FORMER IBM EAST FISHKILL FACILITY PART 373 DRAFT RENEWAL PERMIT FOR PUBLIC NOTICE MARCH 25, 2026

EXECUTIVE SUMMARY/FACT SHEET

RCRA PART 373 PERMIT
EXECUTIVE SUMMARY/FACILITY FACT SHEET

Former IBM East Fishkill
East Fishkill, New York

NYSDEC Permit No.: 3-1328-00535/00002
DER Site No.: 314054
USEPA RCRA ID No.: NYD000707901

[DRAFT]

1.0 FACILITY PERMIT AND GENERAL INFORMATION

1.1 Facility Permit Information

Permittee Names:	IBM Corporation (Operator) iPark East Fishkill LLC (Owner & Operator) iPark East Fishkill I LLC (Owner & Operator) iPark East Fishkill 84 LLC (Owner & Operator) iPark East Fishkill B338 LLC (Owner & Operator) - These entities are collectively known as iPark Semiconductor Components Industries LLC (dba onsemi) (Owner and Operator)
Facility Name:	Former IBM East Fishkill Facility
Facility Location:	2070 Route 52, Hopewell Junction, NY 12533
EPA ID No.:	NYD000707901
DEC Permit No.:	3-1328-00535/00002
DEC DER No.:	314054
Commercial/Non-Commercial TSDF:	N/A (CA)
Facility Contact: IBM	Linda Daubert LNDaubert@us.ibm.com 720-397-5670
Facility Contact: iPark	Daniel Pennessi dpennessi@nationalresources.com 203-661-0055
Facility Contact: onsemi	Randall Duggan Randall.duggan@onsemi.com 845-894-3243
DEC Contact:	Emily Barry emily.barry@dec.ny.gov 845-633-5457

Initial/Renewal Permit (Permit type):	Corrective Action
Permit Term:	10 years
Estimated Closure Cost:	N/A
Estimated Post-Closure Care Cost:	N/A *Costs for the former IBM landfill in Lot 6 have been rolled into CA costs.
Estimated Corrective Action Cost:	IBM - $59,174,000 iPark - $899,964
Estimated Financial Assurance Cost:	$60,073,964
On-site Environmental Monitor(s):	Zero

1.2 General Description

The Former IBM East Fishkill Facility (the Site or Facility) is an approximately 460-acre area located in the Town of East Fishkill, Dutchess County, New York bounded by New York State Route 52 to the north, Interstate 84 (I-84) to the south, iPark Boulevard (County Road 27) to the east, and high voltage lines to the west owned by Consolidated Edison Company (ConEdison) of New York, a Central Hudson Gas and Electric Corporation (CHG&E) utility corridor and the John Jay High School.

The Site is currently a permitted Corrective Action facility (Permit) under Title 6 of the New York Codes, Rules & Regulations (6 NYCRR) Part 373 as well as in the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 314054, both of which are administered by the New York State Department of Environmental Conservation (NYSDEC or Department).

Development of the Site by International Business Machines Corporation (IBM) began in 1963 with the construction of office and manufacturing buildings for research, development and manufacturing of semiconductors, semiconductor packaging, and electronic computing equipment. The typical chemicals used in the manufacturing here were chlorinated solvents.

A groundwater protection program was initiated by IBM at the site in 1978. The initial activities included installation and sampling of groundwater monitoring wells. Upon the discovery of the presence of contaminated groundwater at the Site, IBM commenced a voluntary investigation of the Site to establish the source and to determine the concentration and location of the contamination. IBM, under an Order on Consent with NYSDEC for compliance with Environmental Conservation Law (ECL) Section 27-1313, also took voluntary remedial actions to remove the contamination, extract and treat the contaminated groundwater, and monitor the groundwater within and outside the boundaries of the Site (April 1981 Order on Consent between IBM and NYSDEC).

Per the 1981 Order, IBM developed a program to monitor, evaluate and remediate contaminated groundwater. Beginning in early 1992, under the authority of the Resource Conservation and

Recovery Act (RCRA) Corrective Action Program, NYSDEC received and reviewed documents submitted by IBM to fulfill RCRA Facility Investigation reporting requirements for contaminated groundwater in five areas of the Facility, designated as Area A, Area B, Area D, Deep Bedrock, and the Southeast Quadrant. In September 1995, NYSDEC issued IBM a 6 NYCRR Part 373 Hazardous Waste Management Permit (1995 Permit), including Modules III and IX which addressed Corrective Action. The permit indicated that IBM's obligations under the 1981 Order with NYSDEC were terminated by the 1995 Part 373 Permit. Seven Areas of Concern (AOCs) were identified in the 1995 Part 373 Permit, designated as Area A, Area B, Area C, Area D, Southeast Quadrant, Building 322 and the Deep Bedrock Aquifer. In November 2011, the 6 NYCRR Part 373 Permit was renewed (2011 Permit). The 2011 Permit addressed the storage and management of hazardous waste containers and the operation and maintenance of final Corrective Measures under a Statement of Basis (SB) for contaminated groundwater as well as requiring financial assurance for closure and corrective action. The B315 Catch Basin and B330 AOCs were designated in the 2011 Part 373 Permit in addition to the seven AOCs identified in the 1995 Part 373 Permit.

Since issuance of the 2011 Permit, the storage of hazardous waste containers was discontinued under Part 373/RCRA Closure and IBM has sold portions of the Facility to other entities. The following paragraphs contain information regarding the sale(s) of parcel(s) as well as some notable contamination, whereas Section 1.3 (Background Information) contains additional information on contamination at the Site.

On July 1, 2015, the Site was acquired by GLOBALFOUNDRIES U.S. 2 LLC (GF) as two parcels: the larger of the two parcels consisted of the approximately 460 acres East Campus identified at the time as Tax Grid #05-6356-04-980140 and the smaller adjacent parcel identified as Tax Grid #05-6456-03-116374.

In May 2017, GF subdivided the Site into eight Lots consisting of a total of approximately 433 acres as shown on **Plate 1-2 (Parcel, Lots, Condominium and Condominium Unit Location Map**). This includes approximately 27.5 acres of roads within the Site boundary. On September 1, 2017, iPark East Fishkill LLC and iPark East Fishkill I LLC, purchased Lots 2, 3, 4, 6, 7, and 8. Thereafter, iPark leased portions of the Site to industrial and commercial entities. Lots 1 and 5 remained GF property. On September 1, 2017, the Part 373 Permit was modified to reflect ownership transitions to include iPark East Fishkill I LLC for Lots 2 and 3; iPark East Fishkill LLC for Lots 4, 6, 7 and 8; and GF for Lots 1 and 5.

As of August 31, 2017, and as recorded with the Dutchess County Clerk on November 4, 2020, iPark East Fishkill I, LLC established a Plan of Condominium Ownership for Lots 2 and 3 with the name of The Hopewell Condominium I. The Plan for Hopewell Condominium I established eight units, each with an associated tax parcel number. One unit, Unit 7GL was a ground lease between GF and iPark East Fishkill I, LLC.

As of March 29, 2018, and as recorded with the Dutchess County Clerk on November 18, 2020, iPark East Fishkill LLC established a Plan of Condominium Ownership for Lot 7 with the name of The Hopewell Condominium II. The Plan for Hopewell Condominium II established nine units, each with an associated tax parcel number.

On January 1, 2023, Semiconductor Components Industries LLC (dba onsemi) acquired the GF East Fishkill facility, became owner of Lots 1 and 5 and the 2011 Permit was transferred from GF to onsemi.

In total, as of the submittal date of this 6 NYCRR Part 373 Permit Renewal Application, the Site consists of twenty-two tax parcels and seven fee roads that bisect the property (See **Plate 1-2** (Site Parcel, Lots, Condominium and Condominium Unit Location Map) and **Table 1-1 (Site Ownership)**).

The owner(s) of the site parcel(s) as of the submittal date of this 6 NYCRR Part 373 Permit Renewal Application are as described in **Table 1-1 (Site Ownership) of the Permit.**

The operator(s) responsible for the remediation of site parcel(s) as of the submittal date, May 5, 2021 (and modified on August 16, 2024), of this 6 NYCRR Part 373 Permit Renewal Application are:

- IBM Corporation (the Site with the exception of the following iPark responsibilities for vapor intrusion mitigation systems in commercial use space as noted below).
- iPark East Fishkill 84 LLC (VE-32 sub-slab depressurization system (SSDS), B330C, Lot 7, Hopewell Condo II, Unit# 1B)
- iPark East Fishkill B338 LLC (VE-30 SSDS (B338) and VE-31 SSDS (B339), Lot 7, Hopewell Condo II, Unit # 5; the HVAC engineering control associated with a portion of B330C, Hopewell Condo II, Unit# 1B; the HVAC (presumptive) engineering controls associated with B308, Lot 2A, Hopewell Condo Unit I, Unit #3 and B330L, Lot 7, Hopewell Condo Unit II, Unit #1B)
- iPark East Fishkill LLC [the HVAC (presumptive) engineering control associated with B334, Lot 7 Hopewell Condo II, Unit #2];
- iPark East Fishkill I LLC [the HVAC engineering control associated with a portion of B310 Lot 2A, Hopewell Condo I, Unit #4]
- Onsemi [the HVAC (presumptive) engineering control associated with B300, a portion of B316, B317, B320B, B321, B322, B323, B323A, B386 and; the B320B Passive sub-slab depressurization (SSD) system (all located on Lot 5)].

GF, iPark East Fishkill LLC, and iPark East Fishkill I LLC are listed as facility owners under the current NYSDEC Part 373 Permit, with IBM maintaining responsibility for Groundwater Corrective Action. IBM is currently conducting a Corrective Measures Program to monitor, collect and treat contaminated groundwater at the Site under Modules II and IX of the Site's Part 373 Permit (see additional information in Section 1.3 below). The Part 373 Permit requires IBM to investigate and remediate contaminated media at the Site. The current Corrective Measures Program is addressing the remedial work in the following Areas of Concern (AOCs): Area A, ,

Building 330 (B330) Area, and the deeper bedrock aquifer **(Figure 1-2 Site Layout and Operable Units Map)**.

After completion of the remedial work, some of the contamination was left at this Site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination, thereby ensuring protection of human health and the environment. An Interim Site Management Plan (ISMP) (included in the Permit as **Attachment G**) was prepared to manage remaining contamination and will be finalized under this permit.

Lot 8 has been investigated and NYSDEC has determined that Lot 8 is able to be released from the Part 373 permitted facility and will be managed under an Environmental Easement and Site Management Plan by iPark. Groundwater monitoring by IBM on Lot 8 is required as part of the overall groundwater monitoring (GWM) for the facility.

In 2021, Lots 2 and 3 were divided into Lots 2A, 3A and Lot 9. Frito-Lay Sales, LP purchased Lot 9 on December 17, 2021. Lot 9 is not a part of this renewal permit. Groundwater monitoring by IBM on Lot 9 is required as part of the overall GWM for the facility. Lots 2A and 3A remain under iPark ownership and as part of the Part 373 permitted facility.

South Drive, an internal fee road, was established as part of the 2017 GF subdivision, At the time of the subdivision, South Drive was included in an Irrevocable Offer of Cessation and Dedication to the Town of East Fishkill. NYSDEC has determined that South Drive is able to be released from the Part 373 Permitted facility and can be managed under an Environmental Easement and Site Management Plan by the Town of East Fishkill, if so desired.

1.3 Background Information

On January 23, 1981, the NYSDEC placed the IBM East Fishkill Facility on the registry of Inactive Hazardous Waste Disposal Sites. Pursuant to Section 27-1313 of the Environmental Conservation Law, in April 1981, IBM signed an Order on Consent (1981 Order) with NYSDEC. The 1981 Order stipulated that IBM would:

- Contain, collect and treat contaminated groundwater;
- Implement remedial action programs;
- Establish a groundwater monitoring program.

In June 1986, three provisions were added to the 1981 Order to supplement and clarify the obligations of IBM. These provisions further stipulated that NYSDEC retains the right to obtain for the purpose of comparative analysis split samples, that IBM would submit periodic monitoring reports, and that IBM would notify the NYSDEC if there was a significant change in water quality at the perimeter of the Site or in IBM's production wells within the Site.

Subsequent to the 1981 Order, IBM developed a program to monitor, evaluate and remediate contaminated groundwater. Beginning in early 1992, under the authority of the Resource

Conservation and Recovery Act (RCRA) Corrective Action Program, NYSDEC reviewed documents submitted by IBM to fulfill RCRA Facility Investigation reporting requirements for contaminated groundwater in five areas of the Facility, designated as Area A, Area B, Area D, Deep Bedrock and the Southeast Quadrant. In a letter dated March 10, 1993, NYSDEC approved the following four groundwater collection and treatment systems as RCRA Interim Corrective Measures:

- The Area A Groundwater Collection and Treatment System
- The Area B Groundwater Collection and Treatment System
- The Area D Groundwater Collection and Treatment System
- The Central Carbon system (treating groundwater withdrawals from deep bedrock production wells)

In September 1995, NYSDEC issued IBM a 6 NYCRR Part 373 Hazardous Waste Management Permit (1995 Part 373 Permit), including Modules III and IX which addressed Corrective Action. The permit indicated that IBM's obligations under the 1981 Order with NYSDEC were terminated by the 1995 Part 373 Permit. Seven Areas of Concern (AOCs) were identified in the 1995 Part 373 Permit, designated as Area A, Area B, Area C, Area D, Southeast Quadrant, Building 322 and the Deep Bedrock Aquifer.

In July 2002, a catch basin located on the north side of B315 was identified as AOC E. Following sampling and subsequent excavation with the catch basin being removed, NYSDEC approved the remediation of this area with No Further Action required for AOC E.

As an outcome of IBM's 2009 RCRA Facility Work Plan and subsequent assessments that focused on indoor air quality, vapor intrusion mitigation measures have been implemented for certain site buildings. The vapor intrusion mitigation measures include sub-slab depressurization systems (SSDSs) and heating, ventilation, and air conditioning (HVAC) systems, In addition, a passive sub-slab venting system is installed beneath a portion of one building (B320B) as a vapor intrusion mitigation measure. Further information on the types, locations, and operators of the vapor intrusion mitigation systems is provided in the Operable Units and Engineering Controls Table provided in Attachment A-2 of the Part 373 Permit Renewal Application Update (August 16, 2024).

In November 2011, the 6 NYCRR Part 373 Permit was renewed (2011 Part 373 Permit). The 2011 Part 373 Permit addressed: (1) the storage and management of hazardous waste containers; (2) the operation, monitoring and maintenance of the groundwater monitoring well network used to assess the performance of the Interim Corrective Measures (ICMs) for contaminated groundwater; and (3) financial assurance for closure and corrective action. The B315 Catch Basin AOC, annotated as removed, and the B330 AOCs were designated in the 2011 Part 373 Permit in addition to the seven AOCs identified in the 1995 Part 373 Permit.

As of September 2013, eight AOCs had been identified at the Site and designated as Operable Units (OUs): the Bedrock Remediation Area (OU2); Area B (OU3); Area D (OU4); Area A (OU5); Area C (OU6); B322 AOC (OU7); B330C AOC (OU8) and the SEQ Area (OU9).

In February 2015, closure of the permitted hazardous waste storage rooms in Building 309 was initiated. This process was completed in April 2015 with submission of closure certification documentation to NYSDEC, and closure certification acceptance by NYSDEC on May 21, 2015. On May 28, 2015, the 2011 Permit was modified pursuant to 6 NYCRR 373-1.7 (c)(15); the modification transitioned the permit to Corrective Action only. There are no longer any permitted hazardous waste management units at the facility.

In June 2015, IBM submitted requests to perform shutdown testing of groundwater remediation activities at Area B, Area D; the SEQ Area and at the B322 AOC. With NYSDEC approval, the groundwater extraction wells associated with these four AOCs were shut down for a period of two years. Following completion of the testing, IBM submitted reports summarizing the shutdown test results for the four systems. In July 2018, NYSDEC approved the permanent shutdown of the groundwater remediation at Area B, Area D, the SEQ Area and B322 AOCs.

In 2017 and 2018, IBM designed and constructed three new groundwater treatment facilities (GTF) to replace the Central Carbon treatment system for the extraction and treatment of bedrock aquifer groundwater underlying the site (Bedrock Remediation Area (OU2)). Operation of the three newly constructed GTF, began during the first quarter of 2019. In addition, IBM upgraded the B384 GTF in Area A during the same time period. The groundwater treatment facilities meet the requirements for the RCRA Waste Water treatment Unit exemption and are not subject to RCRA permitting.

Following IBM's request to conduct a shutdown test at B322 AOC, NYSDEC approved the shutdown request and requested an evaluation of remedial alternatives in the B322 AOC source area wells. In November 2016, IBM informed NYSDEC that the future of B322 was uncertain and that the majority of the building may be demolished. Following the demolition work, completed in July 2019, IBM conducted an RFI. NYSDEC approved the B322 RFI in July 2020.

On May 1, 2020, iPark East Fishkill LLC, iPark East Fishkill I LLC, IBM and GlobalFoundries entered into an Order on Consent, Case No. CO-1-20181004 (Consent Order) with the NYSDEC for violation of the 2011 Permit and violation of ECL Article 27, Title 9 as established in 6 NYCRR 373-1.6(a)(1). Respondent iPark (collectively iPark East Fishkill LLC and iPark East Fishkill I LLC) is the sole owner of the portion of the property that was the subject of noncompliance. Respondent iPark leased a property within its portion of the Site to Sloop Brewing Co., which was operating as a commercial business activity on a Site only authorized to have industrial activities. As such, Respondent IBM and Respondent GlobalFoundries were not the cause of the violations. Pursuant to the Order on Consent, Respondent iPark was ordered to, in accordance with work plan(s) approved by NYSDEC, design, install, operate and maintain active sub-slab depressurization systems (SSDSs) on the ground floor of all indoor areas within the Use Modification Parcel (Commercial Use Area – as described in Section 4.1).

On May 4, 2021, the Permittees submitted a timely Part 373 Permit Renewal Application. Based on this submittal, the conditions of the 2011 Permit have been extended pending issuance of a Renewal Permit. A draft of this Renewal Permit and a draft Statement of Basis for proposed Final Remedy Selections for corrective action activities at Building 335, Indoor Air, Lot 8 and Lot 9 are being public noticed in conjunction with issuance of this Executive Summary/Fact Sheet.

1.4 Site Maps

The following figures are attached to this executive summary:

- Figure 1-1: Site Location Map
- Plate 1-1: Aerial Site Map
- Plate 1-2: Site Layout and Operable Units

1.5 Other Facility Permits

The following state and local permits and registrations are applicable to the facility:

- onsemi - Air Title V Facility Permit: No. 9-2911-00112/00233 [chlorine/caustic production
- onsemi - State Pollutant Discharge Elimination System (SPDES) Permit No. NY0005096 (IBM is currently meeting all requirements of the SPDES permit they are authorized to discharge under - NY0005096);

2.0 RCRA PERMITTED UNITS

The permit is for corrective actions at the Facility, which includes on-going operations, maintenance and monitoring of the closed former landfill. Any RCRA regulated wastes that may be generated are stored and disposed of according to the applicable generator requirements.

3.0 CORRECTIVE ACTION SUMMARY

The following table summarizes the ongoing corrective action activities occurring at the facility:

Location Name / Designation	Activity Description	Estimated Completion Date
Entire Facility	Monitoring of groundwater is required for the entire Facility.	Unknown, 30-year perpetual care required.
On-Site Groundwater	Overburden groundwater in Area A is collected and treated at the B384 GTF. Bedrock groundwater underlying the Site (Bedrock Remediation Area, OU2) is extracted and treated at the Facility.	Unknown, 30-year perpetual care required.
On-Site Soil	Covers and caps are required to prevent migration of/exposure to contamination present in on-site soil. Intrusive activity is managed through institutional controls.	Unknown, 30-year perpetual care required.
On-Site Soil Vapor	On-Site soil vapor beneath certain buildings contains Site contaminants. Soil vapor intrusion is being mitigated by active and passive systems, including SSD, SVE, and HVAC systems, for certain Site buildings.	Unknown, 30-year perpetual care required.
Off-Site Groundwater	Off-site overburden groundwater near the Site eastern boundary were minimally contaminated as a result of historical Facility operations, On-site groundwater extraction systems have reduced VOC concentrations below cleanup levels and continue to recover off-site groundwater for treatment and prevent off-site migration.	Unknown, 30-year perpetual care required.
OU6 Area C, Former Landfill	The landfill, which contained hazardous constituents, was excavated in 1982 and backfilled with clean soil, capped with clay, and covered with topsoil and seeded. In 2004, surplus soils from Building 323 Annex construction, which contained some arsenic, were placed on top of the capped landfill and seeded. Ongoing groundwater monitoring is required.	Unknown, 30-year perpetual care required.

Building 335	Based on various investigations, the building structure as well as the surrounding soils and groundwater are contaminated with Tetrachloroethene (PCE) from former recycling and storage operations. The Statement of Basis includes the removal of large portions of the building and related corrective measures to be implemented during and following building demolition.	Unknown, 30-year perpetual care required.

4.0 SITE MANAGEMENT

The following table provides a summary of the site management activities currently occurring at the Facility:

Area/Regulated Unit	Activity Description
Overburden Groundwater	Quarterly hydraulic and chemical monitoring of the overburden groundwater in accordance with the groundwater monitoring plan.
Bedrock Groundwater	Quarterly hydraulic and chemical monitoring of the bedrock groundwater in accordance with the groundwater monitoring plan.
Soil Vapor	Operation, maintenance and monitoring of vapor intrusion mitigation systems.
Treatment Plant Effluent	Groundwater treatment plant effluent is sampled on a monthly basis.
Cover Maintenance	Areas of cover are inspected annually and maintained as necessary.

The facility has a NYSDEC-approved:

Yes	No	
☐	☒	Post-Closure Plan - Not Applicable
☒	☐	Groundwater Monitoring Program - There is an approved groundwater monitoring program at the Facility, however, the Renewal Permit shall require the program to be updated.
☐	☒	Site Management Plan – A draft Interim Site Management Plan has been submitted for the Facility and shall be finalized under the Renewal Permit.

4.1 Institutional Controls

IBM recorded a Declaration of Restrictions, Easements and Covenants (Declaration), with the Dutchess County Clerk on July 9, 2015. The Declaration, presented in **Attachment F** of the Permit, divides the Site into four Use Areas: Area A, the Core Area, the former Landfill Area and the Perimeter Area (remainder of the Site) as shown on Plate 1-3 of the Permit. The Declaration provides for access to conduct, complete and monitor groundwater remediation and monitoring as required by NYSDEC under the 2011 Part 373 Permit; installation and maintenance of remediation systems and / or utility systems; and includes certain obligations and prohibitions with respect to owners, operators and users of all or any portion of the Facility. The obligations and prohibitions related to each of the four use areas (for the Facility) are enumerated in the Declaration and include the prohibition of pumping or extraction of groundwater other than in conjunction with the remediation efforts and designation of the Facility for industrial use unless approved by NYSDEC or other Governmental Body. Specific restrictions and requirements are outlined for the Use Areas including prohibition of soils disturbance within the Landfill and Area A; site-wide soils management; prohibition of the disruption or impairment of any vapor mitigation system; installation of vapor mitigation systems in all new structures sufficient to achieve air quality in such structures as reasonably necessary to comply with all requirements established by NYSDEC. An amendment (First Amendment to the Declaration) to the Declaration was made on April 14, 2020. The First Amendment to the Declaration (presented in **Attachment F** of the Permit) removed a portion of the property from the Core Area and established a Designated Area which may be used for Commercial Uses subject to the terms described in the 2021 Order on Consent. The Designated Area described in the First Amendment to the Declaration is shown on Plate 1-3 of **Attachment F** of the Permit as the Designated Area (Commercial Use Area).

GlobalFoundries recorded a Declaration of Restrictions and Covenants (GF Declaration), with the Dutchess County Clerk on November 8, 2017. The GF Declaration, presented in **Attachment F** of the Permit, restricts site use to Industrial within certain portions of Lot 2, Lot 5 and Lot 7 subject to the restrictions, covenants and obligations set forth in the filed document. The Restricted Area described in the GF Declaration is shown on Plate 1-3. A series of Institutional Controls (ICs) are required by the 2013 Final Statement of Basis, the Declaration, the First Amendment to the Declaration, and the GF Declaration to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to industrial uses only except as authorized by the NYSDEC.

4.2 Engineering Controls

Numerous engineering controls are in place at the facility to prevent future exposure to contamination and/or restrict the further migration of such contamination. These engineering controls are as follows:

- Composite Site Cover system including Area C (OU6) Former Landfill Cap
- Groundwater Collection (Extractions Wells) and Treatment Systems
- Soil Vapor Intrusion Mitigation Systems and Controls
    - Sub Slab Depressurization (SSD) Systems
    - HVAC Systems

- Passive Sub Slab Venting System
- Soil Vapor Extraction (SVE) System

5.0 ISSUES AND CONCERNS

The following sections describe any potential issues or concerns for the facility related to its hazardous waste permit. Additionally, it includes information on any major changes made between the last issued permit and this renewal permit.

5.1 Environmental Risk Assessment

The Facility was evaluated as part of RCRA Corrective Action Environmental Indicators - CA725 Current Human Exposures Under Control (2002) and CA750 Migration of Contaminated Groundwater Under Control (2001). Based on these reviews, it was determined that contamination at the Facility did not pose imminent danger to human health or the environment, but that corrective action was required to control risks to health and environment.

Corrective action programs have been implemented to clean up, restrict migration of, and prevent exposure to contamination.

5.2 Regulatory Compliance History

The Site is currently a permitted Corrective Action facility (Permit) under Title 6 of the New York Codes, Rules & Regulations (6 NYCRR) Part 373 as well as in the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 314054, which is administered by the New York State Department of Environmental Conservation (NYSDEC). The site is also subject to the requirements of SPDES permit # NY0005096 for industril wastewater discharges.

5.3 Climate Leadership and Community Protection Act (CLCPA)

A. Pursuant to the requirements of Section 7(2) of the CLCPA, during its review of the permit renewal application the DEC has taken into consideration information regarding the facility's consistency with attainment of the statewide greenhouse gas (GHG) emission limits established in Article 75 of the environmental conservation law.

B. Pursuant to the requirements of Section 7(3) of the CLCPA, review of the permit renewal application to the DEC found no proposed increase in GHGs or co-pollutants within a Disadvantaged Community (DAC).

5.4 Community Risk and Resiliency Act (CRRA)

The Facility has demonstrated to the DEC that future physical climate risk, not limited to sea-level rise, storm surge and flood, was considered during the permit renewal process. The DEC has made a tentative assessment that the Facility is not at risk of adverse climate change impacts due to

extreme weather events, and no additional actions are necessary at this time to improve the resiliency at the facility.

5.5 Environmental Justice (EJ)

A. Commissioner's Policy 29 (CP-29) Environmental Justice and Permitting

The Facility is located in a mapped Potential Environmental Justice Area (PEJA), but the policy categorically excludes it from applying to renewals.

B. Environmental Justice Siting Law

This Facility is located within a DAC. The EJ Siting Law requires that agencies undertaking State Environmental Quality Review (SEQR) consider whether an action may cause or increase a disproportionate pollution burden on a DAC, and for DEC to determine if permit actions will cause "de minimis" or a "significant increase" in existing disproportionate pollution burden on DACs. This action is a renewal and not subject to the SEQR, and DEC has determined that the action will not cause or increase the pollution burden on the DAC.

5.6 Unresolved Issues and Concerns

The past consolidation of on-site soil/debris into stockpiles without extensive sampling needs to be reconciled with current practices. Existing stockpiles may remain as previously approved, but future consolidation of soil/debris on-site will require approval by the Department.

Once the final remedy is in place, a final SMP for the Lots remaining in the Permitted boundary must be submitted to and approved by the Department.

The Vapor Intrusion Performance Monitoring Program (VI PMP) must be updated in accordance with Module XII, Condition B.4 to include all SSD and HVAC Systems required by the Permit. Additionally, it needs to include all necessary Indoor Air Quality Operation and Maintenance Compliance information for all the aforementioned systems. This can be done either in the body pf the PMP or in its attachments.

5.7 Compliance Schedule Items

The Permittee (iPark) is required to submit revised corrective action cost estimates as well as a financial assurance mechanism and to have that information incorporated into the enforceable Permit documents.

5.8 Public Participation

The draft RCRA Part 373 Renewal Permit will have a 45-day public notice comment period. Renewal Application documents and the draft RCRA Part 373 Renewal Permit as well as other pertinent documents are accessible at DEC Info Locator (https://extapps.dec.ny.gov/data/DecDocs/314054/) or at the Facility's repositories:

onsemi East Fishkill
2070 Route 52
Hopewell Junction, NY 12533

IBM
https://ibm.box.com/v/EFKrepository

iPark
i.Park East Fishkill LLC (PUBLIC ACCESS) - Dropbox

If no comments are received, the draft permit shall be issued as final. If comments are received, they shall be addressed in either a Response to Comments document or a direct response letter to the commentor(s).

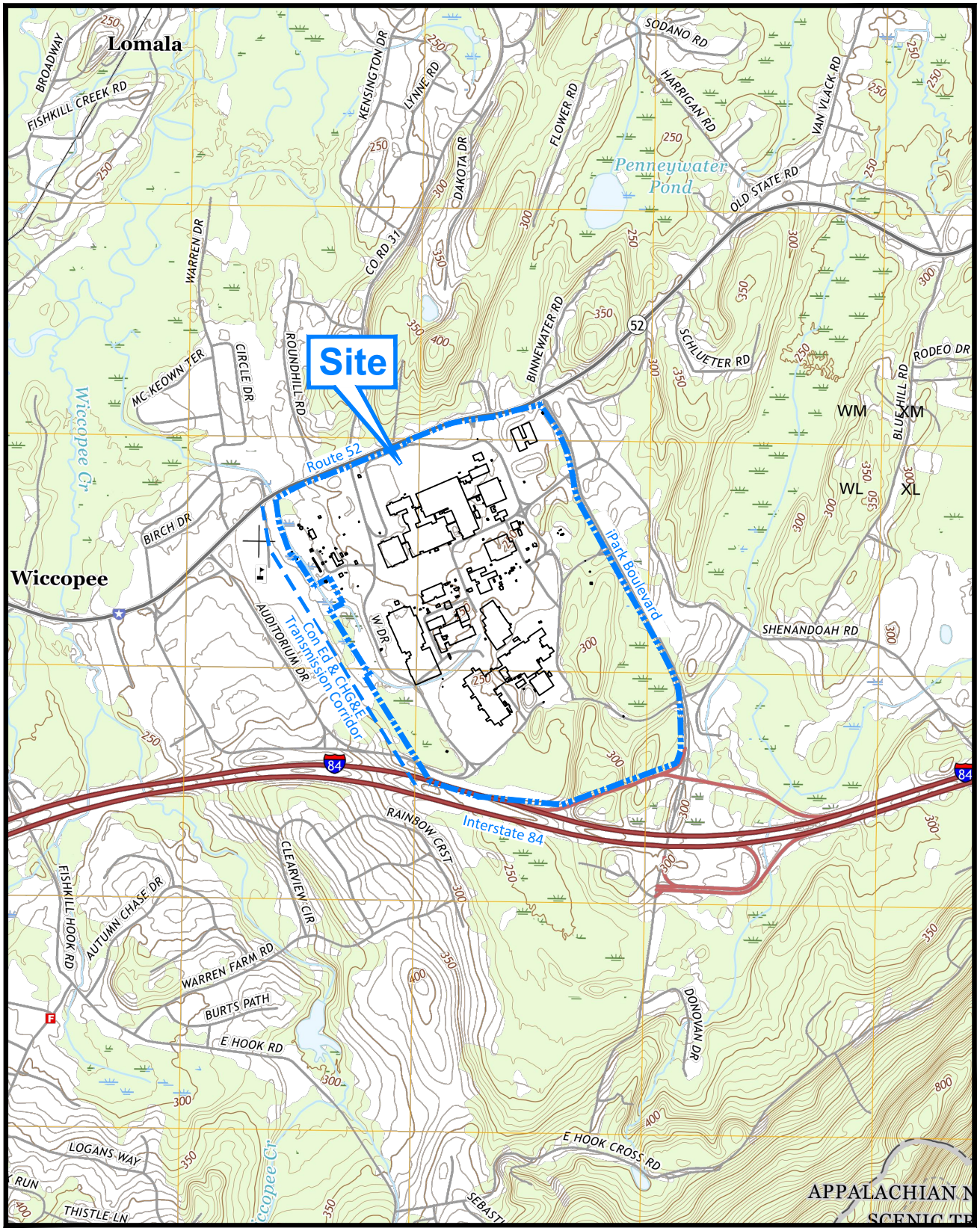
5.9 Significant Permit Modifications

Upon full execution and recording of the Environmental Easements and DEC approval of the final SMPs for Lot 8, which is owned by iPark, Lot 9, which is owned by Frito-Lay (see Figure 1-2 of the Permit), and South Drive may be removed from the Part 373 Permit and the Facility Boundary as an administrative function.

The Department has made minor modifications to the Permit to update formatting, implement any new regulatory requirements and address technical concerns raised during the renewal process.

6.0 Upcoming Construction/Closure Activities

No upcoming construction or closure activities have been approved at this time.



Portion of the Hopewell Junction, NY 7.5-minute USGS Quadrangle (2016)

All or portions of Lot 4, Lot 6, the roadway between Lots 4 and 6, Lot 8, Lot 9, and South Drive are anticipated to be removed from the Site when environmental easements for Site properties are duly recorded and indexed by Dutchess County.

Approximate

Scale

0 1000' 2000'

Former IBM East Fishkill Facility

Site Location Map

GROUNDWATER SCIENCES CORPORATION

15000-034-B1 / 4-12-2021

N

W E

S

Scale (feet)

0 200 400 800

LEGEND

Site Boundary

Aerial photo is a composite of NYS GIS Clearinghouse and Google Earth imagery (dated 2020 and 2024 respectively).

IBM

East Fishkill, New York

Plate 1-1
Aerial Site Map

DRAWN:	CHECKED:	APPROVED:	DATE:	FIGURE:
JPB	RCW	RCW	7/30/2024	

GROUNDWATER SCIENCES CORPORATION

www.groundwatersciences.com

H:\15000\15000\GIS\2024-07 aerial\2024-07 aerial.aprx | Aerial Site Map

1
45.64 AC.
2A
23.75 AC.
3A
20.87 AC.
4
13.72 AC.
5
98.94 AC. (TOTAL)
96.26 AC. (PART OF LOT 5)
2.68 AC.
(PART OF LOT 5)
6
56.19 AC.
7
71.73 AC. (PART OF LOT 7)
85.05 AC. (TOTAL)
13.32 AC.
(PART OF LOT 7)
8
59.41 AC.
9
28.42 AC.
LOT 2 REVERSIONARY PARCEL – 6.64 AC.
PROPERTY LINE NOT IN HOPEWELL
UNIT 1A
AREA =10.875 AC.
603,206 SF
UNIT #2
AREA =10.000 AC.
435,608 SF
UNIT #3
AREA =3.872 AC.
168,640 SF
UNIT 4A
AREA =10.568 AC.
603,206 SF
UNIT 5A
AREA =9.390 AC.
603,206 SF
UNIT #7GL
AREA =6.639 AC.
289,282 SF
UNIT 5B
AREA =4.128 AC.
179,824 SF
UNIT 5C
AREA =4.128 AC.
179,824 SF
UNIT 5D
AREA =4.128 AC.
179,824 SF
UNIT 5E
AREA =4.128 AC.
179,824 SF
UNIT 5F
AREA =4.128 AC.
179,824 SF
UNIT 5G
AREA =4.128 AC.
179,824 SF
UNIT 5H
AREA =4.128 AC.
179,824 SF
UNIT 5I
AREA =4.128 AC.
179,824 SF
UNIT 5J
AREA =4.128 AC.
179,824 SF
UNIT 5K
AREA =4.128 AC.
179,824 SF
UNIT 5L
AREA =4.128 AC.
179,824 SF
UNIT 5M
AREA =4.128 AC.
179,824 SF
UNIT 5N
AREA =4.128 AC.
179,824 SF
UNIT 5O
AREA =4.128 AC.
179,824 SF
UNIT 5P
AREA =4.128 AC.
179,824 SF
UNIT 5Q
AREA =4.128 AC.
179,824 SF
UNIT 5R
AREA =4.128 AC.
179,824 SF
UNIT 5S
AREA =4.128 AC.
179,824 SF
UNIT 5T
AREA =4.128 AC.
179,824 SF
UNIT 5U
AREA =4.128 AC.
179,824 SF
UNIT 5V
AREA =4.128 AC.
179,824 SF
UNIT 5W
AREA =4.128 AC.
179,824 SF
UNIT 5X
AREA =4.128 AC.
179,824 SF
UNIT 5Y
AREA =4.128 AC.
179,824 SF
UNIT 5Z
AREA =4.128 AC.
179,824 SF
UNIT 5AA
AREA =4.128 AC.
179,824 SF
UNIT 5AB
AREA =4.128 AC.
179,824 SF
UNIT 5AC
AREA =4.128 AC.
179,824 SF
UNIT 5AD
AREA =4.128 AC.
179,824 SF
UNIT 5AE
AREA =4.128 AC.
179,824 SF
UNIT 5AF
AREA =4.128 AC.
179,824 SF
UNIT 5AG
AREA =4.128 AC.
179,824 SF
UNIT 5AH
AREA =4.128 AC.
179,824 SF
UNIT 5AI
AREA =4.128 AC.
179,824 SF
UNIT 5AJ
AREA =4.128 AC.
179,824 SF
UNIT 5AK
AREA =4.128 AC.
179,824 SF
UNIT 5AL
AREA =4.128 AC.
179,824 SF
UNIT 5AM
AREA =4.128 AC.
179,824 SF
UNIT 5AN
AREA =4.128 AC.
179,824 SF
UNIT 5AO
AREA =4.128 AC.
179,824 SF
UNIT 5AP
AREA =4.128 AC.
179,824 SF
UNIT 5AQ
AREA =4.128 AC.
179,824 SF
UNIT 5AR
AREA =4.128 AC.
179,824 SF
UNIT 5AS
AREA =4.128 AC.
179,824 SF
UNIT 5AT
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179,824 SF
UNIT 5AU
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UNIT 5AV
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UNIT 5AW
AREA =4.128 AC.
179,824 SF
UNIT 5AX
AREA =4.128 AC.
179,824 SF
UNIT 5AY
AREA =4.128 AC.
179,824 SF
UNIT 5AZ
AREA =4.128 AC.
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UNIT 5BA
AREA =4.128 AC.
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UNIT 5BB
AREA =4.128 AC.
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UNIT 5BC
AREA =4.128 AC.
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UNIT 5BD
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UNIT 5BH
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UNIT 5BI
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UNIT 5BM
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UNIT 5BN
AREA =4.128 AC.
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UNIT 5BO
AREA =4.128 AC.
179,824 SF
UNIT 5BP
AREA =4.128 AC.
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UNIT 5BQ
AREA =4.128 AC.
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UNIT 5BR
AREA =4.128 AC.
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UNIT 5BS
AREA =4.128 AC.
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UNIT 5BT
AREA =4.128 AC.
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UNIT 5BU
AREA =4.128 AC.
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UNIT 5BV
AREA =4.128 AC.
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UNIT 5BW
AREA =4.128 AC.
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UNIT 5BX
AREA =4.128 AC.
179,824 SF
UNIT 5BY
AREA =4.128 AC.
179,824 SF
UNIT 5BZ
AREA =4.128 AC.
179,824 SF
UNIT 5CA
AREA =4.128 AC.
179,824 SF
UNIT 5CB
AREA =4.128 AC.
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UNIT 5CC
AREA =4.128 AC.
179,824 SF
UNIT 5CD
AREA =4.128 AC.
179,824 SF
UNIT 5CE
AREA =4.128 AC.
179,824 SF
UNIT 5CF
AREA =4.128 AC.
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UNIT 5CG
AREA =4.128 AC.
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UNIT 5CH
AREA =4.128 AC.
179,824 SF
UNIT 5CI
AREA =4.128 AC.
179,824 SF
UNIT 5CJ
AREA =4.128 AC.
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UNIT 5CK
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179,824 SF
UNIT 5CL
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UNIT 5CM
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UNIT 5CN
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UNIT 5CO
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UNIT 5CP
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UNIT 5CQ
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UNIT 5CR
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UNIT 5CS
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ACRONYMS

ACRONYMS

Acronyms for Part 373 Permit

1981 Order - Order on Consent signed by IBM in April 1981
1995 Part 373 Permit – 6 NYCRR Part 373 Hazardous Waste Management Permit issued by NYSDEC in September 1995
2011 Part 373 Permit – 6 NYCRR Part 373 Hazardous Waste Management Permit issued by NYSDEC in November 2011
2020 Order – Order on Consent signed by I.Park East Fishkill LLC, I.Park East Fishkill I, LLC, IBM and Global Foundries U.S. 2 LLC in April 2020

A
AOC - Administrative Order on Consent
AOC - Areas of Concern
AMSL - Above Mean Sea Level

B
B - B preceding a number indicates a Site building number. B/ was used historically to indicate the same information (Building)
bgs - below ground surface
BTOC - Below Top Of Casing

C
CA - Corrective Action
CAP - Corrective Action Program
CBI - Confidential Business Information
CFR - Code of Federal Regulations
CHG&E - Central Hudson Gas and Electric Corporation
CLCPA - Climate Leadership and Community Protection Act
CMI - Corrective Measures Implementation
CMS - Corrective Measures Study
CO - Consent Order
COCs - Constituents of Concerns
ConEdison - Consolidated Edison Company
CPP - Citizen Participation Plan
CPT - Comprehensive Performance Test
CQA - Construction Quality Assurance
CRRA - Community Risk and Resiliency Act

D
DAR - Division of Air Resources
DCE - dichloroethene
DEC - Department of Environmental Conservation
DER - Division of Environmental Remediation
Department - Department of Environmental Conservation
DIR(s) - Document(s) Incorporated by Reference
DMM - Division of Materials Management

DOH - NYS Department of Health
DOW - Division of Water
DR - Deed Restriction
DUSR - Data Usability Summary Report

E
EC - Emergency Coordinator
EC - Engineering Control
ECL - Environmental Conservation Law
ED - Emergency Director
EDS - Electronic Document Standards
EE - Environmental Easement
ELAP - Environmental Laboratory Approval Program

F
FER - Final Engineering Report
FS - Feasibility Study
FSB – Final Statement of Basis

G
GF – GlobalFoundries U.S. 2 LLC
GOL - General Obligations Law
GMP - Groundwater Monitoring Program
GTF – Groundwater Treatment Facility
GW - Groundwater
GWM - Groundwater Monitoring

H
HHERA - Multi-pathway Human Health and Ecological Risk Assessment
HHRA - Multi-pathway Human Health Risk Assessment
Hr – Hour
HVAC – Heating, Ventilation and Air Conditioning
HWM - Hazardous Waste Management
HWMU - Hazardous Waste Management Unit

I
IAWP – Intrusive Activities Work Plan
IBM – International Business Machines Corporation
IC - Institutional Control
ICM - Interim Corrective Measure
iPark - iPark collectively refers to any and all iPark East Fishkill entities unless a specific iPark entity is referenced in the text or other documents associated with this Permit
ISMP - Interim Site Management Plan

J

K

L
LDR - Land Disposal Restrictions
LQG - Large Quantity Generator

M
MCL - Maximum Contaminant Level
µg/L - micrograms per liter, in water
mg/kg - milligrams per kilogram, in soil
MNA - Monitored Natural Attenuation
MSL - Mean Sea Level
MTBE - Methyl Tert-Butyl Ether

N
NAPL – Non-Aqueous Phase Liquid
NFA - No Further Action
NFPA - National Fire Protection Association
NYCRR - New York State Codes, Rules & Regulations
NYS – New York State
NYSDEC - New York State Department of Environmental Conservation
NYSDOH - New York State Department of Health

O
O&M - Operation & Maintenance
OGC - Office of General Counsel
OM&M - Operation, Maintenance & Monitoring
onsemi - Semiconductor Components Industries, LLC (dba onsemi)
OSHA - Occupational Safety & Health Administration
OU - Operating Unit
OU - Operable Unit (under Corrective Action or 6NYCRR Part 375)

P
P&ID - Process and Instrumentation Drawing/Diagram
PCBs - Polychlorinated Biphenyls
PCE - Tetrachloroethene
PDF - Portable Document Format
PFAS - Per- and Polyfluoroalkyl Substance(s)
PFD – Process Flow Diagram
PHC - Principal Hazardous Constituents
PMP – Performance Monitoring Plan
POC - Point of Compliance
POHC - Principal Organic Hazardous Constituent
PPB - Parts per billion
PPM - Parts per million
PR - Preliminary Review

PR/VSI - Preliminary Review/Visual Site Inspection
PRR - Periodic Review Report

Q
QAPP - Quality Assurance Project Plan
QA/QC - Quality Assurance/Quality Control

R
RA - Remedial Action
RCRA - Resource Conservation & Recovery Act
RD - Remedial Design
RD/RA - Remedial Design/Remedial Action
RFA - RCRA Facility Assessment
RFI - RCRA Facility Investigation
RI - Remedial Investigation
ROD - Record of Decision
RP - Remedial Plan
RP - Responsible Party
RP – Remedial Party
RPL - Real Property Law
RSO - Remedial System Optimization
RTC(s) - Response(s) to TNOIA Comments

S
SAP – Sampling and Analysis Plan
SAPA - State Administrative Procedures Act
SB - Statement of Basis
SC - Site Characterization
SCADA - Supervisory Control And Data Acquisition
SCG - Standard, Criteria or Guidance
SCOs - Soil Cleanup Objectives
SEQR - State Environmental Quality Review
SHPC - Sanborn, Head Engineering & Geology, P.C.
SLERA - Screening Level Ecological Risk Assessment
SM - Site Management
SMP - Site Management Plan
SPDES - State Pollutant Discharge Elimination System
SSD – Sub-slab Depressurization
SSDS - Sub Slab Depressurization System
SV - Sampling Visit
SV – Soil Vapor
SVE – Soil Vapor Extraction
SVI – Soil Vapor Intrusion
SVOCs - Semi-Volatile Organic Compounds
SWMU - Solid Waste Management Unit

T
TCE - Trichloroethene
TOGS - NYSDEC's Division of Water's Technical and Operational Guidance Series
TNOIA(s) - Technical Notice(s) of Incomplete Application
TSDF - Treatment, Storage & Disposal Facility

U
UIC - Underground Injection Control
UL - Underwriters Laboratories
USDA - United States Department of Agriculture
USDOT - United States Department of Transportation
USEPA - United States Environmental Protection Agency
UV – Ultraviolet

V
VC – Vinyl Chloride
VI – Vapor Intrusion
VOCs - Volatile Organic Compounds
VSI - Visual Site Inspection

W
WAP - Waste Analysis Plan

X

Y

Z

NOTE: This list may not include all acronyms in the Permit

MODULE I
General Conditions

MODULE I
GENERAL CONDITIONS

The Permittee shall operate, monitor, and maintain the facility described herein, in compliance with the provisions of the New York State Environmental Conservation Law (ECL) Article 27, Title 9, Section 27-0900 et seq., the Federal Resource Conservation and Recovery Act (RCRA), including the Hazardous and Solid Waste Amendments of 1984 (HSWA) and the approved Permit application as further modified through Permit conditions set herein.

This Permit does not authorize the operation of any hazardous waste management unit requiring a 6 NYCRR Part 373 permit. This Permit is for Corrective Action. The general conditions included herein related to Operating Permits are reserved in case facility hazardous waste operations change.

A. EFFECT OF PART 373 PERMIT

1. This Permit consists of the general and special conditions contained in this and the attached Modules, including the Attachments and documents incorporated by reference; and the applicable requirements of the New York State Environmental Conservation Law (ECL) Article 27, Title 9, Section 27-0900 et seq., and the following regulations:

   6 NYCRR 370 - Hazardous Waste Management System-General

   6 NYCRR 371 - Identification and Listing of Hazardous Wastes

   6 NYCRR 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities

   6 NYCRR 373 - Hazardous Waste Management Facilities

   6 NYCRR 374 - Management of Specific Hazardous Waste

   6 NYCRR 376 - Land Disposal Restrictions

   6 NYCRR 621 - Uniform Procedures

   6 NYCRR 624 - Permit Hearing Procedures

   The applicable regulations or requirements would be those which are in effect prior to final issuance of this Permit.

2. **All documents and reports required by this Permit must be certified pursuant to conditions established in 6 NYCRR 373-1.4(a)(5)(iv) and Condition O.4 of this Module and submitted in accordance with requirements set forward in Conditions O and W of this Module. Additionally, unless specifically exempted in this Permit, all information (e.g., documents and reports) required to be submitted by the Permittee must be approved by DEC. DEC does not require certain plans, documents or reports to also be certified by NYS licensed professionals. The Permittee should verify if certification is required prior to submittal to the DEC.**

3. The following Guidance and Policy Documents are potentially relevant to this Permit. The Permittee shall consider applicable Department guidance when conducting activities required by this Permit.

   DAR-1 Guidelines for the Control of Toxic Ambient Air Contaminants

   DEP 23-1 Permitting and Disadvantaged Communities

   DER-10 Technical Guidance for Site Investigation and Remediation

   DER-13 Strategy For Evaluating Soil Vapor Intrusion at Remedial Sites in New York

   DER-23 Citizen Participation Handbook for Remedial Programs

   DER-31 Green Remediation

   DER-33 Institutional Controls: A Guide to Drafting and Recording Institutional Controls

   PFAS Guidance: Sampling, Analysis, and Assessment of PFAS (revised April 2023)

   TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

4. The following Commissioner Policies are potentially relevant to this Permit. The Permittee shall consider applicable Department policies when conducting activities required by this Permit.

   CP-29 Environmental Justice and Permitting

   CP-39 Use of Enforcement Discretion for Discarded Mercury-containing Equipment

   CP-43 Groundwater Monitoring Well Decommissioning

   CP-44 Natural Resource Damages

   CP-45 Procedure to Demonstrate Compliance with Financial Test Requirements (for financial assurance)

   CP-51 Soil Cleanup Guidance

5. Compliance with this Permit during its term constitutes compliance, for purposes of enforcement, with 6 NYCRR Parts 370 through 374 and 376 except for the following requirements not included in the Permit:

   a. Requirements which become effective by statute, including amendments thereto;

   b. Requirements which are promulgated under 6 NYCRR 376 restricting the placement of hazardous wastes in or on the land;

   c. Requirements which are promulgated under 6 NYCRR 373-2 regarding leak detection systems for new and replacement surface impoundment, waste pile,

and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detections system requirements include double liners, Construction Quality Assurance (CQA) programs, monitoring, action leakage rates, and response action plans, and will be implemented through the procedures of 6 NYCRR 373-1.7 for major modifications; or

d. Requirements which are promulgated under 6 NYCRR 373-3.27, 373-3.28, and 373-3.29, limiting air emissions.

6. The Permittee is authorized to manage hazardous waste in accordance with the conditions of this Permit. Any storage, treatment or disposal of hazardous waste not authorized by this Permit is prohibited unless exempt under 6 NYCRR 373-1.1(d). Issuance of this Permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of federal, State or local laws or regulations.

7. The Permittee is authorized to manage only hazardous wastes which are generated at the Permittee's facility.

8. The Permittee is required to conduct corrective action in accordance with the conditions of this Permit.

9. The Permittee must submit plans, reports, specifications, implementation schedules and any subsequent amendments to those documents required by this Permit to the Department for review and comment. Following its review of a document, if the document requires formal Department approval (as determined by the Department), the Department may either approve the document as submitted or issue comments on the submittal. If the Department issues comments on the document, subsequent activities for the document must proceed in accordance with the following schedule:

   a. Meeting between the Permittee and the Department to discuss the document comments, if requested by the Permittee or deemed necessary by the Department; and,

   b. Submission of a revised document to the Department for approval within thirty (30) calendar days of the above-described meeting. (If the above referenced meeting is determined not to be necessary, the Permittee must submit a revised document for Department approval, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days of the Permittee's receipt of comments from the Department).

   c. If the submission is not revised to the Department's satisfaction, the Department may revise the document and send the Permittee a notice of intent to modify the Permit to incorporate the revised document into the Permit, pursuant to 6 NYCRR 621.13.

10. All plans, reports, specifications and schedules required by the terms of this Permit, and all subsequent amendments to those documents, are incorporated by reference into this Permit when written approval issued by the DEC pursuant to 6 NYCRR 621.11, or

6 NYCRR 621.13. Upon incorporation, the provisions of each such document will be binding upon the Permittee and have the same legal force and effect as the requirements of this Permit.

11. The Permittee must place the submittal within the Facility's document repository within fifteen (15) days of receipt of the Department's approval.

12. Informal advice, guidance, suggestion, or comment by the DEC must not be construed as relieving the Permittee of the Permittee's obligation to obtain such formal approvals as may be required by this Permit. The Permittee consents to and agrees not to contest the authority and jurisdiction of the DEC to enter into or enforce this Permit.

13. The Permittee must also comply with the following:

    6 NYCRR 373-1.1(f) – Uniform Procedures

    6 NYCRR 373-1.1(g) – Enforcement

    6 NYCRR 373-1.1(h) – Severability

14. The Permittee must maintain a current and complete paper copy or electronic copy on an electronic storage device (or equivalent method) of this Permit, including all Modules, Attachments and documents incorporated by reference, in at least one (1) location at the Facility for review by the DEC upon request.

15. For any Environmental Monitor(s) assigned to the Facility, the Permittee must maintain a complete set of all submittals required by this Permit, in the format requested by the Environmental Monitor, in the office of the Environmental Monitor or as otherwise directed by the Environmental Monitor(s) as per **Condition T.2** of this Module.

16. In the event of a discrepancy between this Permit and any regulation, order on consent, other permit, or plans, reports, specifications, and schedules submitted pursuant to this Permit, the more stringent requirement applies, as determined by the Department.

B. PERMIT DOCUMENTS

The Permittee's Hazardous Waste Part 373/B Permit Renewal Application is attached, in whole or in part, to this Permit. Other documents pertinent to this Facility and that are listed below are incorporated by reference into this Permit. These documents are made part of this Permit, are binding upon the Permittee and have the same legal force and effect as the requirements of this Permit. The following documents are considered part of this Permit:

Modules

I	General Conditions
II	Corrective Action Requirements
III	RESERVED

IV RESERVED

V RESERVED

VI RESERVED

VII RESERVED

VIII RESERVED

IX RESERVED

X RESERVED

XI Groundwater Monitoring

XII RESERVED

XIII Scheduled Dates

Attachments

A. Permit Modification Log

B. Permit Renewal Application with overall Renewal Application Certification required per 6 NYCRR Part 373-1.4(a)(5)(iv), exclusive of its Attachments.

C. SMWU/AOC Current Conditions Report

D. Groundwater Monitoring Plan(s)/Program

E. Statement(s) of Basis, Closure Plan(s) and/or Post Closure Care Plan(s)

F. Environmental Easement(s) or DEC-approved Covenant

G. Site Management Plan

H. Closure, Post Closure and/or Corrective Action Cost Estimate(s)

I. On-going Corrective Action Documents

J. Other Laws

K. Performance Monitoring Plan

L. Other Hazardous Waste Management Unit Closures (e.g., Discontinued Use Areas)

M. Security Plan (Attachment V of the Renewal Application)

N. On-site Soil/Debris Management and Reuse Plan

Footnotes:

1. Each document referenced above includes the dated original submission and any subsequent Department approved document revisions.
2. If a document is necessary under the Permit and was not provided with the Permit Renewal Application, it will be required in accordance with Module XIII.

Document(s) Incorporated by Reference

Please see **Attachment O** of this Permit for a complete list of the Documents Incorporated by Reference.

Proposed modifications to this Permit, including modifications to the Permit Application documents incorporated into this Permit, shall be addressed according to 6 NYCRR 373-1.7. The Permittee shall place a revision date on all pages of the proposed Permit modification application.

The Permittee must provide and maintain a log of all modifications made to this Permit, including modifications made to the Permit Application documents that are made part of this Permit. The log shall contain at a minimum the following information regarding an approved modification: (1) the name of the specific document being modified (e.g., contingency plan, security requirements, hazardous waste unit operations, etc.); (2) the effective date of the modification to the Permit; (3) the pertinent pages, sections, and/or attachments of the Permit and Permit Application documents subject to the modifications; (4) the revision date of the modifications; and (5) a brief statement regarding the nature of the modifications. The Permittee shall place the log at the beginning of this Permit along with a copy of the Department's approval letters, when applicable. The Permittee must replace the pages, sections, and/or attachments in the Permit and Permit Application with the modified pages, sections, and/or attachments.

C. DEFINITIONS

1. For the purposes of this Permit, the terms used herein shall have the same meanings as those provided in 6 NYCRR 370 through 374 and 376, and the terms defined in this Permit, unless this Permit specifically states otherwise. Where the terms are not otherwise defined, the meanings associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industry meaning of the term.

2. The following additional terms used in this Permit are defined as such:

   a. Action Levels. For the purposes of this Permit, "action levels" are hazardous constituent concentrations for a specific environmental medium which if exceeded indicate a potential threat to human health or the environment. The exceedance of action levels may trigger further investigations, studies and corrective measures. Where available, action levels are based on appropriate promulgated standards established for a specific environmental medium. When promulgated standards are not available, action levels can be media-specific hazardous constituent concentrations derived from non-promulgated human health risk data or environmental risk data with the latter levels being protective of aquatic life or wildlife. An action level may be set at the background level for a hazardous constituent for which data are inadequate to set a human health or environmental health-based level. The action levels for groundwater are the more stringent of the following for each compound or constituent: 6 NYCRR 703.5, New York State Department of Health's Drinking Water Standards and the United States Environmental Protection Agency's Maximum Contaminant Levels (MCLs).

b. Areas of Concern (AOC). Pursuant to the authority granted by 6 NYCRR 373 1.6(c)(2), an "area of concern" has been defined for purposes of this Permit to mean an area at the facility, or an off-site area, which is not at this time known to be a solid waste management unit (SWMU), where hazardous waste and/or hazardous constituents are present, or are suspected to be present, as a result of a release from the facility. The term shall include areas of potential or suspected contamination as well as actual contamination. Such area(s) may require study and a determination of what, if any, corrective action may be necessary. All Permit references to and conditions for SWMUs shall apply to areas of concern.

c. Contamination. The presence of any hazardous constituent in a concentration which exceeds the naturally occurring concentration of that constituent in areas which should not be affected by the operations of the facility.

d. Corrective Action. For the purposes of this Permit, "corrective action" is a process that includes all activities related to the investigation, characterization and cleanup of a release of hazardous wastes or hazardous constituents from a solid waste management unit (SWMU) at a permitted or interim status treatment, storage and disposal facility (TSDF) to any environmental medium. The "corrective action" process includes all activities necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents at the facility, regardless of the time at which waste was placed in the unit. Corrective action may address releases to air, soil, surface water sediment, groundwater, or subsurface gas. Module II of this Permit contains a more detailed discussion of the corrective action process.

e. DEC or Department. New York State Department of Environmental Conservation

f. DER. Division of Environmental Remediation.

g. Environment or environmental media. "Environment" or "environmental media" means any water; water vapor; land, including land surface or subsurface; air; and, fish, wildlife, biota and all other natural resources.

h. Extent of Contamination. The horizontal and vertical area in which the concentrations of hazardous constituents in the environmental media being investigated are above the naturally occurring concentration of that constituent in areas which should not be affected by the operations of the facility.

i. Hazardous Constituents. For the purposes of this Permit, "hazardous constituents" are those constituents listed in Appendix 23 of 6 NYCRR 371 or any constituent listed in Appendix 33 of 6 NYCRR 373-2 as well as any hazardous substances in 6 NYCRR Part 597.

j. Permittee. For the purposes of this Permit, "Permittee" herein refers to the party(ies) subject to this Permit. In addition, refer to **Conditions S.2 and S.3** of this Module.

k. Priority Pollutant. Pursuant to 6 NYCRR 750-1.2(a)(67), "priority pollutant" means those pollutants listed in 40 CFR 122, Appendix D (see 6 NYCRR 750-1.24) as Organic Toxic Pollutants (volatiles, acid compounds, base/neutral compounds and pesticides), Metals, Cyanide and Total Phenols.

l. Release. For purposes of this Permit, "release" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment of any hazardous waste, including hazardous constituents, unless expressly authorized under the terms of this Permit or otherwise permitted under law (e.g., SPDES permitted discharges).

m. Solid Waste Management Unit (SWMU). For purposes of this Permit, a "solid waste management unit" includes any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of hazardous or solid wastes. Such units include any area at the facility at which solid wastes have been routinely and systematically released. These units include certain areas associated with production processes that have become contaminated as a result of routine and systematic releases.

n. Unit. Includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank, container storage area, wastewater treatment unit, elementary neutralization unit, or recycling unit.

D. GENERAL PERMIT CONDITIONS [6 NYCRR 373-1.6]

1. 6 NYCRR 373-1.6 provides conditions applicable to all Part 373 Permits which are therefore incorporated into this Permit. The provisions are incorporated into and made enforceable under this Permit.

2. Oral Reports: The Permittee must orally report any noncompliance that may endanger health or the environment within 24 hours from the time the Permittee becomes aware of the circumstances. This noncompliance includes, but is not limited to:

   a. Information concerning release of any hazardous waste(s), hazardous constituents(s) or emerging contaminant(s) that may cause an endangerment to public drinking water supplies; and

   b. Any information of a release or discharge of hazardous waste(s), hazardous constituents(s) or emerging contaminant(s) or of a fire or explosion from the hazardous waste management (HWM) facility, which could threaten the environment or human health outside the facility.

   The oral reports must be made to the DEC using the New York State 24-hour oil and hazardous material spill notification number (800) 457-7362 and the National Response Center using its 24-hour number (800) 424-8802, or any designated telephone numbers which may subsequently replace those listed above. The Permittee must also provide such oral reports to DEC staff that are on-site at the time of, or subsequent to, a reportable incident. The information reported must include that listed

at 6 NYCRR 373-1.6(a)(12)(vi)('b') and 6 NYCRR 373-2.4(g)(4)(ii).

For a fire, explosion or release to the environment, the Permittee must also comply with the reporting requirements in **Condition L.3** of this Module.

3. Entry Upon Facility:

   a. The Permittee must allow, pursuant to 6 NYCRR 373-1.6(a)(9), entry upon the Facility (or areas in the vicinity of the Facility which may be under the control of the Permittee) at reasonable times by any duly designated officer or employee of the United States Environmental Protection Agency (USEPA), the DEC or any State agency having jurisdiction with respect to matters addressed pursuant to this Permit, and by any agent, consultant, contractor or other person so authorized by the DEC, upon presenting identification, for inspecting, sampling, copying records that must be maintained by this Permit, testing, and any other activities necessary to evaluate the Permittee's compliance with this Permit.

   b. Upon request, the Permittee must: (i) provide the DEC with suitable workspace at the Facility, including access to a telephone, to the extent available; and, (ii) allow the DEC full access to all records relating to matters addressed by this Permit. Raw data must be provided to the DEC upon request.

   c. In the event the Permittee is not the owner of the Facility property and is unable to obtain any authorization from third-party property owners necessary to provide access, the Permittee must immediately notify the Department and provide any requested assistance in obtaining such authorizations.

   d. The DEC shall have the right to take its own photographs, samples and scientific measurements and to obtain split samples, duplicate samples or both, as necessary to evaluate the Permittee's compliance with this Permit. The DEC shall make the results available to the Permittee in accordance with DEC policy.

4. Reservation of Rights

   a. Nothing contained in this Permit shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the DEC's rights or authorities, including, but not limited to, the right to require performance of further investigations and/or response action(s), the right to, at any time, issue a notice of intent to modify, suspend or revoke this Permit in accordance with 6 NYCRR 621.13 and/or to exercise any summary abatement powers with respect to any person, including the Permittee.

   b. Except as otherwise provided in this Permit, the Permittee specifically reserves all rights and defenses under applicable law, and further reserves all rights respecting the enforcement of this Permit, including the rights to notice, to be heard, to appeal, and to any other due process. The existence of this Permit or the Permittee's compliance with it shall not be construed as an admission of liability, fault, wrongdoing, or breach of standard of care by the Permittee, and shall not give rise

to any presumption of law or finding of fact, or create any rights, or grant any cause of action, which shall inure to the benefit of any third party.

E. PERMIT MODIFICATION AND PERMIT TRANSFER [6 NYCRR 373-1.7 and 621]

1. Proposed modifications to this Permit, including modifications to the Attachments and documents incorporated by reference into this Permit, must be addressed in accordance with 6 NYCRR 373-1.7 and 621.

2. The Permittee must contact the DEC with respect to any and all proposed permit modifications requested by the Permittee. The DEC shall make the determination as to whether a proposed permit modification is a minor or major modification in accordance with 6 NYCRR 373-1.7 and 40 CFR 270.42. For the purposes of this Permit, as described in **Condition E.2.a** of this Module, the DEC will entertain proposed administrative modifications to this Permit that would not otherwise be required to follow the requirements of **Conditions E.2.b and/or E.2.c** of this Module. Administrative changes generally include in-kind replacements or minor updates to plans attached to this Permit or incorporated by reference. **However, the DEC must determine whether any and all changes are administrative modifications to this Permit.**

   a. For modifications determined by the DEC to be administrative, the Permittee shall make the change in the Permittee's copy of all affected Attachment(s) and/or document(s) incorporated by reference. Submittal to the DEC of a change that the DEC has determined is administrative in nature is not necessary. However, at the time of Permit renewal, the Permittee must incorporate all administrative changes into this Permit. The Permittee must record all administrative changes in the Permit Modification Log provided as **Attachment A** of this Permit in accordance with **Condition E.3** of this Module. **Note:** The DEC reserves the right to have its project manager, environmental monitor and/or permit writer request proposed administrative changes in writing by the Permittee's submission of a cover letter, written description of the proposed administrative modification and a clean copy of the modified affected pages for the DEC's review and approval.

   b. For modifications determined by the DEC to be minor pursuant to 6 NYCRR 373-1.7(c) and 40 CFR 270.42(a), the Permittee must receive written approval from the DEC before implementing the modification into this Permit, and subsequently follow the requirements of 6 NYCRR 373-1.7, 6 NYCRR Part 621 and DEC guidance for minor modifications.

   c. For modifications determined by the DEC to be major, the Permittee must treat the modification as a new application in accordance with 6 NYCRR 621.11 and follow the applicable requirements of 6 NYCRR 621.

3. The Permittee must maintain a log of all modifications requested and made to this Permit, including modifications made to the Attachments and documents incorporated by reference into this Permit. The log must conform to the DEC-approved format presented in **Attachment A** of this Permit and must be submitted with each modification request. The log must be filled out in its entirety, except for the issuance

date. Upon issuance of each Permit modification, the Permittee must place the updated log in **Attachment A** of this Permit along with a copy of the DEC's approval letters, when applicable, and replace all affected pages in the Modules, Attachments and/or documents incorporated by reference with the modified pages.

4. The DEC may at any time, at its discretion, modify this Permit under the terms of 6 NYCRR 621.13 in accordance with the requirements contained therein.

5. Permit Transfer: The Permittee must process all changes in Facility ownership and/or operational control in accordance with the requirements of 6 NYCRR 373-1.7(a), including the timeframes specified therein. Prior to undertaking a change in Facility ownership and/or operational control, the Permittee must provide written notification to the DEC and receive written approval from the DEC to allow transfer of this Permit. The Permittee must demonstrate to the DEC's satisfaction that the prospective transferee will be able to comply with all applicable laws and regulations, Permit conditions, financial assurance and other requirements to which the Permittee is subject. The written notification must include the identity of the transferee and of the nature and proposed date of the conveyance, and must notify the transferee in writing, with a copy to the DEC, of the applicability of this Permit including the corrective action program, as appropriate. The DEC will determine whether transfer of this Permit is acceptable and will require either a minor or major modification.

F. EXPIRATION AND CONTINUATION OF PERMITS [6 NYCRR 373-1.8]

1. Requests for continuation of this Permit must be submitted in accordance with 6 NYCRR 373-1.8 and 621.11.

2. No sooner than one (1) year and no later than one hundred eighty (180) calendar days before the expiration of this Permit, the Permittee must provide the DEC with a report regarding the matters identified in ECL 27-0913(3) occurring within two (2) years of the date of the report. The report must include any such matters involving the permitted Facility, all other facilities owned or operated by the Permittee and any duly incorporated parent or subsidiary managing hazardous wastes within the United States. The Permittee must supply such documents and pertinent details regarding the matters in the report as may be requested by the DEC.

3. The Permittee must schedule a "Pre-Application" meeting with the DEC at least two hundred seventy (270) calendar days prior to the expiration date of this Permit. Renewal applications with a significant change (as defined at 6 NYCRR 373-1.10(a)(1)) are subject to the requirements of 6 NYCRR 373-1.10.

4. Complete applications for permit renewal must be submitted at least one hundred eighty (180) calendar days before the expiration date of this Permit pursuant to 6 NYCRR 373-1.8(b).

5. At any time during the review of the renewal application, the DEC may request that the Permittee submit any additional information in writing which is necessary for determining the completeness of the application. Failure to provide such information by the date specified in the request may be grounds for denial of the application and

the extension allowed pursuant to Section 401(2) of the State Administrative Procedures Act.

G. TERMINATION OF PERMIT ACTIVITIES

1. Should the Permittee cease the hazardous waste management activities allowed by this Permit prior to the expiration of this Permit, then, pursuant to 6 NYCRR 373-1.6(d), the Permittee must continue to comply with the applicable closure, post-closure and corrective action conditions and requirements stipulated in this Permit.

2. If the Permittee certifies closure of all hazardous waste management units at the Facility, and the DEC accepts these closure certifications during the term of this Permit, and post-closure care or corrective action is determined to be necessary by the DEC, the Permittee may request to enter into another enforceable commitment document which is appropriate, pursuant to Environmental Conservation Law (ECL) Section 71-2727(3) in lieu of this Permit. The Permittee must enter into the appropriate enforceable commitment prior to the expiration of this Permit, or submit a renewal application as required by **Condition F. 4** of this Module.

H. FACILITY OPERATION

1. In accordance with 6 NYCRR 373-2.3(b), the facility must be designed, constructed, maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste(s) or hazardous waste constituents to air, soil, surface water or groundwater that could threaten human health or the environment.

2. The Permittee must at all times construct, operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee as designed in accordance with this Permit.

3. The Permittee must inspect the Facility to prevent malfunctions and deterioration, operator errors, and discharges that may cause or lead to the release of hazardous waste(s) or hazardous waste constituents to the environment, or a threat to human health pursuant to 6 NYCRR 373-2.2(g).

I. COMPLIANCE SCHEDULE

1. The Permittee must complete any activities referenced in **Condition A of Module XIII** of this Permit within the timeframes set forth therein and in accordance with 6 NYCRR 373-1.6(d).

2. The Permittee must submit reports in a DEC-approved format no later than 14 days following each interim and the final compliance date that summarize the status of each of the activities listed in this Permit. These reports must be signed and certified pursuant to 373-1.6(a)(11) and 373-1.4(a)(5).

J. WASTE ANALYSIS [6 NYCRR 373-2.2(e)]

1. The Permittee must perform general waste analysis in accordance with the requirements of 6 NYCRR 373-2.2(e) and this Permit.

2. All laboratories utilized for the analysis of any closure, post-closure and/or corrective action samples must be certified under the New York State Department of Health's Environmental Laboratory Approval Program (ELAP). Any laboratory tests or sample analyses for which the commissioner of the New York State Department of Health (NYSDOH) issues certificates of approval must be performed by a laboratory certified to perform such tests or analyses pursuant to the NYSDOH Environmental Laboratory Approval Program.

K. PERSONNEL TRAINING PROGRAM [6 NYCRR 373-2.2(h)]

1. The Permittee must conduct personnel training in accordance with 6 NYCRR 373-2.2(h)(1), (2) and (3), and this Permit.

2. The Permittee must maintain training documents in accordance with 6 NYCRR 373-2.2(h)(4) and (5), and this Permit.

L. PREPAREDNESS AND PREVENTION, CONTINGENCY PLAN AND EMERGENCY PROCEDURES [6 NYCRR 373-2.3 and 2.4]

1. The Permittee must comply with the preparedness and prevention requirements in accordance with 6 NYCRR 373-2.3 and this Permit.

2. The Permittee must comply with contingency plan and emergency procedure requirements in accordance with 6 NYCRR 373-2.4 and this Permit.

3. Reporting of Fires, Explosions or Releases to the Environment

   a. Oral Reports: For fires, explosions or releases which could threaten human health or the environment outside of the facility, the Facility's Emergency Coordinator must immediately notify the DEC (using the New York State 24-hour oil and hazardous material spill notification number (518) 457-7362) and the local governmental official designated as the on-scene coordinator for that governmental area. This notification must be made in accordance with, and include the information required by 6 NYCRR 373-2.4(g)(4)(ii).

   b. Written Report: For any fire, explosion or release to the environment, except if the release is less than or equal to one (1) pound and immediately cleaned up, the Permittee must, within fifteen (15) calendar days of the incident, submit a written report to the DEC in accordance with, and include the information required by 6 NYCRR 373-2.4(g)(10).

M. WASTE REDUCTION REQUIREMENTS

1. The Permittee must comply with the requirements of Article 27, Title 9, Section 27-0908 of the ECL and 6 NYCRR 373-2.5(c)(2)(ix) relative to waste reduction requirements.

N. REQUIREMENTS FOR RECORDING AND REPORTING OF MONITORING RESULTS [6 NYCRR 373-1.6(b)]

1. The Permittee must comply with the recording, reporting and monitoring requirements listed in this Permit.

2. The Permittee must install, use and maintain monitoring equipment, utilize the approved methods, and report monitoring results as specified in this Permit, and 6 NYCRR 373-2.

O. DATA AND DOCUMENT STANDARDS

1. All analytical data required by this Permit, as well as all analytical data requested by the Department, must be submitted to the DEC in the standardized format in accordance with the DEC's Electronic Data Deliverable guidance (i.e., NYSDEC EQuIS™ database) within 30 days of receipt from the laboratory or at a schedule approved by the Department (see http://www.dec.ny.gov/chemical/62440.html). The Permittee may obtain Category A deliverables for routine sampling activities. At decision points where determinations of final actions are taken, the Permittee must obtain Category B deliverables and have all closure, post-closure and corrective action data validated by a third party prior to submission to the DEC. The individual performing the third-party validation must prepare a Data Usability Summary Report (DUSR) consistent with the guidelines of the DEC's Technical Guidance for Site Investigation and Remediation, DER-10. The DUSR must be submitted with the report containing the data in accordance with **Condition O.2** of this Module. The data deliverable submitted to the DEC must include the results of the data validation.

2. The Permittee must deliver to the DEC preliminary or final reports, specifications or drawings prepared pursuant to this Permit in an electronic format that complies with the DEC's Electronic Document Standards (EDS) or as otherwise directed by the DEC. All final documents are to be submitted in an electronic format that complies with the most recent DER EDS. Until such time as the DEC establishes an EDS, final documents are to be submitted as a PDF document (see Requirements For Submittal Of Electronic Documents - NYSDEC). Also, the Permittee must, at the request of the DEC, provide electronic versions of technical documents in MS Word and/or MS Excel, and plan drawings and/or other site drawings in AutoCAD, or other format suitable to the DEC.

3. In addition to electronic copies, the Permittee must provide paper copies of any document (e.g., reports, plans, data, specifications, drawings, etc.) requested by the Department in paper format or as may be specified in paper format in this Module.

4. All Documents and Reports required by this Permit and other information requested by the DEC must be signed in accordance with the provisions of 6 NYCRR 373-1.4(a)(5),

and include the following statement required by 6 NYCRR 373-1.4(a)(5)(iv): "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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."

P. FINANCIAL ASSURANCE

1. The Permittee must comply with all of the applicable requirements of 6 NYCRR 373-2.8 and this Permit. The definitions contained in 6 NYCRR 373-2.8(b) are applicable to the financial requirements within this Permit.

2. The Permittee must comply with this Permit and 6 NYCRR 373-2.6(l) for meeting the financial assurance requirements for corrective action for releases from any solid waste management unit located at the Facility, regardless of the time the waste was placed in the unit.

3. The Permittee must adjust for inflation all cost estimates required by 6 NYCRR 373-2.6(l), 373-2.8 and this Permit annually by April 1st or another DEC-approved date and provide additional financial assurance for this adjustment in accordance with 6 NYCRR 373-2.8 and **Condition P.6**. These adjustments must be independent of any requests to decrease cost estimates, unless the DEC has previously approved such a decrease (i.e., the inflationary adjustment must be made separately from any unapproved request for a decrease in the cost estimate). In addition, the total amount of any post-closure cost estimate must be established and maintained throughout the life of this Permit in at least the amount derived by multiplying the annual post-closure cost estimate by a minimum of thirty (30) years unless the DEC has approved a decrease in the post-closure care period for a unit or the Facility in accordance with 6 NYCRR 373-2.7(g)(1)(ii).

4. The Department-approved closure, post-closure and corrective action cost estimates are in **Attachment H** of this Permit. These cost estimates must be adjusted annually either by recalculating the cost estimate in current dollars, or by using an inflation factor in accordance with **Conditions P.3 and P.6** of this Module.

5. The Permittee must obtain approval in writing from the DEC prior to any reduction in the approved cost estimates and for any changes to the instrument(s) and/or mechanism(s) (e.g., type of instrument(s) and/or mechanism(s), the issuing company(ies)/institution(s) and/or a reduction in the dollar amount(s)).

6. Corrective Action Cost Estimates: For any and all corrective actions required under the authority of this Permit for any Solid Waste Management Units, both final and interim, the Permittee must submit for the DEC's approval, written estimates, in current dollars, which reflect all costs involved in implementing corrective action through DEC-approved completion. Such estimates must reflect the cost of hiring a third party to

perform the corrective action in accordance with 6 NYCRR 373-2.8(e)(1)(i). For the final corrective measure(s), the Permittee must provide such estimates with the submission of the Corrective Measures Implementation (CMI) work plan. For Interim Corrective Measures (ICM) requiring work plans, the Permittee must provide such estimates with the submission of each ICM work plan required by this Permit.

7. Short-Term Corrective Measures: For financial assurance of final or interim corrective measures for any Solid Waste Management Units required by DEC-approved work plans where the implementation schedule in the approved work plan(s) indicates anticipated completion of said action(s) within one (1) year, the Permittee must provide the DEC with a letter certifying that the Permittee has sufficient liquid financial resources to perform and complete the approved corrective measure(s) based on the DEC-approved cost estimate(s) required by **Condition P.6** of this Module. This letter must include a certification in accordance with 6 NYCRR 373-1.4(a)(5) and must be provided for the DEC's acceptance with the Permittee's submission of a final or interim corrective measures work plan(s). If the DEC notifies the Permittee that the certification is not acceptable, the Permittee must establish financial assurance for corrective measures in accordance with the requirements of financial assurance for Long-Term Corrective Measures as specified in **Condition P.8** of this Module within sixty (60) days of said notification. If the corrective action(s) are not completed within one (1) year of the initial certification, the Permittee may request and the DEC, at its discretion, may approve up to a one (1) year extension of the certification. If the corrective action(s) has not been completed to the DEC's satisfaction at the end of the first year or a DEC-approved extension, the Permittee must, within sixty (60) days, provide financial assurance in accordance with the requirements of financial assurance for Long-Term Corrective Measures as specified in **Condition P.8** of this Module.

8. Long-Term Corrective Measures: For final or interim corrective measures required for any Solid Waste Management Units by a DEC-approved work plan(s) where the implementation schedule in the approved work plan(s) indicates that the anticipated completion of the final or interim corrective action(s) will take longer than one (1) year, the Permittee must establish and maintain a DEC-approved financial assurance instrument(s) in accordance with 6 NYCRR 373-2.8(f). This financial assurance must be equal to the current dollar amount of the most recent DEC-approved final or interim corrective measures cost estimate(s) required by **Condition P.6** of this Module. The DEC-approved financial assurance must be one, or an allowable combination, of the financial assurance instruments, specified in 6 NYCRR 373-2.8(f)(1) through (4) and these instruments must be issued by an entity, or entities, that are legally and fiscally separate and distinct from the Permittee and any parent or subsidiary thereof. If the Permittee chooses to use either 6 NYCRR 373-2.8(f)(2) or (3) (or a combination thereof), the Permittee must revise or establish a Standby Trust Fund in accordance with said regulations. The Permittee must submit the instrument(s), for the DEC's approval, no later than sixty (60) days after the DEC's approval of corrective measures work plan(s), or as required by the requirements of financial assurance for Short-Term Corrective Measures as specified in **Condition P.7** of this Module.

9. For any Permit modification request pertaining to the Closure Plan or Post-Closure Plan provided as **Attachment E** of this Permit involving an increase in cost, the Permittee must also submit a revised cost estimate, in current dollars, which includes

the cost increases with appropriate third-party justification. For any new or modified corrective measure required by this Permit and submitted by the Permittee subsequent to the issuance of this Permit which involves an increase in the cost of corrective action, the Permittee must also submit for DEC approval, a revised cost estimate, as discussed in the preceding sentence.

10. Within sixty (60) calendar days of a modification of this Permit or DEC approval of a new or modified corrective measure involving an increase in a cost estimate, the Permittee must establish additional financial assurance to cover the amount of the increase in the cost estimate in accordance with the requirements of 6 NYCRR 373-2.8.

11. The Permittee must maintain the DEC-approved financial assurance instruments for closure, post-closure, corrective action, and third-party liability coverage. Changes in existing financial assurance instruments or replacement of existing financial assurance instruments must be approved by the DEC. The Permittee must provide annual evidence to the DEC within thirty (30) calendar days prior to the anniversary on which the initial approved financial assurance instrument was established, that all required instruments have been maintained and not allowed to lapse.

12. Within sixty (60) calendar days after any increase in the approved cost estimate, the Permittee must, in accordance with 6 NYCRR 373-2.8, either:

    a. Revise one or more of the DEC approved financial assurance instrument(s) to increase the instrument(s) amount by at least the amount of the increase in the approved cost estimate and submit the revised instrument(s) for DEC approval; or

    b. Submit an additional financial assurance instrument, or instruments from the allowable instrument types specified in 6 NYCRR 373-2.8 with an amount equal to at least the amount of the increase in the approved cost estimate and submit the additional instrument(s) for DEC approval.

13. If the Permittee elects to replace any instrument with new financial assurance instrument(s) as specified by 6 NYCRR 373-2.8, the new instruments must be issued by an entity, or entities, that are legally and fiscally separate and distinct from the Permittee and any parent or subsidiary thereof. Also, if applicable, any replacement instruments pertaining to post-closure and corrective action must be worded in accordance with 6 NYCRR 373-2.8(j) except that the words "post-closure and corrective action" must be substituted for the words "post-closure" in any such replacement instrument.

Q. COMMUNICATIONS

1. The Permittee must transmit all communications pursuant to this Permit to the DEC via electronic delivery to the recipients specified in **Condition W.1** of this Module. All deliverables must be transmitted in a DEC-approved format as specified in **Condition O** of this Module.

2. If requested by the DEC in lieu of or in addition to an electronic deliverable, the Permittee must transmit the requested written communications pursuant to this Permit to the DEC by United States Postal Service, by private courier service or by hand delivery to the following address:

   Supervisor, HW Corrective Action & Post Closure
   Division of Materials Management
   New York State Department of Environmental Conservation
   625 Broadway
   Albany, NY 12233-7256

3. The Permittee must submit additional copies of the specific deliverables identified in **Condition W** of this Module to the addresses and agencies listed therein.

R. PENALTIES

1. The Permittee's failure to comply with any term of this Permit constitutes a violation of this Permit and the ECL. Nothing herein abridges the Permittee's right to contest any allegation that it has failed to comply with this Permit.

2. Payment of any penalties must not in any way alter the Permittee's obligations under this Permit.

S. MISCELLANEOUS

1. The paragraph headings set forth in this Permit are included for convenience of reference only and must be disregarded in the construction and interpretation of any provisions of this Permit.

2. If there are multiple parties subject to this Permit, except where stated otherwise, the term "Permittee" must be read in the plural, the obligations of each such party under this Permit are joint and several, and the insolvency of or failure by any Permittee to implement any obligations under this Permit must not affect the obligations of the remaining Permittee(s) under this Permit.

3. If the Permittee is a partnership, the obligations of all general partners (including limited partners who act as general partners) under this Permit are joint and several and the insolvency or failure of any general partner to implement any obligations under this Permit must not affect the obligations of the remaining partner(s) under this Permit.

4. In any administrative or judicial action to enforce a condition of this Permit, the Permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Permit.

5. Whenever materials or equipment are specified or described in this Permit using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, quality, performance and design criteria required. In all cases, unless the name is followed by words indicating that "no 'or equal' or substitution is allowed" or similar language, materials or equipment of other

suppliers may be accepted by the DEC if sufficient information is submitted by the Permittee to allow the DEC to determine that the material or equipment proposed is equivalent or equal to that named. Requests for review of "or equal" or substitute items of material and equipment will not be accepted by the DEC from anyone other than the Permittee. If the Permittee wishes to furnish or use an "or equal" or substitute item of material or equipment, the Permittee must make written application to the DEC for acceptance thereof, certifying that the proposed "or equal" or substitute will perform the same functions and achieve the same results called for by the general design, be similar and of equal substance and quality to that specified, and be suited to the same use as that specified.

6. The Permittee may submit a written request to the DEC for a clarification on compliance with any condition in this Permit. Any such request must be submitted at least 30 calendar days prior to the date on which the Permittee must comply with the condition identified in the clarification request. In response, the DEC will provide the Permittee with a written clarification, detailing what constitutes compliance with the identified Permit condition. This clarification process shall in no way relieve the Permittee from the obligation to comply with all the terms and conditions of this Permit.

7. All data, information, and records concerning, created for or maintained by the Permittee for the operation, investigation or remediation of the facility and any contamination that has emanated from the facility, shall be preserved and made available to the DEC upon request, except for attorney-client privilege or work product protection doctrine material(s). The Permittee shall use its best efforts to ensure that all employees of the Permittee and all persons, including contractors and subcontractors who engage in activities under this Permit, are made reasonably available to, and cooperate with the DEC if information, whether written or oral, is sought.

8. Special Conditions Concerning Future State and/or Federal Laws or Regulations

   a. In the event that any State statutory or regulatory requirements are enacted, adopted, or promulgated which are applicable to the Permittee's Facility and address the need for and/or the nature and extent of post-closure care and/or corrective action, and such statutory or regulatory requirements are deemed by the Department to be more stringent than the post-closure care and/or corrective action requirements stipulated in this Permit, such statutory and regulatory requirements shall supersede the pertinent requirements of this Permit.

   b. In the event that any Federal statutory or regulatory requirements are enacted, adopted, or promulgated which are applicable to the Permittee's Facility and address the need for and/or the nature and extent of post-closure care and/or corrective action, such statutory or regulatory requirements shall supersede the pertinent requirements of this Permit to the extent that it is determined by the Department that such statutory or regulatory requirements afford equal or greater protection to continuing post-closure care and/or corrective action as is afforded by this Permit.

T. REQUIREMENTS FOR AN ON-SITE DEC ENVIRONMENTAL MONITOR

1. Number of DEC Environmental Monitors assigned to Facility: **Zero (0)**

2. The Permittee shall fund environmental monitoring services to be performed by or on behalf of the Department. These monitoring services will include, but not be limited to, the scope of work in an annual environmental monitoring work plan which is incorporated by reference and enforceable under this Permit.

3. The Permittee shall provide to the Department on an annual basis the funds necessary to support the activities set forth in the annual environmental monitoring work plan. The sum to be provided will be based on the annual budgeted amount and is subject to annual revision. Subsequent annual payments shall be made for the duration of this Permit or until the environmental monitoring services are no longer necessary, whichever comes first. The Permittee shall be billed annually, prior to the start of each State Fiscal Year (SFY) (April 1). If this Permit is to first become effective subsequent to April 1, the initial bill will be for an amount sufficient to meet the anticipated cost of the environmental monitoring services through the end of the current SFY.

4. The DEC may revise the required payment on an annual basis to include all costs of environmental monitoring services to the DEC. The annual revision may take into account factors such as inflation, salary increases, changes in the fringe benefits rate, changes in operating hours and procedures, changes in non-personal service costs (including travel, training, sampling and analytical, and equipment costs, etc.), and changes in the need for and level of Environmental Monitor services and supervision of such Environmental Monitor(s). Upon written request by the Permittee, the DEC shall provide that entity with a written explanation of the basis for any modification. If such a revision is required, the DEC will notify the Permittee of such a revision no later than 60 calendar days in advance of any such revision.

5. Prior to making its annual payment, the Permittee will receive and have an opportunity to review an annual work plan that the DEC will undertake during the year.

6. Payments are to be in advance of the period in which they will be expended. Payments shall be made in full within thirty (30) calendar days of written notice by the DEC that a payment is due. The notice from the Department to the Permittee will provide information regarding to whom payments should be made payable and the address to which payments should be sent.

7. Failure to make the required payments is a violation of this Permit. The DEC reserves all rights to take appropriate action to enforce the above payment provisions.

8. The Environmental Monitor(s) shall, when present at the Permittee's Facility, abide by all of the Permittee's health and safety and operational requirements and policies; if such requirements and policies exist and provided they are not inconsistent with Department policies and labor management contracts, and further provided, however, that this shall not be construed as limiting the Environmental Monitor's powers as otherwise provided for by law and shall not result in the Environmental Monitor(s)

being less protected than the Environmental Monitor(s) would be if he or she were to abide by State and Federal health and safety requirements.

9. The DEC's Environmental Monitor(s) must receive from the Permittee all general and site- specific safety training which is normally given to new facility/site employees for all areas of the facility or site. This training will be a supplement to the mandatory safety training that Environmental Monitors receive from the Department. Upon selection of the Environmental Monitor(s), the Permittee shall immediately furnish to the Environmental Monitor(s) any facility/site health and safety and operational requirements and policies. Within five (5) days of any revision to the facility/site health and safety and operational requirements and policies, the Permittee shall furnish to the Environmental Monitor(s) the health and safety and operational requirements and policies.

10. The Environmental Monitor(s) shall be permitted to use environmental monitoring and data collection devices (e.g., photo ionization detectors, cameras, video recording devices, computers, cell phones, etc.) deemed necessary by the Department to evaluate and document observed conditions. Copies of the data or images collected from areas where confidentiality is a concern shall be provided to the Permittee upon their request. The Permittee may request the data and images be considered confidential information if appropriate.

11. It will remain the responsibility of the Permittee to contact the Spill Hotline or any Division within the Department regarding any required notification of any spill, release, exceedances etc. Notification to the environmental monitor will not be considered sufficient to replace any required notifications.

12. The Environmental Monitor's office space in a building is to be kept in good operating condition, including watertightness, lighting, appropriate heating and cooling, electrical power, telephone service and prompt snow removal. Adequate parking shall be provided for the monitor.

U. SPECIFIC CONDITIONS

1. The Permittee must make reasonable attempts to organize training events for local fire companies or departments, and to also arrange inspections of the Facility by these entities. During each inspection the Permittee shall solicit recommendations from the fire company or department concerning minimum suggested inventories for firefighting and safety equipment to be maintained at the facility. A report of each inspection, including any and all recommendations made by fire company or department inspectors and the Permittee's plans for addressing these recommendations, must be submitted to the DEC by the Permittee within seven (7) calendar days of each inspection.

2. The Permittee must make a copy of the Emergency Response Plan containing an inventory sheet listing the amount and location of all emergency equipment available on-site, to all employees involved in emergency response.

3. Upon notification by the Permittee of any partial closure of a unit or portion thereof, or

of final closure of the Facility, the DEC will determine at the time of said closures whether additional samples, sampling points, sampling techniques/methods and/or sample analysis (i.e., in addition to Closure Plan requirements in **Attachment E** of this Permit) will be necessary to verify the effectiveness of decontamination or removal of components, equipment, structures and contaminated soils. These determinations will be based upon the history of operating practices and types of wastes handled at the unit/Facility and on the closure regulations and other requirements in effect at the time of closure of the unit/Facility. The operating record, the record of spills, the types of waste released, location of spills and the condition of any secondary containment systems will also provide data to be used in these determinations. Also, at the time of said closures, the DEC will determine whether more restrictive and/or additional criteria (i.e., more restrictive than, or in addition to Closure Plan criteria in **Attachment E** of this Permit) will be necessary to verify the effectiveness of decontamination or removal of components, equipment, structures and contaminated soils, based on the DEC's regulatory cleanup standards in effect at the time of said closures.

4. If the DEC determines that additional sampling and analysis or more restrictive and/or additional criteria are necessary at the time of unit/Facility closure, the DEC shall send the Permittee a notice of intent to modify this Permit in accordance with 6 NYCRR 621 to incorporate these requirements into the Permit. In the event the DEC issues such a notice of intent, the Permittee will be restricted from issuing a certification of closure for the unit/facility in accordance with 6 NYCRR 373-2.7(f), until the associated 6 NYCRR 621 Permit modification process is completed and any associated closure requirement(s) that might result from this modification process are satisfied.

5. Permittee (i.Park) must obtain approval in writing from the Department for any new proposed uses or activities on the Site, including but not limited to any new tenant uses or activities, prior to any and all construction or fitting up or any other activity related to the commencement of that new activity. The Department's review and approval shall take into consideration the proposed activities' use classification (i.e., industrial, commercial, etc.) and the current use restrictions in place at the Site.

6. Permittee (i.Park) must submit to the Department the requisite 60-day notice for any new proposed use or activities on the Site, including but not limited to any new tenant uses or activities, prior to any and all construction or fitting up or any other activity related to the commencement of that new activity, and otherwise comply with the Department's requirements.

V. PUBLIC PARTICIPATION (including 6 NYCRR 373-1.10)

1. Information Repository (6 NYCRR 373-1.10(c))

The Permittee shall establish and maintain Information Repositories at:

onsemi East Fishkill
2070 Route 52
Hopewell Junction, NY 12533

IBM

https://ibm.box.com/v/EFKrepository

iPark
i.Park East Fishkill LLC (PUBLIC ACCESS) - Dropbox

These repositories shall need to be merged following issuance of a final Renewal Permit. See **Module XIII, Condition B.9**. The Permittee shall provide the DEC with thirty (30) calendar days' notice of any change to the location of the repository. The Permittee will continue to maintain the information repository for the life of the Permit or until otherwise notified by the DEC.

The repository shall contain a copy of the final approved Part 373 Permit application, approved documents such as plans, reports, other relevant documents, the Part 373 Permit Executive Summary/Fact Sheet, public notices pertaining to the Part 373 Permit, copies of correspondence including enclosures and attachments from the effective date of the Permit between the DEC and the Permittee pertaining to the Permit or to compliance. Certain portions of the permit, and other information within the repository, may be redacted as necessary to protect national security or due to public sensitivity.

The Permittee shall provide a written notice of the availability of the information repository to all individuals on the facility mailing list within one (1) month from the effective date of this Permit (except to those previously notified within one (1) year prior to the effective date of the Permit) and to all individuals on the facility mailing list one year before the expiration date of this Permit.

2. Other public participation activities to consider maintaining good community relations:

   a. Public Meetings

   b. Citizens Advisory Group Meeting

W. PLANS, REPORTS, SPECIFICATIONS, IMPLEMENTATION SCHEDULES AND OTHER SUBMITTALS

Submittals required by the Permit must be provided to the DEC and other identified Agencies as listed below. The list below identifies the DEC/Agencies staff by title that must receive submissions and indicates the types of submissions each must receive. At any time during the life of this Permit, the DEC may designate alternate titles or addresses to receive submissions (different than those indicated below), and direct the Permittee to make submissions to the alternate title or address. The list below also indicates whether the submission must be a paper or electronic copy. Where electronic copies are indicated, the submission must be in a form as required by **Condition O** of this Module. Submissions of electronic copies may be made by e-mail or other methods acceptable to the DEC. Appropriate email addresses will be provided to the Facility at Permit issuance and whenever there is a staffing or email address change.

1. One (1) electronic copy of all submittals to:

   Project Manager, Division of Environmental Remediation

New York State Department of Environmental Conservation
Region 3 Headquarters
21 South Putt Corners Rd.
New Paltz, NY 12561
emily.barry@dec.ny.gov

Steven McCague, Regional Hazardous Waste Remediation Engineer
Division of Environmental Remediation
New York State Department of Environmental Conservation
Region 3 Headquarters
21 South Putt Corners Rd.
New Paltz, NY 12561
steven.mccague@dec.ny.gov

Supervisor, HW Corrective Action & Post Closure
Bureau of Hazardous and Waste and Radiation Management
New York State Department of Environmental Conservation
625 Broadway, 9th Floor
Albany, NY 12233-7256
kevin.wood@dec.ny.gov

and one (1) electronic copy, transmitted via e-mail, to:

Manager, Land and Redevelopment Programs Branch
LCRD-LRPB
USEPA Region 2
290 Broadway, NY, NY 10007-1866
Phone: (212) 637-4109
nidal.azzam@epa.gov

2. One (1) paper copy and one (1) electronic copy of all financial assurance documents to:

   Financial Assurance Coordinator
   Bureau of Program Management
   Division of Environmental Remediation
   New York State Department of Environmental Conservation
   625 Broadway
   Albany, NY 12233-7012
   jennifer.dawson@dec.ny.gov

3. One (1) electronic copy of all waste reduction documents to:

   Pollution Prevention Unit
   Division of Materials Management
   New York State Department of Environmental Conservation
   625 Broadway
   Albany, NY 12233-7253
   pollutionprevention@dec.ny.gov

4. One (1) paper copy of all modification requests pertaining to this Permit to:

   Regional Permit Administrator
   Division of Environmental Permits
   New York State Department of Environmental Conservation
   Region 3 Headquarters
   21 South Putt Corners Rd.
   New Paltz, NY 12561

5. Where additional DEC staff are copied on the above submittals, the Permittee shall submit these copies electronically. In addition, the Permittee shall provide hard copies of any of the above submittal(s) when specifically requested by the Department.

MODULE II
Corrective Action Requirements

MODULE II
CORRECTIVE ACTION REQUIREMENTS

A. APPLICABILITY

1. Statute and Regulations: Article 27, Title 9, Section 27-0913, and 6 NYCRR 373-2.6(l) requires corrective action, including corrective action beyond the Facility boundary where necessary to protect human health and the environment, for all releases of hazardous wastes, including hazardous constituents listed in Appendix 23 of 6 NYCRR 371 or Appendix 33 of 6 NYCRR 373-2 as well as any newly added hazardous substances (i.e., emerging contaminants) in 6 NYCRR Part 597 (defined together as constituents), from any solid waste management unit (SWMU) at a storage, treatment or disposal facility that has ever sought a 6 NYCRR Part 373 or a federal RCRA permit, regardless of the time at which waste was placed in such unit. Pursuant to 6 NYCRR 373-1.6(c)(2), the Department may impose Permit Conditions as the Department determines necessary to protect human health and the environment (e.g., areas of concern (AOCs) as defined in **Module I** of this Permit).

2. **All documents and reports required by this Permit must be certified pursuant to conditions established in 6 NYCRR 373-1.4(a)(5)(iv) and Condition O.4 of Module I and submitted in accordance with requirements set forward in Conditions O and W of Module I. Additionally, unless specifically exempted in this Permit, all information (e.g., documents and reports) required to be submitted by the Permittee must be approved by DEC. DEC does not require certain plans, documents or reports to also be certified by NYS licensed professionals. The Permittee should verify if certification is required prior to submittal to the DEC.**

3. Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs): The Permittee must initiate and complete the corrective action process for all SWMUs and AOCs at the Facility. The conditions of this Module apply to:

   a. All the SWMUs and AOCs listed in **Table 1 of the SWMU/AOC Current Conditions Report in Attachment L** individually or in combinations.

   b. Any additional SWMU(s) and AOC(s) identified during the course of groundwater monitoring, field investigations, environmental audits or other means as described in **Condition C** below.

   c. All SWMUs and AOCs located on-site and/or off-site are identified in **Table 1** of the **SWMU/AOC Current Conditions Report in Attachment L** as SWMUs/AOCs requiring Further Corrective Action or No Further Action.

   d. The Permittee need not undertake corrective action at any SWMU(s) and/or AOC(s) identified as No Further Action in **Table 1 of the SWMU/AOC Current Conditions Report in Attachment L** provided there is no evidence of the release(s) of hazardous waste(s), constituent(s) from the SWMU(s) and/or AOC(s) threatening human health or the environment.

e. A determination of No Further Action shall not preclude the DEC from modifying this Permit in accordance with 6 NYCRR 621.13 in order to require further investigations, studies, monitoring, or corrective measures, if new information, subsequent analysis or new contamination indicates the release(s) or likelihood of release(s) that could pose a threat to human health or the environment.

NOTE: If the SWMU/AOC Current Conditions Report was submitted prior to issuance of this Permit, then it is included in **Attachment L** with the abovementioned table (**Table 1**) as required. If it is listed as an item to be submitted following Permit issuance under the Schedule of Deliverables (**Module XIII, Condition B**), then the abovementioned table (**Table 1**) must be included in the document as required. Upon the DEC's acceptance of said report, it will automatically be included in **Attachment L**.

B. STANDARD CONDITIONS FOR CORRECTIVE ACTION

1. The Permittee must perform any and all corrective action specified by **Condition A.3** of this Module and all conditions in this Permit.

2. The Permittee must follow the requirements for groundwater protection as specified in **Module XI** of this Permit, including any groundwater sampling and analysis plan which may be required therein.

3. The Permittee and its consultants/contractors performing corrective action activities must demonstrate completion of appropriate training in accordance with the Department-approved personnel training plan in this Permit and follow all applicable health and safety plans.

4. Work Plans. All work plans submitted pursuant to this Module shall include:

   a. Quality Assurance/Quality Control protocols to ensure that data generated is valid and supported by documented procedures;

   b. Other plans (e.g., Quality Assurance Project Plan (QAPP)), specifications and protocols, as applicable;

   c. A schedule for starting specific tasks, completing the work and submitting progress and final reports; and

   d. Plans for the treatment, storage, discharge or disposal of wastes to be generated by activities described therein.

5. Quality Assurance/Quality Control. Any laboratory to be used pursuant to sampling required by this Module must be approved by the DEC prior to implementation. Certification by the New York State Department of Health (DOH) Environmental Laboratory Approval Program (ELAP) in the relevant analytical services is required. All laboratory deliverables must be submitted in accordance with **Condition O.1 of Module I.**

6. Health/Safety Plans. The Permittee shall develop, according to applicable Federal, State and local requirements, and submit to the DEC, health and safety plans that will be implemented to ensure that the health and safety of project personnel, plant personnel and the general public are protected. These plans are not subject to approval by the DEC.

7. Guidance Documents. When preparing the submissions described in this Permit Module, the Permittee shall take account of applicable guidance documents issued by the DEC and U.S. Environmental Protection Agency in a manner reflecting reasonable technical considerations.

8. Prior Submissions. The Permittee may have already submitted portions of information, plans, or reports required by this Permit Module and its Attachments to the DEC pursuant to the terms of previous applications, consent orders, or plans. For those items the Permittee contends were submitted to the DEC, the Permittee may cite the specific document(s) it believes adequately addresses each of the individual items requested by this Permit Module and its Attachments. The references, by document(s) shall be placed in the appropriate sections of the submissions that require the referenced information and data. If the DEC determines that it does not possess any of the referenced information, plans, or reports that the Permittee claims were previously submitted, the DEC will notify the Permittee and the Permittee shall submit the referenced documents within the time frame specified within the notification.

9. Compliance Schedule For Reporting And Submissions.

    a. The Permittee shall submit, to the DEC, signed progress reports, as specified in approved work plans pursuant to this Permit, of all activities (i.e., SWMU Assessment, Interim Measures, RCRA Facility Investigation, Corrective Measures Study) conducted pursuant to the provisions of the Corrective Action Compliance Schedules of this Permit Module, beginning no later than thirty (30) calendar days after the Permittee is first required to begin implementation of any requirement herein. These reports shall contain:

        i. A description of the work completed during the reporting periods;

        ii. Summaries of all findings made during the reporting period;

        iii. Summaries of all changes made during the reporting period;

        iv. Summaries of all contacts made with representatives of the local community and public interest groups during the reporting period;

        v. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;

        vi. Changes in personnel conducting or managing the corrective action activities during the reporting period;

vii. Projected work for the next reporting period; and

viii. Copies of daily reports, inspection reports, laboratory/monitoring data, etc., generated during the reporting period.

b. Upon request, copies of other relevant reports and data not identified in **Condition B.9.a** above shall be made available to the DEC.

c. The DEC may require the Permittee to conduct new or more extensive assessments, investigations, or studies, based upon information provided in the progress reports referred to in **Condition B.9.a** of this Module, or upon other supporting information.

d. All work plans, reports, studies, designs and schedules required by the conditions of this Permit Module and its Attachments are upon approval of the DEC, incorporated into this Permit by reference and become an enforceable part of this Permit. Any noncompliance with such approved work plans, reports, studies, designs and schedules shall constitute noncompliance with this Permit. Extensions of the specified final compliance dates for submissions may be granted by the DEC in accordance with the major permit modification procedures stipulated in **Module I** of this Permit.

10. Compliance with Governmental Requirements: During investigative activities, interim corrective measures and final corrective measures (including, but not limited to, equipment decommissioning, excavation and unit demolition) required by this Module, the Permittee must ensure that the transportation, treatment, storage, discharge, and disposal of all contaminated materials generated as a result of such activities (including, but not limited to, soil, sediments, liquids, tanks, pipes, pumps, rubble, debris and structural materials) are performed in an environmentally sound manner pursuant to all applicable federal, State and local requirements, and in a way that is protective of human health and the environment. Nothing in this Module shall be construed to require the Permittee to proceed in a manner which is in violation of any such requirements.

11. Notifications:

a. Groundwater Contamination: If at any time the Permittee discovers that hazardous constituents in groundwater released from the Facility have migrated beyond the Facility boundary in concentrations that exceed action levels in the DEC's TOGS 1.1.1 (ambient values) and EPA's MCLs (see **Condition C.2(a) of Module I**). The Permittee must, within fifteen (15) calendar days of discovery, provide written notice to the DEC.

b. Air Contamination: If at any time the Permittee discovers that hazardous constituents in air have been released from a SWMU or AOC at the Facility, and have or are migrating to areas beyond the Facility boundary in concentrations that exceed action levels in the DEC's DAR-1, and that residences or other places at which continuous, long-term human exposure to such constituents might occur are located within such areas (see DER-13), the Permittee must immediately initiate all

appropriate actions necessary to mitigate the release to concentrations below the action levels or cease operation immediately. In addition, the Permittee must:

i. Immediately initiate any actions that might be necessary to provide notice to all individuals who have been, may have been or may become exposed to the released constituents; and

ii. Provide written notification to the DEC as well as DOH within fifteen (15) calendar days of such discovery.

c. Residual Contamination: If hazardous wastes or hazardous constituents are located within or have been released from SWMUs or AOCs and will remain in or on the land, including groundwater, after the terms of this Permit have expired, the Permittee must record such information in an environmental easement and/or restrictive covenant to run with the land in favor of the State in accordance with **Condition F.2** of this Module or in some other instrument acceptable to the DEC which is normally examined during title search that will, in perpetuity, notify any potential purchaser of the property, of the types, concentrations and locations of such hazardous wastes or hazardous constituents.

d. Newly Discovered SWMUs and AOCs: The Permittee must notify the DEC, in writing, of any additional SWMUs and AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits or other means within fifteen (15) calendar days of discovery. Thereafter, the Permittee must proceed with the assessment, investigation, evaluation and remediation of the SWMU and/or AOC as set forth in **Condition C** of this Module.

e. Newly Discovered Releases: The Permittee must notify the DEC, in writing, of any release(s) of hazardous wastes, including hazardous constituents, discovered during the course of groundwater monitoring, field investigations, environmental audits, or other activities no later than fifteen (15) calendar days of discovery. Such newly discovered release(s) may be from newly identified unit(s)/area(s), from unit(s)/area(s) for which, based on the findings of the RCRA Facility Assessment (RFA), the DEC had previously determined that no further investigation was necessary, or from unit(s)/area(s) investigated as part of a RCRA Facility Investigation (RFI). Based on the information provided in the notification, the DEC shall determine the need for further investigation of the release(s). If the DEC determines that such investigations are needed, the DEC shall, by written notification, require the Permittee to prepare an RFI Work Plan in accordance with **Condition D** of this Module. The DEC may, at its discretion, also require the Permittee to prepare an Interim Corrective Measures (ICM) Work Plan.

f. Emerging Contaminants: The DEC will notify the Permittee, in writing, of any additional investigations for emerging contaminants that may be necessary for the facility's SMWUs and AOCs. Once notified, the Permittee will have thirty (30) calendar days to prepare and submit a schedule for the investigation to DEC. Once the DEC approves the schedule, the Permittee must proceed with the assessment, investigation, evaluation and remediation of the SWMU and/or AOC as set forth therein.

12. Determination of No Further Action

a. Based on the results of a RFA or a RFI for a particular SWMU or AOC, or combination of SWMUs and/or AOCs, and any other relevant information, the Permittee may submit an application to the DEC for a permit modification in accordance with **Section E of Module I**, 6 NYCRR 373-1.7(b) and 621 to terminate the subsequent corrective action requirements of this Module for the subject SWMU(s) or AOC(s). The permit modification application must contain information demonstrating:

i. Hazardous waste or hazardous constituents are not detected in any applicable environmental media; or

ii. Hazardous waste or hazardous constituents which have been detected are below background concentrations (pre-released conditions); or

iii. Hazardous waste or hazardous constituents which have been detected do not pose a threat to human health or the environment.

iv. The permit modification application must also include the information required in 6 NYCRR 373-1, 373-2 and 621.4(n).

b. If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the forty-five (45) calendar day public comment period required for major permit modifications, the DEC determines that the release(s) or the suspected release(s) investigated are either non-existent or do not pose a threat to human health or the environment, the DEC may grant the requested modification.

c. A determination of No Further Action shall not preclude the DEC from modifying this Permit in accordance with 6 NYCRR 621.13 in order to implement the following actions:

i. Require the Permittee to perform such investigations as necessary to comply with the requirements of this Module if new information or subsequent analysis indicates that there are, or are likely to be, releases from SWMUs/AOCs/operable units that may pose a threat to human health or the environment; and/or,

ii. Require continual or periodic monitoring of environmental media, if necessary, to protect human health and the environment, when site-specific circumstances indicate the release(s) of hazardous waste(s), including hazardous constituents, are likely to occur from any SWMU(s) and/or AOC(s) and/or operable units.

13. SWMU/AOC Current Conditions Report. The Permittee shall submit to the Department an updated **SWMU/AOC Current Conditions Report in Attachment L** providing current information regarding the status of investigations or remedial work for all SWMUs and AOCs annually or when requested by the Department. The report

must include, at a minimum, information regarding physical and operational description, waste types/characteristics, any known or suspected releases, and current status of corrective action, including beginning and completion dates of each applicable phase.

C. SCHEDULE FOR ASSESSMENT OF NEWLY IDENTIFIED OR DISCOVERED SWMUs AND AOCs

The information required herein must be submitted in accordance with the Newly Discovered SWMUs and AOCs Assessment Schedule as outlined in **Table II-1** of this Module.

1. Notification of Assessment: The Permittee must notify the DEC, in writing, of any additional SWMU(s) and/or AOC(s) not listed in the tables of the **SWMU/AOC Current Conditions Report, or Table 1 in Attachment C**, which are identified during the course of groundwater monitoring, field investigations, environmental audits, or other means. For new units managing solid waste only, or for other new unit(s), the Permittee may seek clarification from the Department as to whether the unit constitutes a SWMU requiring notification under this permit condition. Once such notification has been made, a newly installed SWMU (i.e., new use with no history of release) will receive a determination of No Further Action and will be processed by the Department as a notification. Should a subsequent release occur at such a unit, then the full notification, assessment and reporting procedures of this Module will apply.

2. SWMU/AOC Assessment Report: The Permittee must submit a SWMU/AOC Assessment Report to be included in **Attachment C**. This report must provide, at a minimum, the following information for each newly identified SWMU/AOC:

   a. Type of unit/area;

   b. Location of each unit/area on a topographic map of appropriate scale;

   c. Dimensions, capacities, and structural descriptions of the unit/area (supply available engineering drawings);

   d. Function of unit/area;

   e. Dates that the unit/area was operated;

   f. Description of the wastes that were placed or spilled at the unit/area;

   g. Description of any known releases from the unit/area (to include groundwater data, soil analyses, air monitoring data, and/or surface water/sediment data);

   h. The results of any sampling and analysis required for the purpose of determining whether releases of hazardous wastes, including hazardous constituents, have occurred, are occurring, or are likely to occur from the unit/area;

i. Whether this unit/area, individually or in combination with other units/areas listed in the **SWMU/AOC Current Conditions Report in Attachment C**, is a significant source of contaminant release; and

j. Proposed status (i.e., No Further Action/Supplemental Investigation/ Further Action).

3. SWMU/AOC Sampling and Analysis Plan: If determined necessary, the Permittee must submit to the DEC for approval a plan for sampling and analysis of specific environmental media including, but not limited to, groundwater, land surface and subsurface strata, surface water/sediment or air, as necessary to determine whether a release of hazardous waste, including hazardous constituents, from such unit(s) and/or area(s) has occurred, is likely to have occurred, or is likely to occur. The SWMU/AOC Sampling and Analysis Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste, including hazardous constituents, from the newly discovered SWMU(s) and/or AOC(s) to the environment.

4. Subsequent Assessment Actions: Following submission of the SWMU/AOC Assessment Sampling and Analysis Plan set forth in **Condition C.3** of this Module, the Department may either approve the Sampling and Analysis Plan as submitted or issue comments on the Plan. If approved, the Permittee must implement sampling in accordance with **Table II-1**. If comments are issued, then subsequent activities for the Sampling and Analysis Plan shall proceed in accordance with **Condition A.9 of Module I** of this Permit.

5. SWMU/AOC Sampling and Analysis Report: The Permittee must follow the reporting requirements in the approved Plan and submit a SWMU/AOC Sampling and Analysis Report to the DEC. The Sampling and Analysis Report must describe all results obtained from the implementation of the approved Sampling and Analysis Plan.

6. Assessment Conclusions: Based on the results of the SWMU/AOC Sampling and Analysis Report, the DEC shall determine the need for further investigations at the specific unit(s) covered in the SWMU/AOC Assessment Report. If the DEC determines that such investigations are needed, the DEC shall, by written notification, require the Permittee to prepare and submit for approval an RFI Work Plan. In addition, the DEC may, at its discretion, require the Permittee to submit a Corrective Measures Study (CMS) or an ICM Work Plan if either is deemed necessary by the DEC to safeguard human health and the environment. Any additional activities required by the DEC must be undertaken in accordance with **Condition D** of this Module.

D. CORRECTIVE ACTION REQUIREMENTS

1. RCRA Facility Investigation: The Permittee must conduct, or have conducted, a RCRA Facility Investigation (RFI) to determine the nature and extent of known and suspected releases of hazardous constituents in groundwater and soil, originating from any location at the Facility, including a SWMU and/or AOC, as identified in **Table 1 of the SWMU/AOC Current Conditions Report in Attachment C**, and to gather data to support the Corrective Action Plan (CAP). The Permittee must conduct all items

associated with the RFI in accordance with schedule specified in **Table II-2** (RCRA Facility Investigation Schedule) of this Module and must address both on-site and off-site contamination**.**

a. The Permittee must submit, or have submitted, an RFI work plan to the DEC for the SWMU(s) and/or AOC(s) identified in **Table 1 of the SWMU/AOC Current Conditions Report in Attachment C**.

b. The RFI Work Plan shall include:

i. A Project Management Plan detailing a discussion of the technical approach to the investigation, schedules, and milestone reports;

ii. A Quality Assurance Project Plan to establish and document all sampling and monitoring procedures;

iii. A Data Management Plan to track investigation data and results; and

iv. A Health and Safety Plan for safe conduct of corrective action activities.

c. Along with RFI Work Plan, the Permittee shall include a section for a Description of Current Conditions. The section shall include, at a minimum:

i. Background information gathered during previous investigations or inspections and other relevant data;

ii. Nature, extent, and rate of migration of contamination, if known; and

iii. Past or current activities at the Facility.

d. Any proposed RFI Work Plan must be submitted for the DEC's review and approval/acceptance, and must include, at a minimum, a chronological description of the anticipated activities, a schedule for performance of those activities, and sufficient detail to allow the DEC to evaluate that RFI Work Plan.

e. All work plans prepared pursuant to this Module must be certified in accordance with 6 NYCRR 373-1.4(a)(5) and **Condition A.2** of this Module.

2. <u>RFI Implementation</u>

a. Upon approval of an RFI Work Plan by the DEC, the Permittee must implement such work plan in accordance with schedule specified in **Table II-2** of this Module. The Permittee shall present data of adequate technical quality to support the contention that No Further Action is required, or the development and evaluation of corrective measures alternatives presented in the CAP. RFI Implementation shall consist of:

i. Characterization of the environmental setting at the Facility, including the hydrogeology, soils, surface water, sediment, and air;

ii. Source characterization of all waste management areas at the Facility, including the nature of the unit and the type of waste place in the unit as described by chemical and physical characteristics;

iii. Contamination characterization, including analysis of hazardous waste or hazardous constituents from SWMUs and/or AOCs and the effects of such hazardous waste or hazardous constituents on environmental media; and

iv. Potential receptor identification describing the potential for human and environmental impact from contaminant exposure from the Facility.

b. The DEC must be notified at least seven (7) days in advance of, and be allowed to attend, any field activities to be conducted under a DEC-approved work plan, as well as any pre-bid meetings, job progress meetings, substantial completion meeting and inspection, and final inspection and meeting.

c. During all field activities conducted under a DEC-approved work plan, the Permittee must have, on-site, a representative who is qualified to supervise the activities undertaken. Such representative may be an employee, or a consultant retained to perform such supervision.

d. The Permittee shall prepare an analysis and summary of the RFI(s) including results. This task, designated as Investigation Analysis, shall be included in the RFI Report. The objective of Investigation Analysis shall be to ensure that the investigation data are sufficient in quality and quantity to describe the nature and extent of contamination, potential threat to human health and the environment, and to produce the CAP. Investigation Analysis shall consist of:

i. Data analysis of the type and extent of contamination at each SWMU and/or AOC including sources and migration pathways; and

ii. Protection standards for environmental media must be compared to pre-released conditions, or other relevant protection standard.

e. Any final RFI report or final engineering report that includes construction activities must include “as built” drawings showing any changes made to the remedial design or the IRM.

f. The Permittee shall submit a schedule of activities and reports, to the DEC as required by **Table II-2** of this Module.

g. All final reports and final engineering reports prepared pursuant to this Module must be certified in accordance with 6 NYCRR 373-1.4(a)(5) and **Condition A.2** of this Module.

3. Compliance Schedule for Interim Corrective Measures (ICMs)

   a. If at any time it is determined by the DEC that a release or, based on site-specific circumstances, a threatened release of hazardous wastes, including hazardous constituents from a SWMU, an AOC or a combination of SWMUs and/or AOCs poses a significant and immediate threat to human health or the environment, or that such condition jeopardizes the Permittee's ability to comply with any governmental permit, an ICM shall be submitted to the DEC for approval within thirty (30) calendar days of notice of such a determination. This study shall consider, among other relevant factors, the character, the extent, direction, the rate of release, the proximity to population, the exposure pathways, the effects of delayed action, and the evaluations of appropriate ICM(s) or the selection of a pragmatic and presumptive ICM. Upon approval of the study by the DEC, the Permittee shall implement the required ICM as specified by the DEC. Should a selected ICM involve an engineered action (e.g., pump and treat), then its design, implementation schedule and subsequent construction completion certification shall require approvals by the DEC. Nothing herein precludes the Permittee from taking immediate action to address the conditions described herein and promptly notifying the DEC.

   b. In the event the Permittee discovers a release or based on site-specific circumstances, a threatened release of hazardous waste, including hazardous constituents, from a SWMU, an AOC, or a combination of SWMUs and/or AOCs, that poses a significant and immediate threat to human health or the environment, the Permittee shall identify ICMs to mitigate this threat. The Permittee shall immediately summarize the nature and magnitude of the actual or potential threat and the nature of the ICM being considered and notify the DEC. Within thirty (30) calendar days of notifying the DEC, the Permittee shall submit to the DEC, for approval, a focused CMS and follow the progression of events identified in **Condition D.4, D.5 and D.6** of this Module as well as **Table II-3** of this Module.

   c. The following factors may be considered by the DEC or Permittee in determining the need for interim corrective measures:

      i. Time required to develop and implement a final corrective measure:

      ii. Actual or potential exposure of human and environmental receptors:

      iii. Actual and potential contamination of groundwater and sensitive ecosystems;

      iv. Concentration of hazardous constituents in soils that have the potential to migrate to the air, groundwater or surface water; and

      v. Other situations that may pose threats to human health and the environment.

4. Corrective Measures Study (CMS)

   a. Should a CMS be required, the DEC shall notify the Permittee in writing. This notice shall identify the hazardous constituent(s) which have exceeded the action

level(s) as well as those which have been determined to threaten human health and the environment given site-specific exposure conditions or due to additive exposure risk. The notification shall specify target cleanup levels for hazardous constituents detected in each medium of concern and may also specify corrective measure alternatives to be evaluated by the Permittee during the CMS.

b. The DEC may require a CMS under the following conditions:

   i. If the concentrations of hazardous constituents in environmental media exceed their corresponding individual cleanup levels; or

   ii. If the concentrations of hazardous constituents in environmental media do not exceed their corresponding individual cleanup levels, but additive exposure risk due to the presence of multiple constituents is not protective of human health; or

   iii. If the concentrations of hazardous constituent in environmental media do not exceed corresponding individual cleanup levels, but still pose a threat to human health or the environment, given site-specific exposure conditions.

c. The Permittee shall submit to the DEC for review and approval a CMS for all SWMUs and/or AOCs that have been identified to have a release of hazardous waste or hazardous constituents, in accordance with the schedule specified in **Table II-3** (Corrective Measure Study Schedule) of this Module.

d. The CMS shall include:

   i. Identification and Development of the Corrective Measure Alternative or Alternatives:

      (1) Description of Current Situation

      (2) Establishment of Corrective Action Objectives

      (3) Screening of Corrective Measures Technologies

      (4) Identification of the Corrective Measure Alternative or Alternatives

   ii. Evaluation of the Corrective Measure Alternative or Alternatives:

      (1) Technical/Environmental/Human Health/Institutional

      (2) Cost Estimate

   iii. Justification and Recommendation of the Corrective Measure or Measures

      (1) Technical

      (2) Human Health

(3) Environmental

iv. Target cleanup levels;

v. Provide a detailed description of the corrective measures evaluated and include an evaluation of how each corrective measure alternative meets the standards;

vi. Schedule for implementation of the corrective action(s) according to the timeframe and schedule contained in **Table II-3** of this Module;

vii. The Permittee in conjunction with the DEC shall establish site specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA and New York State guidance, and the requirements of any applicable federal and state statutes. At a minimum, all corrective actions concerning groundwater releases from regulated units must be consistent with, and as stringent as, those required under 6 NYCRR 373-2.6; and

viii. Contain any additional information to support the DEC in the corrective measure selection decision-making process.

e. Upon approval of the CMS, the Permittee shall implement the corrective action(s) according to the schedule as approved in the CMS. The approved schedule for the CMS shall be incorporated in **Table II-3** of this Module.

f. The Permittee shall furnish or retain all personnel, materials, and services necessary for the implementation of the CMS.

5. Corrective Measures Selection: The DEC shall review and respond in writing to each corrective action submittal (e.g., plans, studies, reports, schedules, written submittals, etc) that the Permittee makes pursuant to this Permit Module in accordance with **Condition A.9 of Module I** of this Permit.

a. Under **Condition D.4** of this Module and any further evaluations of additional corrective measures under this study, the DEC shall select the corrective measure(s) that at a minimum will meet the following standards:

i. Be protective of human health and the environment;

ii. Attain media target cleanup levels selected by the DEC during the corrective measures selection process;

iii. Control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases of hazardous waste, including hazardous constituents, that might pose a threat to human health and the environment; and

iv. Meet all applicable waste management requirements.

b. In selecting the corrective measure(s) which meets the standards for corrective measures established under **Condition D.5.a** of this Module, the DEC shall consider the following evaluation factors, as appropriate:

i. Long-term reliability and effectiveness. Any potential corrective measure(s) may be assessed for the long-term reliability and effectiveness it affords, along with the degree of certainty that the corrective measure(s) will prove successful. Factors that shall be considered in this evaluation include:

(1) Magnitude of residual risks in terms of amounts and concentrations of hazardous waste, including hazardous constituents, remaining following implementation of the corrective measure(s), considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes, including hazardous constituents:

(2) The type and degree of long-term management required, including monitoring and operation and maintenance;

(3) Potential for exposure of humans and environmental receptors to remaining hazardous wastes, including hazardous constituents, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal or containment;

(4) Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated hazardous wastes, including hazardous constituents, and their residuals; and

(5) Potential need for replacement of the corrective measure(s).

ii. Reduction of toxicity, mobility, or volume. A potential corrective measure(s) may be assessed as to the degree to which it employs treatment that reduces toxicity, mobility or volume of hazardous and/or mixed wastes, including hazardous constituents. Factors that shall be considered in such assessments include:

(1) The treatment processes the corrective measure(s) employs and materials it would treat;

(2) The amount of hazardous and/or mixed wastes, including hazardous constituents, that would be destroyed or treated;

(3) The degree to which the treatment is irreversible;

(4) The residuals that will remain following treatment, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous and/or mixed wastes, including hazardous constituents; and

(5) All concentration levels of hazardous and/or mixed waste, including hazardous constituents, in each medium that the corrective measure(s) must achieve to be protective of human health and the environment.

iii. The short-term effectiveness of a potential corrective measure(s) may be assessed considering the following:

(1) Magnitude of reduction of existing risks;

(2) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a corrective measure(s), including potential threats to human health and the environment associated with excavation, transportation, and re-disposal or containment; and

(3) Time until full protection is achieved.

iv. Implementability. The ease or difficulty of implementing a potential corrective measure(s) may be assessed by considering the following types of factors:

(1) Degree of difficulty associated with constructing the technology;

(2) Expected operational reliability of the technologies;

(3) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(4) Availability of necessary equipment and specialists;

(5) Available capacity and location of needed treatment, storage and disposal services; and

(6) Requirements for removal, decontamination, closure, or post- closure of units, equipment, devices or structures that will be used to implement the corrective measure(s).

v. Cost. The types of costs that may be assessed include the following:

(1) Capital costs;

(2) Operation and maintenance costs;

(3) Net present value of capital and operation and maintenance costs; and

(4) Potential future corrective measure costs.

c. The DEC shall select the final corrective measure(s) based on the information submitted by the Permittee in the RFI Report, the CMS, and/or other documents or

reports. The proposed remedy shall be set forth in a draft Statement of Basis (SB) prepared by the DEC for the Facility.

d. The selected remedy(ies) will be public noticed. The public will have the opportunity to review the reports and documents associated with the selected remedy(ies). Additionally, the public has the opportunity to comment on these and the proposed selected remedy(ies). The selected remedy(ies) could be modified based on comments received.

e. Once the SB has been finalized and incorporated into this Permit pursuant to 6 NYCRR 621.13 and **Condition D.6** of this Module, the Permittee must submit a Corrective Measures Implementation (CMI) Work Plan that provides for the development and implementation of final plans and specifications for implementing the remedial alternative set forth in this Permit (i.e., in the SB). This CMI Work Plan must, unless otherwise provided in writing by the DEC, be submitted in accordance with the schedule specified in in **Table II-3** of this Module. The Permittee must commence implementation of the CMI Work Plan, in accordance with the schedule specified in **Table II-3** of this Module.

f. Once the selected remedy(ies) has been implemented, the Permittee must oversee the remedy effectiveness and performance in accordance with the schedule specified in **Table II-3** of this Module.

6. Permit Modification for Corrective Measures:

a. Based on the CMS, the DEC will select the corrective measure(s), prepare the draft SB, and initiate a permit modification to this Permit, pursuant to 6 NYCRR 373-1.7(b) and 6 NYCRR 621.14, which includes a forty-five (45) day public comment period for the SB and the permit modification. The permit modification will specify the selected corrective measure(s) and include, at a minimum the following:

i. Description of all technical features of the corrective measure(s) that are necessary for achieving the standards for corrective measures established under **Condition D.5.a** of this Module, including length of time or which compliance must be demonstrated at specified points of compliance.

ii. All media cleanup standards for hazardous constituents, selected by the DEC, that the corrective measure(s) must achieve to be protective of human health and the environment.

iii. All requirements for achieving compliance with these cleanup standards.

iv. All requirements for complying with the standards for management of wastes.

v. Requirements for removal, decontamination, closure or post-closure of units, equipment, devices or structures that will be used to implement the corrective measure(s).

vi. A schedule for initiating and completing all major technical features and milestones of the corrective measure(s); and

vii. Requirements for submission of reports and other information.

b. Once the final SB has been issued, it is automatically incorporated in its entirety into this Permit.

7. Modification of Compliance Schedules

a. If at any time the Permittee determines that modification of any Compliance Schedule of this Permit Module is necessary because such schedules cannot be met, the Permittee must:

i. Notify the DEC in writing within fifteen (15) calendar days of such determination;

ii. Provide an explanation why the current schedule cannot be met; and

iii. Propose the date by which the Compliance Schedule can be met.

b. The DEC shall notify the Permittee in writing of the final decision regarding the Permittee's proposed modification to the Compliance Schedule.

c. Modification(s) to the Compliance Schedule pursuant to this procedure does not constitute a reissuance of this Permit.

d. All other modifications to this Permit Module must be made in accordance with **Module I** of this Permit.

8. Reporting Requirements

a. The Permittee shall submit to the DEC, when applicable, written progress reports of all activities conducted after the effective date of the approved CMS. The Permittee shall submit the first progress report in accordance with the schedule specified in **Table II-3** of this Module.

b. The progress reports shall contain:

i. A description of the work completed;

ii. Summaries of all the finding and all raw data;

iii. Summaries of all problems encountered during the reporting period and actions taken or to be taken to rectify problems; and

iv. Projected work for the next period.

c. The Permittee shall maintain copies of the reports, drilling logs and data at the facility or in another approved location (i.e., electronic repository) during the effective period of this Permit.

E. INACCESSIBLE SWMUS

If, based on, the RCRA Facility Assessment/RCRA Facility Investigation and subsequent documentation, the DEC has determined that there is a potential for release of hazardous waste and/or constituents from any inaccessible SWMU(s)/AOC(s) at the Facility, they will be identified in **Table 1 of the SWMU/AOC Current Conditions Report in Attachment C** as requiring further action.

For the above area(s), the Permittee shall submit to the DEC for approval a schedule for the preparation of a RFI Work Plan, no later than one-hundred and eighty (180) calendar days prior to the date when the SWMU(s) is anticipated to become accessible for such an investigation. Accessibility to the SWMU(s) shall be considered achievable when the impediment (e.g., buildings, structures, utilities) is demolished, abandoned, or is altered in a manner that would allow access to the SWMU(s). All such work shall proceed in accordance with the approved schedule.

Following submission of the RFI Work Plan set forth in this condition, subsequent activities for the Plan shall proceed in accordance with schedule specified in **Table II-2** of this Module.

F. OTHER REQUIREMENTS

1. Groundwater Requirements. Any Groundwater Monitoring Program that is required as part of this permit, shall be submitted as part of the Groundwater Monitoring Requirement in accordance with **Condition C of Module XI** of this Permit.

2. Environmental Easement

   a. If a SB, or other approved work plan, for the Facility relies upon one or more institutional and/or engineering controls, the Permittee (or the owner of the Facility) must submit to the DEC for approval an environmental easement and/or restrictive covenant to run with the land in favor of the State which must be:

      i. created and recorded pursuant to ECL Article 71, Title 36;

      ii. in a form and manner as prescribed by the DEC;

      iii. in compliance with General Obligations Law (GOL) § 5-703(1) and ECL § 71-3605(2); and,

      iv. recordable pursuant to Real Property Law § 291.

b. Upon acceptance of the environmental easement and/or restrictive covenant by the State, the Permittee must comply with the requirements of **Condition F.2** of this Module.

c. Agents, employees or other representatives of the State may enter and inspect the property burdened by an environmental easement with reasonable prior notice to the property owner, to assure compliance with the restrictions identified by the environmental easement.

d. If the SB provides for no action other than implementation of one or more institutional controls, the Permittee must cause an environmental easement to be recorded under the provisions of **Condition F.2.a** of this Module.

e. If the Permittee does not cause such environmental easement to be recorded in accordance with **Condition F.2.a** of this Module, the DEC may file an Environmental Notice on the Facility.

3. Dispute Resolution

a. The Permittee may submit a written Notice of Dispute to the DEC related to the DEC's action on any of the Permittee's corrective action submittals required by or related to this Permit Module. Any such notices must be made within fifteen (15) days of receiving the DEC correspondence which is the basis of the dispute and must be directed to the designated individual as defined in **Condition F.3.a.iii** below. Such a notice must contain specific information describing the Permittee's position and including any relevant supporting documentation. The designated individual shall render a written decision and furnish a copy thereof to the Permittee. This written decision shall be the final DEC determination, unless the Permittee files a written appeal of that decision with the designated appeal individual within twenty (20) days of receipt of that decision.

i. Upon receipt of the written appeal pursuant to **Condition F.3.a** of this Module, the designated appeal individual will review the record and decision. The designated appeal individual will take one of the following actions, with written notice to the Permittee:

(1) remand the matter to the program staff for further negotiation or information if it is determined that the matter is not ripe for review;

(2) determine that there is no need for further action, and that the determination of the designated individual is confirmed; or

(3) make a determination on the records as it exists.

ii. The decision of the designated appeal individual shall be the final DEC decision and represent the DEC's determination to proceed in accordance with **Condition F.3.b** of this Module.

iii. The designated individual to:

(1) hear disputes is a bureau director in the DEC's Division of Materials Management; and,

(2) to review dispute decisions is the assistant director of the DEC's Division of Materials Management.

b. In the event that the DEC issues a final decision in accordance with **Condition F.3.a.ii** above, the DEC shall, pursuant to 6 NYCRR 621.13, send to the Permittee a notice of intent to modify this Permit with regard to the DEC's final decision in order to safeguard human health and the environment.

c. Upon receipt of a notice of intent from the DEC, the Permittee must act in accordance with 6 NYCRR 621.13(d) or the DEC's action will become effective on the date specified in the notice of intent. In the event that the Permittee acts in accordance with 6 NYCRR 621.13(d) within the specified timeframe, the procedure for permit modification will continue in accordance with 6 NYCRR 621.13.

4. Required Authorizations

a. The Permittee must use best efforts to obtain all Facility access, permits, easements, approvals, institutional controls, and/or authorizations necessary to perform the Permittee's obligations under this Permit, including all DEC-approved work plans and the schedules contained therein. If, despite the Permittee's best efforts, any access, permits, easements, approvals, institutional controls, or authorizations cannot be obtained, the Permittee must promptly notify the DEC and include a summary of the steps taken. The DEC may, as it deems appropriate and within its authority, assist the Permittee in obtaining the same.

b. If an interest in property is needed to implement an institutional control required by a work plan and such interest cannot be obtained, the DEC may require the Permittee to modify the work plan to reflect changes necessitated by the Permittee's inability to obtain such interest. Within fifteen (15) days of receipt of such notice, the Permittee must elect in writing to either: a) modify the work plan as requested by the DEC within forty-five (45) days, or b) invoke dispute resolution in accordance with **Condition F.3** of this Module.

5. Green Remediation

a. As part of the DEC's initiative, the Permittee must make best efforts to implement green remediation practices in the performance of the requirements of the Work, including but not limited to performance of a RCRA Facility Investigation, Corrective Measures Study, Interim Corrective Measure, Corrective Measures Implementation and Post-Closure/Effectiveness Evaluations to maximize to the extent practicable, sustainability, reduce energy and water usage, promote carbon neutrality, promote materials reuse and recycling, and protect and preserve land resources.

b. The Permittee must make best efforts to utilize concepts and techniques presented in the New York State Department of Environmental Conservation - DEC Program Policy DER-31/Green Remediation, most recent edition.

6. Institutional Measures

In order to minimize the impacts of the soil and groundwater contamination on the surrounding community the Permittee must:

a. Restrict public access to the industrial areas of facility. Public access is limited to the commercial use designated areas of the Facility and the Facility internal road system.

b. Place a formal notification on approval of an environmental easement and/or restrictive covenant, or on some other instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property that:

i. the land has been used to manage hazardous waste; and

ii. its use is restricted under 6 NYCRR 373-2.7, as if it were a "hazardous waste disposal facility."

7. System Down Time

If a remedial system is installed it shall be operated on a continuous basis. The Permittee must follow all requirements for groundwater and indoor air systems as dictated in the Groundwater Monitoring Plan (**Attachment D** of this Permit) or Performance Monitoring Program (**Attachment K** of this Permit), respectively, depending on the system type.

The Permittee is required to update the PMP to include notification of routine and non-routine down time events for SSD and HVAC systems required to be operating for indoor air quality (i.e., Category 2, 3, and 4 buildings, as referenced in the PMP). . Until an updated PMP is approved by DEC and incorporated into this Permit, if any part of the PMP system is inoperable (down) for a period of more than three (3) days consecutively or for five (5) days in a rolling thirty (30)-day period, the Permittee shall notify the DEC. The notification shall include a plan for restoring system operation as soon as possible.

8. Modifications of Remedial Systems

If, after review of the performance monitoring data, the DEC determines that the design or operation of the Remedial System is not sufficient to achieve the remedial criteria, the DEC may require Permittee to modify the design or operation of the system so as to achieve the remedial criteria. Alternatively, the DEC may require, in accordance with **Condition D.5.f** of this Module, that the Permittee investigate and evaluate the use of a different corrective measure for remediation. If necessary, the DEC or the

Permittee may seek modification of this Permit pursuant to 40 CFR 270.41 or 270.42 and 124.5 to implement modification to the existing Corrective Measure Remedy.

9. On-site Soil/Debris Management and Reuse

   The Permittee may only manage and reuse soil/debris on-site in Lot 3A, Unit 2 in accordance with a DEC-approved Soil/Debris Management and Reuse Plan. Any soils/debris managed on-site which are removed from Lot 3A, Unit 2 and not reused on-site must be sent to permitted hazardous waste landfill for final disposition. Until such time as the DEC has approved a management and reuse plan, no additional soil/debris may be added to or removed from on-site management units.

Table II-1: Newly Discovered SWMUs and AOCs Assessment Schedule

Activity	Due Date[1]
Notification of Assessment	Fifteen (15) calendar days of discovery
SWMU/AOC Assessment Report	Within thirty (30) days of notifying the DEC
SWMU/AOC Sampling and Analysis Plan Submittal, if necessary	Within sixty (60) days from submission of SWMU/AOC Assessment Report
SWMU/AOC Sampling and Analysis Plan Subsequent Assessment Actions, if necessary	• Meeting with the DEC • Submission of a revised Plan within thirty (30) days after the above-describing meeting
SWMU/AOC Sampling and Analysis Plan Implementation	Within thirty (30) days of SWMU/AOC Sampling and Analysis Plan approval
SWMU/AOC Sampling and Analysis Report	Within thirty (30) calendar days of receipt by the Permittee of validated analytical data
Assessment Conclusions	If DEC determines that such investigations are needed, DEC shall, by written notification, require the Permittee to prepare and submit for approval a RCRA Facility Investigation Work Plan.

Footnotes:
1. Due Date changes may be made with written approval from the Department.

Table II-2: RCRA Facility Investigation Schedule

Activity	Due Date[1]
Submit Draft RFI work plan and schedule	Within ninety (90) calendar days from submission of the SWMU/AOC Sampling and Analysis Report
Subsequent Assessment Actions, if necessary	• Meeting with the DEC • Submission of a revised Plan within thirty (30) days after the above-described meeting
Begin RCRA Facility Investigation according to the approved RFI work plan and schedule	Within fifteen (15) days following written approval by the DEC
Submit RFI Report	Within thirty (30) calendar days of receipt by the Permittee of validated analytical data
Assessment Conclusions	If the DEC determines that remedies are needed, the DEC shall, by written notification, require the Permittee to prepare and submit for approval a Corrective Measure Study (CMS) Work Plan.

Footnotes:
1. Due Date changes may be made with written approval from the Department.

Table II-3: RCRA Corrective Measure Study Schedule

Activity	Due Date[1]
Submittal of CMS	Within one hundred and eighty (180) calendar days after receiving the written notification from DEC of the requirement for a CMS. Following completion of the CMS, the DEC will select the corrective measure(s) from the corrective measure alternatives evaluated in the CMS.
Subsequent Assessment Actions, if necessary	• Meeting with the DEC. • Submission of a revised CMS within thirty (30) days after the above-described meeting.
Submit CMS Final Report	Within ninety (90) calendar days of the DEC's approval of any draft/revised draft CMS.
Statement of Basis and Permit Modification – Public Participation	Forty-five (45) calendar days for public notice. The public will have forty-five (45) calendar to review the selected remedy(ies) and submit comments
Responsiveness Summary	Within sixty (60) calendar days of the close of the public comment period, the DEC shall provide a response for all the public comments received on the selected remedy(ies).
Permit Modification Approval	The final SB and permit modification shall become effective thirty (30) days after service of notice of the approval, unless another date is specified.
Submittal of the Corrective Measures Implementation (CMI) Work Plan	Within one hundred twenty (120) days of the effective date of the Permit modification.
Implementation of CMI Work Plan	The Permittee must commence implementation of the CMI Work Plan within thirty (30) days of the DEC's approval of such work plan.
CMI Construction	As specified in approved CMI Work Plan
CMI Construction Report	Within ninety (90) calendar days following completion of construction
Progress Reports	As required, but the first shall be submitted within ninety (90) calendar days after the CMI Work Plan is approved
Corrective Measures (Progress) Effectiveness and Performance Reports	Triennially, three (3) calendar years after its construction.

Footnotes:

1. Due Date changes may be made with written approval from the Department.

MODULE III

RESERVED

MODULE IV
RESERVED

MODULE V
RESERVED

MODULE VI
RESERVED

MODULE VII
RESERVED

MODULE VIII

RESERVED

MODULE IX
RESERVED

MODULE X
RESERVED

MODULE XI
Groundwater Monitoring

MODULE XI
GROUNDWATER MONITORING

A. APPLICABILITY

1. Statute and Regulations: Article 27, Title 9, Section 27-0913, 6 NYCRR Sections 373-1.5(a), 373-2.6(a). 373-2.6(c), 373-2.6(h) and 373-3.6(b), as well as unit specific regulations requiring groundwater monitoring, including all measures beyond the Facility boundary where necessary to protect human health and the environment, for all releases of hazardous wastes, including hazardous constituents listed in Appendix 23 of 6 NYCRR Part 371 or Appendix 33 of 6 NYCRR 373-2 as well as any newly added hazardous substances (i.e., emerging contaminants) in 6 NYCRR Part 597 (defined together as constituents), from any land-based unit under post-closure care or any solid waste management unit (SWMU) regardless of the time at which waste was managed or placed in such unit. Pursuant to 6 NYCRR 373-1.6(c)(2) and **Condition F.1 of Module II**, the Department may impose Permit conditions as the Department determines necessary to protect human health and the environment (such as Areas of Concern (AOCs). The conditions of this Module are applicable to all groundwater monitoring programs required pursuant to this Permit.

2. **All documents and reports required by this Permit must be certified pursuant to conditions established in 6 NYCRR 373-1.4(a)(5)(iv) and Condition O.4 of Module I and submitted in accordance with requirements set forward in Conditions O and W of Module I. Additionally, unless specifically exempted in this Permit, all information (e.g., documents and reports) required to be submitted by the Permittee must be approved by DEC. DEC does not require certain plans, documents or reports to also be certified NYS licensed professionals. The Permittee should verify if certification is required prior to submittal to the DEC.**

B. STANDARD CONDITIONS

1. Other regulatory programs: Sites and activities potentially impactful to the Facility's Groundwater Monitoring Program (GWMP or GMP) will be subject to this Module when the nature and extent of contamination and/or complexity of the issues warrant this determination.

2. Policies and Guidance Documents: The Permittee shall consider applicable Policies and Guidance Documents listed in **Conditions A.3 and A.4 of Module I** when conducting activities required by this Permit.

3. Groundwater Contamination: Groundwater notifications must be followed pursuant to **Condition B.11 of Module II**.

4. Groundwater Monitoring Period: When groundwater monitoring is required, the Permittee shall plan for a perpetual thirty (30)-year monitoring period for post closure or corrective action.

5. Groundwater Protection Standard: The Permittee must ensure that Groundwater Protection Standards are being met throughout the Site and, specifically, at any Point of Compliance or that remedial actions are taken to reduce contaminant levels to meet standards. The Facility's full listing of Constituents of Concerns (COCs) and their corresponding concentration limits are listed in **Table XI-1**. The COCs for which the Facility is required to perform groundwater monitoring sampling as well as their frequency may be found in the Facility's GMP.

6. Point of Compliance: The Permittee must ensure any Point(s) of Compliance (POC) is described in the Corrective Measures Study (CMS) as well as clearly delineated and represented in a Facility GMP well map. Additionally, POCs must be listed in the GMP as well as shown in a figure attached thereto.

7. Nothing in this Module shall be construed to require the Permittee to proceed in a manner which is in violation of any Permit conditions. The Permittee shall comply with all applicable requirements of this Permit as well as **Conditions A.5, P.1, and R.1 of Module I and B.10 of Module II**.

8. The Permittee is responsible to comply with all federal, state and local regulations in reference to Primary, Principal and Sole-Source Aquifer designations.

9. The Permittee is required to maintain and/or submit records in accordance with 6 NYCRR 373-1.4 and as described in either **Condition N of Module I** or in this Module.

10. A permit modification(s) is required when specific changes to groundwater monitoring plans, programs and wells, as listed in 6 NYCRR 373-1.7, 40 CFR 270.42 or as determined by the Department, are made. Permit modifications must be made in accordance with the regulations and **Condition E of Module I** of this Permit.

C. GROUNDWATER MONITORING PLAN(S) AND PROGRAM

A facility may have an overall Groundwater Monitoring Program (GMP) for a sitewide GWM system or may have GWM Plans for multiple areas. When combined these GWM Plans provide the sitewide GMP.

1. The Permittee must design, implement, and maintain a groundwater monitoring program/plan as required under this Permit and the applicable regulations. The program/plan shall discuss, at a minimum, the following:

   a. Proper identification and management of contaminated groundwater.

   b. Identification and description of the uppermost aquifer and aquifers hydraulically interconnected as established in 6 NYCRR 373-1.5(3)(iii) and (3)(v).

   c. A description of Facility activities.

   d. A list of adjacent properties and/or roadways to north, south, east and west and adjacent property types (residential, agricultural, etc.); nearby wetlands/water

bodies, private drinking water wells on adjacent properties, and existing wells on the Facility (including irrigation, private, monitoring) and location; an aerial site map to demonstrate site layout (additional site maps may be necessary to show water bodies and existing well locations, utilities, etc.); and a written description of site layout (location of entrance, mulch piles, etc.)

e. A history of the Facility, prior uses, specifically any land-based RCRA units and their capacity, known spills or activities that may impact water quality or indicate a potential presence of specific contaminants known point source.

f. A description of the surface and subsurface characteristics of the Facility, including geology, hydrogeology, and depth to groundwater. Identify any sources of contamination, possible migration pathways, and actual or potential receptors of contaminants on or through air, soil, bedrock, sediment, groundwater, surface water, utilities, and structures at the contaminated Facility, without regard to property boundaries.

g. Aquifer characteristics and hydrogeologic units to identify groundwater flow paths and rates including hydraulic conductivity, hydraulic gradient, effective porosity, aquifer thickness, degree of saturation, stratigraphy, degree of fracturing and secondary porosity of soils and bedrock, aquifer heterogeneity, groundwater discharge, and groundwater recharge areas.

h. A combined use of direct and indirect techniques to produce an efficient and complete characterization to define the geology of the Facility including an identification of:

    i. The seasonal/temporal naturally and artificially induced (e.g., off-site production well pumping, agricultural use) variation in groundwater flow. The Permittee should take into consideration atypical seasonal changes with potential groundwater direction shift. The GMP and reports must include a minimum discussion on hydraulic gradient, sustained well yield, hydraulic conductivity, permeability and an estimate of the rate of groundwater and contaminant flow in the aquifer with formulas.

    ii. Potential effluent zones to surface water and public drinking water supply intake infrastructure.

    iii. Engineering controls including trenches, liners, cover systems, and aquifer controls (e.g., lowering the water table). These shall be evaluated under design and failure conditions to estimate their long-term residual performance.

    iv. Assessment and estimation of microbiological degradation which may attenuate target compounds or cause transformation of compounds potentially forming harmful chemical species.

2. The Permittee must include, but is not limited to, the following for site characterization figures:

a. An inventory of their monitoring well network for both off-site and on-site wells. This inventory must also include the laboratory analyses of subsurface samples.

b. Geophysical techniques.

c. Structure contour maps.

d. Cross-sections

e. Groundwater modeling.

f. Topographic maps (1":200' scale) that show all features required by 6 NYCRR 373-1.5(a)(2)(xix), including:

i. Map scale.

ii. Aerial photography.

iii. Location of the operational units within the hazardous waste facility as well as any area where hazardous waste is treated, stored, or disposed including equipment clean up areas.

D. GROUNDWATER MONITORING SYSTEMS

1. The Permittee must observe requirements as established, but not limited to, those found in 6 NYCRR 373-2.6 and 373-3.6.

2. Groundwater Level Measurements: The Permittee must measure and report the elevation of the potentiometric surface in all monitoring wells and/or piezometers within the off-site and on-site monitoring well network identified in the GMP or the appropriate Groundwater Monitoring Report (GWMR).

a. Water level measurements must have been collected within a 24-hour period. Within thirty (30) days of completing these measurements, the Permittee shall use the water level data to evaluate the direction and rate of groundwater flow. The facility must specify any other situations in which all measurements need to be taken within a short time interval as is the case of tidally influenced aquifers, impacts from impoundments, pumping charges and dischargers (including artesian wells if existing), stressed aquifers by production wells, recharge due to sudden precipitation, etc.

b. Piezometers must be re-surveyed as required in the Facility's GMP to determine the extent of subsidence or rise in the ground surface.

c. In cases where immiscible contamination is found during the characterization, water level should be adjusted to reflect true elevation.

d. Information gaps such as unidentified extraction wells in the vicinity, changes in seasonal precipitation causing groundwater plume shifting, formerly inaccessible areas, etc.

e. Assess off-site or on-site well pumping as it may affect both the rate and direction of groundwater flow.

Additionally, the Permittee must provide, and keep current, a Facility map showing the locations of the GWM wells as discussed in **Conditions B.5 and D.6** of this Module.

3. Description of Wells: The Permittee must maintain an inventory of their monitoring well network for both off-site and on-site wells. This inventory must also include the status (active/inactive), purpose, type (e.g., upgradient/downgradient, compliance, monitoring, piezometers, replacement wells, etc.), depth and location of these wells. If at any time, another type of well(s) is found in the premises of the facility (e.g., extraction, artesian, emergency use, etc.), the Permittee must obtain and report their status and capacity to the DEC. The Permittee may coordinate efforts to obtain this information with local authorities and/or DEC. The Permittee is responsible for notifying DEC on all changes in the well network including decommissioning, abandonment and/or underreported wells. The Permittee is responsible for updating this inventory every five (5) years, or within sixty (60) days of addition of a new well, well decommissioning or replacement.

4. Monitoring Well Designations: The Permittee must ensure adequate placement of monitoring wells. This placement must include upgradient and downgradient monitoring wells relative to active and closed hazardous waste management units, solid waste management units and areas of concern at the Facility. Additionally, this placement must include screening of detection monitoring wells for the interception of predicted pathways of migration. The number of wells that shall be required shall be determined by DEC as the number necessary to achieve the performance objectives.

5. Plume Assessment Wells: The appropriately designated monitoring wells listed in the GMP or GWMR shall be used to monitor the contaminant plume movement and to assess the effectiveness of the Post Closure Care or Corrective Action Program.

6. Documentation of Monitoring Wells: The Permittee must maintain an updated inventory of groundwater monitoring well information including but not limited to:

   a. Date/time of original construction. Additionally, the inventory must include any well redevelopment or replacement information.

   b. Well identification number. Wells must be properly identified in the administrative record as well as physically on the well protective casing, cover or flush mount.

   c. Well type (e.g. background, sampling, point of compliance, etc.)

   d. Well location (+/- 0.5 ft)

i. Coordinates must be submitted in latitude/longitude coordinate system with a precision as required by DEC guidance.

ii. The Permittee must include a conversion factor or system whenever using Easting and Northing.

e. Well development method and date.

f. Unit(s) monitored.

g. Bore hole diameter and well casing diameter.

h. Casing materials.

i. Well depth (± 0.1 ft, must be the well bottom).

j. Ground elevation (± 0.01ft relative to mean sea level (MSL)).

k. Top-of-Riser elevation (± 0.01 ft).

l. Screened interval (ft. relative MSL).

m. Drilling and lithological logs.

n. Monitored zone.

o. Detailed drawing of well (include dimensions).

All depth or elevations may be reported in ft BGS (below ground surface), ft AMSL (above mean sea level) or ft BTOC (below top of casing). Whatever system is used must be consistent across all GWM systems/plans/program for the Facility. All documentation must include the necessary definitions, units or acronyms used therein.

If requested by DEC, the Permittee must provide a copy of the Monitoring Well documentation within five (5) business days.

E. WELL LOCATION, INSTALLATION AND CONSTRUCTION

The Permittee must submit a written proposal to install and maintain a groundwater monitoring system a minimum of forty-five (45) days prior to planned installation. The Permittee must design all groundwater monitoring system(s) such that they comply with all applicable regulations and requirements. The Permittee may not install any wells without DEC approval, including any proposed replacement well(s).

1. The Permittee shall ensure that all wells are designed, installed, and maintained such that groundwater samples are representative of the true water quality. Additionally, the wells shall be designed, installed and monitored in such a manner to prevent interconnection between different hydrologic units.

2. The Permittee must ensure the use of adequate construction materials that are durable enough to resist chemical and physical degradation and do not interfere with the quality of groundwater samples. Specific well components that are of concern include well casings, well screens, filter packs, and annular seals or backfills. Emerging contaminants, chemicals or materials characterized by a perceived, potential, or real threat to human health or the environment or by a lack of published health standards, should be considered when selecting these materials.

3. The Permittee must ensure the drilling method used minimizes disturbance of the surface and subsurface materials. Any method used should not contaminate these materials as well as groundwater or surface water. Emerging contaminants, chemicals or materials characterized by a perceived, potential, or real threat to human health or the environment or by a lack of published health standards, should be considered when selecting these materials.

4. The Permittee must maintain documentation on the design and construction of the wells. Otherwise, a placement of a monitoring well will be considered inadequate for groundwater monitoring if no documentation is provided to the DEC.

5. The Permittee shall measure total well depth annually and redevelop any monitoring well when sediment has entered the well and accumulated to a depth of one foot; or the accumulated sediment blocks ten percent of the screen length, whichever is less. The Permittee must notify DEC within fifteen (15) days of any need to redevelop a well or any sediment accumulation above ten (10) percent.

6. The Permittee must submit a written plan for any well abandonment or decommissioning a minimum of forty-five (45) days prior to implementation. The Permittee may not decommission any wells without DEC approval. The Permittee must follow DEC's well decommissioning policy per **Condition A.4 of Module I**.

F. WELL MAINTENANCE

1. The Permittee is responsible for maintaining the GWM system and ensuring that all monitoring points yield representative samples of high integrity. During each sampling event the wells to be sampled shall be visually inspected for integrity. Any well found to be damaged beyond usability, blocked or broken, or that fails to recharge properly, shall be repaired, abandoned or replaced, if necessary, in accordance with the conditions of this Permit. Additionally, if the Permittee, or their contractor, observes any cracking or frost heaving of grout at any well, repairs shall be made, and the top of the inner well casing will be resurveyed to ensure accurate definition of groundwater elevations. All repairs or replacements shall be completed prior to the next scheduled sampling event Flush mounted wells shall be capped with a watertight seal. The integrity of this seal shall be inspected each time the wells are sampled.

2. The Permittee shall perform inspection activities within one hundred eighty (180) days of the effective date of this Permit, and every three (3) years after the initial inspection. These inspections shall evaluate the exterior conditions and accessible parts of GWM

wells as mentioned in **Condition F.1** above as well as assessing well performance and effectiveness in the GMP (i.e., well screen depth versus plume locations, etc). The Permittee shall report observations and maintenance actions in both an initial report and the Triennial Well Inspection Report as listed in **Table C of Module XIII**.

3. The Permittee shall maintain an inventory of all existing and historical wells throughout the facility and at off-site locations associated with the GMP.

The Permittee is responsible to mark and label wells for field identification.

G. SAMPLING AND ANALYSIS PROCEDURES

1. The Permittee must ensure that the frequency of sample collection and the wells to be sampled are in accordance with the Groundwater Monitoring Schedule established in the GMP or GWMR. These wells shall adequately characterize the nature and extent, both horizontal and vertical of groundwater contamination. The Permittee shall monitor groundwater quality throughout the compliance period to demonstrate conformance with the GMP.

   a. The Permittee must prepare and submit a Sampling and Analysis Plan (SAP) and its corresponding Sampling and Analysis Report (SAR) to DEC pursuant to **Conditions C.3 and C.5 of Module II**, as may be necessary. Any new groundwater monitoring requirements necessary based on any new SAP or SAR would subsequently be incorporated into the GMP.

   b. Any required SAP must include provisions for measurement of static water elevations in each well prior to each sampling event. A change in hydrologic conditions may necessitate modification to the design of the groundwater monitoring system.

2. Proposed sampling frequencies shall be submitted by the Permittee as part of the Permit application. The sampling frequency is determined on a case-by-case scenario and should reflect site-specific hydrogeological conditions. The minimum sampling is determined by the Department as defined in the GMP and per 6 NYCRR 373-2.6(h), (i) and (j).

3. Unless specified in the Permit and/or approved modifications to the GMP, the Permittee must include all active wells in sampling activities. Monitoring wells can only be removed from sampling activities after the review and approval of DEC.

4. The Permittee shall report water level data with the groundwater quality analytical results as specified in **Conditions C and D** of this Module and with a collection time inside a twenty-four (24) hour time span for a given well, unless otherwise approved by the Department in the GMP.

5. The Permittee must collect field data parameters during sampling activities to obtain pH, temperature, redox potential, dissolved oxygen, and specific conductance. Other

field measurements may be required yet not limited to purged water collected and screened with photoionization detectors (PID) or organic vapor meters.

6. The Permittee shall take into account other indicator parameters additional to established hazardous constituents as described in 6 NYCRR 373-2.6(i) or as may be determined by the Department on a case-by-case basis.

7. The Permittee must note and report the presence of immiscible layers: Non-Aqueous Phase Liquids (NAPLs), and Dense Non-Aqueous Phase Liquids (DNAPLs) not detected in the aqueous phase.

8. At a minimum, the Permittee must use the techniques and procedures outlined in **Conditions G.9 through G.12** of this Module when obtaining and analyzing groundwater samples from the groundwater monitoring wells. The specific elements to be used must be established and discussed in the GMP and GWMR.

9. Presampling Procedures

    a. Procurement, inspection, and calibration of equipment;
    b. Procurement and preparation of sample bottles;
    c. Storage and handling of sampling gear between uses;
    d. Personal protective equipment needed for sampling;
    e. Well purging techniques;
    f. Water level measuring techniques; and
    g. Laboratory notification/verification.

10. Sampling Procedures

    a. Use of sampling equipment;
    b. Field measurements and calibration techniques;
    c. Sampling parameters/sample handling techniques, including:
        i. sample containers to be used,
        ii. sample preservation techniques,
        iii. sample filtration techniques
        iv. order of sample collection,
        v. sample labels, and
        vi. sample storage,
    d. Field QA/QC such as decontamination, blanks, duplicate measurements;
    e. Sample shipping and chain of custody procedures;
    f. Health and safety/personal protection measures; and

g. Provisions for adequate disposal of purge water

11. Background Information for each Monitoring Well/Piezometer
    a. Well log;
    b. Water level recovery rate of wells;
    c. Measuring point elevation;
    d. Normal purge volume of wells;
    e. Background water quality values; and
    f. Development/redevelopment history of the wells

12. Data Management

    a. The Permittee is responsible to maintain and update data from each well or piezometer after each sampling or monitoring event. The well record must contain the following information:
        i. Well I.D. number and, if possible, designation as up or downgradient;
        ii. Depth of wells as installed and as measured in the most recent Annual Well Inventory (for exceptions see **Condition F** of this Module)
        iii. Measuring point elevation;
        iv. Depth of water;
        v. Purge volume;
        vi. Purge time (start/stop)
        vii. Sampling time;
        viii. Field parameters (e.g., temp., pH, S.C., TDS);
        ix. Physical condition of the well;
        x. Important field observation related to sample integrity;
        xi. Names of sampling personnel;
        xii. Weather conditions;
        xiii. Purge/sample date;
        xiv. Concentration of required monitoring parameters;
        xv. Concentration of any other parameters analyzed;
        xvi. Pertinent laboratory information (QA/QC problems, etc.); and
        xvii. Water Elevation (quarterly water level measurements only).

13. Sample Analysis. Samples shall be analyzed based on most current USEPA Hazardous Waste Test Methods SW-846, using the most recent and stringent procedure at the time of analysis, unless the Department approves a different methodology prior to sampling. These samples must be analyzed by a laboratory with a NYS Environmental Laboratory Approval Program (ELAP) certification.

14. The Permittee is responsible to sample any wastes or other materials that may be generated as part of the GMP and to ensure it is disposed of in accordance with all applicable regulations.

15. The GMP should include provisions for measurement of static water elevations in each well prior to each sampling event.

16. The Permittee must report the presence of hazardous waste constituents that are consistently present in the monitoring wells exceeding established groundwater protection standards. DEC may require the Permittee to perform additional sampling and install additional wells to determine the horizontal and vertical extent of any contamination.

17. Inability to Obtain Samples. If the Permittee knows that a well may not provide representative samples, may not provide accurate piezometric values, may be damaged, or is inaccessible due to obstructions, the Permittee shall within seven (7) days of such knowledge notify DEC, in writing, of the problem and proposed remedy. Within fourteen (14) days of such knowledge, the Permittee shall attempt to remedy the problem and, when appropriate, sample or re-sample the well. Within twenty-one (21) days of such knowledge, the Permittee shall, through written notice to the DEC, provide information which describes the nature of the problem.

18. The Permittee must include a section in the GMP with detailed procedures for evacuating GMP wells (e.g., low-flow vs high-flow techniques, use of dedicated equipment, purging times, etc.). The Permittee must provide a written report to DEC within fourteen (14) days whenever a well cannot be sampled due to water table conditions, sediment built up, etc.

19. Insufficient Groundwater for Sampling. The Permittee must report wells with a history of pumping dry and discuss with DEC the order of sampling COCs. For wells in which the water table has lowered sufficiently to consider the well dry and no longer adequate for sampling, DEC will make the determination on whether the well should be retained in the GMP or replaced.

20. The Permittee is responsible for the characterization of all Investigation Derived Waste (IDW) generated during sampling activities. Characterization may include Toxicity Characteristics Leaching Procedure (TCLP) analysis. The Permittee shall treat, store and/or dispose of all IDW, including contaminated groundwater, in accordance with all applicable federal, state and local requirements.

21. At the request of the DEC, the Permittee shall allow the DEC and/or its authorized representatives to collect samples or splits of any samples collected by the Permittee

pursuant to the requirements of this Permit. Similarly, at the request of the Permittee, the DEC will allow the Permittee or the Permittee's authorized representatives to take splits or duplicates of any samples collected by the DEC. The Permittee shall provide appropriate management of or disposal of purge water whenever samples are collected by the DEC.

22. Laboratory Reporting: As stated in **Condition G.9** above, all samples must be analyzed by an ELAP-certified laboratory. Additionally, the Permittee must provide DEC with ASP Category B deliverables for sample results in accordance with **Condition O.1 of Module I**. An associated Data Usability Summary Report (DUSR) must be prepared by a qualified and approved data validator and submitted along with all results.

23. Change in Analytical Laboratory: Whenever the Permittee changes analytical contractors, the Permittee shall submit to the Department, within thirty (30) days of such a change, a copy of the new laboratory's New York State ELAP certification to be included in the permit application. This certification must state the expiration date, analytical test methods and parameters for which the laboratory is certified.

24. The Permittee is required to report the concentrations of any newly detected hazardous constituents found during analysis to the DEC in writing within **seven (7) days** after receipt of analytical data. The Permittee must immediately incorporate these new constituents into the GMP when the presence of new hazardous constituents is confirmed by resampling. If the Permittee chooses not to resample, the original detections will be considered valid detections, and the hazardous constituents must be added to the GMP.

25. The Permittee must use the appropriate statistical procedure to evaluate groundwater monitoring data for each hazardous constituent detected as established in 6 NYCRR 373-2.6(h)(8) and (9) or otherwise approved by the Department.

H. GROUNDWATER MONITORING PROGRAM TERMINATION CRITERIA

1. Request for Termination: The Permittee may submit a request for Termination of the Groundwater Monitoring Program. The termination request must provide information that the Permittee's GMP has met all groundwater protection standards set forth in monitoring parameters in **Table XI-1**.

2. Termination Monitoring: Termination Monitoring will be initiated whenever the Permittee determines that the cleanup in all or part of the on-site area/aquifer is achieving the Termination Criteria. The Department shall determine the appropriate sampling episodes required to demonstrate that the groundwater quality meets the Termination Criteria. At least 60 days prior to commencing Termination Monitoring, the Permittee shall submit a Termination Monitoring Plan for DEC review. That plan will describe the area (or wells) for which Termination Monitoring is proposed, and the monitoring plan, including wells, which will be used to determine whether the Termination Criteria have been achieved. The Permittee may proceed with the Termination Monitoring Program, without DEC approval, at their own risk. Only those

results which conform to a DEC-approved Termination Monitoring Plan shall be accepted by the Department.

3. Basis for Termination: The basis for the DEC's determination of whether the termination criteria have been met for a particular well shall be if DEC concurs that the well has met the **Table XI-1** groundwater protection standards for three (3) years of sampling for Corrective Action monitoring.

I. GROUNDWATER WELL DECOMMISSIONING OR REPLACEMENT

1. The Permittee is responsible to submit a Permit modification request, in accordance with **Condition B.10** of this Module, including a well decommissioning plan for any plugging, capping and abandonment of a GMP well at the Facility. Once approved by the DEC and implemented, the Permittee must submit a GWM well decommissioning report to DEC for review and approval. All wells in the GMP shall be decommissioned in accordance with **Condition A.4 of Module I** of this Permit. Once a well is decommissioned, the Permittee must update the GMP and maintain changes in the GWMR to remove said well(s).

2. The Permittee must submit a Permit modification request, in accordance with **Condition B.10** of this Module, including a work plan for any well replacement proposal. The Permittee must receive DEC approval prior to a well replacement installation. The new well should retain the same vertical and horizontal characteristics as the original well and the screen depth should be at the same stratigraphic unit. DEC will review this on a case-by-case scenario.

TABLE XI-1
Groundwater Protection Standards
Site Specific Parameters

Constituent	**Concentration Limit, µg/L (micrograms per liter)[2]**
Chlorobenzene	5
Chloroform	7
1,2-Dichlorobenzene	3
Dichlorodifluoromethane (Freon® 12) [1]	5
1,2-Dichloroethane (1,2-DCA)	0.6
1,1-Dichloroethene	5
cis-1,2-Dichloroethene (cis-1,2-DCE) [1]	5
trans-1,2-Dichloroethene	5
1,2-Dichloroethene, Total [3]	5
1,2-Dichloro-1,2,2-trifluoroethane (Freon® 123a) [1]	5
Ethylbenzene	5
Methylene Chloride	5
Tetrachloroethene (PCE) [1]	5
1,1,1-Trichloroethane	5
1,1,1-Trichloroethene	5
Trichloroethene or Trichloroethylene (TCE) [1]	5
Trichlorofluoromethane (Freon® 11) [1]	5
1,1,2-trichloro-1,2,2-trifluoroethane (Freon® TF or Freon® 113) [1]	5
Vinyl chloride [1]	2
1,4-Dioxane	0.35
Flouride, Total	1,500
Perfluorooctane Sulfonic acid (PFOS)	0.0027
Perfluorooctanoic acid (PFOA)	0.0067
Beta-BHC	Non-Detectable[4]
Arsenic, Total	25
Arsenic, Dissolved	25
Chromium, Total	50
Chromium, Dissolved	50
Mercury, Total	2
Nickel, Total	100
Nickel, Dissolved	100
Silver, Total	50
Acetone [5]	None
m,p -Xylene	5
o-Xylene	5

Footnotes:

1. This list contains all known Constituents of Concern (COCs) for the Facility; however, these particular COCs and their breakdown products are the primary COCs currently subject to groundwater monitoring requirements at the Facility. Additional information may be found in the GMP or GWMR.
2. The total concentration of all organic constituents, excluding pesticides, herbicides, vinyl chloride, and trihalomethanes, shall not exceed 100.0 µg/l.
3. The Permittee may analyze for total-1,2-Dichloroethylene or the individual cis- and trans- isomers during routine monitoring. However, the Department may require analysis for the individual isomers during termination monitoring.
4. The concentration shall not be at or above the method detection limit established by SW-846 Method 8260.
5. A "general organic guidance value" of 50 µg/L has been established for this parameter, which is a common laboratory contaminant.

MODULE XII
RESERVED

MODULE XIII

Scheduled Dates

MODULE XIII
SCHEDULED DATES

A. COMPLIANCE SCHEDULE

The Permittee must complete the following activities within the scheduled timeframes indicated in the following table in accordance with 6 NYCRR 373-1.6(d):

Item No.	Item	Requirement	Compliance Date[1]
1.	Financial Assurance Updated Cost Estimate - iPark	Module I, Condition P	Within 30 days from the effective date of this Permit.
2.	Financial Assurance Instrument(s) - iPark	Module I, Condition P	Within 45 days of approval of cost estimate by DEC.

Footnotes:
1. The Permittee must comply with the reporting requirements of 6 NYCRR 373-1.6(d)(1)(iii) for each interim date and the final compliance date.

B. SCHEDULE OF DELIVERABLES

The Permittee must complete the activities indicated in the following table within the scheduled timeframes from the effective date of the Permit:

Item No.	Item	Requirement	Deliverable Date[1]
1.	Draft Site Management Plan (SMP) Update	Submit a draft SMP prepared in accordance with Modules I and II as well as DER-10 (https://extapps.dec.ny.gov/fs/programs/der/templates/smptemplate1.docx). The SMP must be a comprehensive document, must consider and include all site management activities for the entire Facility, and must describe how the Permittee will manage the Facility to achieve remedial goals and objectives for the entire Facility as a whole.	Within 180 days of the receipt of DEC comments.
2.	Final SMP	Submit a final SMP acceptable to the Department prepared in accordance with DER-10.	Within 60 days of the NYSDEC approval of the draft SMP.
3.	SWMU/AOC Current Conditions Assessment Report	Module II, Condition B.13	Within 365 days of the effective date of this Permit.

Item No.	Item	Requirement	Deliverable Date[1]
4.	Performance Monitoring Plan (PMP) Update (to include Sloop, B338, B339 and the required system down time information)	Module I, Condition B and Module II, Condition F.7	Within 90 days of the effective date of this Permit.
5.	Groundwater Monitoring Plan/Program Update	Module XI, Condition D.6	Within 120 days of the effective date of this Permit.
6.	Initial Well Inspection Report	Module XI, Condition F.2	Within 180 days of the effective date of this Permit
7.	B335 Corrective Measures Implementation Work Plan	Module II, Table II-3	Within 120 days of effective date of this Permit.
8.	On-site Soil/Debris Management and Reuse Plan – iPark	Module II, Condition F.9	Within 90 days of the effective date of this Permit.
9.	Environmental Easement Finalization – iPark (Lots 2a, 3a, 4, 7 including all its units, Fee Roads (including South Drive)), onsemi (Lots 1 and 5), Frito-Lay (lot 9), iPark (Lot 8)	Module II, Condition F.2	Within 120 days of the effective date of this Permit.
10.	Establishment of a single repository	Module I, Condition V.1	Within 30 days of the effective date of this Permit.

Footnotes:
1. Deliverable Date changes may be made with written approval from the Department.

C. ROUTINE REPORTING

The Permittee must submit the following routine reports to the Department by the indicated due date in accordance with the requirements of this Permit (Note: the table below is intended to serve as a guide for certain routine reporting required by this Permit. However,

the Permittee is still obligated to comply with all applicable regulations cited in this Permit and all conditions and requirements contained in the Modules, Attachments and documents incorporated by reference into this Permit, regardless of whether they are or are not listed in the table below.):

Item No.	Item	Frequency	Due Date[1]	Requirement
1.	Hazardous Waste Manifest Reporting	On-going	10 days of receipt	6 NYCRR 373-2.5(b)(1)(i)
2.	Annual Hazardous Waste Report	Annually	March 1	6 NYCRR 373-2.5(e)
3.	Hazardous Waste Reduction Plan Update/Report	Annually, if necessary	July 1	ECL 27-0908 and Module I, Condition M
4.	SWMU/AOC Current Conditions Assessment Report	Annual	June 1	Module II, Condition B.13 and Attachment G
5	Corrective Action Cost Estimate Adjusted for Inflation	Annually	60 days prior to anniversary date of establishment of financial instrument	6 NYCRR 373-2.8(c)(2), 6 NYCRR 373-2.8(e)(2) and Module I, Condition O.3
6.	Evidence that Financial Assurance Instruments have been maintained and not lapsed	Annually	April 1	Module I, Condition P.11
7.	Well Inspection Report	Triennially	Three years after submittal of the Initial Report	Module XI, Condition F.2
8.	Groundwater Monitoring & Vapor Intrusion Engineering Controls (PMP) Reports	Annually, or as per approved GWMPs	June 1 or as per approved GWMPs	Module XI, Conditions C and D and Attachment K
9.	Groundwater Monitoring Well Inventory	Every 5 years, or when wells are modified	Dependent on activity	Module XI, Condition D.3 and Condition I

Footnotes:

1. Routine Date changes may be made with written approval from the Department.

ATTACHMENT A
Permit Modification Log

ATTACHMENT A
PERMIT MODIFICATION LOG

The permit may be modified for causes as allowed under 6 NYCRR 373-1.7 and 621.14. Modification shall be requested in writing as required by 6 NYCRR 621.13 and 621.14. Requests for modifications shall be submitted to designees as specified in **Condition W of Module I.**

An application for permit modification is processed pursuant to 6 NYCRR Part 621 and 373-1.7. Applications for minor modifications listed under 373-1.7(c) may be processed without being treated as a new application. For any other modification not explicitly listed as major under 373-1.7(d) or minor modification, the permittee may submit a request for permit modification and request that it be classified and administered as a modification under Part 373-1.7(c)(15). This request must include information supporting the requested classification. The Department shall determine whether the request qualifies to be administered as a modification or an application for a new permit in accordance with Part 621 – Uniform Procedures. In making this determination, the Department shall consider the degree to which the proposed changes are similar to those listed as minor modification under 373-1.7(c), the Federal Regulations under 40 CFR 270.42 and the following criteria:

Minor modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health and the environment.

Revision #	Affected permit modules, attachments, and/or documents incorporated by reference	Modified page number(s)		Permit modification request date	Permit modification issuance date	The nature of the modifications
		Old	New			

ATTACHMENT B

Permit Renewal Application, exclusive of Attachments

ATTACHMENT B-1

Part A Application and Certifications

PART A PERMIT APPLICATION

The Part A Permit application for the former IBM East Fishkill Facility contains a revised RCRA Hazardous Waste Part A Permit Application (RCRA Subtitle C Site Identification Form (EPA Form 8700-12, 8700-13 A/B, 8700-23) and the Hazardous Waste Permit Part A Form.

The owners and tax parcel information at the time of this submittal are as described in **Attachment A-1**. The operators and associated engineering control information at the time of this submittal are described in **Attachment A-2**.

Exhibit A-1 contains the completed RCRA Subtitle C Site Identification Form.

Exhibit A-2 contains the completed Hazardous Waste Part A Form.

The Former IBM East Fishkill Facility is identified on the USGS 7.5-minute Hopewell Junction Quadrangle (1" = 2,000') provided as **Exhibit A-3 (Hopewell Junction Quadrangle)**. The facility property lines are outlined on these maps.

Exhibit A-4 (Facility Site Plan) contains a facility Site Plan that delineates all existing structures.

Exhibit A-5 (Aerial Photograph) contains an aerial photograph of the facility.

EXHIBIT A-1: RCRA SUBTITLE C SITE IDENTIFICATION FORM

United States Environmental Protection Agency
RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal (Select only one.)

☐	Obtaining or updating an EPA ID number for on-going regulated activities (Items 10-17 below) that will continue for a period of time.
☐	Submitting as a component of the Hazardous Waste Report for _____ (Reporting Year)
	☐ Site was a TSD facility, a reverse distributor, and/or generator of ≥ 1,000 kg of non-acute hazardous waste, > 1 kg of acute hazardous waste, or > 100 kg of acute hazardous waste spill cleanup in **one or more months of the reporting year** (or State equivalent LQG regulations)
☐	Notifying that regulated activity is no longer occurring at this Site
☐	Obtaining or updating an EPA ID number for conducting Electronic Manifest Broker activities
☑	Submitting a new or revised Part A (permit) Form

2. Site EPA ID Number

N	Y	D	0	0	0	7	0	7	9	0	1

3. Site Name

FORMER IBM EAST FISHKILL REMEDIATION

4. Site Location Address

Street Address **2070 Route 52**		
City, Town, or Village **Hopewell Junction**		County **Dutchess**
State **NY**	Country **USA**	Zip Code **12533**
Latitude	Longitude	☐ Use Lat/Long as Primary Address

5. Site Mailing Address ☐ Same as Location Street Address

Street Address **8976 Wellington Road**		
City, Town, or Village **Manassas**		
State **VA**	Country **USA**	Zip Code **20109**

6. Site Land Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

7. North American Industry Classification System (NAICS) Code(s) for the Site (at least 5-digit codes)

A. (Primary) **56291**	C.
B.	D.

8. Site Contact Information

☐ Same as Location Address

First Name **Linda**	MI **N**	Last Name **Daubert**
Title **Program Manager**		
Street Address **8976 Wellington Road**		
City, Town, or Village **Manassas**		
State **VA**	Country **USA**	Zip Code **20109**
Email **LNDaubert@us.ibm.com**		
Phone **720-397-5670**	Ext	Fax

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner

☐ Same as Location Address

Full Name **Semiconductor Components Industries, LLC**	Date Became Owner (mm/dd/yyyy) **1/1/2023**

Owner Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

Street Address **2070 Route 52**		
City, Town, or Village **Hopewell Junction**		
State **NY**	Country **USA**	Zip Code **12533**
Email		
Phone	Ext	Fax

Comments **The Site is divided into 9 Lots and several fee roads. There are multiple Owners for the various Site parcels. See Item 18 for other Site Owner information. See Attachment A-1 for a list of the Site tax parcels and respective Owners.**

B. Name of Site's Legal Operator

☐ Same as Location Address

Full Name **IBM Corporation**	Date Became Operator (mm/dd/yyyy) **7/1/1963**

Operator Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

Street Address **8976 Wellington Road**		
City, Town, or Village **Manassas**		
State **VA**	Country **USA**	Zip Code **20109**
Email **LNDaubert@us.ibm.com**		
Phone **720-397-5670**	Ext	Fax

Comments **IBM is the Site Operator for RCRA Corrective Action including the operation, maintenance and monitoring of groundwater extraction and treatment systems; a soil vapor extraction and treatment system; soil vapor mitigation systems; environmental media sampling and analysis; implementation of a Site Management Plan; and related activities. iPark East Fishkill LLC, iPark East Fishkill 84 LLC, iPark East Fishkill I LLC, iPark East Fishkill B338 LLC, Semiconductor Components Industries LLC (onsemi) and Rolling Frito-Lay Sales, LP are site Operators. A complete listing of engineering controls and associated Operator information is provided in Attachment A-2. See item 18 for information relating to other Operators at the Site.**

10. Type of Regulated Waste Activity (at your site)

Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities

☑ Y ☐ N	1. Generator of Hazardous Waste—If "Yes", mark only one of the following—a, b, c	
☑	a. LQG	-Generates, in any calendar month, 1,000 kg/mo (2,200 lb/mo) or more of non-acute hazardous waste (includes quantities imported by importer site); or - Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lb/mo) of acute hazardous waste; or - Generates, in any calendar month or accumulates at any time, more than 100 kg/mo (220 lb/mo) of acute hazardous spill cleanup material.
☐	b. SQG	100 to 1,000 kg/mo (220-2,200 lb/mo) of non-acute hazardous waste and no more than 1 kg (2.2 lb) of acute hazardous waste and no more than 100 kg (220 lb) of any acute hazardous spill cleanup material.
☐	c. VSQG	Less than or equal to 100 kg/mo (220 lb/mo) of non-acute hazardous waste.
☐ Y ☑ N	2. Short-Term Generator (generates from a short-term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section. *Note: If "Yes", you MUST indicate that you are a Generator of Hazardous Waste in Item 10.A.1 above.*	
☐ Y ☑ N	3. Treater, Storer or Disposer of Hazardous Waste—Note: Part B of a hazardous waste permit is required for these activities.	
☐ Y ☑ N	4. Receives Hazardous Waste from Off-site	
☐ Y ☑ N	5 Recycler of Hazardous Waste	
☐	a. Recycler who stores prior to recycling	
☐	b. Recycler who does not store prior to recycling	
☐ Y ☑ N	6. Exempt Boiler and/or Industrial Furnace—If "Yes", mark all that apply.	
☐	a. Small Quantity On-site Burner Exemption	
☐	b. Smelting, Melting, and Refining Furnace Exemption	

B. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g. D001, D003, F007, U112). Use an additional page if more spaces are needed.

D039	**D040**	**D043**				

C. Waste Codes for State Regulated (non-Federal) Hazardous Wastes. Please list the waste codes of the State hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed.

11. Additional Regulated Waste Activities (NOTE: Refer to your State regulations to determine if a separate permit is required.)

A. Other Waste Activities

☐ Y ☑ N	1. Transporter of Hazardous Waste—If "Yes", mark all that apply.
☐	a. Transporter
☐	b. Transfer Facility (at your site)
☐ Y ☑ N	2. Underground Injection Control
☐ Y ☑ N	3. United States Importer of Hazardous Waste
☐ Y ☑ N	4. Recognized Trader—If "Yes", mark all that apply.
☐	a. Importer
☐	b. Exporter
☐ Y ☑ N	5. Importer/Exporter of Spent Lead-Acid Batteries (SLABs) under 40 CFR 266 Subpart G—If "Yes", mark all that apply.
☐	a. Importer
☐	b. Exporter

B. Universal Waste Activities

☐ Y ☑ N	1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) - If "Yes" mark all that apply. Note: Refer to your State regulations to determine what is regulated.
☐	a. Batteries
☐	b. Pesticides
☐	c. Mercury containing equipment
☐	d. Lamps
☐	e. Aerosol Cans
☐	f. Other (specify) _____
☐	g. Other (specify) _____
☐ Y ☑ N	2. Destination Facility for Universal Waste Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

☐ Y ☑ N	1. Used Oil Transporter—If "Yes", mark all that apply.
☐	a. Transporter
☐	b. Transfer Facility (at your site)
☐ Y ☑ N	2. Used Oil Processor and/or Re-refiner—If "Yes", mark all that apply.
☐	a. Processor
☐	b. Re-refiner
☐ Y ☑ N	3. Off-Specification Used Oil Burner
☐ Y ☑ N	4. Used Oil Fuel Marketer—If "Yes", mark all that apply.
☐	a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
☐	b. Marketer Who First Claims the Used Oil Meets the Specifications

D. Pharmaceutical Activities

☐ Y ☑ N	1. Operating under 40 CFR Part 266, Subpart P for the management of hazardous waste pharmaceuticals—if "Yes", mark only one. Note: See the item-by-item instructions for definitions of healthcare facility and reverse distributor.
☐	a. Healthcare Facility
☐	b. Reverse Distributor
☐ Y ☑ N	2. Withdrawing from operating under 40 CFR Part 266, Subpart P for the management of hazardous waste pharmaceuticals. Note: You may only withdraw if you are a healthcare facility that is a VSQG for all of your hazardous waste, including hazardous waste pharmaceuticals.

12. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR Part 262, Subpart K.

☐ Y ☑ N	A. Opting into or currently operating under 40 CFR Part 262, Subpart K for the management of hazardous wastes in laboratories— If "Yes", mark all that apply. Note: See the item-by-item instructions for definitions of types of eligible academic entities.
☐	1. College or University
☐	2. Teaching Hospital that is owned by or has a formal written affiliation with a college or university
☐	3. Non-profit Institute that is owned by or has a formal written affiliation with a college or university
☐ Y ☑ N	B. Withdrawing from 40 CFR Part 262, Subpart K for the management of hazardous wastes in laboratories.

13. Episodic Generation

☐ Y ☑ N	Are you an SQG or VSQG generating hazardous waste from a planned or unplanned episodic event, lasting no more than 60 days, that moves you to a higher generator category. If "Yes", you must fill out the Addendum for Episodic Generator.

14. LQG Consolidation of VSQG Hazardous Waste

☐ Y ☑ N	Are you an LQG notifying of consolidating VSQG Hazardous Waste Under the Control of the Same Person pursuant to 40 CFR 262.17(f)? If "Yes", you must fill out the Addendum for LQG Consolidation of VSQG hazardous waste.

15. Notification of LQG Site Closure for a Central Accumulation Area (CAA) (optional) OR Entire Facility (required)

☐ Y ☑ N	LQG Site Closure of a Central Accumulation Area (CAA) or Entire Facility.
	A. ☐ Central Accumulation Area (CAA) or ☐ Entire Facility
	B. Expected closure date: _____ mm/dd/yyyy
	C. Requesting new closure date: _____ mm/dd/yyyy
	D. Date closed : _____ mm/dd/yyyy ☐ 1. In compliance with the closure performance standards 40 CFR 262.17(a)(8) ☐ 2. Not in compliance with the closure performance standards 40 CFR 262.17(a)(8)

16. Notification of Hazardous Secondary Material (HSM) Activity

☐ Y ☑ N	Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 260.30, 40 CFR 261.4(a)(23), (24), (25), or (27)? If "Yes", you must fill out the Addendum to the Site Identification Form for Managing Hazardous Secondary Material.

17. Electronic Manifest Broker

☐ Y ☑ N	Are you notifying as a person, as defined in 40 CFR 260.10, electing to use the EPA electronic manifest system to obtain, complete, and transmit an electronic manifest under a contractual relationship with a hazardous waste generator?

18. Comments (include item number for each comment)

Item 1: This form is submitted as part of a RCRA Corrective Action permit renewal application and the information provided is only for the Site corrective action activities.

Item 9.A.: Site Legal Owners (continued)
Multiple iPark entities. Multiple Parcels. See Attachment A-1 for specific parcel ownership information.
485 West Putnam Avenue, Greenwich, CT 06830 USA
JCotter@nationalresources.com | (203) 661-0055 | Private Owners | earliest ownership 09/01/2017

Rolling Frito-Lay Sales, LP. LOT 9. See Attachment A-1 for parcel ownership information.
7701 Legacy Drive, Plano, TX 75024
Divesh Patel | Divesh.Patel@pepsico.com |(972) 334-3991 | Private Owner | effective 12/17/2021

Item 19: IBM Corporation is certifying as the Legal Operator for RCRA Corrective Action as noted in Item 9B. Other entities are certifying as the Legal Operators as described on Attachment A-2.

Item 19: Semiconductor Components Industries, LLC, iPark entities and Rolling Frito-Lay Sales, LP certifications are on pages 7, 8, and 9 respectively.

19. Certification 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 fines and imprisonment for knowing violations. **Note: For the RCRA Hazardous Waste Part A permit Application, all owners and operators must sign (see 40 CFR 270.10(b) and 270.11)**.

Signature of legal ~~owner,~~ operator ~~or authorized representative~~	Date (mm/dd/yyyy) **8/14/2024**
Printed Name (First, Middle Initial Last) **Brooke E. Tvermoes**	Title **Director, CEA**
Email **brooke.tvermoes@ibm.com**	

Signature of legal owner, operator or authorized representative	Date (mm/dd/yyyy)
Printed Name (First, Middle Initial Last)	Title
Email	

16. Notification of Hazardous Secondary Material (HSM) Activity

☐ Y ☑ N	Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 260.30, 40 CFR 261.4(a)(23), (24), (25), or (27)? If "Yes", you must fill out the Addendum to the Site Identification Form for Managing Hazardous Secondary Material.

see page 6

17. Electronic Manifest Broker

☐ Y ☑ N	Are you notifying as a person, as defined in 40 CFR 260.10, electing to use the EPA electronic manifest system to obtain, complete, and transmit an electronic manifest under a contractual relationship with a hazardous waste generator?

18. Comments (include item number for each comment)

Item 19:

Semiconductor Components Industries, LLC is certifying as the Legal Owner of the designated tax parcels shown on Attachment A-1.

Semiconductor Components Industries, LLC is also certifying as the Legal Operator of the designated engineering controls described in Attachment A-2 and listed below:

The HVAC (presumptive) engineering control associated with B300, a portion of B316, B317, B320B, B321, B322, B323, B323A, B386 and;

The B320B Passive sub-slab depressurization (SSD) system.

19. Certification 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 fines and imprisonment for knowing violations. **Note: For the RCRA Hazardous Waste Part A permit Application, all owners and operators must sign (see 40 CFR 270.10(b) and 270.11).**

~~Signature of legal owner, operator or authorized representative~~	Date (mm/dd/yyyy)
Printed Name (First, Middle Initial Last)	Title
Email	

Signature of legal ~~owner, operator or authorized representative~~ Kristen Fitzpatrick (owner rep + operator)	Date (mm/dd/yyyy) 8-13-24
Printed Name (First, Middle Initial Last) Kristen Fitzpatrick	Title Facilities Director
Email Kristen.Fitzpatrick@onsemi.com	

16. Notification of Hazardous Secondary Material (HSM) Activity

☐ Y ☑ N	Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 260.30, 40 CFR 261.4(a)(23), (24), (25), or (27)? If "Yes", you must fill out the Addendum to the Site Identification Form for Managing Hazardous Secondary Material.

see page 6

17. Electronic Manifest Broker

☐ Y ☑ N	Are you notifying as a person, as defined in 40 CFR 260.10, electing to use the EPA electronic manifest system to obtain, complete, and transmit an electronic manifest under a contractual relationship with a hazardous waste generator?

18. Comments (include item number for each comment)

Item 19:

iPark is certifying as the Legal Owner of the designated tax parcels shown on Attachment A-1.

iPark is also certifying as the Legal Operator of the designated engineering controls described in Attachment A-2 and as listed below:
iPark East Fishkill LLC [the HVAC (presumptive) engineering control associated with B334];
iPark East Fishkill I LLC [the HVAC engineering control associated with a portion of B310];
iPark East Fishkill B338 LLC [the sub-slab depressurization (SSD) systems engineering controls installed in B338 and B339];
iPark East Fishkill 84 LLC [the SSD system engineering control installed in the northeast portion of B330C; the HVAC engineering control associated with a portion of B330C, the HVAC (presumptive) engineering controls associated with B308 and B330L].

19. Certification 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 fines and imprisonment for knowing violations. **Note: For the RCRA Hazardous Waste Part A permit Application, all owners and operators must sign (see 40 CFR 270.10(b) and 270.11).**

Signature of legal owner, ~~operator or authorized representative~~	Date (mm/dd/yyyy) **8/14/2024**
Printed Name (First, Middle Initial Last) **Joseph Cotter**	Title **President**
Email **jcotter@nationalresources.com**	

Signature of legal ~~owner~~, operator ~~or authorized representative~~	Date (mm/dd/yyyy) **8/14/2024**
Printed Name (First, Middle Initial Last) **Joseph Cotter**	Title **President**
Email **jcotter@nationalresources.com**	

16. Notification of Hazardous Secondary Material (HSM) Activity

☐ Y ☑ N	Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 260.30, 40 CFR 261.4(a)(23), (24), (25), or (27)? If "Yes", you must fill out the Addendum to the Site Identification Form for Managing Hazardous Secondary Material.

see page 6

17. Electronic Manifest Broker

☐ Y ☑ N	Are you notifying as a person, as defined in 40 CFR 260.10, electing to use the EPA electronic manifest system to obtain, complete, and transmit an electronic manifest under a contractual relationship with a hazardous waste generator?

18. Comments (include item number for each comment)

Item 19:

Rolling Frito-Lay Sales, LP is certifying as the Legal Owner of the designated tax parcel shown on Attachment A-1.

Rolling Frito-Lay Sales, LP is also certifying as the Legal Operator of the designated engineering controls described in Attachment A-2 and as listed below:

The Frito-Lay Fulfillment Center Passive sub-slab depressurization (SSD) system; the Frito-Lay Fleet Center Passive SSD system and; the Frito-Lay Guard Booth Passive SSD system.

19. Certification 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 fines and imprisonment for knowing violations. **Note: For the RCRA Hazardous Waste Part A permit Application, all owners and operators must sign (see 40 CFR 270.10(b) and 270.11)**.

Signature of legal owner, ~~operator~~ ~~or authorized representative~~	Date (mm/dd/yyyy) **8/12/2024**
Printed Name (First, Middle Initial Last) **Divesh Patel**	Title **Fulfillment Engineering Director**
Email **divesh.patel@pepsico.com**	

Signature of legal ~~owner~~, operator ~~or authorized representative~~	Date (mm/dd/yyyy) **8/12/2024**
Printed Name (First, Middle Initial Last) **Divesh Patel**	Title **Fulfillment Engineering Director**
Email **divesh.patel@pepsico.com**	

ATTACHMENT A-1: SITE OWNERSHIP (as of June 30, 2024)

LOT NUMBER	CONDO	CONDO UNIT	PARCEL NUMBER	OWNER	LOT / PARCEL SIZE (acres)
1	No condo	N/A	6356-04-794174	Semiconductor Components Industries, LLC	45.64
2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC	3.872
2A	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC	10.588
2A	Hopewell Condo I	Unit #5	6356-04-878256	iPark East Fishkill I LLC	9.290
3A	Hopewell Condo I	Unit #1	6456-03-054349	iPark East Fishkill 84 LLC	10.873
3A	Hopewell Condo I	Unit #2	6456-03-069311	iPark East Fishkill I LLC	10.000
4	No condo	N/A	6456-03-127232	iPark East Fishkill LLC	13.720
5	Condo on Unit 7 G/L Ground leasehold only *		6356-04-955157	Semiconductor Components Industries, LLC	98.940
6	No condo	N/A	6456-03-169074	iPark East Fishkill LLC	56.190
7	Hopewell Condo II	Unit #1A	6456-03-016018	iPark East Fishkill 84 LLC	7.864
7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC	9.698
7	Hopewell Condo II	Unit #1C	6456-03-014040	iPark East Fishkill LLC	5.579
7	Hopewell Condo II	Unit #1D	6456-03-054986	iPark East Fishkill LLC	7.251
7	Hopewell Condo II	Unit #2	6456-03-015092	iPark East Fishkill LLC	6.188
7	Hopewell Condo II	Unit #3	6456-03-073123	iPark East Fishkill LLC	13.584
7	Hopewell Condo II	Unit #4	6355-00-958962	iPark East Fishkill LLC	32.178
7	Hopewell Condo II	Unit #5	6456-03-076010	iPark East Fishkill B338 LLC	2.499
7	Hopewell Condo II	Unit #6	6456-03-048008	iPark East Fishkill LLC	0.210
8	No condo	N/A	6455-00-136916	iPark East Fishkill LLC	59.400
9	No condo	N/A	6356-04-861300	Rolling Frito-Lay Sales LP	29.42

FEE ROADS

ROAD ID	Irrevocable Offer of Cession and Dedication	PARCEL NUMBER	OWNER	PARCEL SIZE
Fee Road I	Town of East Fishkill	N/A	iPark East Fishkill LLC	4.93
Fee Road II	Town of East Fishkill	N/A	iPark East Fishkill LLC	1.68
Fee Road IV	Town of East Fishkill	N/A	Semiconductor Components Industries, LLC	6.51
Fee Road V	Town of East Fishkill	N/A	iPark East Fishkill LLC	3.08
Fee Road VI	Town of East Fishkill	N/A	Semiconductor Components Industries, LLC	2.69
South Drive	Town of East Fishkill	N/A	iPark East Fishkill LLC	7.74

NOTES

p/o = Part of

*Lot 2 Reversionary Clause – B303 and B309 (Hopewell Condominium Unit 1, Unit #7GL). In the event GlobalFoundries or its Successors ceases to exist or operate the chip fab or the need for Hazardous Waste Collection is eliminated, then the portion of Lot 5 containing B303 and B309 shall revert back to Lot 2 Owner or its Successors. (Dutchess County Clerk Filed Map No. 23-1111-12578 and Document No. 02-2017-8369)

ATTACHMENT A-2: SUMMARY OF OPERABLE UNITS & ENGINEERING CONTROLS (as of June 30, 2024)

OPERABLE UNIT / AREA OF CONCERN	ACTIVE	OPERATOR	ENGINEERING CONTROL(S)		LOCATION			PARCEL NUMBER	OWNER
			TYPE	NAME / DESIGNATION / ID	LOT	CONDO	UNIT		
OU2 BEDROCK REMEDIATION AREA	YES	IBM	Extraction Well	PW-1	2	Hopewell Condo I	Unit #6	6356-04-861300	iPark East Fishkill I LLC
	YES	IBM	Extraction Well	PW-2R	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	IBM	Extraction Well	PW-25	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	IBM	Treatment System	PW-1 GTF	1	No Condo	N/A	6356-04-794174	Semiconductor Components Industries, LLC
	YES	IBM	Treatment System	PW-2 GTF	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	IBM	Treatment System	PW-25 GTF	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B300	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B316 (partial)	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B317	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B320B	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B321	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B322	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B323	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B323A	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B386	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
OU5 AREA A	YES	IBM	Sump	B384 SUMP	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IBM	Treatment System	B384 GTF	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	NO*	IBM	SSD System	VE-2 (Central Portion of B310)	2	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC
	YES	IBM	SSD System	VE-9 (Central and Southern Portion of B310)	2A	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC
	YES	IBM	SSD System	VE-11 (B308/B310 LINKWAY)	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IBM	SVE System	VE-3 (Seasonal Operations)	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IPARK	HVAC (presumptive)	B308	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IPARK	HVAC	B310 (partial)	2A	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC
	YES	onsemi	Passive SSD System	B320B Passive SSD	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
PERIMETER AREA	YES	Frito-Lay	Passive SSD System	Fulfillment Center Passive SSD	9	No Condo	N/A	6356-04-861300	Rolling Frito-Lay Sales, LP
	YES	Frito-Lay	Passive SSD System	Fleet Center Passive SSD	9	No Condo	N/A	6356-04-861300	Rolling Frito-Lay Sales, LP
	YES	Frito-Lay	Passive SSD System	Guard Booth Passive SSD	9	No Condo	N/A	6356-04-861300	Rolling Frito-Lay Sales, LP
OU6 AREA C FORMER LANDFILL	YES	IBM	Soil Cover System	Former Landfill Cover System	6	No Condo	N/A	6456-03-169074	iPark East Fishkill LLC
OU8 B330 AOC	YES	IBM	SSD System	VE-1 (Northern & Central Portions of B330D)	7	Hopewell Condo II	Unit #1A	6456-03-016018	iPark East Fishkill 84 LLC
	YES	IBM	SSD System	VE-10 (Southern and Central Portions of B330D)	7	Hopewell Condo II	Unit #1A	6456-03-016018	iPark East Fishkill 84 LLC
	YES	IBM	SSD System	VE-7 (Southern Portions B330C)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES	IBM	SSD System	VE-8 (Western Portions of B330C)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES	IPARK	SSD System	VE-32 (B330C)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES**	IPARK	SSD System	VE-30 (B338)	7	Hopewell Condo II	Unit #5	6456-03-076010	iPark East Fishkill B338 LLC
	YES	IPARK	SSD System	VE-31 (B339)	7	Hopewell Condo II	Unit #5	6456-03-076010	iPark East Fishkill B338 LLC
	YES	IPARK	HVAC (presumptive)	B334	7	Hopewell Condo II	Unit #2	6456-03-015092	iPark East Fishkill LLC
	YES	IPARK	HVAC (presumptive)	B330L	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES	IPARK	HVAC	B330C (partial)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
SITE-WIDE	YES		Soil Cover	SOIL COVER SYSTEM					
SITE-WIDE	YES	IBM	Monitoring	GROUNDWATER MONITORING					

Notes:

Condo = Condominium

iPark = iPark collectively refers to any and all iPark East Fishkill entities unless a specific iPark entity is referenced

onsemi = Semiconductor Components Industries, LLC

*VE-2 extraction ports were connected to the VE-9 system on October 22, 2020, and VE-2 was shut-down. A request for SSD system reconfiguration letter was submitted to NYSDEC by IBM on April 1, 2021. NYSDEC approved this reconfiguration request in a July 30, 2021 letter.

**The VE-30 SSD system currently serves an occupied gym tenant space. Additional SSD system components have been constructed and will be brought online as new tenants occupy the various building areas.

EXHIBIT A-2: HAZARDOUS WASTE PERMIT PART A FORM

EPA ID Number	N	Y	D	0	0	0	7	0	7	9	0	1

OMB# 2050-0024; Expires 04/30/2024

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT PART A FORM

1. Facility Permit Contact

First Name	**Linda**	MI	**N**	Last Name	**Daubert**
Title	**Program Manager**				
Email	**LNDaubert@us.ibm.com**				
Phone	**720-397-5670**	Ext		Fax	

2. Facility Permit Contact Mailing Address

Street Address	**8976 Wellington Road**	
City, Town, or Village	**Manassas**	
State **VA**	Country **USA**	Zip Code **20109**

3. Facility Existence Date (mm/dd/yyyy)

7/1/1963

4. Other Environmental Permits

A. Permit Type	B. Permit Number	C. Description
N	**NY0000705901**	**SPDES (onsemi)**
S	**3-0001116**	**Chemical Bulk Storage (onsemi)**
E	**00025/01028**	**Title V Permit (onsemi) (3-1328)**
S	**3-1160**	**Major Oil Storage Facility (onsemi)**
E	**NY1316522**	**Public Water Supply Permit (HVRPWWC)**

5. Nature of Business

This Part A Form is being submitted as part of a New York State Part 373 RCRA Corrective Action Permit (Permit No. 3-1328-00535/00002) renewal application for the former IBM East Fishkill Remediation (Site). There is no treatment, storage or disposal of hazardous wastes generated from Site corrective action activities. The permit application does not include waste management activities that may conducted by the Site owners, tenants, contractors or other entities.

Corrective Action activities include the operation, maintenance and monitoring of groundwater extraction and treatment systems; a soil vapor extraction and treatment system; soil vapor mitigation systems; environmental media sampling and analysis; implementation of a Site Management Plan; and related activities.

6. Process Codes and Design Capacities

Line Number		A. Process Code			B. Process Design Capacity (1) Amount	B. Process Design Capacity (2) Unit of Measure	C. Process Total Number of Units	D. Unit Name

7. Description of Hazardous Wastes (Enter codes for Items 7.A, 7.C and 7.D(1))

Line No.		A. EPA Hazardous Waste No.				B. Estimated Annual Qty of Waste	C. Unit of Measure	D. Processes (1) Process Codes								D. Processes (2) Process Description (if code is not entered in 7.D1))

8. Map

Attach to this application a topographical map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all spring, rivers, and other surface water bodies in this map area. See instructions for precise requirements.

9. Facility Drawing

All existing facilities must include a scale drawing of the facility. See instructions for more detail.

10. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, and disposal areas; and sites of future storage, treatment, or disposal areas. See instructions for more detail.

11. Comments

Item 4: For the purposes of this document the abbreviation onsemi is used for Semiconductor Components Industries, LLC.
Items 6 and 7: Not applicable since hazardous wastes generated from Corrective Action activities are not treated, stored or disposed at the Site.

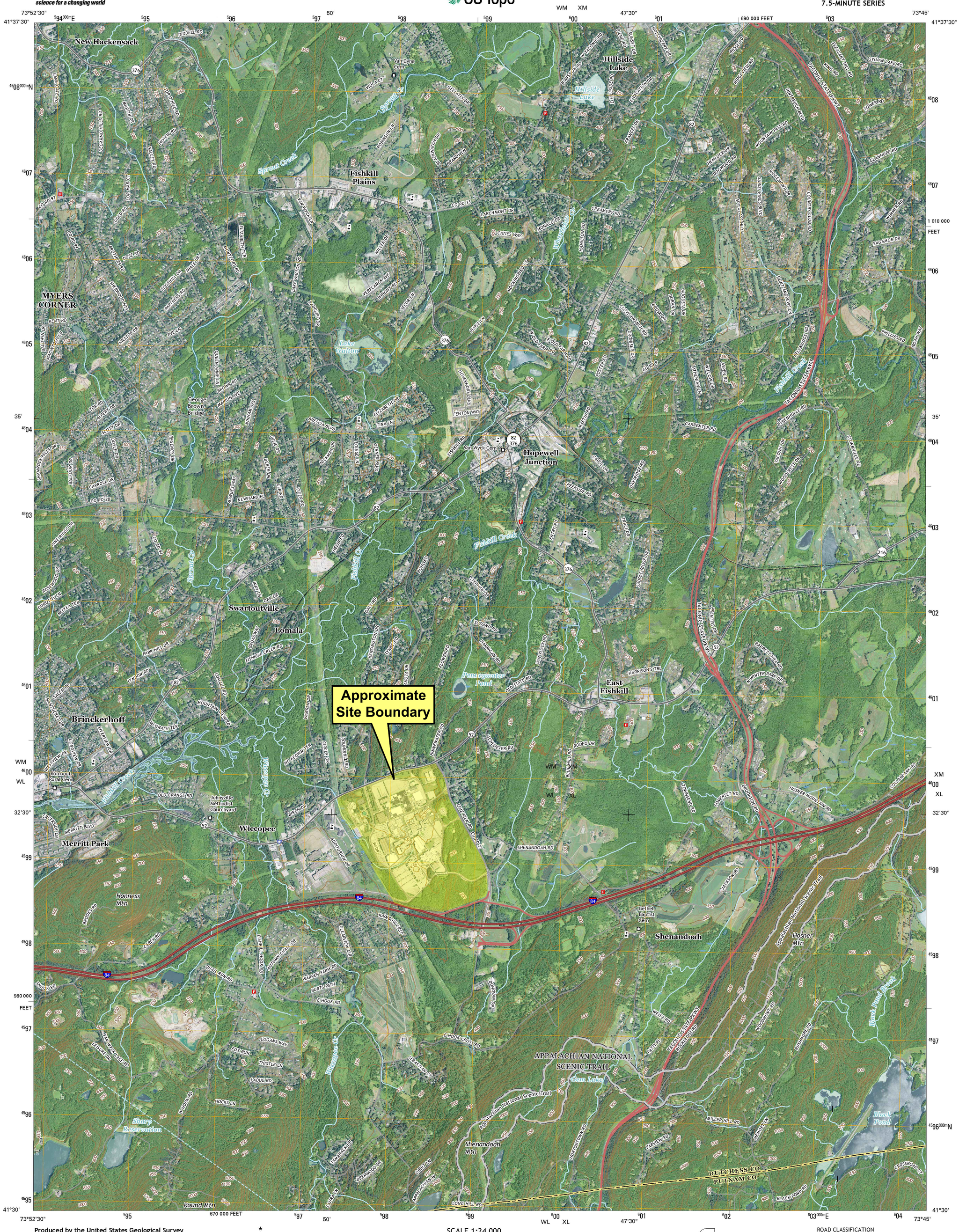
EXHIBIT A-3: HOPEWELL JUNCTION QUADRANGLE

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

USGS science for a changing world

The National Map US Topo

HOPEWELL JUNCTION QUADRANGLE
NEW YORK
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 18T
10 000-foot ticks: New York Coordinate System of 1983 (east zone)

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, August 2013
Roads..... U.S. Census Bureau, 2015 - 2016
Names.....GNIS, 2016
Hydrography.....National Hydrography Dataset, 2013
Contours.....National Elevation Dataset, 2016
Boundaries.....Multiple sources; see metadata file 1972 - 2016

Wetlands.....FWS National Wetlands Inventory 1977 - 2014

UTM GRID AND 2016 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
MN 13° 16' 236 MILS
GN 0° 47' 14 MILS

U.S. National Grid
100,000-m Square ID
WM XM WL XL
Grid Zone Designation 18T

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1 MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.19

All or portions of Lot 4, Lot 6, the roadway between Lots 4 and 6, Lot 8, Lot 9, and South Drive are anticipated to be removed from the Site when environmental easements for Site properties are duly recorded and indexed by Dutchess County.

NEW YORK
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 Poughkeepsie
2 Pleasant Valley
3 Verbank
4 Wappingers Falls
5 Poughquag
6 West Point
7 Oscawana Lake
8 Lake Carmel

HOPEWELL JUNCTION, NY
2016
15000-034.dwg / A1_QuadPropLoc

EXHIBIT A-4: FACILITY SITE PLAN

Notes:

Site Basemap: *Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C., Poughkeepsie, NY (XBASE-SVY_51421-00.dwg, 8/10/15); Parcels: XSUBD_51539-00.dwg*

Offsite Basemap: *"Groundwater Monitoring Basemap", IBM East Fishkill Facility (5/1/8new.dwg, original date 12/21/98)*

Well Survey Control by: *Hayward and Pakan Associates, Poughkeepsie NY*

9-Lot Subdivision: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Final Subdivision Plat, Existing Conditions, GlobalFoundries US 2 LLC. Filed with the Dutchess County Clerk on August 3, 2017 (Filed Map #12578)*

Hopewell Condominium I: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium I, Prepared for i.Park East Fishkill I LLC. Filed with the Dutchess County Clerk on November 4, 2020 (Filed Map #12685)*

Hopewell Condominium II: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium II, Prepared for i.Park East Fishkill LLC. Filed with the Dutchess County Clerk on November 18, 2020 (Filed Map #12692)*

Scale
0 150' 300'

Exhibit A-4

Former IBM East Fishkill Facility

Facility Site Plan

DRAWN BY: KA	DATE: 7/30/24	DRAWING NO.
CHECKED & APPROVED BY: DAB		5007-060_MASTER_rev7-O2

GROUNDWATER SCIENCES CORPORATION

EXHIBIT A-5: AERIAL PHOTOGRAPH

N

W E

S

Scale (feet)

0 200 400 800

LEGEND

Site Boundary

Aerial photo is a composite of NYS GIS Clearinghouse and Google Earth imagery (dated 2020 and 2024 respectively).

IBM

East Fishkill, New York

Exhibit A-5
Aerial Site Map

DRAWN:	CHECKED:	APPROVED:	DATE:	FIGURE:
JPB	RCW	RCW	7/30/2024	

GROUNDWATER SCIENCES CORPORATION
www.groundwatersciences.com

H:\15000\15000\GIS\2024-07 aerial\2024-07 aerial.aprx | Aerial Site Map

PART B OF THE RCRA PERMIT RENEWAL APPLICATION

1.0 FACILITY DESCRIPTION

1.1 General Description

The former IBM East Fishkill Facility (the Site) is an approximately 460-acrea area located in the Town of East Fishkill, Dutchess County, New York bounded by New York State Route 52 to the north, Interstate 84 (I-84) to the south, iPark Boulevard (County Road 27) to the east, and high voltage power lines to the west owned by Consolidated Edison Company (ConEdison) of New York, a Central Hudson Gas and Electric Corporation (CHG&E) utility corridor and the John Jay High School (see **Figure 1-1 Site Location Map** and **Plate 1-1 (Aerial Site Map**).

Development of the Site by International Business Machines Corporation (IBM) began in 1963 with the construction of office and manufacturing buildings for research, development and manufacturing of semiconductors, semiconductor packaging, and electronic computing equipment.

A groundwater protection program was initiated by IBM at the Site in 1978. The initial activities included installation and sampling of groundwater monitoring wells. Upon the discovery of the presence of contaminated groundwater at the Site, IBM commenced a voluntary investigation of the Site in an effort to establish the source and to determine the concentration and location of the contamination. IBM also took voluntary remedial actions to remove the contamination, extract and treat the contaminated groundwater, and monitor the groundwater within and outside the boundaries of the Site (April 1981 Order on Consent).

On January 23, 1981[3], the New York State Department of Environmental Conservation (NYSDEC) placed the IBM East Fishkill Facility on the registry of Inactive Hazardous Waste Disposal Sites. Pursuant to Section 27-1313 of the Environmental Conservation Law, in April 1981, IBM signed an Order on Consent (1981 Order) with the NYSDEC. The 1981 Order stipulated that IBM would:

[3] New York State Department of Environmental Conservation, April 27, 1981, IBM East Fishkill Order on Consent, Case #3-0556; Article 27 ECL.

- Contain, collect and treat contaminated groundwater;
- Implement remedial action programs;
- Establish a groundwater monitoring program.

In June 1986, three provisions were added to the 1981 Order to supplement and clarify the obligations of IBM[4]. These provisions further stipulated that NYSDEC retains the right to obtain for the purpose of comparative analysis split samples, IBM would submit periodic monitoring reports, and IBM would notify the NYSDEC if there was a significant change in water quality at the perimeter of the Site or in IBM's production wells within the Site.

Subsequent to the 1981 Order, IBM developed a program to monitor, evaluate and remediate contaminated groundwater. Beginning in early 1992, under the authority of the Resource Conservation and Recovery Act (RCRA) Corrective Action Program, NYSDEC reviewed documents submitted by IBM to fulfill RCRA Facility Investigation reporting requirements for contaminated groundwater in five areas of the Property, designated as Area A, Area B, Area D, Deep Bedrock and the Southeast Quadrant. In a letter dated March 10, 1993[5], NYSDEC approved the following four groundwater collection and treatment systems as RCRA Interim Corrective Measures (ICMs):

- The Area A Groundwater Collection and Treatment System
- The Area B Groundwater Collection and Treatment System
- The Area D Groundwater Collection and Treatment System
- The Central Carbon System (treating groundwater withdrawals from deep bedrock production wells)

In September 1995, NYSDEC issued IBM a 6NYCRR Part 373 Hazardous Waste Management Permit[6], including Modules III and IX which address Corrective Action. The permit indicated that IBM's obligations under the Order-on-Consent with the NYSDEC were terminated and superseded by the 1995 Part 373 Permit.

[4] New York State Department of Environmental Conservation, June 19, 1986, IBM East Fishkill Order on Consent, Supplement and Clarification, Case #3-0556; Article 27 ECL.

[5] New York State Department of Environmental Conservation, March 10, 1993, Letter from S. Kaminski to W. Rudloff of IBM, re: Groundwater Investigation/Treatment Documents.

[6] New York State Department of Environmental Conservation, September 29, 1995, 6 NYCRR Part 373 Hazardous Waste Management Permit, IBM East Fishkill Facility.

In November 2011, the 6NYCRR Part 373 Permit[7] was renewed. The 2011 Part 373 Permit addresses: (1) the storage and management of hazardous waste in containers; (2) the operation and maintenance of the ICMs for contaminated groundwater; (3) the monitoring and maintenance of the groundwater monitoring well network used to assess the performance of the ICMs; and (4) financial assurance for closure and corrective action.

In February 2015, closure of the permitted storage rooms in Building 309 (B309) was initiated. This process was completed in April 2015 with submission of closure certification documentation to NYSDEC, and closure certification acceptance by NYSDEC on May 21, 2015. On May 28, 2015[8], the Part 373 Permit was modified pursuant to 6NYCRR 373-1.7(c)(15), the modification transitioned the permit to Corrective Action only. There are no longer any permitted hazardous waste management units at the facility.

On July 1, 2015[9] the Site was acquired by GLOBALFOUNDRIES U.S. 2 LLC (GF) as two parcels: the larger of the two parcels, Parcel 1 consisting of the approximately 460 acres East Campus identified at the time as Tax Grid #05-6356-04-980140 and; the smaller, adjacent parcel identified as Tax Grid #05-6456-03-116374.

In May 2017, GF subdivided the Site into eight lots consisting of a total of approximately 433 acres as shown on **Plate 1-2** (**Site Parcel, Lots, Condominium and Condominium Unit Location Map)**. In addition, there are approximately 27.5 acres of (Fee) roads within the Site boundary. On August 31, 2017 i.Park East Fishkill LLC and i.Park East Fishkill I LLC, purchased Lots 2, 3, 4, 6, 7, and 8. iPark has leased portions of the Site to industrial and commercial entities. On September 1, 2017[10,]

[7] New York State Department of Environmental Conservation, November 2, 2011, 6 NYCRR Part 373 Hazardous Waste Management Permit, IBM East Fishkill Facility.

[8] New York State Department of Environmental Conservation, May 28, 2015, IBM East Fishkill Facility, Hudson Valley Research Park, NYSDEC Permit 3-1328-00025/00249, EPA ID No. NYD000707901, Minor Permit Modification.

[9] NYSDEC, July 1, 2015, Facility Permit Transfer IBM Corporation to GLOBALFOUNDRIES U.S. 2 LLC, East Fishkill Facility.

[10] New York State Department of Environmental Conservation, September 1, 2017, IBM East Fishkill Facility, Hudson Valley Research Park, NYSDEC Permit 3-1328-00025/00249, EPA ID No. NYD000707901, Minor Permit Modification.

the Part 373 Permit was updated to reflect ownership transition to include i.Park East Fishkill I LLC for Lots 2 and 3 and i.Park East Fishkill LLC for Lots 4, 6, 7, and 8 and GF to retain Lots 1 and 5.

As of August 31, 2017, and as recorded with the Dutchess County Clerk on November 4, 2020, iPark East Fishkill I, LLC established a Plan of Condominium Ownership for Lots 2 and 3 with the name of The Hopewell Condominium I. The Plan for Hopewell Condominium I established eight units, each with an associated tax parcel number. At the time, one unit, Unit 7GL, was designated as a ground lease between GF and iPark East Fishkill I LLC.

As of March 29, 2018, and as recorded with the Dutchess County Clerk on November 18, 2020, iPark East Fishkill LLC established a Plan of Condominium Ownership for Lot 7 with the name of The Hopewell Condominium II. The Plan for Hopewell Condominium II established nine units, each with an associated tax parcel number.

On May 1, 2020, i.Park East Fishkill LLC, i.Park East Fishkill I LLC, IBM, and GF entered into an Order on Consent, Case No. CO-1-20181004 (Consent Order) with the NYSDEC for violation of the 2011 Part 373 Permit and violation of the Environmental Conservation Law (ECL) Article 27, Title 9 as established in 6NYCRR 373-1.6(a)(1). Respondent i.Park (collectively i.Park East Fishkill LLC, i.Park East Fishkill I LLC) is the sole owner of the portion of the property that is the subject of noncompliance. Respondent iPark leased a property within its portion of the Site to Sloop Brewing Co., which was operating as a commercial business activity on a Site only authorized to have industrial activities. Respondent i.Park affirmatively states that its actions, not the actions of Respondent IBM and Respondent GF was the cause of the violations. As such, Respondent i.Park was ordered to, in accordance with work plan(s) approved by NYSDEC, design, install, operate and maintain active sub-slab depressurization systems (SSD) in the ground floor of all indoor areas within the Designated Area, as shown on **Plate 1-3 (Site Use Areas)**.

On November 16, 2021, the Town of East Fishkill Planning Board granted a subdivision of portions of Lots 2 and 3 to create a new ninth Lot consisting of approximately 28.4 acres of land as shown on **Plate 1-2** (**Site Parcel, Lots, Condominium and Condominium Unit Location Map**. The newly established Lot 9 was recorded with the Dutchess County Clerk on December 13, 2021. Rolling

Frito-Lay Sales, LP purchased Lot 9 on December 17, 2021, as recorded by the Dutchess County Clerk on February 10, 2022. At the time of the establishment of Lot 9, the remainder of former Lots 2 and 3 were designated as Lot 2A and Lot 3A respectively as shown **Plate 1-2** (**Site Parcel, Lots, Condominium and Condominium Unit Location Map**.

On January 1, 2023, Semiconductor Components Industries, LLC (onsemi) acquired the GF East Fishkill Facility and became the owner of Lots 1 and 5.

Onsemi, i.Park East Fishkill LLC, i.Park East Fishkill I LLC and Rolling Frito-Lay Sales LP are listed as facility owners under the current NYSDEC Part 373 Permit. IBM is considered an operator under the current NYSDEC Part 373 Permit, responsible for operating, maintaining and monitoring elements of Groundwater Corrective Action, including groundwater extraction and treatment systems and certain vapor mitigation systems. IBM is currently conducting a Corrective Measures Program to monitor, collect and treat contaminated groundwater at the Site under Modules II and IX of the Site's Part 373 Permit. The Part 373 Permit requires IBM, to investigate and remediate contaminated media at the Site. The current Corrective Measures Program is addressing the remedial work in the following Areas of Concern (AOCs): Area A, Area B, Area C, Area D, Building 322 (B322) Area, Building 330 (B330) Area, the Southeast Quadrant (SEQ) and the deeper bedrock aquifer (**Figure 1-2 Site Layout and Operable Units Map)**.

In total, the Site consists of twenty (20) tax parcels, and six (6) fee roads that bisect the property (See **Plate 1-2** (**Site Parcel, Lots, Condominium and Condominium Unit Location Map)** and **Table 1-1 (Site Ownership**).

The owner(s) of the site parcel(s) as of June 30, 2024 are described in **Table 1-1 (Site Ownership**).

The operator(s) of the Site parcel(s) as of June 30, 2024 are:

IBM Corporation, as operator of the IBM designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* and listed below:

- Extraction Wells [PW-1, PW-2R and PW-25]
- B384 Sump
- Groundwater Treatment Systems [PW-1 GTF, PW-2 GTF, PW-25 GTF, B384 GTF]
- Sub-slab Depressurization (SSD) Systems [VE-1, VE-7, VE-8, VE-9, VE-10, VE-11]

- Soil Vapor Extraction (SVE) System [VE-3]
- Soil Cover System [Former Landfill Cover System]
- Monitoring [Groundwater Monitoring]

Semiconductor Components Industries, LLC (onsemi) as operator of the Semiconductor Components Industries, LLC (onsemi) designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* and listed below:

- The HVAC (presumptive) engineering control associated with B300, a portion of B316, B317, B320B, B321, B322, B323, B323A, B386 and;
- The B320B Passive sub-slab depressurization (SSD) system.

iPark as the operator of the iPark designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* and listed below:

- iPark East Fishkill LLC [the HVAC (presumptive) engineering control associated with B334];
- iPark East Fishkill I LLC [the HVAC engineering control associated with a portion of B310];
- iPark East Fishkill B338 LLC [the sub-slab depressurization (SSD) systems engineering controls installed in B338 and B339];
- iPark East Fishkill 84 LLC [the SSD system engineering control installed in the northeast portion of B330C; the HVAC engineering control associated with a portion of B330C, the HVAC (presumptive) engineering controls associated with B308 and B330L]

Rolling Frito-Lay Sales, LP as the operator of the Rolling Frito-Lay Sales, LP designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* and listed below:

- Passive sub-slab depressurization (SSD) systems [Frito-Lay Fulfillment Center; Frito-Lay Fleet Center and; Frito-Lay Guard Booth].

After completion of the remedial work, some contamination was left at this Site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Interim Site Management Plan (ISMP) (attached herein as **Attachment I**) was prepared to manage remaining contamination at the Site.

The Site is currently in the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 314054, which is administered by NYSDEC.

TABLE 1-1: SITE OWNERSHIP (as of June 30, 2024)

LOT NUMBER	CONDO	CONDO UNIT	PARCEL NUMBER	OWNER	LOT / PARCEL SIZE (acres)
1	No condo	N/A	6356-04-794174	Semiconductor Components Industries, LLC	45.64
2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC	3.872
2A	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC	10.588
2A	Hopewell Condo I	Unit #5	6356-04-878256	iPark East Fishkill I LLC	9.290
3A	Hopewell Condo I	Unit #1	6456-03-054349	iPark East Fishkill 84 LLC	10.873
3A	Hopewell Condo I	Unit #2	6456-03-069311	iPark East Fishkill I LLC	10.000
4	No condo	N/A	6456-03-127232	iPark East Fishkill LLC	13.720
5	Condo on Unit 7 G/L Ground leasehold only *		6356-04-955157	Semiconductor Components Industries, LLC	98.940
6	No condo	N/A	6456-03-169074	iPark East Fishkill LLC	56.190
7	Hopewell Condo II	Unit #1A	6456-03-016018	iPark East Fishkill 84 LLC	7.864
7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC	9.698
7	Hopewell Condo II	Unit #1C	6456-03-014040	iPark East Fishkill LLC	5.579
7	Hopewell Condo II	Unit #1D	6456-03-054986	iPark East Fishkill LLC	7.251
7	Hopewell Condo II	Unit #2	6456-03-015092	iPark East Fishkill LLC	6.188
7	Hopewell Condo II	Unit #3	6456-03-073123	iPark East Fishkill LLC	13.584
7	Hopewell Condo II	Unit #4	6355-00-958962	iPark East Fishkill LLC	32.178
7	Hopewell Condo II	Unit #5	6456-03-076010	iPark East Fishkill B338 LLC	2.499
7	Hopewell Condo II	Unit #6	6456-03-048008	iPark East Fishkill LLC	0.210
8	No condo	N/A	6455-00-136916	iPark East Fishkill LLC	59.400
9	No condo	N/A	6356-04-861300	Rolling Frito-Lay Sales LP	29.42

FEE ROADS

ROAD ID	Irrevocable Offer of Cession and Dedication	PARCEL NUMBER	OWNER	PARCEL SIZE
Fee Road I	Town of East Fishkill	N/A	iPark East Fishkill LLC	4.93
Fee Road II	Town of East Fishkill	N/A	iPark East Fishkill LLC	1.68
Fee Road IV	Town of East Fishkill	N/A	Semiconductor Components Industries, LLC	6.51
Fee Road V	Town of East Fishkill	N/A	iPark East Fishkill LLC	3.08
Fee Road VI	Town of East Fishkill	N/A	Semiconductor Components Industries, LLC	2.69
South Drive	Town of East Fishkill	N/A	iPark East Fishkill LLC	7.74

NOTES

p/o = Part of

*Lot 2 Reversionary Clause – B303 and B309 (Hopewell Condominium Unit 1, Unit #7GL). In the event GlobalFoundries or its Successors ceases to exist or operate the chip fab or the need for Hazardous Waste Collection is eliminated, then the portion of Lot 5 containing B303 and B309 shall revert back to Lot 2 Owner or its Successors. (Dutchess County Clerk Filed Map No. 23-1111-12578 and Document No. 02-2017-8369)

1.2 Topographic Map: General Requirements

A topographic map delineating the facility location, boundaries, and general setting may be found in **Plate 1-4 (Site Plan, Topographic Map)**.

A site map showing the surface drainage patterns and the location of the storm sewer system is provided **Figure 1-3 (Site Plan, Storm Water Drainage System).**

A wind rose for the East Fishkill Facility is provided as **Figure 1-4 (Wind Rose, Dutchess County Airport, Poughkeepsie, New York).**

1.3 Location Information: Flood Plain Standard

The Site and the engineering controls associated with the Site remedy do not appear to be vulnerable to flood plain flooding events. A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the area encompassing the Site, FIRM Number 36027C0487E (**Plate 1-5)** and FIRM Number 36027C0495E (**Plate 1-6**) indicate the Site is located within an area of "minimal or no flooding".

Specifically, no portion of the Site is located within Special Flood Hazard Areas Subject to Inundation by the 1% Chance of Annual Flood (100-year flood) (Zones A, AE, AH, AO, AR, A99) or any coastal flood area with velocity wave action (Zones V and VE). In addition to not being located within the 100-year floodplain, the Site is equipped with structural features such as catch basins, storm water drains and approximately 20 separate storm water conveyance systems to facilitate proper drainage during precipitation events.

Since the Site is not located with the 100-year, 500-year or coastal (wave action) floodplains, there is no requirement for the development of a flood plan for the Site under 6 NYCRR Part 373.

1.4 Demonstration of Compliance

A Demonstration of Compliance is not required for the Site since it is not located within the 100-year floodplain, as described in the previous section.

1.5 Seismic Considerations

The Site is not in an area listed in 40 CFR Part 264, Appendix VI ("Seismic considerations").

2.0 SOLID WASTE MANAGEMENT UNITS AND AOCS

The Solid Waste Management Units (SWMUs) identified at the Site have been categorized by Areas of Concern (AOCs) due to the physical location of the units within known areas of soil and/or groundwater contamination regardless of whether the individual units had releases to the environment.

The Final Statement of Basis[11] (FSB) (**Attachment II**), dated September 2013, was developed by the NYSDEC in consultation with the New York State Department of Health (NYSDOH) (collectively, the Departments) under the authority of RCRA. As described in the FSB, the Site includes eight Areas of Concern (AOCs) based on known historic release areas that resulted in the presence of hazardous substances in soil, bedrock, and/or groundwater. Each of these AOCs have been designated as Operable Units (OUs) as detailed in **Table 2-1**. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate, or mitigate a release, threat of release or exposure pathway resulting from site contamination.

TABLE 2-1: AREAS OF CONCERN / OPERABLE UNITS

Area of Concern	Operable Unit	Location / Description
Bedrock Remediation Area	OU2	Deep bedrock aquifer underlying the Site
Area B	OU3	Fire Brigade Training #1 and leach field and Silica Slurry Lagoon
Area D	OU4	Located in the northwest portion of the Site and comprises the former Fire Brigade Training Area #2
Area A	OU5	Building 308, Building 309 and Building 310 Vicinity
Area C	OU6	Former landfill area to the east of Building 330
B322 AOC	OU7	Building 322 Area of Concern
B330 AOC	OU8	Building 330 Area of Concern
SEQ	OU9	Contractor's staging area, known as the Southeast Quadrant, located in the southeast portion of the Site between Area B and the former landfill area.

[11] Final Statement of Basis, IBM East Fishkill, East Fishkill, Dutchess County, EPA ID No. NYD 000707901, Site No. 314054, September, 2013.

It should be noted that during construction activities in 2002, sediment with tetrachloroethylene (PCE) was discovered in the bottom of a storm sewer catch basin located on the north side of Building 315 (B315). The area was sampled and approximately 32 cubic yards of soil were excavated, and the catch basin was removed. Post excavation sampling indicated that no VOCs remained in the soil above Technical Administrative Guidance Memorandum 4046 (TAGM 4046) soil cleanup objectives. The NYSDEC approved the remediation of this area as an ICM and No Further Action is required[12]. Based on soil investigation and remediation activities, this AOC was removed from the FSB and therefore does not have an associated OU number.

The general locations of the Operable Units (OU3 through OU9) are shown on **Figure 1-2**. The **Bedrock Remediation Area (OU2)** corresponds to the portions of the bedrock beneath the above-listed OUs where hazardous substances exceed applicable Part 703 New York State Groundwater Quality Standards (NYSGQS). These areas primarily consist of bedrock beneath OU5, OU6, OU7, and OU8.

The FSB constitutes the "Record of Decision" required for these Areas of Concern under New York State's Inactive Hazardous Waste Disposal Site program regulations (6NYCRR Part 375).

A **Current Conditions Report** and Solid Waste Management Unit Inventory Update is provided as **Attachment III**.

[12] Wilkie, H., New York State Department of Environmental Conservation to S. Tranchina, IBM, July 31, 2002, *Newly Identified Area of Concern E (AOC-E) Report, B/315 Catch Basin*.

3.0 CORRECTIVE ACTION PROGRAM

As noted in **Section 1.0**, IBM has conducted Corrective Action activities with the oversight of the NYSDEC from 1981-1995 under an Order on Consent and from 1995 to present under a 6 NYCRR Part 373 permit. The results of investigations identified elevated levels of hazardous constituents or chemicals of concern (COCs), in particular, volatile organic compounds (VOCs) in soil, groundwater, soil vapor and indoor air.

Based on the results of the investigations conducted by IBM, the FSB for the Site concluded that the ICMs have proven to be effective in controlling the extent of the groundwater plume. Further, the ICMs have prevented the contamination from migrating off-site, reducing the concentration of contaminants in the groundwater.

The corrective action remedial program described in the FSB was incorporated into the 2011 Part 373 Permit (Modules II and IX). Module II was modified to incorporate the selected groundwater remedy. The FSB selected the final remedy for the Site as "No Further Action" with continued operation of the groundwater extraction and treatment systems that were installed as ICMs, the implementation of institutional controls (ICs) and engineering controls (ECs) and a Site Management Plan.

Brief summaries of the nature and extent of impact to various media, implemented corrective measures and NYSDEC determinations for each of the AOCs is discussed in the following subsections.

3.1 OU2 Bedrock Remediation Area

The Bedrock Remediation Area (OU2) corresponds to the portions of the bedrock beneath the above-listed OUs where hazardous substances exceed applicable NYSGQS. These areas primarily consist of bedrock beneath OU5, OU6, OU7, and OU8. Contamination in the Bedrock Remediation Area (OU2) is primarily from sources that has migrated vertically through the soil and till into the bedrock within Area A (OU5), Area C (OU6), and the B330 Area of Concern (OU8)..

The primary contaminants of concern are PCE and 1,1,2-trichloro-1,2,2-trifluoroethane (Freon® TF) and their respective breakdown products. PCE in bedrock groundwater is found primarily in two

plumes. In the northern portion of the site near B308 and B310, concentrations are up to 200,000 ug/L. In the southern portion of the site near B300, B330C, B330D, B334, and B338, PCE is found at concentrations up to 100,000 ug/L. Freon® TF is found in bedrock groundwater in the same two areas, but at lower concentrations and in smaller plumes. Freon® TF concentrations in both the northern and southern areas are less than 300 ug/L.

The bedrock plume is contained to the Site through the continuous pumping of on-site extraction wells as part of the Bedrock Remediation System. This pumping, currently at approximately 0.6 million gallons per day, has created strong inward gradients thus containing contaminated groundwater in the bedrock to the Site.

This area was remediated as an ICM.

3.2 OU3 Area B, Fire Training Area #1, Leachfield & Silica Slurry Lagoon

Area B (OU3) is located near the east central border of the Site immediately west of iPark Boulevard (formerly known as Lime Kiln Road) and adjacent to Gate 4. Area B includes a former fire training area used in the late 1960s and the area of a former silica slurry lagoon.

Investigations began 1979 and continued into the early 1980s identified the presence of chlorinated organic solvents, principally PCE and methylene chloride in near surface soils and in overburden and shallow bedrock groundwater, associated with fire training operations from the late 1960s.

All fire training structures, and contaminated surficial soils were removed and sent off-site to an approved landfill in the early 1980s. Soil in this area was remediated as an ICM.

Area B is located in a portion of the Site consisting of dense glacial till overlying carbonate bedrock. Groundwater extraction and treatment operations were initiated in Area B in 1982, via pumping of shallow bedrock well GW-863 and the groundwater in this area was treated through continuous pumping and Granular Activated Carbon (GAC) treatment. Following treatment, the effluent was reinjected into a groundwater leachfield upgradient of the extraction well. In 2003, the Area B groundwater extraction and treatment system was upgraded as follows:

- A new extraction well, designated GW-628, was drilled and installed to replace GW-863;
- A new treatment building was installed proximate to well GW-628 to replace the original treatment system shed;
- New treatment equipment was installed in the treatment building, including two cartridge filters for suspended solids removal, and two GAC cylinders, each containing 200 pounds of GAC; and
- An instrumentation and control system was installed to provide for continuous operation and monitoring of the extraction system.

Active remediation of this plume continued from 1982 through August 1, 2015 using a pump-and-treat system which was located near the source area. During operations, the groundwater in this plume was treated through continuous pumping and carbon adsorption, and the treated water was then discharged to an upgradient leach field. Groundwater contaminants consist of chlorinated organic solvents, principally PCE and methylene chloride.

On June 18, 2015, IBM submitted a request to perform shutdown testing at Area B groundwater extraction well GW-628[13]. The shutdown of this remediation system was approved by NYSDEC on July 9, 2015[14] for a two-year period with monitoring to confirm that operation of this system could be discontinued without a meaningful change in Area B Remediation Area groundwater quality. On September 14, 2017[15], IBM submitted a report to NYSDEC summarizing the GW-628 shutdown test noting that chemistry remained stable during the shutdown test and recommending the permanent shutdown of extraction GW-628.

NYSDEC approved the permanent shutdown of the Area B (OU3) extraction well GW-628 on July 16, 2018[16].

[13] Groundwater Sciences Corporation, June 18, 2015, *Shutdown Test Request, Extraction Well 628, Area B Remediation Area (Operable Unit 3)*.

[14] NYSDEC to IBM Corporate Environmental Affairs, July 9, 2015, *Shutdown Test Request – Extraction Well 628, Area B Remediation Area (OU-3)*.

[15] Groundwater Sciences Corporation, September 14, 2017, *Extraction Well 628 Shutdown Test Findings*.

[16] NYSDEC to IBM Corporate Environmental Affairs, July 16, 2018, *Extraction Well 628 Shutdown, Area B Remediation Area (OU3).*

3.3 OU4 Area D, Fire Training Area #2

Area D (OU4) is a former fire training area located near the western boundary of the Site in the sanitary wastewater treatment plant area. Contamination was confirmed at this location in 1979 and resulted from fire training operations which occurred during the mid-1970s. Contaminants consist of chlorinated organic solvents, principally trichloroethene (TCE) and PCE and cis-1,2-dichloroethene (cis-1,2-DCE). Contamination is limited to the overburden aquifer. No SWMUs are associated with this AOC.

The fire training structures and contaminated surficial soils were removed and sent off-site to an approved landfill in the early 1980s. Soil removal met the requirements of an ICM.

Groundwater recovery operations were ongoing in Area D beginning in 1982 until the system was shut down as per a NYSDEC approved shutdown request[17] on August 1, 2015. Groundwater extraction was initially performed using recovery well GW-032. In 1998, the well was replaced by well GW-032A, located about 40 feet to the southwest, due to construction of a new nitrification basin at the B325 wastewater pollution control facility (B325 WPCF). In 2011, well GW-032A was replaced with a new nearby well designated GW-032B to address GW-032A extraction performance issues due to an apparent break in the well screen[18].

While operating, groundwater extracted via GW-032B discharged directly to the B325 WPCF where the extracted groundwater was combined with sanitary and treated industrial wastewater, followed by additional treatment steps, and was then discharged under a State Pollution Discharge Elimination System (SPDES) permit to Gildersleeve Brook.

[17] NYSDEC to IBM Corporate Environmental Affairs, July 9, 2015, *Shutdown Test Request – Extraction Well 032B, Area D Remediation Area (OU-4)*.

[18] Hawkins, S., IBM Corporation to A. Czuhanich and H. Wilkie, New York State Department of Environmental Conservation, September 12, 2011, *Report of Findings: Installation and Testing of Replacement Well GW-032B, Remediation Area D.*

NYSDEC approved IBM's groundwater investigations in Area D as meeting the requirements of an RFI and ICMs[19] and that there is No Further Action required for remediation of soils[20].

Area D (OU4) contains a small isolated soil groundwater plume consisting of low levels (less than 5 µg/l) of PCE-series compounds near shallow pumping well GW-032B. The predominant component is TCE with lesser concentrations of PCE and cis-1,2DCE. Analytical data shows that groundwater in Area D (OU4) has been meeting applicable standards for constituents of concern.

As noted, GW-032B was shut down on August 1, 2015 in accordance with the NYSDEC approved shutdown test for a period of 2 years with quarterly monitoring of overburden wells within this area to evaluate the effects of the shutdown.

On September 14, 2017[21], IBM submitted a report to NYSDEC summarizing the GW-032B shutdown test results. The report concluded that contaminant concentrations had stabilized below the NYSGQS of 5 µg/l for PCE, TCE, and cis-1,2DCE and recommended permanent shutdown of extraction well GW-032B.

NYSDEC approved the permanent shutdown the Area D (OU4) extraction well GW-032B on July 16, 2018[22].

[19] Kaminski, S., New York State Department of Environmental Conservation to W. Rudloff, IBM, March 10, 1993, *Groundwater Investigation/Treatment Documents.*

[20] Kaminski, S., New York State Department of Environmental Conservation to W. Rudloff, IBM, September 29, 1993, *RCRA Corrective Action, Soil/Waste Investigation Documents*.

[21] Groundwater Sciences Corporation to J. LaClair and H. Wilkie, New York State Department of Environmental Conservation, September 14, 2017, *Extraction Well 032B Shutdown Test Findings, Area D Remediation Area (Operable Unit 4).*

[22] NYSDEC to IBM Corporate Environmental Affairs, July 16, 2018, *Extraction Well 032B Shutdown, Area D Remediation Area (OU4).*

3.4 OU5 Area A

The Area A source is located in the northeast portion of the Site and is beneath and adjacent to buildings B308, B309 and B310. The overburden plume extends to buildings B316, B385 and B386. Contamination was confirmed at this Area of Concern in 1979.

There are two distinct source areas associated with Area A. The first source area is associated with a closed tank farm, which contained both virgin and waste solvents located north of B309, adjacent to the east side of B310. The second source area is located adjacent to both sides of the linkway connecting B308 with B310.

A tank, associated piping, and contaminated soil were removed south of the B308/B310 linkway. About 1,500 cubic yards of contaminated soils were excavated and sent off-site to a permitted secure landfill.

PCE and its related breakdown products [TCE, cis-1,2-DCE and vinyl chloride (VC)], Freon® 113 (Freon® TF), and Freon® 123A (F123A) have been identified as contaminants which exceed the NYSGQS.

Two soil plumes of primarily PCE-series compounds are associated with Area A (OU5). One of these plumes is in the glacial till and appears to have a source near the northwest corner of B309. A small plume of Freon® TF exists in this same general area. The lateral extent of the PCE series plume is not well-defined south of well GW-714 where the glaciolacustrine silt/clay inhibits vertical contaminant transport between the shallow soils and the till underlying the silt/clay. A second plume lies in the alluvial sand and gravel above the glaciolacustrine silt/clay and has a source on the eastern side of B310 where PCE concentrations are greater than 10,000 µg/l. Two GMP monitoring wells (GW-015 and GW-706) and the B384 Sump monitor the central portion of this plume. Based on historical data from monitoring wells that are not routinely sampled, this plume extends to the east and northeast, in the direction of groundwater flow toward the area where the silt/clay and dense till are absent northeast of B308 near well GW-720 (the B308 sink). The plume also extends to the southeast beneath B386. PCE-series concentrations less than 100 µg/l are found south of Building 386 (B386) and Facility Drive.

Remediation efforts in Area A consist of groundwater extraction and treatment, sub-slab depressurization and treatment and seasonal soil vapor extraction.

The B384 groundwater treatment facility (GTF) (B384 Sump) is located adjacent to and south of the B308-B310 linkway.

Two sub-slab depressurization systems extract sub slab vapor from beneath the southern and central portions of B310 and the B310/B308 linkway. The systems include **VE-9** located in the southern portion of B310 and **VE-11** located in the linkway.

The seasonal soil vapor extraction system, **VE-3** is located north of the B308/B310 linkway.

The Area A plume has also impacted the fractured dolomite bedrock aquifer. Pumping of well PW-2R, part of the **Bedrock Remediation System** in the bedrock maintains hydraulic containment of this plume.

3.5 OU6 Area C, Former Landfill

The Area C Landfill (OU6) is located in a grassed area east of B330C and East Drive. The area was used primarily as a construction debris landfill and when investigated was found to contain hazardous constituents, including PCE, Freon® TF and their breakdown products. Contamination was first identified at this location in 1979.

In 1982, the landfill was excavated to bedrock; 20,000 cubic yards contaminated soil and construction debris were excavated and sent offsite to a permitted secure landfill. The excavation was subsequently back-filled with clean soil and capped with clay as an ICM. In early 2004 IBM completed a soil sampling program as part of the activities associated with the construction of the B323 Annex to determine if the soil to be excavated for the new construction needed to be managed as hazardous waste. The soil was sampled for all hazardous constituents reasonably expected to be present (VOCs and metals). NYSDEC correspondence, dated March 17, 2004, noted that "Concentrations detected for individual VOCs and metals (except arsenic) were all significantly less than the "contained-in" soil action levels and Land Disposal Restriction concentrations." Further, "the results of the investigation indicate the soils do not act as a source of groundwater contamination and that the

residual levels would be acceptable in an industrial/commercial setting." Although most arsenic samples were above "contained-in" action levels, only three exceeded TAGM 4046. NYSDEC concurred that soils excavated from the B323 Annex construction may be used as fill at the Former Landfill (Area C) and that excess soil could be used as fill in selected areas of the Site (East Complex) or transported off-site to a permitted solid waste landfill with a liner and leachate collection system. On June 4, 2004, IBM submitted a restoration work plan that included placement of about 10,000 cubic yards of excavated soils from the B323 Annex project on top of the existing closure cap in Area C.

The restoration work plan called for between 1 and 20 feet of soil to be placed on top of the existing grass covered closure cap. The existing closure cap would not be removed and there would be no penetrations into the existing clay cap. The restoration work plan was approved by NYSDEC on June 22, 2004 and the work was completed by IBM during July 2004.

Residual contamination remains in the bedrock consisting of chlorinated volatile organic compounds (VOCs), composed primarily of PCE-series compounds and has a source near soil/bedrock monitoring well 561 and shallow bedrock well 559.

VOCs are present in both soil and bedrock groundwater and the Area C plume consists of contaminated groundwater in the southeast part of the Site. The Area C soil groundwater plume is bounded on the east by unsaturated soils associated with a topographic high in the bedrock and extends downward into the bedrock and extends to the west toward B338 and into the bedrock south of deep soil monitoring well GW-921, where it ultimately is captured by bedrock extraction well PW-25, part of the **Bedrock Remediation System**. The Area C shallow bedrock VOC plume associated with well 559 is also ultimately captured by PW-25.

As noted, the on-site extraction well, PW-25, associated with the **Bedrock Remediation System** maintains hydraulic containment of the Area C plume.

A sub-slab depressurization system extracts sub slab vapor from beneath B338 (**VE-30**) and a second from beneath B339 (**VE-31**).

3.6 OU7 B322 Area of Concern

The B322 Area of Concern (B322 AOC) source area is located in the central part of the Site.

Contamination in the B322 Area of Concern is believed to emanate largely from two areas: (1) in the area of the B320B-B322 linkway in the vicinity of a closed waste solvent tank farm; and (2) within B322 along the western side of the building. The B322 plume is located primarily in the overburden aquifer.

Groundwater contamination associated with B322 was discovered during the mid-1980s. The primary constituents of concern that remain in the B322 AOC consist of volatile organic compounds (VOCs), including PCE, Freon® TF (Freon® 113), and their associated breakdown products.

Soil and groundwater RFIs were performed in the B322 AOC (OU7) in the mid-1990s. The soil RFI focused on areas of potential releases near solid waste management units (SWMUs) in the area of B322 and the B322-B320B linkway. Results of the soil RFI activities did not identify the presence of VOCs in soil exterior to buildings and structures in the vicinity of B322[23]. Results of the groundwater RFI activities indicated the presence of separate groundwater plumes in overburden (soil) and bedrock where VOCs have been detected above applicable NYSGQS. Both plumes appear to originate northeast of B322, in the area of former solvent and waste solvent underground storage tanks (USTs) generally located between the former B322-B320 linkway and support Building 320C (B320C). The shallow VOC plume in soil extends to the southwest beneath B322, while the deeper VOC plume in bedrock extends to the northwest, towards bedrock extraction well PW-1.

The groundwater RFI revealed a potential pathway for human exposure associated with future discharge of a minor component of groundwater flow, transporting VOCs towards Gildersleeve Brook. Although the groundwater data did not suggest discharge of VOCs to the brook at the time

[23] William F. Cosulich, Associates, P.C., February 6, 1998, *RCRA Facility Investigation Report for SWMUs at B330, B322, B308/310 and B309/310, and, RCRA Facility Assessment Report for the Southeast Quadrant Area of Concern.*

of the RFI, there was a potential for low concentrations of VOCs to reach wet areas bordering the brook in the future.

IBM constructed and began operating a pump and treat system for the western portion of the B322 overburden plume in 2000. The B322 groundwater extraction system included three overburden extraction wells (GW-612, GW-617 and GW-618), with one backup extraction well (GW-613). Extraction wells GW-612, GW-613, and GW-617 were installed to capture perched groundwater in the overburden in the area of West Drive to eliminate the potential migration of VOCs toward the Gildersleeve Brook. Extraction well GW-618 was installed with the goal of remediating a localized presence of dichlorodifluoromethane (Freon® 12) near the wetland area surrounding Gildersleeve Brook. During operations, the extracted groundwater from wells GW-612, GW-613, GW-617, and GW-618 was piped to the Site's WPCF where it was combined with sanitary and treated industrial wastewater, treated, and discharged under a State Pollution Discharge Elimination System (SPDES) permit to the Gildersleeve Brook.

This area is addressed in the corrective action module of the Part 373 Permit and remediated as an ICM.

On June 18, 2015, IBM requested to conduct a shutdown test[24] of the extraction wells GW-612, GW-613 and GW-617 following a period where groundwater quality in the vicinity of these three extraction wells had been meeting applicable standards for constituents of concern.. On July 15, 2015[25], NYSDEC approved the request for the shutdown and requested an evaluation of remedial alternatives in the B322 AOC source area wells (wells (GW-627 and GW-635). As part of the planned shutdown test, on August 1, 2025, the three extraction wells (GW-612, GW-613 and GW-617) were shut down. On September 18, 2015[26], IBM informed NYSDEC that IBM would conduct an evaluation and review of potential remedial technologies to address the remaining VOC presence northeast of

[24] Groundwater Sciences Corporation, June 18, 2015, Shutdown Test Request, Extraction Wells 612, 613, and 617, B/322 Area of Concern (Operable Unit 7).

[25] NYSDEC to IBM Corporate Environmental Affairs July 15, 2015, Shutdown Test Request – Extraction Wells 612, 613, and 617, B/322 Area of Concern (OU-7).

[26] IBM Corporate Environmental Affairs, September 18, 2015, Status of Remedial Alternatives Evaluation, Apparent Groundwater Plume Origin Area Northeast of B/322.

B322. On November 11, 2016[27], IBM informed NYSDEC that the future use of B322 is uncertain, and that the majority of the building may be demolished.

NYSDEC approved the B322 (OU7) extraction wells GW-612, GW-613 (inactive/backup), and GW-617 permanent shutdown on July 16, 2018[28].

In 2018, GF began redevelopment activities that include demolition of the northern two-thirds of B322 leaving a small telephone panel room and associated structures in the southern portion of the building. The demolition work was completed in July 2019.

IBM submitted an RFI work plan on April 30, 2019, and after receiving comments from NYSDEC, a revised work plan was submitted by IBM on July 23, 2019[29]. The revised work plan was approved by NYSDEC in a letter to IBM, dated July 29, 2019[30].

In 2019, IBM completed a RCRA Facility Investigation (RFI) in the B322 AOC (OU7). The purpose of the RFI was to collect data of sufficient quantity and quality to further refine the nature and extent of the VOC presence in the B322 AOC (OU7) portion of the Site. The findings of the RFI were also intended to evaluate whether a source for the remaining VOC presence exists, and if so, are B322 AOC conditions suitable for additional source reduction corrective measures. The scope of the RFI consisted of a multi-phased program of field explorations and testing whereby the results of the initial field explorations were reviewed and used to support the scope of the subsequent phases of work. Results of the investigation did not identify residual VOC source areas. All soil sample detections were at least an order of magnitude below New York State Part 375.6-8 Soil Cleanup Objectives for commercial use. Groundwater grab sample results were consistent with previous sampling of nearby

[27] IBM Corporate Environmental Affairs, November 11, 2016, Updated Status of Remedial Alternatives Evaluation, B/322 Area of Concern (Operable Unit 7).

[28] NYSDEC to IBM Corporate Environmental Affairs, July 16, 2018, Extraction Wells 612, 613, 617 Shutdown, Area B/322 Remediation Area (OU7).

[29] Groundwater Sciences Corporation, April 30, 2019, revised July 23, 2019, RCRA Facility Investigation Work Plan, Building 322 Area of Concern (Operable Unit 7).

[30] NYSDEC to IBM Corporate Environmental Affairs, July 29, 2019, RCRA Facility Investigation Work Plan, Building 322 Area of Concern.

monitoring wells. As reported in the RFI Report[31], the nature and extent of the remaining VOC presence detected in groundwater was consistent with what would be expected in the area of a former plume that has been present for several decades.

3.7 OU8 B330 Area of Concern

The B330 AOC is located beneath and adjacent to B330C and B330D. Contamination in this area is associated with historical waste solvent tank farms, one located on the south side of B330C and the other located to the east of B330C, and underground waste piping within the buildings.

Groundwater contamination associated with B330 was discovered during the mid-1980s and the primary contaminants of concern are PCE, and breakdown products and Freon® TF. Both the overburden and the bedrock aquifers have been impacted. PCE has been detected up to approximately 150,000 ppb in the upper aquifer, where dense non-aqueous phase liquid (DNAPL) has also been found.

The B330 AOC (OU8) soil VOC plumes have multiple source areas and consist primarily of PCE-series compounds. The soil groundwater plumes are the source of several plumes in the underlying deep bedrock. One of the source areas for the B330 AOC plumes is located beneath the south-central portion of B330D near well GW-572 where separate-phase PCE has been recovered during sampling. A second soil VOC plume is located on the northeast side of B330C near well GW-956; this plume is associated with a source in the vicinity of soil monitoring wells GW-576, GW-178 and GW-956 and soil/bedrock monitoring well GW-574. A third soil VOC plume is associated with a source near well GW-181 between B330D and B335; this plume appears to merge with the plume originating near well GW-572.

Contamination is addressed in the corrective action module of the permit. During the remedial investigation, the Department determined that there has been a release of hazardous waste from the inaccessible solid waste management units (SWMUs). These inaccessible SWMUs are listed under

[31] Groundwater Sciences Corporation, March 30, 2020, *RCRA Facility Investigation Report, Building 322 Area of Concern (Operable Unit 7)*.

the current Part 373 Permit Module II Condition E.l.b. When they become accessible; IBM will prepare a RCRA Facility Investigation Work Plan.

This area was remediated as an ICM. Groundwater is pumped from the deep bedrock extraction well PW-25, part of the **Bedrock Remediation System** to contain the B330 AOC plume near the source.

Three sub-slab depressurization systems were designed to extract vapor from beneath southern portions (**VE-7**); western portions (**VE-8**) and the north east portions (**VE-32**) of B330C. Two sub-slab depressurization systems extract vapor from beneath the northern and southern portions of B330D (**VE-1 and VE-10**).

IBM conducted a VI investigation in B335 in 2018 to 2019 in response to iPark's intent to market B335 for lease. B335 formerly housed IBM's PCE recycling plant for the Site, and was unoccupied at the time of the VI investigation. The work included indoor air grab sampling, passive diffusion sampling, building pressure testing and indoor air screening, subslab vapor sampling, and mass flux testing. The results of the VI investigation indicated that three transport mechanisms are likely contributing to the PCE presence in indoor air: off-gassing of PCE from the slab, VI through the slab by diffusion, and VI through floor cracks and other advective pathways. Based on these results, it was concluded that a multi-faceted mitigation approach would likely be needed to adequately lower PCE concentrations in indoor air. The results of the VI investigation were documented in an April 2019 report to the Departments[32].

The Departments responded in a June 7, 2019 letter requesting the completion of an RFI to evaluate the potential source(s) of PCE in the subsurface in the B335 Area and to evaluate the extent of contamination. The B335 Area RFI was conducted in 2019 to 2020 in accordance with an RFI Work Plan[33] approved by the Departments in an October 17, 2019 letter, As described in the work plan, IBM performed a subsurface investigation within and surrounding B335 which included shallow soil

[32] Sanborn, Head Engineering P.C., April 2019, *B335 VI Data Summary Report, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[33] Sanborn, Head Engineering P.C., September 2019, *B335 Area RCRA Facility Investigation Work Plan, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

vapor screening, high resolution soil and upper bedrock sampling and analysis, installation of multilevel CMT® implants, and groundwater and soil vapor sampling from the CMT® implants.

The aggregated data pointed to two main source areas contributing to PCE in the subsurface of the B335 Area: (1) B335 and just to its north, and (2) the underground tank area located in the B330D south loading dock area. Hydrogeologic analysis of the data suggested that PCE mass discharge into bedrock from the B335 Area is negligible compared to mass removal from PW-25 and the site remedial program overall. In addition, a qualitative exposure assessment indicated that soil vapor, soil / rock, and groundwater in the B335 source areas do not present risk under current or reasonably foreseeable future site conditions due to existing site controls and implementable VI controls as needed. However, it was noted that for B335 itself, typical VI engineering controls (subslab depressurization and HVAC controls) may not be sufficient to reduce PCE concentrations in indoor air due to off-gassing of PCE from the concrete building materials.

The B335 RFI report concluded that continuation of the existing remedial actions, and current engineering and institutional controls, was recommended. Furthermore, a corrective measures study (CMS) did not appear warranted given that the results of the preliminary remedial screening indicated that remedial technologies to remove the mass in the two source areas are limited due to the dense, low permeability till unit where PCE mass is predominantly located. It further concluded that the future re-use of B335 is contingent on mitigating VI and off-gassing of PCE sorbed to building materials. The effectiveness of such measures is uncertain given the long history of significant volumes of PCE being managed in this building. The results of the B335 Area RFI were documented in a September 2020 report to the Departments[34]. The Departments approved the report in a January 5, 2021 letter to IBM and requested a work plan for VI mitigation testing in B335. A work plan for testing the effectiveness of floor sealing for VI mitigation was submitted to the Departments on February 4, 2021[35]; the Departments approved this work plan in April 2021.

[34] Sanborn, Head Engineering P.C., September 2020, *Building 335 Area RCRA Facility Investigation Summary Report, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[35] Sanborn, Head Engineering P.C., February 2021, *Work Plan for Concrete Sealing Effectiveness Testing, Building 335, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation..

The floor sealing effectiveness testing took place in B335 in June/July 2021, and IBM submitted the results of the assessment to the Departments in January 2022. Based on the testing results, IBM concluded that, while sealing of the floor may be effective in reducing PCE mass flux into B335, sealing alone would not be sufficient to achieve acceptable indoor air quality.

Based on the results of the floor sealing testing described above, the Departments required that the Permittee Owners and Operators complete a CMS to evaluate the potential to achieve acceptable indoor air and subslab VOC concentrations in the B335 Area and potential mitigation measures for the B335 Area (NYSDEC letter of February 10, 2022). Alternatively, the Departments' letter allowed for completion of a focused CMS inclusive of a presumptive remedy if an acceptable presumptive remedy was agreed to by the Departments and the Owners and Operators. Following various communications with the Permittee Owners and Operators and the Departments, IBM completed a focused CMS and submitted the Focused CMS report for the B335 Area in March 2023 (SHPC, March 31, 2023). The focused CMS report summarized the presumed remedy (demolition of B335 and establishment of supporting engineering and institutional controls), supporting investigation results, preliminary design/implementation considerations, proposed performance standards and monitoring approach, opinion of cost, and projected schedule. The presumptive remedy described in the Focused CMS Report was approved by the Departments as an Interim Corrective Measure (NYSDEC, July 13, 2023), pending public notice and potential comments that could cause the remedy to be modified. IBM has moved forward with the design of the approved ICM for B335 at its own risk.

3.8 OU9 Southeast Quadrant

The Southeast Quadrant (SEQ) AOC is a former contractors' staging area, used from the 1970s to the mid-1980s, located in a filled area adjacent to a New York State Freshwater Wetland (HJ-52) in the southeast corner of the Site. The SEQ area was the subject of numerous investigations in the 1980s. The geologic conditions underlying the soil fill in the SEQ AOC consist of dense glacial till overlying carbonate bedrock. Contamination in this area was first discovered in 1980 and a pump and treat system was installed which consisted of one well, PW-23. This area was remediated as an ICM.

In the mid- to late 1990s, a RFA and RFI for soil contamination were completed for this area. No sources were found in soil and NYSDEC determined that No Further Action is required for soils in the SEQ .

The SEQ AOC contains an elongated soil plume of PCE-series compounds extending from an apparent source area near soil monitoring well GW-048 and well PW-23 (formerly shallow bedrock well GW-552) northward toward wells GW-987 (bedrock) and GW-990 (soil) along iPark Boulevard (formerly known as Lime Kiln Road). The SEQ groundwater plume is located in the fill, native soil and very shallow, fractured bedrock. Low-level concentrations, below the NYSGQS, of PCE and its breakdown products are the principal contaminants of concern. No Freon® TF plumes are present in the SEQ.

Active remediation of the SEQ plume began in 2002 and continued through August 1, 2015 when PW-23 was shut down for a period of two years as part of a NYSDEC approved shutdown test request[36] at SEQ groundwater extraction well PW-23.

NYSDEC approved the permanent shutdown of SEQ extraction well PW-23 on July 16, 2018[37].

3.9 Site-Related Soil Vapor Intrusion

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site relating to soil vapor intrusion (SVI).

3.9.1 2007 – 2015 (IBM Ownership)

During the second half of 2007, IBM conducted a program of indoor air sampling to support an energy cost reduction assessment focused on reduction of fresh makeup air into buildings. Results of the sampling indicated the presence of relatively low concentrations of PCE in B310 and B330C, and

[36] Groundwater Sciences Corporation, June 18, 2015, Shutdown Test Request, Production Well PW-23, Southeast Quadrant Area of Concern (Operable Unit 9).

[37] NYSDEC to IBM Corporate Environmental Affairs, July 16, 2018, *Production Well PW-23 Shutdown, Area SEQ Remediation Area (OU9).*

relatively higher PCE concentrations in a portion of B330D. As a result of those findings, IBM initiated an investigation of the source or sources of the PCE in B330D indoor air. The investigation included a review of relevant historical records and reports, indoor air screening and sampling, review of the HVAC systems, sampling of subslab vapor, and testing of subslab vapor extraction.

In October 2008, IBM received concurrence from NYSDEC that the vapor intrusion assessment be performed using a focused scientific approach that: 1) Prioritized buildings for VI assessment based upon location, use, and indoor air concentration; and 2) No sub-slab soil vapor samples were to be collected unless they were needed to support design of vapor intrusion mitigation systems.

The findings of the B330D investigation are summarized in a report titled *Building 330D VOC Source Investigation and Mitigation*[38]. The report identified the location of a PCE source beneath the former 80K clean room in the north end of the building and found that the design of some of the return air chases in the HVAC system created a migration pathway for subslab vapors to be drawn into the HVAC system. The return air chases were subsequently modified. Following the modifications, indoor air PCE concentrations decreased by about one order of magnitude.

In April 2008 (NYSDEC to IBM, April 7, 2008), while the investigation of B330D was ongoing, the NYSDEC and NYSDOH requested that IBM commence a vapor intrusion investigation of buildings within the Site; this request was part of a state-wide initiative focused on so-called legacy sites where corrective measures have been implemented. In June 2009[39], IBM submitted a VI RFI work plan to identify and evaluate sources of VOC vapors in occupied site buildings. The work plan included: a summary of the hydrogeology and VOC distribution in groundwater within the Site; a discussion of the site conceptual model with regard to subslab VOCs and related VI considerations; and a summary of building use, HVAC systems, and indoor air data for 29 buildings.

[38] Sanborn, Head Engineering P.C., December 2008, *Report of Findings, Building 330D VOC Source Investigation and Mitigation, IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation, East Fishkill, New York.

[39] Sanborn, Head Engineering P.C., June 2009, *Work Plan, RCRA Facility Investigation, VOC Source Assessment, IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation, East Fishkill, New York.

The information for the 29 buildings was reviewed and each building was classified as requiring either a "source investigation" work scope, a "confirmatory sampling" work scope, or no further assessment. The scoping considerations included human occupancy, historical solvent use and/or storage release history, probable or confirmed vadose zone contamination, and historical indoor air data. Sampling, investigations, and testing were proposed in 12 of 29 buildings within the Site. B310 and B330D were proposed for a source investigation assessment, ten buildings (B300, B308, B309, B320B, B322, B323, B330C, B334, B338, and B386) were proposed for confirmatory sampling.

Confirmatory indoor air sampling was subsequently performed in ten buildings at the Site. The ten buildings sampled included nine of the ten buildings identified in the VOC source assessment work plan, with the deletion of B322 because it was unoccupied at the time, plus the addition of B316.

Source investigations and implementation of VI mitigation was subsequently completed in B310 and B330D. The work included phased investigations of a possible source or sources for VOCs in indoor air, investigation of the HVAC systems, sampling of subslab vapor, testing of subslab depressurization (SSD), and design and construction of SSD systems. The first SSD system in B330D (**VE-1**) was put into operation on October 6, 2010 and covered the former 80K area in the northern portion of the building (SHPC, December 2011). The first SSD system in B310 (**VE-2**) was put into operation on February 22, 2012 and covered the central portion of the building (SHPC, May 2013). The start-ups of **VE-1** and **VE-2** were documented in reports submitted to and approved by the Departments.

3.9.2 2015 – 2017 (GF Ownership)

Site ownership was transferred from IBM to GF in July 2015. In 2015 and 2016, GF requested to make HVAC adjustments for energy savings purposes in several of its buildings. In response to this request, IBM conducted iterations of HVAC adjustments and field screening using a gas chromatograph / mass spectrometer (GC/MS) to test the impact of the HVAC adjustments on indoor

air quality. The results of the testing were documented in IAQ summary reports for B330C[40], B330D[41],B310[42], B322[43], and B338[44] which were submitted to the Departments. In some instances, HVAC systems were required to stay at the prior settings with higher air exchanges to maintain IAQ. These settings were documented in the respective IAQ reports referenced above.

The HVAC adjustment and IAQ screening / sampling work also identified areas of B330C and B330D where further improvement in IAQ was not possible by HVAC adjustments alone. These areas were overlying the areas of highest PCE concentrations in subslab vapor. Interim SSD systems (one in B330C and two in B330D) were installed to mitigate VI in these areas until permanent SSD systems could be installed. The interim system in B330C (**VE-4**) was put into operation on February 16, 2016[45]. The two interim systems in B330D (**VE-5** and **VE-6**) were put into operation on February 15, 2017 and February 21, 2017, respectively[46]. The interim SSD systems were documented in the interim SSD start-up reports referenced above, which were submitted to and approved by the Departments.

[40] Sanborn, Head Engineering P.C., February 2016, *Report of HVAC Adjustment and Indoor Air Quality Testing, Buildings 330C and 338, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[41] Sanborn, Head Engineering P.C., March 2016, *Report of HVAC Adjustments and Indoor Air Quality Testing - B330D, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation

[42] Sanborn, Head Engineering P.C., July 2016, *Report of HVAC Adjustment and Indoor Air Quality Testing, Building 310, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[43] Sanborn, Head Engineering P.C., January 2016, *Data Transmittal for B322 Indoor Air Quality Testing, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[44] Sanborn, Head Engineering P.C., February 2016, *Report of HVAC Adjustment and Indoor Air Quality Testing, Buildings 330C and 338, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[45] Sanborn, Head Engineering P.C., July 2016, *Report of Interim Measures and Indoor Air Quality Testing, Building 330C, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[46] Sanborn, Head Engineering P.C., May 2017, *Report of Interim Measures and Indoor Air Quality Testing, Building 330D, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

3.9.3 2017 to 2023 (iPark, GF/Onsemi and Rolling Frito-Lay Sales, LP Ownership)

As noted previously, GF sold portions of the site to iPark East Fishkill LLC and iPark East Fishkill I LLC in September 2017. Since that time, various parcels owned by iPark have been transferred to other iPark entities. On January 1, 2023, GF transferred ownership of its remaining parcels to Semiconductor Components Industries, LLC (dba onsemi). Further details relating to the ownership structure is described in **Section 1.0**. iPark began to make building modifications to accommodate new tenants in several of its buildings. In addition, iPark's change of use from industrial to commercial in a portion of the Site prompted additional subslab vapor and pre-occupancy indoor air sampling by iPark within the proposed commercial tenant spaces of B330C, B338, and B339. iPark also conducted pre-occupancy indoor air sampling within tenant spaces of B330C, B330D, B334, B338, and B339 in accordance with work plans submitted and approved by the Departments. The soil vapor and pre-occupancy indoor air sampling results were documented in multiple reports to the Departments by iPark. Additionally, IBM conducted indoor air sampling in response to changes to building use / occupancy and / or HVAC settings in B308, B316, B317 and B320B.

During this time, IBM completed construction of the permanent SSD systems in B330C (**VE-7** and **VE-8**, placed into operation on April 30, 2019 and June 11, 2020, respectively) and B330D (**VE-1** expansion and **VE-10**, put into operation on July 1, 2020 and August 27, 2020, respectively). The interim SSD systems in B330C and B330D were both shut down in 2020 after the permanent systems were installed. Start-up reports for the B330C SSD systems[47,48] and B330D SSD systems[49,50] were submitted to and approved by the Departments.

[47] Sanborn, Head Engineering P.C., October 2019, *B330C - SSDS Completion and Startup Report (Phase I), Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[48] Sanborn, Head Engineering P.C., October 2020, *Subslab Depressurization System Completion and Startup Report (Phase II) - Building 330C, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[49] Sanborn, Head Engineering P.C., December 2019, *SSDS Completion and Startup Report - B330D North System, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[50] Sanborn, Head Engineering P.C., November 2020, *SSDS Completion and Startup Report - B330D Central and South System, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

iPark's construction of a partitioning wall in the southern area of B310 in 2018 appeared to have decreased the effectiveness of the HVAC VI mitigation measures in-place in that area of the building. Therefore, IBM designed and installed an SSD system (**VE-9**) to mitigate VI in the southern portion of the building. The system was put into operation on June 16, 2020. A start-up report for **VE-9**[51] was submitted to and approved by the Departments. On October 22, 2020, the extraction ports from the **VE-2** system were connected to the **VE-9** system for energy savings and equipment access considerations, and **VE-2** was turned off. The combined **VE-9** system was found to be effective in depressurizing the slab, and IBM submitted a request to the Departments to maintain the configuration in April 2021[52], which the Departments approved.

In December 2021, iPark subdivided Lots 2 and 3 to form a new lot (Lot 9) on the northern portion of the Site; iPark subsequently sold Lot 9 to Frito-Lay. Frito-Lay designed and installed passive sub-slab ventilation systems concurrently with the construction of the three new buildings on Lot 9. In August 2023, Frito-Lay submitted an indoor air sampling work plan to the Departments, which was subsequently approved. These results of the indoor air sampling on Lot 9 have not yet been submitted to the Departments.

[51] Sanborn, Head Engineering P.C., October 2020, *Subslab Depressurization System Completion and Startup Report - B310, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

[52] Sanborn, Head Engineering P.C., April 2021, *Request for Subslab Depressurization System Reconfiguration, Systems VE-2 and VE-9 – Building 310, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

4.0 ENGINEERING AND INSTITUTIONAL CONTROLS

Since remaining contamination exists at the Site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment.

4.1 Institutional Controls

IBM recorded a Declaration of Restrictions, Easements and Covenants (*Declaration*)[53], with the Dutchess County Clerk on July 9, 2015. The *Declaration*, presented in **Attachment IV-1**, divides the Site into four Use Areas: Area A, the Core Area, the former Landfill Area and the Perimeter Area (remainder of the Site) as shown on **Plate 1-3**. The *Declaration* provides for access to conduct, complete and monitor groundwater remediation and monitoring as required by NYSDEC under the 2011 Part 373 Permit; installation and maintenance of remediation systems and / or utility systems; and includes certain obligations and prohibitions with respect to owners, operators and users of all or any portion of the property. Obligations and prohibitions are enumerated in the *Declaration* and include prohibition of pumping or extraction groundwater other than in conjunction with the remediation efforts and designation of the property for industrial use unless approved by NYSDEC or other Governmental Body. Specific restrictions and requirements are outlined for the Use Areas including prohibition of soils disturbance within the Landfill and Area A; site-wide soils management; prohibition of the disruption or impairment of any vapor mitigation system; installation of vapor mitigation systems in all new structures sufficient to cause the air quality in such structures as reasonably necessary to comply with all requirements established by NYSDEC.

An amendment[54] (First Amendment to the *Declaration*) to the *Declaration* was made on April 14, 2020. The First Amendment to the *Declaration* is presented in **Attachment IV-2**, removed a portion of the property from the Core Area and established a *Designated Area* which may be used for

[53] Declaration of Restrictions, Easements and Covenants, June 17, 2015 by INTERNATIONAL BUSINESS MACHINES CORPORATION for Section 6.356, Block 4, Lot 980140 (Dutchess County Tax Grid #6356-04-980140) and Section 4.456, Block 3, Lot 116374 (Dutchess County Tax Grid #05-6456-03-116374-000), Recorded by the Dutchess County Clerk on July 9, 2015 as Document # 02 2015 4059.

[54] First Amendment to Declaration of Restrictions, Easements and Covenants, April 14, 2020 by INTERNATIONAL BUSINESS MACHINES CORPORATION.

Commercial Uses subject to the terms described in the Consent Order. The *Designated Area* described in the First Amendment to the *Declaration* is shown on **Plate 1-3** as the *Designated Area*.

GF recorded a Declaration of Restrictions and Covenants (*GF Declaration*)[55], with the Dutchess County Clerk on November 8, 2017. The *GF Declaration*, presented in **Attachment IV-3**, restricts site use to Industrial within certain portions of Lot 2, Lot 5 and Lot 7 subject to the restrictions, covenants and obligations set forth in the filed document. The *Restricted Area* described in the *GF Declaration* is shown on **Plate 1-3**.

An amendment[56] (Second Amendment to the *Declaration*) to the *Declaration* was made on May 12, 2020. The Second Amendment to the *Declaration* is presented in **Attachment IV-3**. The Amendment was made between and among GlobalFoundries, U.S. 2 LLC and IBM and allows for Excavation within Area A as described in *Recital 2* of the Second Amendment to the Declaration.

An amendment[57] (Third Amendment to the *Declaration*) to the *Declaration* was made on May 12, 2020. The Third Amendment to the *Declaration* is presented in **Attachment IV-4** was made between and among Rolling Frito-Lay Sales, LP and IBM, and allows for excavation of soil as part of the Project within that portion of the Project located in Area A as described in Exhibit A of the Third Amendment.

A series of ICs is required by the FSB, the *Declaration*, and First Amendment to the *Declaration* and the *GF Declaration* to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to industrial uses only except as authorized by the NYSDEC.

[55] Declaration of Restrictions and Covenants, August 31, 2017, by GLOBALFOUNDRIES US 2 LLC for Section 6356, Block 4, Lot 980140 (Dutchess County Tax Grid #6356-04-980140) Recorded by the Dutchess County Clerk on November 8, 2017 as Document # 02 2017 8358.

[56] Second Amendment to Declaration of Restrictions, Easements and Covenants, International Business Machines Corporation, executed on or about May 12, 2020.

[57] Third Amendment to Declaration of Restrictions, Easements and Covenants, International Business Machines Corporation, Filed Document No. 02-2022-1892 (May 9, 2022).

Additional ICs pertaining to the B335 area of the B330 AOC are pending public notice and final approval by the Departments of the proposed remedy described in the B335 Focused CMS Report.

4.2 Engineering Controls

A summary of the Engineering Controls together with the location on the Site is provided in **Table 4-1** and shown on **Plate 4-1**.

4.2.1 Composite Cover System including Area C (OU6) former Landfill Cap

Exposure to remaining contamination at the Site is prevented by a composite cover system placed over the Site. This cover system is comprised of a minimum of 36 inches of soil that meets the Part 375 SCO for industrial use, asphalt pavement, concrete-covered sidewalks, and concrete building slabs. The ISMP (**Attachment I**) outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed.

Exposure to remaining contamination is prevented by the soil cover system placed over the former Landfill. This cover system is comprised of a minimum of 36 inches of soil that meets the Part 375 SCO for industrial use. A grass cover will remain on the closed unit to assist in maintaining the integrity of the final cover. Procedures for maintaining and monitoring the cover are provided in the ISMP (**Attachment I**).

Exposure to remaining contamination at the B335 area of the B330 AOC will be prevented by the ECs described in the B335 Focused CMS Report, including retaining the B335 concrete floor slab following building demolition to serve as a cap to the underlying soil contamination, in combination with asphalt pavement, concrete sidewalks, and soil of a minimum thickness of 36 inches that meets the industrial use SCO. The existing Bedrock Remediation System, referenced below, will serve as the EC for groundwater contamination in the B335 Area. These ECs are considered Interim Corrective Measures pending public notice and final approval by the Departments of the proposed remedy described in the B335 Focused CMS Report.

4.2.2 Groundwater Collection and Treatment Systems

The Corrective Measures program includes the operation of two groundwater collection and treatment systems. The Bedrock Remediation System consists of collection and treatment systems operate to remediate the Bedrock Remediation Area (OU2). Shallow groundwater from the Area A AOC (OU5) is remediated by the Area A Groundwater Extraction and Treatment System (B384 Sump).

The Groundwater Collection and Treatment Systems are discussed in detail in the ISMP (**Attachment I**).

4.2.3 Soil Vapor Intrusion Mitigation Systems and Controls

Active SSD systems are operating in B330D (**VE-1** and **VE-10**), B330C (**VE-7**, **VE-8**, and **VE-32**), B310 (**VE-9**), the B310/B308 Linkway (**VE-11**), B338 (**VE-30**), and B339 (**VE-31**). In addition, one passive SSD system was installed in a portion of B320B (**VE-20**) and three (3) passive SSD systems were installed in the three (3) Frito-Lay buildings on Lot 9.

Soil Vapor Intrusion Mitigation Systems and Controls are discussed in detail in the ISMP (**Attachment I**).

4.2.4 Soil Vapor Extraction Systems

The Area A SVE system (**VE-3**) was voluntarily installed as a pilot for VOC contaminant mass removal in Remediation Area A (Area A) located north of the linkway between B308 and B310, to supplement the Area A groundwater extraction system (B384 Sump). The SVE pilot system began operation on May 13, 2015 and has continued to operate seasonally given the reasonably successful performance of the system in removing mass. The system is operated seasonally from the spring to fall due to the potential for excessive condensate generation in the exposed aboveground pipe network and freezing in cold weather. The system is evaluated each year to assess whether operations will be resumed in the subsequent year.

4.2.5 HVAC Systems

HVAC systems are serving as VI ECs in B310 and B330C in areas outside the influence of the SSD systems. HVAC operating conditions that are to be maintained in B310 and B330C for VI mitigation purposes are provided in the Performance Monitoring Plan (PMP) (**Appendix H-2 of the ISMP, Attachment I**).

In addition, ten buildings had acceptable indoor air quality under existing HVAC operations and building use; no alterations of HVAC operations were necessary for VI mitigation purposes. Although changes to HVAC operations were not needed for VI control, the presumption is that existing HVAC operations may be acting as ECs, and they have been carried forward for ongoing monitoring as part of the PMP (**Appendix H-2 of the ISMP, Attachment I**). The buildings that fall under this category include B300, B308, B316, B320B, B321, B322, B323, B323A, B330L, B334, and B386.

The HVAC systems are operated and maintained by the building owners as part of routine building maintenance.

TABLE 4-1: SUMMARY OF OPERABLE UNITS & ENGINEERING CONTROLS (as of June 30, 2024)

OPERABLE UNIT / AREA OF CONCERN	ACTIVE	OPERATOR	ENGINEERING CONTROL(S)		LOCATION			PARCEL NUMBER	OWNER
			TYPE	NAME / DESIGNATION / ID	LOT	CONDO	UNIT		
OU2 BEDROCK REMEDIATION AREA	YES	IBM	Extraction Well	PW-1	2	Hopewell Condo I	Unit #6	6356-04-861300	iPark East Fishkill I LLC
	YES	IBM	Extraction Well	PW-2R	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	IBM	Extraction Well	PW-25	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	IBM	Treatment System	PW-1 GTF	1	No Condo	N/A	6356-04-794174	Semiconductor Components Industries, LLC
	YES	IBM	Treatment System	PW-2 GTF	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	IBM	Treatment System	PW-25 GTF	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B300	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B316 (partial)	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B317	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B320B	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B321	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B322	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B323	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B323A	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
	YES	onsemi	HVAC (presumptive)	B386	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
OU5 AREA A	YES	IBM	Sump	B384 SUMP	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IBM	Treatment System	B384 GTF	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	NO*	IBM	SSD System	VE-2 (Central Portion of B310)	2	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC
	YES	IBM	SSD System	VE-9 (Central and Southern Portion of B310)	2A	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC
	YES	IBM	SSD System	VE-11 (B308/B310 LINKWAY)	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IBM	SVE System	VE-3 (Seasonal Operations)	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IPARK	HVAC (presumptive)	B308	2A	Hopewell Condo I	Unit #3	6356-04-999272	iPark East Fishkill 84 LLC
	YES	IPARK	HVAC	B310 (partial)	2A	Hopewell Condo I	Unit #4	6356-04-939276	iPark East Fishkill I LLC
	YES	onsemi	Passive SSD System	B320B Passive SSD	5	No Condo	N/A	6356-04-955157	Semiconductor Components Industries, LLC
PERIMETER AREA	YES	Frito-Lay	Passive SSD System	Fulfillment Center Passive SSD	9	No Condo	N/A	6356-04-861300	Rolling Frito-Lay Sales, LP
	YES	Frito-Lay	Passive SSD System	Fleet Center Passive SSD	9	No Condo	N/A	6356-04-861300	Rolling Frito-Lay Sales, LP
	YES	Frito-Lay	Passive SSD System	Guard Booth Passive SSD	9	No Condo	N/A	6356-04-861300	Rolling Frito-Lay Sales, LP
OU6 AREA C FORMER LANDFILL	YES	IBM	Soil Cover System	Former Landfill Cover System	6	No Condo	N/A	6456-03-169074	iPark East Fishkill LLC
OU8 B330 AOC	YES	IBM	SSD System	VE-1 (Northern & Central Portions of B330D)	7	Hopewell Condo II	Unit #1A	6456-03-016018	iPark East Fishkill 84 LLC
	YES	IBM	SSD System	VE-10 (Southern and Central Portions of B330D)	7	Hopewell Condo II	Unit #1A	6456-03-016018	iPark East Fishkill 84 LLC
	YES	IBM	SSD System	VE-7 (Southern Portions B330C)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES	IBM	SSD System	VE-8 (Western Portions of B330C)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES	IPARK	SSD System	VE-32 (B330C)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES**	IPARK	SSD System	VE-30 (B338)	7	Hopewell Condo II	Unit #5	6456-03-076010	iPark East Fishkill B338 LLC
	YES	IPARK	SSD System	VE-31 (B339)	7	Hopewell Condo II	Unit #5	6456-03-076010	iPark East Fishkill B338 LLC
	YES	IPARK	HVAC (presumptive)	B334	7	Hopewell Condo II	Unit #2	6456-03-015092	iPark East Fishkill LLC
	YES	IPARK	HVAC (presumptive)	B330L	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
	YES	IPARK	HVAC	B330C (partial)	7	Hopewell Condo II	Unit #1B	6456-03-053044	iPark East Fishkill 84 LLC
SITE-WIDE	YES		Soil Cover	SOIL COVER SYSTEM					
SITE-WIDE	YES	IBM	Monitoring	GROUNDWATER MONITORING					

Notes:

Condo = Condominium

iPark = iPark collectively refers to any and all iPark East Fishkill entities unless a specific iPark entity is referenced

onsemi = Semiconductor Components Industries, LLC

*VE-2 extraction ports were connected to the VE-9 system on October 22, 2020, and VE-2 was shut-down. A request for SSD system reconfiguration letter was submitted to NYSDEC by IBM on April 1, 2021. NYSDEC approved this reconfiguration request in a July 30, 2021 letter.

**The VE-30 SSD system currently serves an occupied gym tenant space. Additional SSD system components have been constructed and will be brought online as new tenants occupy the various building areas.

5.0 SECURITY PLAN

Since the permit application is for corrective action only, the Security Plan provided as **Attachment V** focuses on the measures taken to minimize the potential for others to intentional or unintentionally tamper, damage or impact the corrective action engineering controls (i.e., groundwater extraction and treatment system, sub slab depressurization system) and minimize the potential exposure of Site occupants to chemicals and wastes associated with the engineering controls.

6.0 FINANCIAL REQUIREMENTS

The 30-year corrective action cost estimate for the former IBM East Fishkill Remediation and the financial assurance documents are provided in **Attachment VI-1**. The cost estimate includes both interim and final corrective measures. The cost estimate is reviewed annually and adjusted accordingly. IBM has sudden accidental liability insurance coverage as described in **Attachment VI** of this document.

As required under Section IV of Consent Order No. CO-1-20181004, the financial assurance of a performance guarantee by iPark, initially in the amount of 100,000 dollars ($100,000) for the benefit of the Department is provided in Attachment VI-2.

7.0 CERTIFICATION

Owner and Operator certifications for the Part B Application are on the following four (4) pages.

Part B Certification

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.

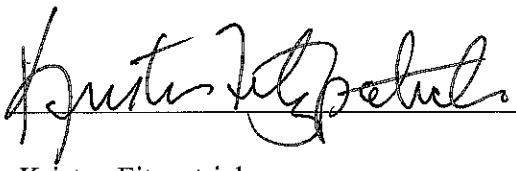
Operator:	Signature:	
	Name:	Brooke Tvermoes
	Title:	Director, Environmental, Energy and Chemical Management Programs, Corporate Environmental Affairs, Finance and Operations
	Company:	IBM Corporation
	Date:	August 14, 2024

Note: Certifying as the operator of the IBM designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* (attached) and listed below:

- Extraction Wells [PW-1, PW-2R and PW-25]
- B384 Sump
- Groundwater Treatment Systems [PW-1 GTF, PW-2 GTF, PW-25 GTF, B384 GTF]
- Sub-slab Depressurization (SSD) Systems [VE-1, VE-7, VE-8, VE-9, VE-10, VE-11]
- Soil Vapor Extraction (SVE) System [VE-3]
- Soil Cover System [Former Landfill Cover System]
- Monitoring [Groundwater Monitoring]

Part B Certification

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.

Owner:	Signature:	
	Name:	Kristen Fitzpatrick
	Title:	Director of Facilities
	Company:	Semiconductor Components Industries, LLC
	Date:	8-13-24

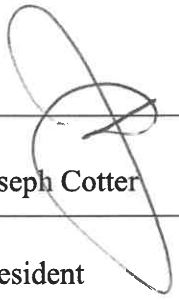
Note: Certifying as the owner of the Semiconductor Components Industries, LLC tax parcels shown on *Table 1-1: Site Ownership* (attached) and as the operator of the Semiconductor Components Industries, LLC (onsemi) designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* (attached) and listed below:

- The HVAC (presumptive) engineering control associated with B300, a portion of B316, B317, B320B, B321, B322, B323, B323A, B386 and;
- The B320B Passive sub-slab depressurization (SSD) system.

Part B Certification

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.

Owner / Operator:

Signature: 

Name: Joseph Cotter

Title: President

Company: iPark East Fishkill LLC

Date: 8/14/2024

Notes: Certifying as the owners of the iPark entities tax parcels shown on *Table 1-1: Site Ownership* (attached) and as listed below:

- iPark Fishkill LLC
- iPark East Fishkill I LLC
- iPark East Fishkill B338 LLC
- iPark East Fishkill 84 LLC

Certifying also as the operator of the iPark designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* (attached) and listed below:

- iPark East Fishkill LLC [the HVAC (presumptive) engineering control associated with B334];
- iPark East Fishkill I LLC [the HVAC engineering control associated with a portion of B310];
- iPark East Fishkill B338 LLC [the sub-slab depressurization (SSD) systems engineering controls installed in B338 and B339];
- iPark East Fishkill 84 LLC [the SSD system engineering control installed in the northeast portion of B330C; the HVAC engineering control associated with a portion of B330C, the HVAC (presumptive) engineering controls associated with B308 and B330L].

Part B Certification

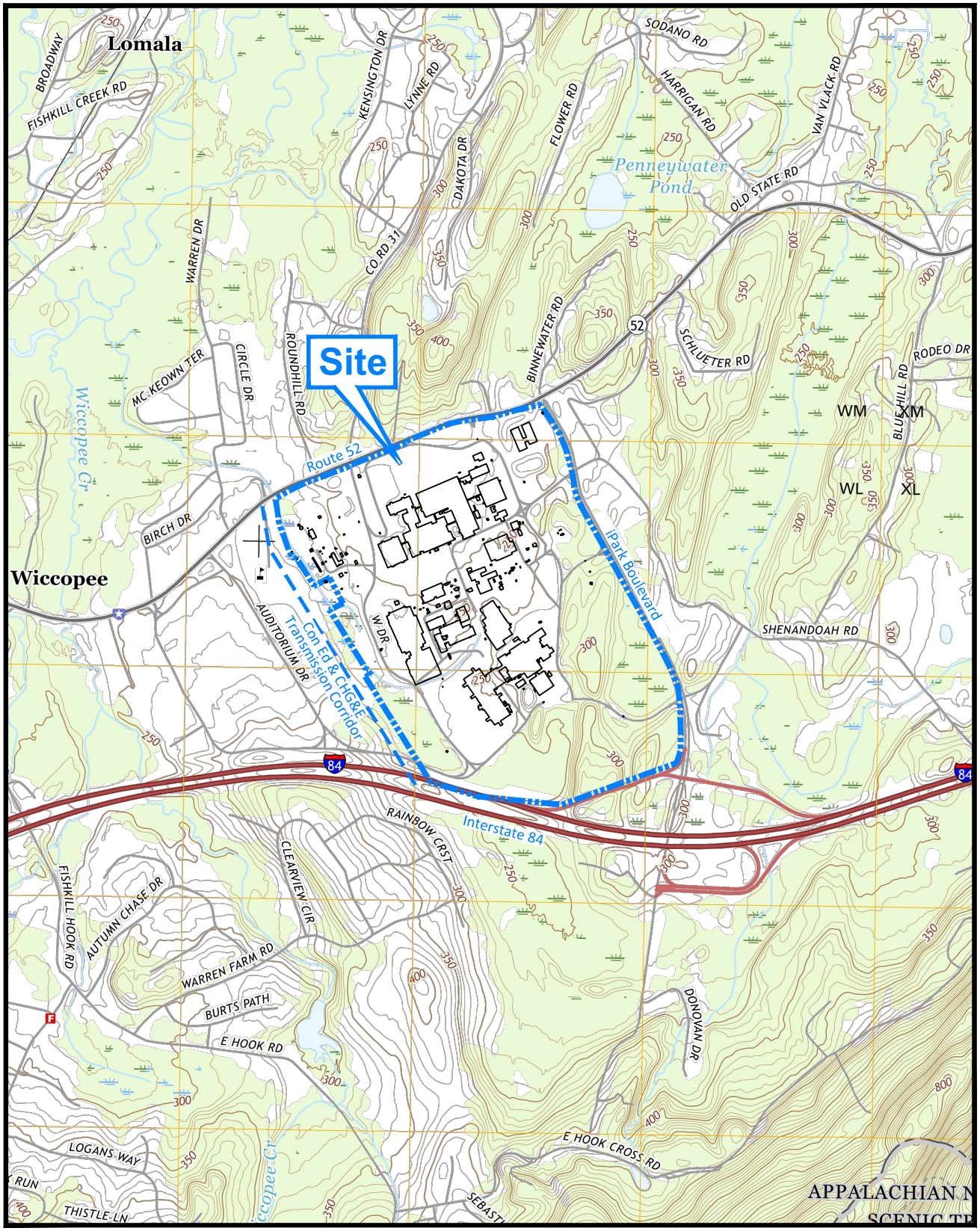
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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.

Owner:	Signature:	
	Name:	Divesh Patel
	Title:	Fulfillment/DC Engineering Director
	Company:	Rolling Frito-Lay Sales, LP
	Date:	8/12/24

Note: Certifying as the owner of the Rolling Frito-Lay Sales, LP tax parcel (LOT 9) shown on *Table 1-1: Site Ownership* (attached) and as the operator of the Rolling Frito-Lay Sales, LP designated engineering controls described in *Table 4-1: Summary of Operable Units and Engineering Controls (as of June 30, 2024)* (attached) and listed below:

- Passive sub-slab depressurization (SSD) systems [Frito-Lay Fulfillment Center; Frito-Lay Fleet Center and; Frito-Lay Guard Booth].

FIGURE 1-1: SITE LOCATION MAP



Portion of the Hopewell Junction, NY 7.5-minute USGS Quadrangle (2016)

All or portions of Lot 4, Lot 6, the roadway between Lots 4 and 6, Lot 8, Lot 9, and South Drive are anticipated to be removed from the Site when environmental easements for Site properties are duly recorded and indexed by Dutchess County.

Approximate

Scale

0 1000' 2000'

Former IBM East Fishkill Facility

Site Location Map

GROUNDWATER SCIENCES CORPORATION

15000-034-B1 / 4-12-2021

FIGURE 1-2: SITE LAYOUT AND OPERABLE UNIT MAP

LEGEND

- Stream/Water Body
- Wetlands Boundary
- Former IBM East Fishkill Facility Property Line
- 8-Lot Subdivision
- Hopewell Condominium I
- Hopewell Condominium II
- Rolling Frito-Lay Sales, LP

OU - Operable Unit

Bedrock Remediation Area (OU 2) is associated with Area A (OU 5), Area C (Landfill) (OU 6), B/330 (OU 8), and B/322 (OU 7).

8-Lot Subdivision: Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Final Subdivision Plat, Existing Conditions, GlobalFoundries US 2 LLC. Filed with the Dutchess CountyClerk on August 3, 2017 (Filed Map #12578)

Hopewell Condominium I: Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium I, Prepared for i.Park East Fishkill I LLC. Filed with the Dutchess County Clerk on November 4, 2020 (Filed Map #12685)

Hopewell Condominium II: Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium II, Prepared for i.Park East Fishkill I LLC. Filed with the Dutchess County Clerk on November 18, 2020 (Filed Map #12692)

Rolling Frito-Lay Sales, LP: Chazen Engineering, Land Surveying, Landscape Architecture & Geology, Co, DPC "Site Layout Map, Lots, Condominium Units, Rights of Way & Fee Roads" April 22, 2022.

AREA A (OU5)

AREA B (OU3)

AREA C (LANDFILL) (OU6)

AREA D (OU4)

B322 AOC (OU7)

B330 AOC (OU8)

BEDROCK REMEDIATION AREA (OU2)

SOUTHEAST QUADRANT AOC (OU9)

All or portions of Lot 4, Lot 6, the roadway between Lots 4 and 6, Lot 8, Lot 9, and South Drive are anticipated to be removed from the Site when environmental easements for Site properties are duly recorded and indexed by Dutchess County.

Figure 1-2

Source: "Groundwater Monitoring Basemap", IBM East Fishkill Facility (9718new.dwg, original date 12/21/98)
Survey Control by: Hayward and Pakan Associates, Poughkeepsie NY
Photogrammetry by: Golden Aerial Surveys, Inc., Newtown, CT
Date of Photography: March 3, 1997.

Scale 0 250' 500'

Former IBM East Fishkill Facility

Site Layout and Operable Units

DRAWN BY: MHM	DATE: 8/5/24	DRAWING NO. 95007-060-MASTER-Rev3
CHECKED & APPROVED BY: DAB		

GROUNDWATER SCIENCES CORPORATION

FIGURE 1-3: SITE PLAN, STORM WATER DRAINAGE SYSTEM

LIME KILN ROAD
GATE#3
GATE#4
GATE#5
GATE#2
GATE#1
EAST DRIVE
SOUTH DRIVE
WEST DRIVE
ROUTE 52
GILDERSLEEVE BROOK
B304
B308
B316
B310
B315
B334
B330C
B320B
B320A
B312
B322
B329
B328
B300C
B300B
B300D
B300A
B321
B323
B323A
B330D
B338
SUB STATION
EMERGENCY STORAGE TANKS & PUMP STATION
B325
B343
B327
SALT STORAGE
CHLORINE CHAMBERS & BLDG
T-3
T-4
HJ-66
HJ-71
001
002
003
004
005
006
007
008
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011
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047
048
049

LEGEND

008 OUTFALLS

UNDERGROUND PIPING

LOTS COVERED BY BMP

LOT BOUNDARIES

500' 250' 0 500'

SCALE IN FEET

D&B ENGINEERS AND ARCHITECTS

ONSEMI EAST FISHKILL
HOPEWELL JUNCTION, NEW YORK
BEST MANAGEMENT PRACTICES PLAN

STORMWATER DRAINAGE SYSTEM

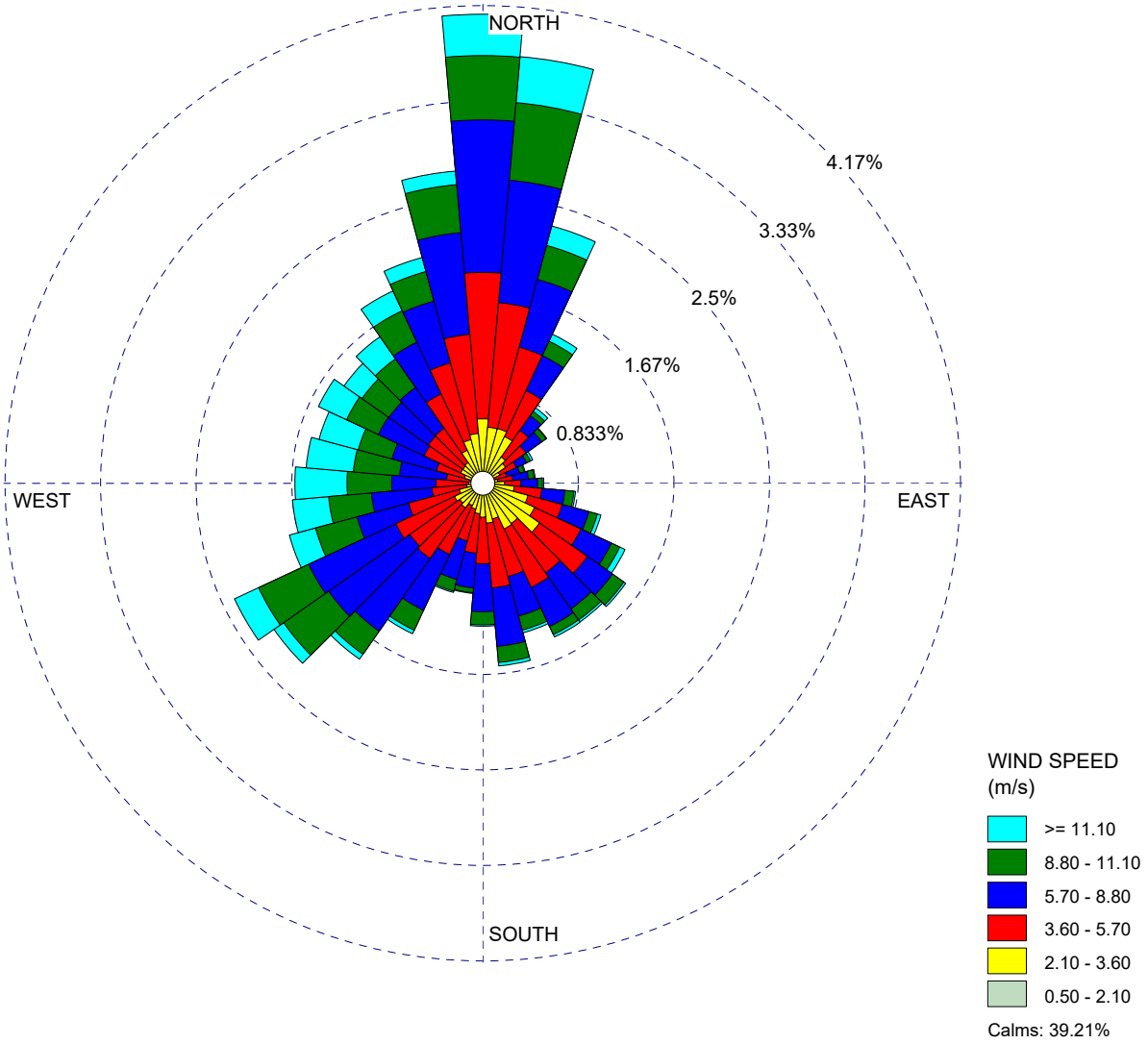
FIGURE 1-3

F:\3932-43\dwg\3932-43-FIG 2-5-BMP.dwg, FIG 2-5, 1/20/2023 1:01:00 PM, DBCadd

FIGURE 1-4: WIND ROSE, DUTCHESS COUNTY AIRPORT, POUGHKEEPSIE NEW YORK

WIND ROSE PLOT:
Poughkeepsie, Dutchess County Airport, Dutchess County, New York
Station ID: KPOU / WBAN 14757

DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2021 - 00:00** **End Date: 12/31/2023 - 23:00**	Figure 1-4	
	CALM WINDS: **39.21%**	TOTAL COUNT: **31894 hrs.**	
	AVG. WIND SPEED: **3.80 m/s**	DATE: **7/8/2024**	PROJECT NO.:

PLATE 1-1: SITE MAP (AERIAL PHOTO)

N

W E

S

Scale (feet)

0 200 400 800

LEGEND

Site Boundary

Aerial photo is a composite of NYS GIS Clearinghouse and Google Earth imagery (dated 2020 and 2024 respectively).

IBM

East Fishkill, New York

Plate 1-1
Aerial Site Map

DRAWN:	CHECKED:	APPROVED:	DATE:	FIGURE:
JPB	RCW	RCW	7/30/2024	

GROUNDWATER SCIENCES CORPORATION

www.groundwatersciences.com

H:\15000\15000\GIS\2024-07 aerial\2024-07 aerial.aprx | Aerial Site Map

PLATE 1-2: SITE LAYOUT MAP (SITE, LOTS, CONDOMINIUM AND CONDOMINIUM UNIT LOCATION MAP)

1
45.64 AC.
2A
23.75 AC.
3A
20.87 AC.
4
13.72 AC.
5
98.94 AC. (TOTAL)
96.26 AC. (PART OF LOT 5)
2.68 AC.
(PART OF LOT 5)
6
56.19 AC.
7
71.73 AC. (PART OF LOT 7)
85.05 AC. (TOTAL)
13.32 AC.
(PART OF LOT 7)
8
59.41 AC.
9
28.42 AC.
LOT 2 REVERSIONARY PARCEL – 6.64 AC.
PROPERTY LINE NOT IN HOPEWELL
UNIT 1A
AREA =10.875 AC.
603,206 SF
UNIT #2
AREA =10.000 AC.
435,608 SF
UNIT #3
AREA =3.872 AC.
168,640 SF
UNIT 4A
AREA =10.568 AC.
603,206 SF
UNIT 5A
AREA =9.390 AC.
603,206 SF
UNIT #7GL
AREA =6.639 AC.
289,282 SF
UNIT 5B
AREA =4.128 AC.
179,824 SF
UNIT 5C
AREA =4.128 AC.
179,824 SF
UNIT 5D
AREA =4.128 AC.
179,824 SF
UNIT 5E
AREA =4.128 AC.
179,824 SF
UNIT 5F
AREA =4.128 AC.
179,824 SF
UNIT 5G
AREA =4.128 AC.
179,824 SF
UNIT 5H
AREA =4.128 AC.
179,824 SF
UNIT 5I
AREA =4.128 AC.
179,824 SF
UNIT 5J
AREA =4.128 AC.
179,824 SF
UNIT 5K
AREA =4.128 AC.
179,824 SF
UNIT 5L
AREA =4.128 AC.
179,824 SF
UNIT 5M
AREA =4.128 AC.
179,824 SF
UNIT 5N
AREA =4.128 AC.
179,824 SF
UNIT 5O
AREA =4.128 AC.
179,824 SF
UNIT 5P
AREA =4.128 AC.
179,824 SF
UNIT 5Q
AREA =4.128 AC.
179,824 SF
UNIT 5R
AREA =4.128 AC.
179,824 SF
UNIT 5S
AREA =4.128 AC.
179,824 SF
UNIT 5T
AREA =4.128 AC.
179,824 SF
UNIT 5U
AREA =4.128 AC.
179,824 SF
UNIT 5V
AREA =4.128 AC.
179,824 SF
UNIT 5W
AREA =4.128 AC.
179,824 SF
UNIT 5X
AREA =4.128 AC.
179,824 SF
UNIT 5Y
AREA =4.128 AC.
179,824 SF
UNIT 5Z
AREA =4.128 AC.
179,824 SF
UNIT 5AA
AREA =4.128 AC.
179,824 SF
UNIT 5AB
AREA =4.128 AC.
179,824 SF
UNIT 5AC
AREA =4.128 AC.
179,824 SF
UNIT 5AD
AREA =4.128 AC.
179,824 SF
UNIT 5AE
AREA =4.128 AC.
179,824 SF
UNIT 5AF
AREA =4.128 AC.
179,824 SF
UNIT 5AG
AREA =4.128 AC.
179,824 SF
UNIT 5AH
AREA =4.128 AC.
179,824 SF
UNIT 5AI
AREA =4.128 AC.
179,824 SF
UNIT 5AJ
AREA =4.128 AC.
179,824 SF
UNIT 5AK
AREA =4.128 AC.
179,824 SF
UNIT 5AL
AREA =4.128 AC.
179,824 SF
UNIT 5AM
AREA =4.128 AC.
179,824 SF
UNIT 5AN
AREA =4.128 AC.
179,824 SF
UNIT 5AO
AREA =4.128 AC.
179,824 SF
UNIT 5AP
AREA =4.128 AC.
179,824 SF
UNIT 5AQ
AREA =4.128 AC.
179,824 SF
UNIT 5AR
AREA =4.128 AC.
179,824 SF
UNIT 5AS
AREA =4.128 AC.
179,824 SF
UNIT 5AT
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179,824 SF
UNIT 5AU
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UNIT 5AV
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UNIT 5AW
AREA =4.128 AC.
179,824 SF
UNIT 5AX
AREA =4.128 AC.
179,824 SF
UNIT 5AY
AREA =4.128 AC.
179,824 SF
UNIT 5AZ
AREA =4.128 AC.
179,824 SF
UNIT 5BA
AREA =4.128 AC.
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UNIT 5BB
AREA =4.128 AC.
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UNIT 5BC
AREA =4.128 AC.
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UNIT 5BD
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UNIT 5BN
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UNIT 5BO
AREA =4.128 AC.
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UNIT 5BP
AREA =4.128 AC.
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UNIT 5BQ
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UNIT 5BR
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UNIT 5BS
AREA =4.128 AC.
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AREA =4.128 AC.
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AREA =4.128 AC.
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UNIT 5BV
AREA =4.128 AC.
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UNIT 5BX
AREA =4.128 AC.
179,824 SF
UNIT 5BY
AREA =4.128 AC.
179,824 SF
UNIT 5BZ
AREA =4.128 AC.
179,824 SF
UNIT 5CA
AREA =4.128 AC.
179,824 SF
UNIT 5CB
AREA =4.128 AC.
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UNIT 5CC
AREA =4.128 AC.
179,824 SF
UNIT 5CD
AREA =4.128 AC.
179,824 SF
UNIT 5CE
AREA =4.128 AC.
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UNIT 5CF
AREA =4.128 AC.
179,824 SF
UNIT 5CG
AREA =4.128 AC.
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UNIT 5CH
AREA =4.128 AC.
179,824 SF
UNIT 5CI
AREA =4.128 AC.
179,824 SF
UNIT 5CJ
AREA =4.128 AC.
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UNIT 5CK
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UNIT 5CL
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UNIT 5CM
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UNIT 5CO
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UNIT 5CP
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UNIT 5CR
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UNIT 5CS
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PLATE 1-3: SITE USE AREAS

LEGEND

- Wetlands Boundary
- Former IBM East Fishkill Facility Property Line

IBM-Imposed Property Use Restrictions

- Area A
- Core Area
- Former Landfill
- Designated Area

OnSemi- Imposed Property Use Restrictions

- Restricted Area

Notes:

Site Basemap: *Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C., Poughkeepsie, NY (XBASE-SVY_51421-00.dwg, 8/10/15); Parcels: XSUBD_51539-00.dwg*

Offsite Basemap: *"Groundwater Monitoring Basemap", IBM East Fishkill Facility (9718new.dwg, original date 12/21/98)*

Well Survey Control by: *Hayward and Pakan Associates, Poughkeepsie NY*

8-Lot Subdivision: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Final Subdivision Plat, Existing Conditions, GlobalFoundries US 2 LLC. Filed with the Dutchess County Clerk on August 3, 2017 (Filed Map #12578)*

Hopewell Condominium I: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium I, Prepared for i.Park East Fishkill I LLC. Filed with the Dutchess County Clerk on November 4, 2020 (Filed Map #12685)*

Hopewell Condominium II: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium II, Prepared for i.Park East Fishkill LLC. Filed with the Dutchess County Clerk on November 18, 2020 (Filed Map #12692)*

Vapor Intrusion Mitigation: *Sanborn Head Engineering "Vapor Intrusion Mitigation Status of Buildings, May 2021*

Soil Vapor Extraction Systems: *Sanborn Head Engineering: B330C Temporary Subslab Depressurization System (March 2017, B330C_Temp_SSD.mxd); B330D Temporary Subslab Depressurization Systems (March 2017, Bld310.dwg) B310 Subslab Depressurization System (March 2017, Bld310.dwg) Area A and B308/B319 Linkway Soil Vapor Extraction and Subslab Depressurization Systems (March 2017, AreaA_DP_Contours.dwg).*

Area A, Core Area, Former Landfill: *International Business Machines Corporation, Declaration of Restrictions, Easements & Covenants, Filed with the Dutchess County Clerk on July 9, 2015 (Document No. 2-2015-4059)*

Designated Area: *International Business Machines Corporation, First Amendment to Declaration of Restrictions, Easements & Covenants, Filed with the Dutchess County Clerk on July 9, 2015 (Document No. 02-2015-4059), executed April 14, 2020*

Restricted Area: *GlobalFoundries US 2 LLC, Declarations of Restrictions and Covenants. Filed with the Dutchess County Clerk on November 8, 2017 (Document No. 02-2017-8358).*

Scale: 0 150' 300'

Plate 1-3

Former IBM East Fishkill Facility

Site Use Areas Location Map

DRAWN BY: KA	DATE: 7/30/24	DRAWING NO.
CHECKED & APPROVED BY: DAB		5007-060_MASTER_rev2-O2

GROUNDWATER SCIENCES CORPORATION

PLATE 1-4: SITE PLAN, TOPOGRAPHIC MAP

Notes:

Site Basemap: *Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C., Poughkeepsie, NY (XBASE-SVY_51421-00.dwg, 8/10/15); Parcels: XSUB3_51539-03.dwg*

Offsite Basemap: *"Groundwater Monitoring Basemap", IBM East Fishkill Facility (9718new.dwg, original date 12/21/98)*

Well Survey Control by: *Hayward and Pakan Associates, Poughkeepsie NY*

8-Lot Subdivision: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Final Subdivision Plat, Existing Conditions, GlobalFoundries US 2 LLC. Filed with the Dutchess County Clerk on August 3, 2017 (Filed Map #12578)*

Hopewell Condominium I: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium I, Prepared for i.Park East Fishkill I LLC. Filed with the Dutchess County Clerk on November 4, 2020 (Filed Map #12685)*

Hopewell Condominium II: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium II, Prepared for i.Park East Fishkill LLC. Filed with the Dutchess County Clerk on November 18, 2020 (Filed Map #12692)*

Vapor Intrusion Mitigation: *Sanborn Head Engineering "Vapor Intrusion Mitigation Status of Buildings, May 2021*

Soil Vapor Extraction Systems: *Sanborn Head Engineering: B330C Temporary Subslab Depressurization System (March 2017, B330C_Temp_SSD.mxd); B330D Temporary Subslab Depressurization Systems (March 2017, Bld310.dwg) B310 Subslab Depressurization System (March 2017, Bld310.dwg) Area A and B308/B319 Linkway Soil Vapor Extraction and Subslab Depressurization Systems (March 2017, AreaA_DP_Contours.dwg).*

Area A, Core Area, Former Landfill: *International Business Machines Corporation, Declaration of Restrictions, Easements & Covenants, Filed with the Dutchess County Clerk on July 9, 2015 (Document No. 2-2015-4059)*

Designated Area: *International Business Machines Corporation, First Amendment to Declaration of Restrictions, Easements & Covenants, Filed with the Dutchess County Clerk on July 9, 2015 (Document No. 02-2015-4059), executed April 14, 2020*

Restricted Area: *GlobalFoundries US 2 LLC, Declarations of Restrictions and Covenants. Filed with the Dutchess County Clerk on November 8, 2017 (Document No. 02-2017-8358).*

Scale: 0 150' 300'

Plate 1-4

Former IBM East Fishkill Facility

Site Plan: Topographic Map

DRAWN BY: MHM/KA	DATE: 7/30/24	DRAWING NO. 5007-060_MASTER_rev6-O2
CHECKED & APPROVED BY: DAB		

GROUNDWATER SCIENCES CORPORATION

PLATE 1-5: FLOOD PLAIN INSURANCE RATE MAP NUMBER 36027C0487E

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3182
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from digital orthophotography provided by the New York State Office of Cyber Security & Critical Infrastructure Coordination. This information was produced as one-foot and two-foot resolution natural color orthoimagery from photography dated April 2006.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

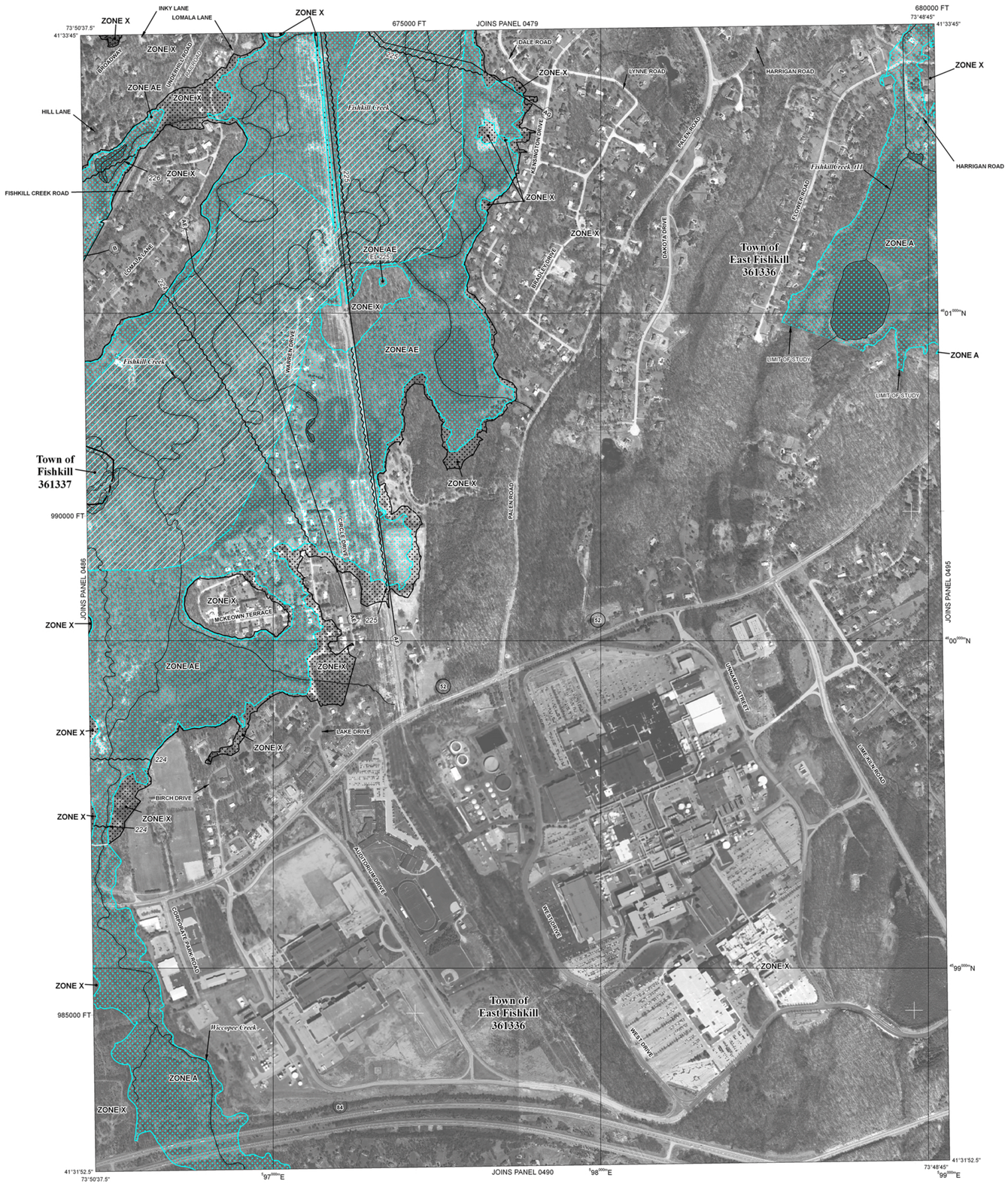
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM, visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

This digital FIRM was produced through a unique cooperative partnership between the New York State Department of Environmental Conservation (NYSDEC) and FEMA. As part of the effort, NYSDEC has joined in a Cooperative Technical Partnership agreement to produce and maintain FEMA's digital FIRM.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Limited detail cross section line
- Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 3976000mN — 1000-meter Universal Transverse Mercator grid values, zone 18
- 600000 FT — 5000-foot grid values: New York State Plane coordinate system, East zone (FIPSZONE 3101), Transverse Mercator projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- ● M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
May 2, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0487E

FIRM

FLOOD INSURANCE RATE MAP

for DUTCHESS COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

COMMUNITY	NUMBER
EAST FISHKILL, TOWN OF	361336
FISHKILL, TOWN OF	361337

PANEL 487 OF 602
MAP SUFFIX: E
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36027C0487E

EFFECTIVE DATE
MAY 2, 2012

Federal Emergency Management Agency

PLATE 1-6: FLOOD PLAIN INSURANCE RATE MAP NUMBER 36027C0495E

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3182
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from digital orthophotography provided by the New York State Office of Cyber Security & Critical Infrastructure Coordination. This information was produced as one-foot and two-foot resolution natural color orthoimagery from photography dated April 2008.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

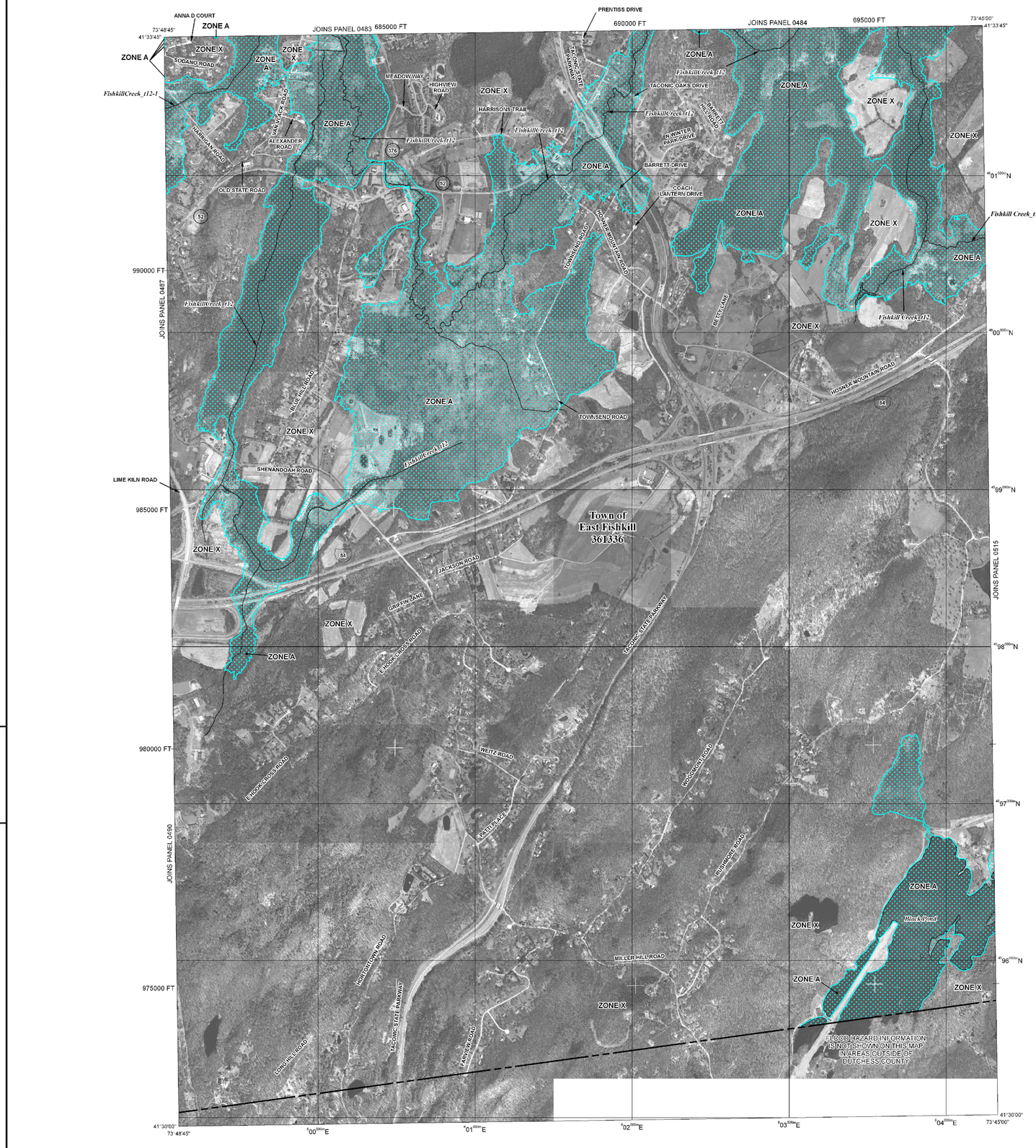
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM, visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

CTP Cooperating Technical Partners

This digital FIRM was produced through a unique cooperative partnership between the New York State Department of Environmental Conservation (NYSDEC) and FEMA, s part of the effort, NYSDEC has joined in a Cooperative Technical Partnership agreement to produce and maintain FEMA's digital FIRM.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL. 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 3 — 3 — Limited detail cross section line
- 23 — 23 — Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 76°W — 1000-meter Universal Transverse Mercator grid values, zone 18
- 600000 FT — 5000-foot grid values; New York State Plane coordinate system, East zone (FIPSZONE 3101), Transverse Mercator projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
May 2, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0495E

FIRM

FLOOD INSURANCE RATE MAP

for DUTCHESS COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

COMMUNITY	NUMBER
EAST FISHKILL, TOWN OF	361336

PANEL 495 OF 602
MAP SUFFIX: E
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36027C0495E

EFFECTIVE DATE
MAY 2, 2012

Federal Emergency Management Agency

PLATE 4-1: ELEMENTS OF SITE ENGINEERING CONTROLS

LEGEND

- Stream/Water Body
- Wetlands Boundary
- Former IBM East Fishkill Facility Property Line
- 8-Lot Subdivision
- Hopewell Condominium I
- Hopewell Condominium II
- Rolling Frito-Lay Sales, LP

OU - Operable Unit

Bedrock Remediation Area (OU 2) is associated with Area A (OU 5), Area C (Landfill) (OU 6), B/330 (OU 8), and B/322 (OU 7).

8-Lot Subdivision: Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Final Subdivision Plat, Existing Conditions, GlobalFoundries US 2 LLC. Filed with the Dutchess CountyClerk on August 3, 2017 (Filed Map #12578)

Hopewell Condominium I: Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium I, Prepared for i.Park East Fishkill I LLC. Filed with the Dutchess County Clerk on November 4, 2020 (Filed Map #12685)

Hopewell Condominium II: Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Map of The Hopewell Condominium II, Prepared for i.Park East Fishkill I LLC. Filed with the Dutchess County Clerk on November 18, 2020 (Filed Map #12692)

Rolling Frito-Lay Sales, LP: Chazen Engineering, Land Surveying, Landscape Architecture & Geology, Co, DPC "Site Layout Map, Lots, Condominium Units, Rights of Way & Fee Roads" April 22, 2022.

AREA A (OU5)

AREA B (OU3)

AREA C (LANDFILL) (OU6)

AREA D (OU4)

B322 AOC (OU7)

B330 AOC (OU8)

BEDROCK REMEDIATION AREA (OU2)

SOUTHEAST QUADRANT AOC (OU9)

All or portions of Lot 4, Lot 6, the roadway between Lots 4 and 6, Lot 8, Lot 9, and South Drive are anticipated to be removed from the Site when environmental easements for Site properties are duly recorded and indexed by Dutchess County.

Figure 1-2

Source: "Groundwater Monitoring Basemap", IBM East Fishkill Facility (9718new.dwg, original date 12/21/98)
Survey Control by: Hayward and Pakan Associates, Poughkeepsie NY
Photogrammetry by: Golden Aerial Surveys, Inc., Newtown, CT
Date of Photography: March 3, 1997.

Scale 0 250' 500'

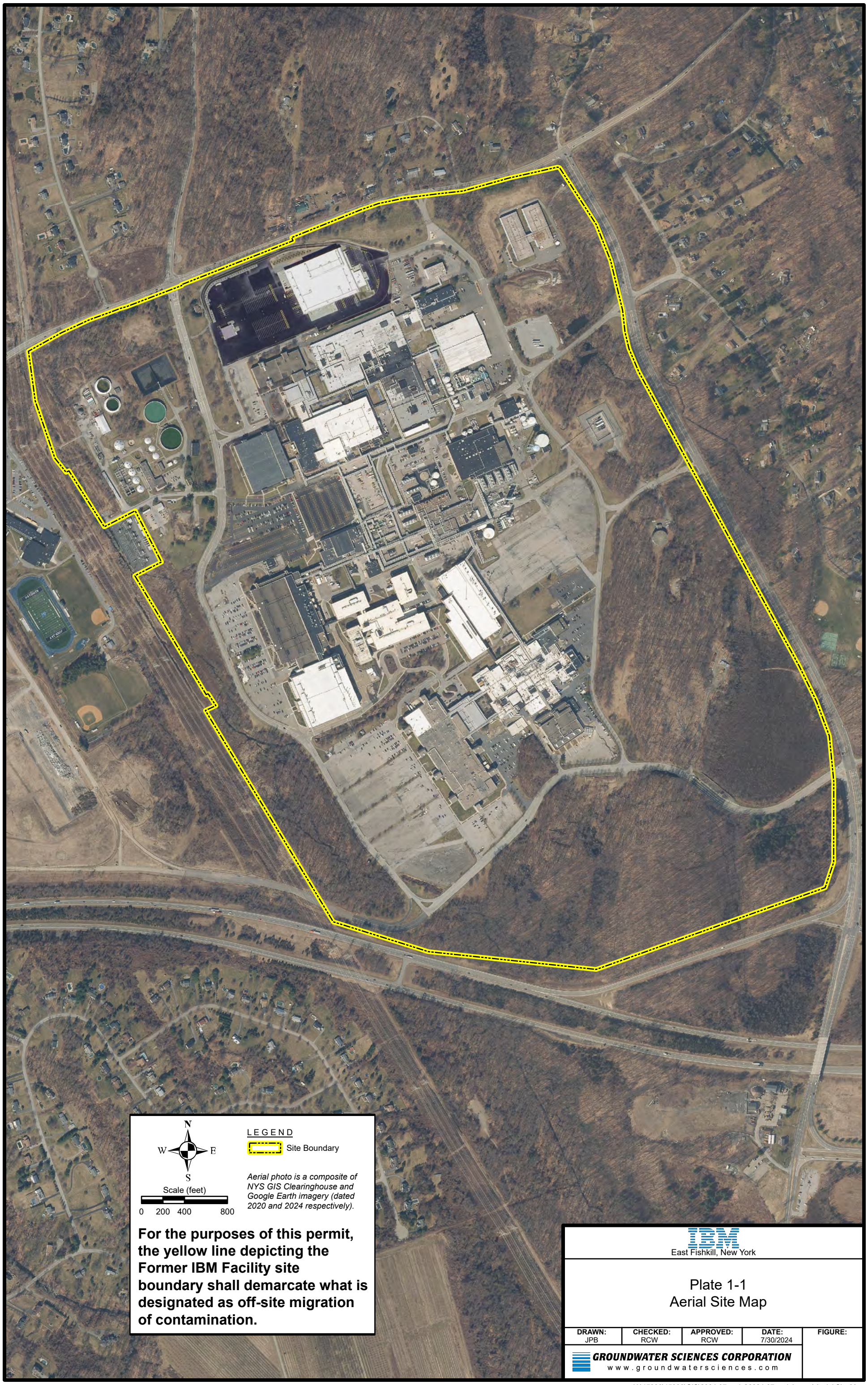
Former IBM East Fishkill Facility

Site Layout and Operable Units

DRAWN BY: MHM	DATE: 8/5/24	DRAWING NO. 95007-060-MASTER-Rev3
CHECKED & APPROVED BY: DAB		

GROUNDWATER SCIENCES CORPORATION

ATTACHMENT B-2
Facility Maps



IBM
East Fishkill, New York

Plate 1-1
Aerial Site Map

DRAWN:	CHECKED:	APPROVED:	DATE:	FIGURE:
JPB	RCW	RCW	7/30/2024	

GROUNDWATER SCIENCES CORPORATION
www.groundwatersciences.com

H:\15000\15000\GIS\2024-07 aerial\2024-07 aerial.aprx | Aerial Site Map

1
45.64 AC.
2A
23.75 AC.
3A
20.87 AC.
4
13.72 AC.
5
98.94 AC. (TOTAL)
96.26 AC. (PART OF LOT 5)
2.68 AC.
(PART OF LOT 5)
6
56.19 AC.
7
71.73 AC. (PART OF LOT 7)
85.05 AC. (TOTAL)
13.32 AC.
(PART OF LOT 7)
8
59.41 AC.
9
28.42 AC.
LOT 2 REVERSIONARY PARCEL – 6.64 AC.
PROPERTY LINE NOT IN HOPEWELL
UNIT 1A
AREA =10.875 AC.
603,206 SF
UNIT #2
AREA =10.000 AC.
435,608 SF
UNIT #3
AREA =3.872 AC.
168,640 SF
UNIT 4A
AREA =10.568 AC.
603,206 SF
UNIT 5A
AREA =9.390 AC.
603,206 SF
UNIT #7GL
AREA =6.639 AC.
289,282 SF
UNIT 5B
AREA =4.128 AC.
179,824 SF
UNIT 5C
AREA =4.128 AC.
179,824 SF
UNIT 5D
AREA =4.128 AC.
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UNIT 5E
AREA =4.128 AC.
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UNIT 5G
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UNIT 5Z
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UNIT 5AA
AREA =4.128 AC.
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UNIT 5AB
AREA =4.128 AC.
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UNIT 5AC
AREA =4.128 AC.
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UNIT 5AD
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UNIT 5AE
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UNIT 5AP
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UNIT 5AX
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UNIT 5BZ
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UNIT 5CA
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UNIT 5CB
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UNIT 5CE
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UNIT 5FJ
AREA =4.128 AC.
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UNIT 5FK
AREA =4.128 AC.
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UNIT 5TP
AREA =4.128 AC.
179,824 SF
UNIT 5TQ
AREA =4.128 AC.
179,824 SF
UNIT 5TR
AREA =4.128 AC.
179,824 SF
UNIT 5TS
AREA =4.128 AC.
179,824 SF
UNIT 5TT
AREA =4.128 AC.
179,824 SF
UNIT 5TU
AREA =4.128 AC.
179,824 SF
UNIT 5TV
AREA =4.128 AC.
179,824 SF
UNIT 5TW
AREA =4.128 AC.
179,824 SF
UNIT 5TX
AREA =4.128 AC.
179,824 SF
UNIT 5TY
AREA =4.128 AC.
179,824 SF
UNIT 5TZ
AREA =4.128 AC.
179,824 SF
UNIT 5UA
AREA =4.128 AC.
179,824 SF
UNIT 5UB
AREA =4.128 AC.
179,824 SF
UNIT 5UC
AREA =4.128 AC.
179,824 SF
UNIT 5UD
AREA =4.128 AC.
179,824 SF
UNIT 5UE
AREA =4.128 AC.
179,824 SF
UNIT 5UF
AREA =4.128 AC.
179,824 SF
UNIT 5UG
AREA =4.128 AC.
179,824 SF
UNIT 5UH
AREA =4.128 AC.
179,824 SF
UNIT 5UI
AREA =4.128 AC.

ATTACHMENT C
SWMU/AOC Current Conditions Report
(to be replaced by updated approved document during the Permit period)

FORMER IBM EAST FISHKILL REMEDIATION
DUTCHESS COUNTY
TOWN OF EAST FISHKILL, NEW YORK

2070 ROUTE 52
HOPEWELL JUNCTION, NEW YORK 12533

ATTACHMENT III
CURRENT CONDITIONS REPORT

Submitted MAY 2021
Updated AUGUST 2024

May 30, 2024

Emily Barry
Assistant Geologist
Division of Environmental Remediation, Region 3
New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, New York 12561

Subject: Solid Waste Management Unit Inventory Update

Reference: Former IBM East Fishkill Corrective Action Program
Former IBM East Fishkill Facility
Hopewell Junction, New York
NYSDEC Part 373 Permit 3-1328-00535/00002
EPA ID No. NYD000707901

Dear Ms. Barry:

The purpose of this letter is to provide you with the required annual update of our Solid Waste Management Unit (SWMU) Inventory pursuant to Module II.C.1 of the above referenced Part 373 Permit. This update is for the calendar year 2023.

No SWMUs were added to the facility inventory in 2023.

A status change was made to six units in 2023. On June 30, 2023 Arcadis of New York Inc., on behalf of Semiconductor Components Industries, LLC (Onsemi), submitted a closure certification report[1] for Building 316 (B316) SWMUs 509, 510, 511, and 512 which contained granular activated carbon and groundwater. New York State Department of Environmental Conservation (NYSDEC) approved the certification report on January 31, 2024[2], and the status has been changed to reflect the removal of the units. IBM submitted a closure certification report dated December 21, 2023 for B316 SWMUs 504 and 513 which contained granular activated carbon and groundwater[3]. NYSDEC approved the certification report on January 31, 2024[4], and the status has been changed to reflect the removal of the units. The status changes are shown on the attached *Annual Solid Waste Management Unit (SWMU) Inventory Update* table.

[1] Arcadis to New York State Department of Environmental Conservation, June 30, 2023, *GlobalFoundries B316 Renovation Project 2022, Closure Certification for Four GAC Tank SWMUs in Building 316.*
[2] New York State Department of Environmental Conservation, December 2, 2022, *GlobalFoundries B322 South Project 2020-2022, Closure Certification for SWMUs in Building 322*.
[3] Groundwater Sciences, P.C. and Groundwater Sciences Corporation, December 21, 2023, *Solid Waste Management Unit (SWMU) Closure Report, SWMUs 504 and 513.*
[4] New York State Department of Environmental Conservation, January 2024, *Solid Waste Management Unit (SWMU) Closure Report SWMUs 504 and 513.*

As of August 31, 2017, and as recorded with the Dutchess County Clerk on November 4, 2020, iPark East Fishkill I, LLC established a Plan of Condominium Ownership for Lots 2 and 3 with the name of The Hopewell Condominium I. The Plan for Hopewell Condominium I established eight units, each with an associated tax parcel number. One unit, Unit 7GL is a ground lease between GLOBALFOUNDRIES U.S. 2 LLC and iPark East Fishkill I, LLC. The attached *Site Layout Map, Site Lots, Condominium and Condominium Units* location map shows the Unit 7GL ground lease.

As of March 29, 2018, and as recorded with the Dutchess County Clerk on November 18, 2020, iPark East Fishkill LLC established a Plan of Condominium Ownership for Lot 7 with the name of The Hopewell Condominium II. The Plan for Hopewell Condominium II established nine units, each with an associated tax parcel number.

On November 16, 2021 the Town of East Fishkill Planning Board granted a subdivision of portions of former Lots 2 and 3 to create a new ninth Lot. The remainder of former Lots 2 and 3 were designated Lots 2A and 3A. The newly established Lot 9 was recorded with the Dutchess County Clerk on December 13, 2021. Rolling Frito-Lay Sales, LP purchased Lot 9 on December 17, 2021 as recorded by the Dutchess County Clerk on February 10, 2022. It should be noted that there are no SWMUs on Lot 9, therefore Rolling Frito-Lay Sales, LP is not a signatory of this document. The attached *Site Layout Map, Site Lots, Condominium and Condominium Units* location map shows the Lots 2A, 3A, and 7 condominium units.

On January 1, 2023 Semiconductor Components Industries, LLC (Onsemi) acquired GlobalFoundries and became the owner of Lot 1 and Lot 5.

Table II-1 of the NYSDEC Part 373 Permit, titled *Solid Waste Management Units*, has been updated with the unit B322-SO status change, and is attached.

A copy of the updated *NYSDEC Part 373 Permit Document, Module II Corrective Action, Appendix II-E Solid Waste Management Unit Location Map*, dated 4/11/2023, is included. The undersigned persons make the following certification pertaining to information on the SWMUs owned and managed by their respective organizations.

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.

Please contact Linda Daubert of IBM at (720) 397-5670 if you have any questions or require further information.

Sincerely yours,

Signatures are on page 4.

Enclosures: (electronic and hardcopy)

cc: Steven McCague, NYSDEC Region 3, Regional Remediation Engineer (electronic copy)
Sarah Saucier, Director, NYSDEC Division of Environmental Remediation, Remedial Bureau C (electronic copy)
NYSDEC, Supervisor RCRA Permitting Section (electronic copy)
USEPA Region 2, Chief RCRA Programs Branch (electronic copy)

Brandon Ashby
Manager, Environmental Engineering
IBM Corporate Environmental Affairs

Kristen Fitzpatrick
Director of Facilities
Semiconductor Components Industries, LLC

Vinny Tancora
General Manager
iPark East Fishkill LLC

Vinny Tancora
General Manager
iPark East Fishkill I LLC

Vinny Tancora
General Manager
iPark East Fishkill 84 LLC

Vinny Tancora
General Manager
iPark East Fishkill B338 LLC

Brandon Ashby
Manager, Environmental Engineering
IBM Corporate Environmental Affairs

Kristen Fitzpatrick
Director of Facilities
Semiconductor Components Industries, LLC

Vinny Tancora
General Manager
iPark East Fishkill LLC

Vinny Tancora
General Manager
iPark East Fishkill I LLC

Vinny Tancora
General Manager
iPark East Fishkill 84 LLC

Vinny Tancora
General Manager
iPark East Fishkill B338 LLC

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Vinny Tancora
General Manager
iPark East Fishkill I LLC

Vinny Tancora
General Manager
iPark East Fishkill 84 LLC

Vinny Tancora
General Manager
iPark East Fishkill B338 LLC

IBM East Fishkill Corrective Action Program
Former IBM East Fishkill Facility
Hopewell Junction, New York
NYSDEC Part 373 Permit 3-1328-00535/00002
EPA ID No. NYD000707901

Annual Solid Waste Management Unit (SWMU) Inventory Update
January 1, 2023 - December 31, 2023

Unit ID #	Description	Location	Original Status	Revised Status	Groundwater Remediation Area	RCRA Status	LOT NUMBER(S)	SWMU OWNER
504	Activated Carbon and Contaminated Groundwater	B/316	Inactive	Removed	Area A	No Further Action	5	IBM
509	Activated Carbon and Contaminated Groundwater	B/316	Active	Removed	Area A	No Further Action	5	Semiconductor Components Industries LLC
510	Activated Carbon and Contaminated Groundwater	B/316	Active	Removed	Area A	No Further Action	5	Semiconductor Components Industries LLC
511	Activated Carbon and Contaminated Groundwater	B/316	Active	Removed	Area A	No Further Action	5	Semiconductor Components Industries LLC
512	Activated Carbon and Contaminated Groundwater	B/316	Active	Removed	Area A	No Further Action	5	Semiconductor Components Industries LLC
513	Activated Carbon and Contaminated Groundwater	B/316	Inactive	Removed	Area A	No Further Action	5	IBM

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
TRANSFER STATIONS AND CONTAINER STORAGE AREAS (CSA'S)										
TS Area B/303	Tank Trailer Storage Area	TS/CSA	B/303 W	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 Room #2	Drum Storage Room	TS/CSA	B/309	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 Room #5	Drum Storage Room	TS/CSA	B/309	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 Room #7	Drum Storage/Consolidation Room	TS/CSA	B/309	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 Room #8	Drum Storage Room	TS/CSA	B/309	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 Room #9	Drum Storage Room	TS/CSA	B/309	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 Room #11	Drum Loading/Unloading Dock	TS/CSA	B/309	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 Room #23	Drum Storage Room	TS/CSA	B/309	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/309 LW Dock	Drum Loading/Unloading Dock	TS/CSA	B/309 Link	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/385 DB & FL	Sludge Dumpster Bay	TS/CSA	B/385	Closed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
TC 385 DS	Sludge Dumpster Storage Area	TS/CSA	B/385	Closed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
B/386 DB Area	Sludge Dumpster Bay	TS/CSA	B/386	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/386 DS Area	Tank Truck Loading/Unloading Area & Sludge Dumpster Storage Area	TS/CSA	B/386	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
L/UL Area #5	Tank Truck Loading/Unloading Area	TS/CSA	B/320B	Inactive	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
L/UL Area #6	Tank Truck Loading/Unloading Area	TS/CSA	B/309 NW	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
L/UL Area #7	Tank Truck Loading/Unloading Area	TS/CSA	B/309 N	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
L/UL Area #11	Tank Truck Loading/Unloading Area	TS/CSA	B/300 N	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
L/UL Area #12	Tank Truck Loading/Unloading Area	TS/CSA	B/330C NE	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
L/UL Area #13	Tank Truck Loading/Unloading Area	TS/CSA	B/330D NE	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
L/UL Area #15	Tank Truck Loading/Unloading Area	TS/CSA	B/335 NE	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
L/UL Area #16	Tank Truck Loading/Unloading Area	TS/CSA	B/320B E	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
L/UL Area #21	Tank Truck Loading/Unloading Area	TS/CSA	B/334 NW	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
L/UL Area #23	Tank Truck Loading/Unloading Area	TS/CSA	B/303	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
L/UL Area #24	Tank Truck Loading/Unloading Area	TS/CSA	B/338 SW	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
L/UL Area #25	Tank Truck Loading/Unloading Area	TS/CSA	B/322 E	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
L/UL Area #26	Tank Truck Loading/Unloading Area	TS/CSA	B/325 N	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
L/UL Area #31	Tank Truck Loading/Unloading Area	TS/CSA	B/330D E	Inactive	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
CW L/UL 300	Container Waste Loading/Unloading Area	TS/CSA	B/300	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
CW L/UL 320B (2)	Container Waste Loading/Unloading Area	TS/CSA	B/320 B	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
CW L/UL 322	Container Waste Loading/Unloading Area	TS/CSA	B/322	Closed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
CW L/UL 323	Container Waste Loading/Unloading Area	TS/CSA	B/323	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
CW L/UL 323A	Container Waste Loading/Unloading Area	TS/CSA	B/323Annex	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
CW L/UL 330F	Container Waste Loading/Unloading Area	TS/CSA	B/330 F	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
CW L/UL 330 OMF	Container Waste Loading/Unloading Area	TS/CSA	B/330 C	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
CW L/UL 330C	Container Waste Loading/Unloading Area	TS/CSA	B/330 C	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
CW L/UL 330D	Container Waste Loading/Unloading Area	TS/CSA	B/330 D	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
CW L/UL 334	Container Waste Loading/Unloading Area	TS/CSA	B/334	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
CW L/UL 316	Container Waste Loading/Unloading Area	TS/CSA	B/316 W	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
CW L/UL 338	Container Waste Loading/Unloading Area	TS/CSA	B/338	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
CW L/UL 315	Container Waste Loading/Unloading Area	TS/CSA	B/315	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
CW L/UL 335	Container Waste Loading/Unloading Area	TS/CSA	B/335	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
LANDFILLS, SURFACE IMPOUNDMENTS AND/OR WASTE PILES										
81	Sanitary/Treated Ind. Wastewater	LF/SI/WP	B/325 N	Closed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
97	Sanitary/Treated Ind. Wastewater	LF/SI/WP	B/325 N	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
LF-1	Construction Debris Landfill	LF/SI/WP	B/330C E	Inactive, Closed	B/330 AOC	No Further Action *	6	N/A	N/A	i.Park East Fishkill LLC
LF-2	Construction Debris Landfill	LF/SI/WP	B/334 E	Inactive, Closed	No	No Further Action *	7	Hopewell Condo II	Unit #3	i.Park East Fishkill LLC
WASTEWATER TREATMENT AND WASTE RECYCLING UNITS (Treatment Facilities as a Whole)										
Building 312	Industrial Wastewater Neutralization Treatment	WWT/WRU	B/312	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
Building 316	Industrial Waste Treatment	WWT/WRU	B/316	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
Building 317	Ammonia Treatment Plant	WWT/WRU	B/317	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
Building 325	Water Pollution Control Plant (Sanitary)	WWT/WRU	B/325	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
Building 335	Perchloroethylene Recycling/Recovery Plant	WWT/WRU	B/335	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
Building 385	Fluoride/Heavy Metals Wastewater Treatment	WWT/WRU	B/385	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
Building 386	Fluoride/Heavy Metals Wastewater Treatment	WWT/WRU	B/386	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
STORAGE/TREATMENT TANKS										
5	Solvent Waste-Mixed	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
14	Perchloroethylene Sludge	S/TT	B/310	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
15	Solvent Waste-Mixed	S/TT	B/320B E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
16	Perchloroethylene Waste	S/TT	B/310 E	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
17	Perchloroethylene Waste	S/TT	B/310 E	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
18	Fluoride/Heavy Metals Wastewater	S/TT	B/385 S	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
23	Solvent Waste-Mixed	S/TT	B/308 W	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
24	Solvent Waste-Mixed	S/TT	B/308 W	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
25	Fluoroboric Acid Waste	S/TT	B/308 SW	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
26	Fluoride/Heavy Metals Wastewater	S/TT	B/385 E	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
27	Fluoride/Heavy Metals Wastewater	S/TT	B/385 E	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
28	Fluoride/Heavy Metals Wastewater	S/TT	B/385 E	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
29	Industrial Waste	S/TT	B/385 SW	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
35	Fluoride/Heavy Metals Wastewater	S/TT	B/385 S	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
37	Industrial Waste	S/TT	B/385 S	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
40	Fluoride/Heavy Metals Wastewater	S/TT	B/385 S	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
42	Fluoride/Heavy Metals Wastewater	S/TT	B/385 N	Closed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
43	Fluoride/Heavy Metals Wastewater	S/TT	B/385 N	Closed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
50	Fluoride/Heavy Metals Wastewater	S/TT	B/312 S	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
51	Fluoride/Heavy Metals Wastewater	S/TT	B/312 S	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
52	Fluoride Wastewater	S/TT	B/320D	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
53B	Solvent Waste-Mixed	S/TT	B/320B S	Closed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
53	Solvent Waste-Mixed	S/TT	B/320B S	Removed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
54	Fluoride/Heavy Metals Wastewater	S/TT	B/312 S	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
58	Fluoride/Heavy Metals Wastewater	S/TT	B/300B S	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
60	Solvent Waste-Mixed	S/TT	B/300 NW	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
79	Fluoride/Heavy Metals Wastewater	S/TT	B/308 W	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
80	Fluoride/Heavy Metals Wastewater	S/TT	B/300B S	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
86	Solvent Waste-Mixed	S/TT	B/330C S.Link	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
87	Fluoride/Heavy Metals Wastewater	S/TT	B/330C S.Link	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
88	Solvent Waste-Mixed	S/TT	B/330D E	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
89	Fluoride/Heavy Metals Wastewater	S/TT	B/330D E	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
90	Industrial Wastewater	S/TT	B/315 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
91	Fluoride/Heavy Metals Wastewater	S/TT	B/330D W	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
92	Fluoride/Heavy Metals Wastewater	S/TT	B/330D W	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
93	Fluoride/Heavy Metals Wastewater	S/TT	B/330D W	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
103	Corrosive Spill Waste	S/TT	B/309 N	Inactive	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
104	Spill Tank, Can Wash	S/TT	B/309 N	Inactive	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
105	Organic Solvents (waste)	S/TT	B/309 N	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
106	Organic Solvents (waste)	S/TT	B/309 N	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
107	Solvent Waste-Mixed	S/TT	B/330C E	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
117	Solvent Waste-Mixed (Spill Tank)	S/TT	B/304 N	Active	No	No Further Action *	3A	Hopewell Condo I	Unit #1A	i.Park East Fishkill 84 LLC
118	Solvent Waste-Mixed (Spill Tank)	S/TT	B/304 S	Active	No	No Further Action *	3A	Hopewell Condo I	Unit #1A	i.Park East Fishkill 84 LLC
121	Sanitary Wastewater	S/TT	B/325 E	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
122	Sanitary Wastewater	S/TT	B/325 E	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
123	N-Butyl Acetate Waste	S/TT	B/320B N	Closed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
124	Isopropyl Alcohol	S/TT	B/320B N	Closed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
125	Freon Waste	S/TT	B/320B N	Closed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
127	Solvent Waste-Mixed	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
134	Methylene Chloride Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
135	N-Butyl Acetate	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
136	Freon TP 35 Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
137	Perchloroethylene Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
138	Isopropyl Alcohol Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R, 2A	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
139	Solvent Waste-Mixed	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
140	N-Butyl Acetate Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
141	Xylene Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
142	Freon TF Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
143	Isopropyl Alcohol Waste	S/TT	B/309 NW	Closed	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
144	Industrial Waste	S/TT	B/312 E	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
145	Industrial Waste	S/TT	B/312 E	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
146	Industrial Waste	S/TT	B/312 E	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
147	Industrial Waste	S/TT	B/312 E	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
154	Industrial Wastewater	S/TT	B/315 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
157	Solvent Waste-Mixed	S/TT	B/320B S	Removed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
157B	Solvent Waste-Mixed	S/TT	B/320B S	Closed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
157C	Solvent Waste-Mixed	S/TT	B/320B S	Closed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
158	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
159	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
162	Fluoride/Heavy Metals Wastewater	S/TT	B/330C Link	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
165	Fluoride/Heavy Metals Wastewater	S/TT	B/320B S (Vault)	Removed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
168	Solvent Waste-Mixed	S/TT	B/330D	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
169	Solvent Waste-Mixed	S/TT	B/330C E	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
171	Sanitary/Treated Industrial Waste	S/TT	B/325 NE	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
173	Solvent Waste-Mixed	S/TT	B/330C E	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
178	Recycled Perchloroethylene	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
179	Recycled Perchloroethylene	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
181	IW Clarifier	S/TT	B/335 E	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
182	Sanitary/Treated Industrial Waste	S/TT	B/325 E	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
183	Sanitary/Treated Industrial Waste	S/TT	B/325 N	Inactive	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
184	Mixed Waste Solvent	S/TT	B/330C E	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
185	Mixed Waste Solvent	S/TT	B/330C E	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
186	Industrial Waste	S/TT	B/303 A-1	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
187	Industrial Waste	S/TT	B/309N	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
188	Sanitary/Treated Industrial Waste	S/TT	B/325 W	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
189	Sanitary/Treated Industrial Waste	S/TT	B/325 W	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
193	Fluoride/Heavy Metals Wastewater	S/TT	B/300 E	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
196	Sanitary/Treated Industrial Waste	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
197	Sanitary/Treated Industrial Waste	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
200	VAC Rotary Filter #1 Waste	S/TT	B/385	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
201	VAC Rotary Filter #2 Waste	S/TT	B/385	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
202	Industrial Wastewater	S/TT	B/385	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
204	Solvent Waste-Mixed	S/TT	B/322 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
205	NBA Waste	S/TT	B/322 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
206	Isopropyl Alcohol Waste	S/TT	B/322 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
207	N-Methyl-2-Pyrrolidone Waste	S/TT	B/322 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
208	Solvent Waste-Mixed (Spill Tank)	S/TT	B/322 W	Removed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
214	Contaminated Groundwater	S/TT	B/384 S Link	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
215	Sanitary/Treated Industrial Waste	S/TT	B/325 N	Inactive	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
219	Solvent Waste-Mixed (Spill Tank)	S/TT	B/303 D-5	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
220	Solvent Waste-Mixed	S/TT	B/303 D-5	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
221	Solvent Waste-Mixed	S/TT	B/303 D-5	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
222	Photoresist Waste	S/TT	B/303 D-4	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
223	N-Methyl-2-Pyrrolidone Waste	S/TT	B/303 D-6	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
224	Az Strip Waste	S/TT	B/303 D-6	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
225	Solvent Waste-Mixed	S/TT	B/303 E-6	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
231	Treated Groundwater	S/TT	B/384	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
248	Fluoride/Heavy Metals Wastewater	S/TT	B/334 D-1	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
249	Fluoride/Heavy Metals Wastewater	S/TT	B/334 D-2	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
250	Industrial Waste	S/TT	B/334 D-2	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
251	Solvent Waste-Mixed	S/TT	B/334 D-2 Tk Pit	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
252	Solvent Waste-Mixed	S/TT	B/334 D-2 Tk Pit	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
253	Industrial Waste	S/TT	B/333 NW	Active	No	No Further Action *	7	Hopewell Condo II	Unit #4	i.Park East Fishkill LLC
257	Solvent Waste-Mixed	S/TT	B/330C S	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
263	Industrial Waste	S/TT	B/323 K-14	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
264	Industrial Waste	S/TT	B/323 K-14	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
265	Fluoride/Heavy Metals Wastewater	S/TT	B/323 K-13	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
266	Fluoride/Heavy Metals Wastewater	S/TT	B/323 K-14	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
267	Fluoride/Heavy Metals Wastewater	S/TT	B/323 L-13	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
268	Fluoride/Heavy Metals Wastewater	S/TT	B/323 L-14	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
270	Sanitary Wastewater	S/TT	B/323 D-12	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
272	Mixed Solvent Waste	S/TT	B/323 BF-1 Tk Rm	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
273	Photoresist Waste	S/TT	B/323 BF-1 Tk Rm	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
274	Mixed Solvent Waste	S/TT	B/323 BF-1 Tk Rm	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
275	Mixed Solvent Waste	S/TT	B/323 BF-1 Tk Rm	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
276	NMP Waste	S/TT	B/323 BF-1 Tk Rm	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
277	Solvent Waste-Mixed	S/TT	B/323 BF-1 Tk Rm	Closed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
278	Solvent Waste-Mixed	S/TT	B/323 BF-1 Tk Rm	Closed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
281	Industrial Waste Effluent	S/TT	B/315 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
282	Industrial Waste Effluent	S/TT	B/315 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
285	Solvent Waste-Mixed	S/TT	B/309 NW	Inactive	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
286	Industrial Wastewater	S/TT	B/338 W (Outside)	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
287	Industrial Wastewater	S/TT	B/338 W (Outside)	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
293	Fluoride/Heavy Metals Wastewater	S/TT	B/334 MER	Inactive	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
294	Industrial Waste	S/TT	B/334 MER	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
295	Industrial Waste	S/TT	B/334 MER	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
296	Perchloroethylene	S/TT	B/334 C17	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
297	Perchloroethylene	S/TT	B/334 D17	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
300	Fluoride/Heavy Metals Wastewater	S/TT	B/385 1st Fl.	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
301	Fluoride/Heavy Metals Wastewater	S/TT	B/385 1st Fl.	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
302	Fluoride/Heavy Metals Wastewater	S/TT	B/385 1st Fl.	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
303	Fluoride/Heavy Metals Wastewater	S/TT	B/385 1st Fl.	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
304	Fluoride/Heavy Metals Wastewater	S/TT	B/385 1st Fl.	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
334	Perchloroethylene Waste	S/TT	B/330D AX-37	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
335	Perchloroethylene Waste	S/TT	B/330D AX-37	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
345	Mixed Solvent Waste, DI Water and 10% HCL, Photo Active Compounds	S/TT	B/330C D-28	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
350	Industrial Wastewater	S/TT	B/310 C-24	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
396	Perchloroethylene Waste	S/TT	B/330D BB-30	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
397	Perchloroethylene Waste	S/TT	B/330D AT-35	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
427	Fluoride/Heavy Metals Wastewater	S/TT	B/385	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
428	Industrial Wastewater	S/TT	B/330D BB-38	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
429	Nickel Boron Waste	S/TT	B/330D BB-38	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
430	Immersion Gold Waste	S/TT	B/330D BB-38	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
431	Potassium Ferricyanide Waste	S/TT	B/330D BB-38	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
432	Neutra Clean Wastewater	S/TT	B/330D BB-38	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
433	Palladium Chloride Waste	S/TT	B/330D BB-38	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
448	Fluoride/Heavy Metals Wastewater	S/TT	B/308 M-8	Inactive	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
455	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
456	Recycled Perchloroethylene	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
457	Recycled Perchloroethylene	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
458	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
459	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
460	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
Old 461	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
461	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
462	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
465	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
466	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
467	Recycled Perchloroethylene	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
473	Perchloroethylene Waste	S/TT	B/330D BD-30	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
474	Perchloroethylene Waste	S/TT	B/330D BD-31	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
475	Perchloroethylene Waste	S/TT	B/330D BD-32	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
476	Perchloroethylene Waste	S/TT	B/330D BD-33	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
477	Perchloroethylene Waste	S/TT	B/330D BD-34	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
501	Perchloroethylene Carbon Bed	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
502	Perchloroethylene Carbon Bed	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
503	Perchloroethylene Carbon Bed	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
504	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	IBM
505	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
506	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
507	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
508	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
509	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
510	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
511	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
512	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
513	Activated Carbon and Contaminated Groundwater	S/TT	B/316	Removed	Area A	No Further Action *	5	N/A	N/A	IBM
529	Industrial Wastewater	S/TT	B/316 L-2	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
555	Industrial Waste Treatment	S/TT	B/316 L-2	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
569	Sodium Hydroxide, DI Water, Hydrochloric Acid	S/TT	B/330C OMF	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
570	Mixed Solvent Waste	S/TT	B/330C OMF	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
577	Industrial Waste Sludge	S/TT	B/312 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
578	Industrial Waste Sludge	S/TT	B/316 D-3	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
579	Base Slurry	S/TT	B/316 C-1	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
580	Industrial Waste Sludge	S/TT	B/312 E	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
581	Industrial Waste Treatment	S/TT	B/316 B-1	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
582	Industrial Waste	S/TT	B/316 C-2	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
584	Industrial Wastewater	S/TT	B/316 E Pumphouse	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
588	Industrial Wastewater	S/TT	B/316 E Pumphouse	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
589	Industrial Waste	S/TT	B/316 N/W	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
590	Industrial Waste	S/TT	B/385	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
591	Fluoride Waste	S/TT	B/385	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
592	Solvent Waste	S/TT	B/330C	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
593	Solvent Waste-Mixed	S/TT	B/330C	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
3002	Fluoride/Heavy Metals Wastewater	S/TT	B/386 W	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3003	Fluoride/Heavy Metals Wastewater	S/TT	B/386 W	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3004	Fluoride/Heavy Metals Wastewater	S/TT	B/386 W	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3005	Fluoride/Heavy Metals Wastewater	S/TT	B/386 W	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3006	Mixed Waste Solvent	S/TT	B/328	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3017	Sanitary/Treated Industrial Waste	S/TT	B/325 NW	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3018	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3019	Old Trickling Filter Splitter	S/TT	B/325 NE	Inactive	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3020	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NE	Inactive	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3021	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NE	Inactive	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3022	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NE	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3023	Sanitary/Treated Industrial Wastewater	S/TT	B/325 N	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3024	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3025	Sanitary/Treated Industrial Wastewater	S/TT	B/325 N	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3029	Sanitary/Treated Industrial Wastewater	S/TT	B/325 W	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3030	Sanitary/Treated Industrial Wastewater	S/TT	B/325 W	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3031	Sanitary/Treated Industrial Wastewater	S/TT	B/325 W	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3033	Sanitary/Treated Industrial Wastewater	S/TT	B/325 E	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3034	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3035	Sanitary/Treated Industrial Wastewater	S/TT	B/325 E	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3036	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NE	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3037	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	Area D	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3038	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3039	Sanitary/Treated Industrial Wastewater	S/TT	B/325 N	Inactive	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3040	Sanitary/Treated Industrial Wastewater	S/TT	B/325 E	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3041	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3042	Sanitary/Treated Industrial Wastewater	S/TT	B/325 N	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3044	Fluoride/Heavy Metals Wastewater	S/TT	B/386 E-4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3045	Fluoride/Heavy Metals Wastewater	S/TT	B/386 E-5	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3046	Industrial Waste	S/TT	B/386 F-4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3047	Industrial Waste	S/TT	B/386 F-4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3048	Industrial Waste	S/TT	B/386 F-4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3049	Industrial Waste	S/TT	B/386 F-4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3050	Industrial Waste	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3051	Industrial Waste	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3052	Industrial Waste	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3053	Industrial Waste (original); Fluoride/Heavy Metals Waste (current)	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3054	Industrial Waste	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3055	Industrial Waste	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3056	Industrial Waste Treatment	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3057	Fluoride/Heavy Metals Wastewater	S/TT	B/386 N	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3059	Heavy Metal Waste	S/TT	B/386 W	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3063	Industrial Waste	S/TT	B/386 G-4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3064	Industrial Waste Treatment	S/TT	B/386 F-5	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3065	Industrial Waste Treatment	S/TT	B/386 F-5	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3069	Industrial Waste Treatment	S/TT	B/386 D-3	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3070	Industrial Waste Treatment	S/TT	B/386 PMP HSE B	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3071	Industrial Waste Treatment	S/TT	B/386 D-3	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
3072	Industrial Waste	S/TT	B/316 C-2	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3073	Industrial Waste Treatment	S/TT	B/316 NW	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3074	Industrial Waste Treatment	S/TT	B/316 B-2	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3077	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3079	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3083	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3084	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3085	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Removed	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3087	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3088	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3089	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3090	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3091	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3092	Industrial Wastewater	S/TT	B/316 Recycle Tank Farm	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3093	Freon TF Waste	S/TT	B/322 K21	Removed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3094	Industrial Wastewater	S/TT	B/316 E-1	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3095	Industrial Wastewater	S/TT	B/316 E-1	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3096	Industrial Wastewater	S/TT	B/316 E-1	Removed	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3098	Industrial Wastewater	S/TT	B/335	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3100	Freon TF Waste	S/TT	B/322 J-20	Removed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3102	Solvent Waste - Mixed	S/TT	B/330C OMF	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
3109	MIBK	S/TT	B/330C OMF	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
3110	Solvent Waste - Mixed	S/TT	B/330D WST PERC	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	i.Park East Fishkill LLC
3111	Fluoride Wastewater	S/TT	B/334 E-9	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
3121	Mixed Solvent Waste	S/TT	B/330C Pumphouse (B/330G)	Active, 1987	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #3	i.Park East Fishkill LLC
3122	Fluoride/Heavy Metals Wastewater	S/TT	B/330C Pumphouse (B/330G)	Active, 1987	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #3	i.Park East Fishkill LLC
3123	Fluoride/Heavy Metals Wastewater	S/TT	B/330C Pumphouse (B/330G)	Active, 1987	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #3	i.Park East Fishkill LLC
3124	Fluoride/Heavy Metals Wastewater	S/TT	B/312 Lift Station	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3125	Fluoride/Heavy Metals Wastewater	S/TT	B/312 Lift Station	Active, 1988	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3126	Fluoride/Heavy Metals Wastewater	S/TT	B/312 Lift Station	Active, 1988	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3127	Fluoride/Heavy Metals Wastewater	S/TT	B/330D Lift Station	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3128	Fluoride/Heavy Metals Wastewater	S/TT	B/330D Lift Station	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3129	Industrial Wastewater	S/TT	B/310 CRTYD PMP	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
3131	Industrial Wastewater	S/TT	B/325 Basement	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3132	Industrial Wastewater	S/TT	B/330C Pumphouse (B/330G)	Active, 1987	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #3	i.Park East Fishkill LLC
3133	Industrial Wastewater	S/TT	B/330C Pumphouse (B/330G)	Active, 1987	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #3	i.Park East Fishkill LLC
3134	Industrial Wastewater	S/TT	B/310 CRTYD PMP	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
3135	Fluoride/Heavy Metals Wastewater	S/TT	B/310 B-24	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
3158	Solvent Waste - Mixed	S/TT	B/310 J-14	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
3166	Industrial Wastewater	S/TT	B/338 P-41	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3167	Industrial Wastewater	S/TT	B/330C D-26	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
3168	Industrial Wastewater	S/TT	B/330C B-24	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
3198	Contaminated Groundwater	S/TT	B/384	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
3200	Perchloroethylene Waste	S/TT	B/330D BE-33	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3201	Perchloroethylene Waste	S/TT	B/330D BE-33	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3202	Perchloroethylene Waste	S/TT	B/330D	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3226	Mixed Solvent Wastes	S/TT	B/309 NW (Room 3)	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
3229	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3236	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3237	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3238	Industrial Wastewater, Cooling Tower Blowdown/Overflow	S/TT	B/335 Between 1	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3239	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3240	Perchloroethylene Waste	S/TT	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
3241	Contaminated Groundwater, Solvent Waste-Mixed	S/TT	B/384 S Link	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
3242	Contaminated Groundwater, Solvent Waste-Mixed	S/TT	B/384 S Link	Removed	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
3243	Fluoride/Heavy Metals Waste	S/TT	B/300 BJ-203,Shelter Basement	Active, 1990	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
3244	Fluoride/Heavy Metals Waste	S/TT	B/300 BJ-203,Shelter Basement	Active, 1990	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3245	Industrial Wastewater	S/TT	B/312 SE	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3246	Industrial Wastewater	S/TT	B/300 N	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3248	Heavy Metal Wastewater	S/TT	B/334 D-2 TK Pl	Removed	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
3249	B/328 NMP Waste Reprocessor	S/TT	B/328	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3250	B/328 IPA Waste Reprocessor	S/TT	B/328	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3254	B/328 Acetone Waste Reprocessor	S/TT	B/328	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3262	Industrial Wastewater	S/TT	B/320D	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3263	Industrial Wastewater	S/TT	B/320D	Active	No	No further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3264	Acid Waste	S/TT	B/320D	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3293	B/323 FREON TF Reprocessor Input	S/TT	B/323 Col B-12	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3294	PCE Waste	S/TT	B/330D	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3295	PCE Waste	S/TT	B/330D	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3309	F/HM Waste	S/TT	B/312 Transfer	Removed	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3352	Waste TMAH	S/TT	B/330C	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
3353	Waste TMAH	S/TT	B/338 Q43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3354	Waste TMAH	S/TT	B/338 P41	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3355	Waste TMAH	S/TT	B/338 N42	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3356	Waste TMAH	S/TT	B/338 Q44	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3357	Waste TMAH	S/TT	B/338 Q45	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3358	Waste TMAH	S/TT	B/338 Q45	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3359	Industrial Waste	S/TT	B/338 S43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3360	TMAH Wastewater	S/TT	B/338 S42	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3361	Waste TMAH	S/TT	B/338 S43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3362	Waste TMAH	S/TT	B/338 S43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3363	TMAH Wastewater	S/TT	B/338 V44	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3365	Waste TMAH	S/TT	B/338 Q41	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3366	TMACl Wastewater	S/TT	B/338 T42	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3375	Waste TMAH	S/TT	B/338 S42	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3378	Sanitary/Industrial Waste	S/TT	B/325 W	Active	Area D	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3379	Sanitary/Industrial Waste	S/TT	B/325 W	Active	Area D	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3380	Industrial/Sanitary Waste Treated	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3381	Industrial/Sanitary Waste Treated	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3384	Waste TMAH	S/TT	B/330D	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3386	TMACl Wastewater	S/TT	B/338 T42	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3388	Waste TMAH	S/TT	B/338 Q41	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3389	Heavy Metal Waste	S/TT	B/386 W	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3390	Heavy Metal Waste	S/TT	B/386 Q4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3391	Heavy Metal Waste	S/TT	B/386 Q4.8	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3393	Heavy Metal Waste	S/TT	B/386 Q3.3	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3394	Heavy Metal Waste	S/TT	B/386 O5	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3401	F/HM Influent Storage	S/TT	B/386 Outside Pump A	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3403	F/HM Clarifier	S/TT	B/386 North Side	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3404	F/HM Clarifier	S/TT	B/386 North Side	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3405	Phosphoric Clarifier	S/TT	B/386 North Side	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3406	Phosphoric Clarifier	S/TT	B/386 North Outside	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3409	Phosphoric Mix	S/TT	B/386 Pump B	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3410	Phosphoric Mix	S/TT	B/386 Pump B	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3411	Heavy Metal Sludge	S/TT	B/386 1-C8 Outside	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3421	Industrial Waste	S/TT	B/316	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3423	Acid Slurry	S/TT	B/316	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3424	Lime Slurry	S/TT	B/316	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3428	Industrial Waste	S/TT	B/317 Outside E5	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3429	Industrial Waste	S/TT	B/317 C4	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3430	Industrial Waste	S/TT	B/317 C4	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3431	Industrial Waste	S/TT	B/317 C3	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3432	Industrial Waste	S/TT	B/317 C2	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3433	Industrial Waste	S/TT	B/317 C4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3434	Industrial Waste	S/TT	B/317 D4	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3495	Industrial Waste	S/TT	B/320C Lift Station	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3496	Industrial Waste	S/TT	B/320C Lift Station	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3497	Industrial Waste	S/TT	B/320C Lift Station	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3498	Fluoride/Heavy Metal Waste	S/TT	B/320C Lift Station	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3499	Fluoride/Heavy Metal Waste	S/TT	B/320C Lift Station	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3503	TMAH Wastewater	S/TT	B/339 Pumphouse	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
3504	TMAH Wastewater	S/TT	B/338 N43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3505	TMACI Wastewater	S/TT	B/338 K42	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3507	Treated Industrial Wastewater	S/TT	B/338 M42	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3508	TMACI Wastewater	S/TT	B/338 M43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3512	TMAH Wastewater	S/TT	B/330D	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3514	TMAH Wastewater	S/TT	B/338 S43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3516	Sanitary Waste	S/TT	B/326	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3521	Industrial Waste	S/TT	B/323 F27	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3522	Industrial Waste	S/TT	B/323 F29	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3523	Industrial Waste	S/TT	B/323 G27	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3524	Industrial Waste	S/TT	B/323 G29	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3525	Industrial Waste	S/TT	B/323 H27	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3526	Industrial Waste	S/TT	B/323 H29	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3527	Industrial Waste	S/TT	B/323 K27	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3528	Industrial Waste	S/TT	B/323 H29	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3529	Heavy Metal Waste (original); Ammonia Waste (current)	S/TT	B/323 L27	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3530	Heavy Metal Waste (original); Ammonia Waste (current)	S/TT	B/323 L29	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3531	Fluoride Waste	S/TT	B/323 M27	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3532	Fluoride Waste	S/TT	B/323 M29	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3537	Industrial Waste	S/TT	B/323 G7	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3538	Industrial Waste	S/TT	B/323 G7	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3539	Industrial Waste	S/TT	B/323 G7	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3540	Industrial Waste	S/TT	B/323 G7	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3856	Industrial Waste	S/TT	B/386 2-E6	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3857	Industrial Waste	S/TT	B/386 2-E6	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3858	Industrial Waste	S/TT	B/386 2-F6	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3860	Industrial Waste	S/TT	B/386 2-E8	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3861	Industrial Waste	S/TT	B/386 2-F8	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3913	TMAH Wastewater	S/TT	B/338 L43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3914	TMAH Wastewater	S/TT	B/338 L43	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
3915	Industrial Waste	S/TT	B/317 B2	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3916	Industrial Waste	S/TT	B/317 B2	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3917	Industrial Waste	S/TT	B/317 B2	Inactive	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3922	Sanitary Waste	S/TT	B/323 C2	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3923	Sanitary Waste	S/TT	B/323 G25	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3929	Industrial Waste	S/TT	B/385 South End	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3930	Fluoride/Heavy Metal Waste	S/TT	B/385 South End	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3933	<1% TMAH Wastewater	S/TT	B/330D BC-35	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
3937	Sanitary/Treated Industrial Wastewater	S/TT	B/325 NW	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3938	Treated Industrial Wastewater	S/TT	B/325 Outside, NE	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3939	Treated Industrial Wastewater	S/TT	B/325 Outside, NE	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
3941	Ammonia Wastewater	S/TT	B/317	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3945	Ammonia/Hydrogen Peroxide Wastewater	S/TT	B/317 Outside, E	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3947	Ammonia/Hydrogen Peroxide Wastewater	S/TT	B/317 Outside, E	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3972	Industrial Waste	S/TT	B/386 PHB, 2nd Floor	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3988	Industrial Wastewater	S/TT	B/323 H1Inside	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3989	Industrial Wastewater	S/TT	B/323 J25Inside	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3995	Industrial Wastewater	S/TT	B/323 G35 Annex Inside	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3996	Industrial Wastewater	S/TT	B/323 G35 Annex Inside	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3997	Industrial Wastewater	S/TT	B/323 G35 Annex Inside	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
3998	Industrial Wastewater	S/TT	B/323 G35 Annex Inside	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
4007	Industrial Wastewater	S/TT	B/316 OE5.3 Inside	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
4009	Activated Carbon and Contaminated Groundwater	S/TT	Area B Building	Inactive	Area B	No Further Action *	6	N/A	N/A	IBM
4010	Activated Carbon and Contaminated Groundwater	S/TT	Area B Building	Inactive	Area B	No Further Action *	6	N/A	N/A	IBM
4011	Contaminated Groundwater - Vapor Liquid Separator	S/TT	B/330D Outside, NW	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	IBM
4012	Contaminated Groundwater - Condensate Trap	S/TT	B/330D Outside, NW	Active	B/330 AOC	No further Action *	7	Hopewell Condo II	Unit #1A	IBM
4013	Fluoride/Heavy Metals Wastewater	S/TT	B/320 D	Active	No	No Further Action*	5	N/A	N/A	Semiconductor Components Industries LLC
4014	Fluoride/Heavy Metals Wastewater	S/TT	B/320 D	Active	No	No Further Action*	5	N/A	N/A	Semiconductor Components Industries LLC
4038	Contaminated Groundwater - Vapor Liquid Separator	S/TT	B/310, E10/E11, 1st Floor	Active	Area A	No Further Action*	2A	Hopewell Condo I	Unit #4A	IBM

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
5021	Sanitary/Treated Industrial Wastewater	S/TT	B/344 N	Inactive	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
DGW-01-T1A	Industrial Wastewater	S/TT	B/320B	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
DGW-01-T1B	Industrial Wastewater	S/TT	B/320B	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
TANK A	Solvent Waste-Mixed, Corrosive Wastewater	S/TT	B/330C E	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
TANK B	Solvent Waste-Mixed, Corrosive Wastewater	S/TT	B/330C E	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
B/323 N Sump	Groundwater Sump	S/TT	B/323 N	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
PW1 PV100	Activated Carbon and Contaminated Groundwater	S/TT	PW-1 GTF	Active	No	No Further Action *	1	N/A	N/A	IBM
PW1 PV200	Activated Carbon and Contaminated Groundwater	S/TT	PW-1 GTF	Active	No	No Further Action *	1	N/A	N/A	IBM
PW1 T400	Contaminated Groundwater	S/TT	PW-1 GTF	Active	No	No Further Action *	1	N/A	N/A	IBM
PW2 T700	Contaminated Groundwater	S/TT	PW-2 GTF	Active	Area A	No Further Action *	5	N/A	N/A	IBM
PW2 PV100	Activated Carbon and Contaminated Groundwater	S/TT	PW-2 GTF	Active	Area A	No Further Action *	5	N/A	N/A	IBM
PW2 PV200	Activated Carbon and Contaminated Groundwater	S/TT	PW-2 GTF	Active	Area A	No Further Action *	5	N/A	N/A	IBM
PW2 PV600	Activated Carbon and Contaminated Groundwater	S/TT	PW-2 GTF	Active	Area A	No Further Action *	5	N/A	N/A	IBM
PW2 T400	Contaminated Groundwater	S/TT	PW-2 GTF	Active	Area A	No Further Action *	5	N/A	N/A	IBM
PW25 PV100	Activated Carbon and Contaminated Groundwater	S/TT	PW-25 GTF	Active	No	No Further Action *	5	N/A	N/A	IBM
PW25 PV200	Activated Carbon and Contaminated Groundwater	S/TT	PW-25 GTF	Active	No	No Further Action *	5	N/A	N/A	IBM
PW25 T400	Contaminated Groundwater	S/TT	PW-25 GTF	Active	No	No Further Action *	5	N/A	N/A	IBM
B384 T100	Contaminated Groundwater	S/TT	B384 GTF	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
B384 S300	Contaminated Groundwater	S/TT	B384 GTF	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
B384 PV501	Activated Carbon and Contaminated Groundwater	S/TT	B384 GTF	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
B384 PV502	Activated Carbon and Contaminated Groundwater	S/TT	B384 GTF	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
B384 V601	Vapor Phase Carbon	S/TT	B384 GTF	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
B384 V602	Vapor Phase Carbon	S/TT	B384 GTF	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #3	IBM
VE1 T101	Vapor Phase Carbon	S/TT	VE1 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	IBM
VE1 T102	Vapor Phase Carbon	S/TT	VE1 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	IBM
VE1 T103	Vapor Phase Carbon	S/TT	VE1 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	IBM
VE7 T201	Vapor Phase Carbon	S/TT	VE7 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	IBM
VE7 T202	Vapor Phase Carbon	S/TT	VE7 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	IBM
VE7 T203	Vapor Phase Carbon	S/TT	VE7 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	IBM
VE8 T101	Vapor Phase Carbon	S/TT	VE8 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	IBM
VE8 T102	Vapor Phase Carbon	S/TT	VE8 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	IBM
VE8 T103	Vapor Phase Carbon	S/TT	VE8 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1D	IBM
VE9 T101	Vapor Phase Carbon	S/TT	VE9 Treatment Connex	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	IBM
VE9 T102	Vapor Phase Carbon	S/TT	VE9 Treatment Connex	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	IBM
VE9 T103	Vapor Phase Carbon	S/TT	VE9 Treatment Connex	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	IBM
VE10 T101	Vapor Phase Carbon	S/TT	VE10 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	IBM
VE10 T102	Vapor Phase Carbon	S/TT	VE10 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	IBM
VE10 T103	Vapor Phase Carbon	S/TT	VE10 Treatment Connex	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	IBM
OTHER										
B/310 LS FL	Fluoride/Heavy Metals Lift Stations	Other	B/310	Inactive	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B/310 LS IW	Industrial Wastewater Lift Stations	Other	B/310	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B/310 LS SO	Solvent Waste Lift Stations	Other	B/310	Inactive	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B/320B LS FL	Fluoride/Heavy Metals Lift Stations	Other	B/320B	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/320B LS IW	Industrial Wastewater Lift Stations	Other	B/320B	Inactive	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/320B LS SO	Solvent Waste Lift Stations	Other	B/320B	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/323 LS IW	Industrial Wastewater Lift Stations	Other	B/323	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/323A LS FL	Fluoride/Heavy Metals Lift Stations	Other	B/323 Annex	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/323A LS IW	Industrial Wastewater Lift Stations	Other	B/323 Annex	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/323A LS SO	Solvent Waste Lift Stations	Other	B/323 Annex	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/330C LS FL	Fluoride/Heavy Metals Lift Stations	Other	B/330C	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
B/330C LS IW	Industrial Wastewater Lift Stations	Other	B/330C	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
B/330C LS SO	Solvent Waste Lift Stations	Other	B/330C	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1B	i.Park East Fishkill 84 LLC
B/330D LS FL	Fluoride/Heavy Metals Lift Stations	Other	B/330D	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
B/330D LS IW	Industrial Wastewater Lift Stations	Other	B/330D	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC
B/330D LS SO	Solvent Waste Lift Stations	Other	B/330D	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #1A	i.Park East Fishkill 84 LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
B/386 FP-1	Fluoride/Heavy Metals Filter Press	Other	B/386	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B/386 FP-2	Fluoride/Heavy Metals and IW Filter Press	Other	B/386	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B330-SO	Solvent Waste Transfer Piping	Other	B/330	Inactive, Abandoned	B/330 AOC	Inaccessible SWMU	7	Hopewell Condo II	Units #1A, #1B	i.Park East Fishkill 84 LLC
B330-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/330	Inactive, Abandoned	B/330 AOC	Inaccessible SWMU	7	Hopewell Condo II	Units #1A, #1B	i.Park East Fishkill 84 LLC
B330-IW	Industrial Wastewater Transfer Piping	Other	B/330	Inactive	B/330 AOC	Inaccessible SWMU	7	Hopewell Condo II	Units #1A, #1B	i.Park East Fishkill 84 LLC
B330 - SO (2)	Solvent Waste Transfer Piping	Other	B/330	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Units #1A, #1B	i.Park East Fishkill 84 LLC
B330 - FL (2)	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/330	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Units #1A, #1B	i.Park East Fishkill 84 LLC
B330 - IW (2)	Industrial Wastewater Transfer Piping	Other	B/330	Active	B/330 AOC	No Further Action *	7	Hopewell Condo II	Units #1A, #1B	i.Park East Fishkill 84 LLC
B320-SO	Solvent Waste Transfer Piping	Other	B/320	Inactive, Abandoned	No	Inaccessible SWMU	5	N/A	N/A	Semiconductor Components Industries LLC
B320-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/320	Inactive	No	Inaccessible SWMU	5	N/A	N/A	Semiconductor Components Industries LLC
B320-IW	Industrial Wastewater Transfer Piping	Other	B/320	Inactive	No	Inaccessible SWMU	5	N/A	N/A	Semiconductor Components Industries LLC
B320- SO (2)	Solvent Waste Transfer Piping	Other	B/320	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B320-FL (2)	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/320	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B320-IW (2)	Industrial Wastewater Transfer Piping	Other	B/320	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B310-SO	Solvent Waste Transfer Piping	Other	B/310	Closed	Area A	Inaccessible SWMU	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B310-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/310	Inactive, Closed	Area A	Inaccessible SWMU	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B310-IW	Industrial Wastewater Transfer Piping	Other	B/310	Inactive	Area A	Inaccessible SWMU	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B310-SO (2)	Solvent Waste Transfer Piping	Other	B/310	Inactive	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B310-FL (2)	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/310	Inactive	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B310-IW (2)	Industrial Wastewater Transfer Piping	Other	B/310	Active	Area A	No Further Action *	2A	Hopewell Condo I	Unit #4A	i.Park East Fishkill I LLC
B300-SO	Solvent Waste Transfer Piping	Other	B/300	Inactive, Abandoned	No	Inaccessible SWMU	5	N/A	N/A	Semiconductor Components Industries LLC
B300-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/300	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B300-IW	Industrial Wastewater Transfer Piping	Other	B/300	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B322-SO	Solvent Waste Transfer Piping	Other	B/322	Removed	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B322-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/322	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B322-IW	Industrial Wastewater Transfer Piping	Other	B/322	Active	B/322 AOC	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B308-IW	Industrial Wastewater Transfer Piping	Other	B/308	Active	Area A	Inaccessible SWMU	2A	Hopewell Condo I	Unit #3	i.Park East Fishkill 84 LLC
B309-SO	Solvent Waste Transfer Piping	Other	B/309	Inactive	Area A	Inaccessible SWMU	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B309-SO (2)	Solvent Waste Transfer Piping	Other	B/309	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
FL Transfer Systems (below ground)	Fluoride/Heavy Metals Wastewater Transfer Piping (below ground)	Other	Site	Active	Yes	No Further Action *	2A,5,7	Hopewell Condo I, Hopewell Condo II	Lot 2A: Unit #4A Lot 7: Units #1A, #1B, #1C, #1D, #4	Semiconductor Components Industries LLC or i.Park East Fishkill LLC or i.Park East Fishkill 84 LLC or i.Park East Fishkill I LLC
IW Transfer Systems	Industrial Wastewater Transfer Piping (below ground)	Other	Site	Active	Yes	No Further Action *	1,2A,5,7	Hopewell Condo I, Hopewell Condo II	Lot 2A: Units #3, #4A Lot 7: Units #1A, #1B, #1C, #1D, #4	Semiconductor Components Industries LLC or i.Park East Fishkill LLC or i.Park East Fishkill I LLC or i.Park East Fishkill 84 LLC
B323-IW	Industrial Wastewater Transfer Piping	Other	B/323	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B323-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/323	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B323-SO	Solvent Waste Transfer Piping	Other	B/323	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B323A-IW	Industrial Wastewater Transfer Piping	Other	B/323Annex	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B323A-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/323Annex	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B323A-SO	Solvent Waste Transfer Piping	Other	B/323Annex	Active	No	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B334-IW	Industrial Wastewater Transfer Piping	Other	B/334	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
B334-FL	Fluoride/Heavy Metals Wastewater Transfer Piping	Other	B/334	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
B334-SO	Solvent Waste Transfer Piping	Other	B/334	Active	No	No Further Action *	7	Hopewell Condo II	Unit #2	i.Park East Fishkill LLC
B/335-SO	PCE Waste Transfer Piping	Other	B/335	Inactive	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
B335-SO (2)	PCE Waste Transfer Piping	Other	B/335	Closed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC

Table II-1
Solid Waste Management Units

UNIT ID #	DESCRIPTION	^Unit Type	LOCATION	STATUS	GW REMEDIATION AREA?*	RCRA STATUS	LOT NUMBER(S)	CONDOMINIUM	CONDOMINIUM UNIT	SWMU OWNER
B335-IW	Industrial Wastewater Transfer Piping	Other	B/335	Inactive	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
B335-IW (2)	Industrial Wastewater Transfer Piping	Other	B/335	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #6	i.Park East Fishkill LLC
B/303-SO	Mixed Solvents, Freon, IPA, NMP, NBA Waste Transfer Piping	Other	B/303	Active	Area A	No Further Action *	5R	Hopewell Condo I	Unit #7 GL	Semiconductor Components Industries LLC
B/330-TMAH	Waste TMAH Transfer Piping	Other	B/330C and B/330D	Removed, Abandoned	B/330 AOC	No Further Action *	7	Hopewell Condo II	Units #1A, #1B	i.Park East Fishkill 84 LLC
B/338-TMAH	Waste TMAH Transfer Piping	Other	B/338 and B/339	Removed	B/330 AOC	No Further Action *	7	Hopewell Condo II	Unit #5	i.Park East Fishkill B338 LLC
B315-IW	Industrial Wastewater Transfer Piping	Other	B/315	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
B316-IW	Industrial Wastewater Transfer Piping	Other	B/316	Active	Area A	No Further Action *	5	N/A	N/A	Semiconductor Components Industries LLC
HDWRKS	Headworks Building	Other	B/325 NE	Active	No	No Further Action *	1	N/A	N/A	Semiconductor Components Industries LLC
PW-6	Production Well PW-6	Other	West Drive, B/330D W	Active	No	No Further Action *	7	Hopewell Condo II	Unit #4	IBM
FL Transfer Systems (above ground) #	Fluoride/Heavy Metals Wastewater Transfer Piping (above ground, on trestle)	Other	Site	Active	Yes	No Further Action *	5,7	Hopewell Condo II	Units #1B, #1C, #2, #3	Semiconductor Components Industries LLC
IW Transfer Systems #	Industrial Wastewater Transfer Piping (above ground, on trestle)	Other	Site	Active	Yes	No Further Action *	2A,5,7	Hopewell Condo I, Hopewell Condo II	Lot 2A: Unit #4A Lot 7: Units #1B, #1C, #2, #3	Semiconductor Components Industries LLC
Solvent Transfer Systems (above ground) #	Solvent Wastewater Transfer Piping (above ground, on trestle)	Other	Site	Active	Yes	No Further Action *	2A,5,5R, 7	Hopewell Condo I, Hopewell Condo II	Lot 2A: Unit #3, #7GL Lot 7: Units #1B, #1C, #3	Semiconductor Components Industries LLC
Areas of Concern										
Area A	B/308, B/309 and B/310 Vicinity	AOC			Area A	Soil: No Further Action; GW: Corrective Measures Implemented. See Below.	2A,5,5R	Hopewell Condo I	Units #2, #3, #4A, #6, #7GL	IBM
Area B	Fire Brigade Training #1 and leachfield and Silica Slurry Lagoon	AOC			Area B	Soil: No Further Action; GW: Corrective Measures Implemented. See Below.	4, 6	N/A	N/A	IBM
Area C	LF-1	AOC			Area C	Soil: No Further Action; GW: Corrective Measures Implemented. See Below.	6	N/A	N/A	IBM
Area D	Fire Brigade Training #2	AOC			Area D	Soil: No Further Action; GW: Corrective Measures Implemented. See Below.	1	N/A	N/A	IBM
B/322 AOC	B/322 Vicinity	AOC			B/322	Soil: No Further Action; GW: Corrective Measures Implemented. See Below.	1,5	N/A	N/A	IBM
B/330 AOC	B/330 Vicinity	AOC			B/330	Soil: No Further Action; GW: Corrective Measures Implemented. See Below.	5,7	Hopewell Condo II	Units #1A, #1B, #1C, #1D, #2, #3, #4, #5, #6	IBM
SEQ	Contractors' Staging Area	AOC			SEQ	Soil: No Further Action; GW: Corrective Measures Implemented. See Below.	6	N/A	N/A	IBM
B/315 Catch Basin	B/315 Catch Basin	AOC	B/315	Removed	B/315 Catch Basin	No Further Action. See Below	5	N/A	N/A	Semiconductor Components Industries LLC

Notes:

*

The solid waste management units have been categorized by Areas of Concern (Area A, Area B, etc.) due to the physical location of the units within known areas of soil and/or groundwater contamination regardless of whether the individual units had releases to the environment. Some SWMUs have not been identified with any area as there is no evidence of groundwater or soil contamination. See Appendix II-Ea for the SWMU Location Map. In addition, some SWMUs have been categorized as inaccessible since they are located beneath buildings and structures. See Module II Condition E.1.b. Table II-2.

The investigation of soil and groundwater contamination has been implemented in the Areas of Concern. These investigations have taken into consideration the location, unit construction and release history of individual SWMUs. A summary of the investigations, the remediation implemented, and NYSDEC determinations are discussed below.

The Areas of Concern are listed above and the locations are provided on the Figures in Appendix II-Eb. In addition to these AOCs, the bedrock aquifer has been identified as having been impacted by some of the identified AOCs.

Part 373 permit table II-1 does not have separate unit identification numbers for above ground solvent, fluoride, and industrial waste transfer pipes located on trestles. Historically, this piping has been considered an extension of the above ground, building interior transfer piping from which it originates.
All SWMUs and SWMU components located on trestles are the responsibility of Semiconductor Components Industries LLC.

N/A = Not Applicable

9
28.42 AC.
1
45.64 AC.
2A
23.75 AC.
3A
20.87 AC.
4
13.72 AC.
5
98.94 AC. (TOTAL)
96.26 AC. (PART OF LOT 9)
2.68 AC.
(PART OF LOT 9)
6
56.19 AC.
7
71.73 AC. (PART OF LOT 7)
85.05 AC. (TOTAL)
13.32 AC.
(PART OF LOT 7)
8
59.41 AC.
LOT 2 REVISIONARY PARCEL = 6.61 AC.
Proposed Lot Line Revision
UNIT 1A
AREA =10.872 AC.
603,306 SF
UNIT #2
AREA =10.000 AC.
435,608 SF
UNIT #3
AREA =3.872 AC.
168,662 SF
UNIT #7GL
AREA =4.439 AC.
386,282 SF
UNIT 4A
AREA =10.568 AC.
603,306 SF
UNIT 5A
AREA =10.390 AC.
603,306 SF
B304
B303
B309
B308
B306
B310
iPark 220
B320A
iPark 210
iPark 200
B320B
B321
B317
B316
B322
(REMAINING STRUCTURE)
B323
B323A
B324
B325
B900
B334
iPark 145
B330C
iPark 755
B330E
B330I
iPark 710
B335
iPark 720
B338
iPark 730
B339/iPark 740
Visitors Center
PW-1 GTF
PW-2 GTF
PW-3 GTF
PW-4 GTF
PW-5 GTF
PW-6 GTF
PW-7 GTF
PW-8 GTF
PW-9 GTF
PW-10 GTF
PW-11 GTF
PW-12 GTF
PW-13 GTF
PW-14 GTF
PW-15 GTF
PW-16 GTF
PW-17 GTF
PW-18 GTF
PW-19 GTF
PW-20 GTF

SOLID WASTE MANAGEMENT UNITS

- CG CONTAMINATED GROUNDWATER UNIT
- CS CONTAINER STORAGE/TRANSFER AREA
- CW CONTAINER WASTE
- DB DUMPSTER BAY
- DS DUMPSTER STORAGE AREA
- FL FLUORIDE/HEAVY METALS WASTE UNIT
- HM HEAVY METALS
- IW INDUSTRIAL WASTE UNIT
- LF LANDFILL
- PE PERCHLOROETHYLENE RECYCLE UNIT
- PW PRODUCTION WELL
- SA SANITARY/TREATED INDUSTRIAL WASTE UNIT
- SO SOLVENT WASTE UNIT
- SW SPILL WASTE UNIT
- TMAH TMAH WASTE UNIT
- TS TANK TRAILER STORAGE AREA
- NH4 AMMONIA WASTEWATER UNIT
- CSV CONTAMINATED SOIL VAPOR
- FP Filter Press
- L/UL Tank Truck Loading/Unloading Area
- LS Lift Stations

- ABOVE GROUND FLUORIDE PIPELINES
- BELOW GROUND FLUORIDE PIPELINES
- ABOVE GROUND INDUSTRIAL WASTE PIPELINES
- BELOW GROUND INDUSTRIAL WASTE PIPELINES
- ABOVE GROUND SOLVENT PIPELINES
- BELOW GROUND SOLVENT PIPELINES
- ABOVE GROUND FLUORIDE BUILDING DRAINS
- ABOVE GROUND INDUSTRIAL WASTE BUILDING DRAINS
- ABOVE GROUND SOLVENT BUILDING DRAINS
- BELOW GROUND BUILDING DRAINS (SOLVENT, FLUORIDE & IW WASTE)

Additional Detail (Enlarged 3X)

Additional Detail (Enlarged 3X)
(B335: PERCHLOROETHYLENE RECYCLE/RECOVERY PLANT)

428	Ni
429	NICKEL BORON
430	NAMERSION GOLD
431	POTASSIUM FERROYANIDE
432	NEUTRA CLEAN
433	PALLADIUM CHLORIDE

LEGEND

- 2A - Parcel No.
- - Subdivision
- - Right-of-Way
- - Topographic Contour (5' Interval)

Scale 0 120' 240'

Former IBM East Fishkill Facility

NYSDEC PART 373 PERMIT DOCUMENT
MODULE II CORRECTIVE ACTION
APPENDIX II-E
SOLID WASTE MANAGEMENT UNIT LOCATION MAP

DRAWN BY: MHM/KA | DATE: 4/25/24 | DRAWING NO.
CHECKED & APPROVED BY: CES | \95007\SWMU map\SWMU11

GROUNDWATER SCIENCES CORPORATION

Site Basemap: Chazen Engineering, Land Surveying & Landscape Architechure Co., D.P.C., Poughkeepsie, NY (XBASE-SVY_51421-00.dwg, 8/10/15); Parcels: XSUBD_51539-00.dwg.
Offsite Basemap: "Groundwater Monitoring Basemap", IBM East Fishkill Facility (9718new.dwg, original date 12/21/98).
Topography: Photogrammetry by Golden Aerial Surveys, Inc., Newtown, CT (3/3/1997).
Contour interval: 1 foot (horizontal datum based upon IBM East Fishkill coordinate system; vertical datum based upon National Geodetic Vertical datum of 1929).
Horizontal accuracy: 90% of all detail, field checked, will be within +/- 1.0 foot. The remaining 10% of detail, field checked, will be within +/- 2.0 feet of its true position.
Vertical cccuracy: 90% of all contours, field checked, will be within +/- 0.5 foot. The remaining 10% of contours, field checked, will be within +/- 1.0 feet.

ATTACHMENT D
Groundwater Monitoring Plan(s)/Program
(to be replaced by updated approved document during the Permit period)

ATTACHMENT E

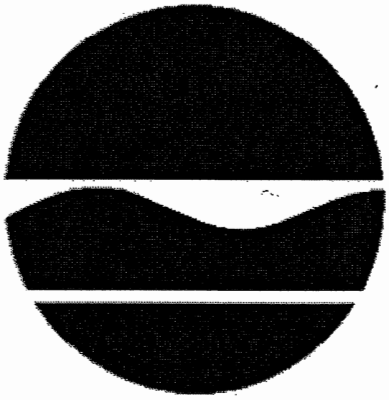
Statement(s) of Basis, Closure Plan(s) and/or Post Closure Care Plan(s)

ATTACHMENT E-1
2013 Statement of Basis

Final Statement of Basis

IBM-East Fishkill
East Fishkill, Dutchess County
EPA ID No. NYD 000707901
Site No. 314054

September 2013



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

FINAL STATEMENT OF BASIS

IBM-East Fishkill
East Fishkill, Dutchess County
EPA ID No. NYD 000707901
Site No. 314054
September 2013

SECTION 1: SUMMARY AND PURPOSE OF THE FINAL STATEMENT OF BASIS

This Final Statement of Basis (FSB) has been developed by the New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), under the authority of the Solid Waste Disposal Act, as amended, and more commonly referred to as the Resource Conservation and Recovery Act (RCRA). The corrective action or remedial program described in this Statement of Basis was incorporated in the current NYSDEC 6 NYCRR Part 373 permit (Module II and Module IX). The section of the permit that deals with corrective action is being modified to incorporate the selected groundwater remedy. This document selects the final remedy for both overburden and bedrock aquifers underlying the facility. It also documents source removal activities that have taken place as part of Interim Corrective Measures (ICMs). Requirements for the investigation and remediation of currently inaccessible Solid Waste Management Units continue to be detailed in the corrective action module of the permit.

The purpose of this FSB was to inform the public that the Department is proposing final Corrective Measures for the International Business Machines Corporation (IBM) facility, located in the Town of East Fishkill, in Dutchess County, New York (the "Facility" or IBM East Fishkill). The releases of hazardous waste or hazardous constituents from regulated units, solid waste management units, and other sources or areas at the facility were addressed by actions known as interim corrective measures (ICMs). An ICM shall be used whenever possible to achieve the initial goals of controlling the migration of contaminated groundwater and controlling current human and ecological exposure to contaminated media and can be effectively addressed before completion of the RCRA Facility Investigation (RFI) or Corrective Measure Study (CMS). The ICMs for the groundwater undertaken at IBM East Fishkill are discussed in Section 6.2.

This SB identifies the ICM(s) conducted and discusses the basis for No Further Action with Site Management. The site management will include requirements to monitor, collect and treat contaminated groundwater (pump and treat). The goal of the groundwater remedial action is to restore the groundwater at the Facility to New York State Groundwater Quality Standards.

IBM has conducted these Corrective Action activities with the oversight of the NYSDEC from 1981-1995 under an Order on Consent and from 1995 to present under a 6 NYCRR Part 373 permit. This Statement of Basis presents a summary of pertinent information and data associated

with the selected corrective measures, including:

- Background and regulatory history;
- Description of the areas;
- Potential environmental and human health exposure; and
- Proposed final groundwater remedy.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 373. This document is a summary of the information that can be found in the site-related reports, the current 6 NYCRR Part 373 permit and documents in the document repository identified below. In addition it is the intention of the Department that this Final Statement of Basis also constitutes the "Record of Decision" required for these Areas of Concern under New York State's Inactive Hazardous Waste Disposal Site program regulations (6NYCRRPart 375).

SECTION 2: CITIZEN PARTICIPATION

The Department has sought input from the community on this Statement of Basis. This was an opportunity for public participation in the remedy selection process. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

East Fishkill Public Library
380 Route 376
Hopewell Junction, New York 12533.

The public comment period was from March 6, 2013 to April 22, 2013.

A public meeting was also conducted. At the meeting, the findings of the remedial investigations and the remedial history of the site were presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the proposed remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of the Final Statement of Basis.

Receive Site Citizen Participation Information by e-mail

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at

http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The IBM East Fishkill Facility is located in the Town of East Fishkill, Dutchess County, New York, approximately 50 miles north of New York City and 10 miles east of the Hudson River, which is shown on Figures 1, 1A and 1B. The facility is bordered by Lime Kiln Road to the east, State Route 52 to the north, Interstate 84 to the south and Gildersleeve Brook to the west.

Site Features: The facility is approximately 464 acres and is composed of approximately 21 main buildings and several associated support buildings, structures, and parking lots.

Current Zoning/Use(s): Current use and zoning of the land is for industrial purposes.

Past Use(s): The facility has been used since 1963 for development and manufacturing of semiconductors, semiconductor packaging and electronic computing equipment. In December 1998, there was a nominal title transfer of the facility from IBM to the Empire State Development Corporation. In December 2012, there was a nominal title transfer of the facility from Empire State Development Corporation back to IBM. Since 1993, portions of the facility have been leased to a number of independent entities for research, operations including manufacture of semiconductors and flat panel displays, and semiconductor equipment cleaning.

The solid waste management units have been categorized by Areas of Concern (AOCs) due to the physical location of the units within known areas of soil and/or groundwater contamination regardless of whether the individual units had releases to the environment. The AOCs include the following

Area A - Building 308, Building 309 and Building 310 Vicinity
Area B - Fire Brigade Training #1, leachfield and Silica Slurry Lagoon
Area C - Landfill
Area D - Fire Brigade Training #2
B/322 AOC - Building 322 Vicinity
B/330 AOC - Building 330 Vicinity
Southeast Quadrant (SEQ) Contractors' Staging Area
Bedrock Remediation Area

Site Geology and Hydrology: The geology of the area is typified by folded and faulted Paleozoic sedimentary rocks overlain by unconsolidated glacial deposits and more recent alluvial deposits. Locally, the bedrock consists of Ordovician dolomite interbedded with smaller amounts of limestone, sandstone, siltstone and shale.

Groundwater flow in the unconsolidated material is typically governed by surface topography, hydraulic conductivity, the presence or absence of an aquitard, proximity to areas of recharge and vertical gradients induced by the Facility's production wells. Depths to overburden groundwater vary from 30 feet in the central part of the Facility to close to ground surface near sections of Gildersleeve Brook. Water table elevations are highest in the spring and lowest in the

fall, and long-term records indicate a direct relationship between this elevation and rainfall. Recharge of surface water into the upper aquifer is variable due to the extensive development at the Facility.

The general direction of bedrock groundwater flow across the site was northward before the IBM supply wells were put into production. Measurements show pronounced influence of the production wells causing a downward vertical gradient and the direction of the bedrock groundwater flow under much of the site to be on-to-site towards the pumped wells. Current water levels in the bedrock range from flowing artesian conditions to depths of greater than 150 feet below ground surface.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. Per Part 373-2.2(b)(1), the ownership or operation of the facility during its operating life shall be transferable only upon prior written approval of the Department. Current use of the land is for industrial purposes. It is anticipated that its use as an industrial facility will continue for the foreseeable future.

SECTION 5: SITE RESPONSIBILITY AND LEGAL INSTRUMENT

The IBM East Fishkill facility is operated in accordance with a 6NYCRR Part 373 Hazardous Waste Management Permit, renewed on November 1, 2011. This permit addresses: (1) the storage and management of hazardous waste in containers; (2) the operation and maintenance of the Interim Corrective Measures (ICMs) for contaminated groundwater; (3) the monitoring and maintenance of the groundwater monitoring network used to assess the performance of the interim corrective measures; and (4) financial assurance for closure and corrective action.

The NYSDEC 6 NYCRR Part 373 permit (Modules II and IX) provides detailed descriptions of the groundwater monitoring program requirements applicable to this corrective measures program. Module II requires Corrective Action, including Corrective Action beyond the facility boundary where necessary to protect human health and the environment, for all releases of hazardous wastes, including hazardous constituents, from any solid waste management unit ("SWMU") and AOC at a storage, treatment or disposal facility seeking a 6 NYCRR Part 373 permit, regardless of the time at which waste was placed in such unit.

Financial Assurance

The annual operational and maintenance cost of the groundwater program is estimated to be approximately $1 million in 2012 dollars. Article 27, Title 9 and 6 NYCRR 373-2.6(1) require assurance of financial responsibility for completing corrective action. The IBM Part 373 Financial Assurance letter (6 NYCRR Permit Part 373 Module II, Appendix II- G) contains the estimated costs for the Corrective Measures Program and a letter from IBM's Chief Financial Officer on the financial test and corporate guarantee selected as the financial assurance mechanism. This statement will be updated and provided by IBM Corporate Headquarters by April 1st of each year and reviewed by the Department.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the RCRA Facility Investigation

A RCRA Facility Investigation (RFI) has been conducted. The purpose of the RFI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RFI Reports.

The following general activities are conducted during an RFI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor
- indoor air

6.1.1: Standards, Criteria, and Guidance (SCGs)

The corrective measures must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of the corrective measures must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RFI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RFI Results

The data have identified chemical(s) of concern. A "chemical of concern" is a hazardous waste or a hazardous constituent that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are chemicals of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RFI Reports contain a full discussion of the data. The chemical(s) of concern identified at the site are listed in Table 1:

Table 1 – Chemical(s) of Concern

Area of Concern	Chemical(s) of Concern
Area A	Tetrachloroethene, Trichloroethene, and cis-1,2-Dichloroethene
Area B	Tetrachloroethene
Area C (Landfill)	Tetrachloroethene, Trichloroethene, cis-1,2-Dichloroethene, Vinyl Chloride, and Freon TF
Area D	Tetrachloroethene, Trichloroethene, and cis-1,2-Dichloroethene
Southeast Quadrant (SEQ)	1,1,2,2-Tetrachloroethene, 1,1,2-Trichloroethene, and cis-1,2-Dichloroethene
Building 322	Tetrachloroethene, Trichloroethene, cis-1,2-dichloroethene, Freon TF and Freon 123
Building 330	Tetrachloroethene, Trichloroethene, cis-1,2-Dichloroethene, Vinyl Chloride, and Freon TF
Bedrock Remediation Area	Tetrachloroethene, Trichloroethene, cis-1,2-dichloroethene, Freon TF

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media are addressed by the ICM(s) described in Section 6.2. More complete information can be found in the RFI Report and the ICM Construction Completion Report.

6.2: Interim Corrective Measures

IBM East Fishkill is currently conducting an Interim Corrective Measures Program to monitor, collect and treat contaminated groundwater (pump and treat). This ICM program has been designed to create a cone of the depression capable of controlling and thereby capturing all contaminated groundwater associated with IBM. The groundwater pumping program is effective in reducing the mobility and volume of wastes by controlling the extent of the contaminant plume and removing the contaminants from the groundwater aquifer system. Major sources of releases were identified and remediated as described below see Figure 2.

Area A

The Area A source is located in the northeast portion of the facility and is beneath and adjacent to buildings B/308, B/309 and B/310. The overburden plume extends to buildings B/316, B/385 and B/386. Contamination was confirmed at this Area of Concern in 1979. There are two distinct source areas associated with Area A. The first source area is associated with a closed tank farm, which contained both virgin and waste solvents located north of B/309, adjacent to the east side of B/310. The second source area is located adjacent to both sides of the linkway connecting B/308 with B/310. Tetrachloroethene (PCE) and its related breakdown products (trichloroethene [TCE], cis-1,2-dichloroethene [cis-1,2-DCE] and vinyl chloride [VC]), Freon TF (FTF), and Freon 123A (F123A) have been identified as contaminants which exceed the New York State Groundwater Quality Standards.

Remediation efforts in Area A consist of groundwater extraction and treatment. Additionally, a tank, associated piping, and contaminated soil were removed south of the B/308-B/310 linkway. About 1,500 cubic yards of contaminated soils were excavated and sent off-site to a permitted secure landfill. The Area A Treatment Facility (B/384) is located adjacent to and south of the B/308-B/310 linkway. Contaminated groundwater is processed through an air stripper prior to discharge to the Industrial Wastewater Treatment Facility (IWTF). The Area A plume has also impacted the fractured dolomite bedrock aquifer (see the Bedrock Groundwater Remediation Area). Pumping of production well PW-2 in the bedrock maintains hydraulic containment of this plume.

Area B

The Area B plume is located near the east central border of the facility immediately west of Lime Kiln Road and adjacent to IBM Gate 4. Contamination was confirmed at this Area of Concern in 1979. Contamination in this area is associated with fire training operations from the late 1960s. All fire training structures and contaminated surficial soils were removed. From 1982 through the present, the groundwater in this plume has been treated through continuous pumping and carbon adsorption, and the treated water is then discharged to an upgradient leach field. Groundwater contaminants consist of chlorinated organic solvents, principally PCE and methylene chloride.

Area C (Landfill)

The Area C plume consists of contaminated groundwater in the southeast part of the facility associated with a former landfill located immediately east of B/330C. The area was used primarily as a construction debris landfill and when investigated was found to contain hazardous constituents, including PCE, FTF and their breakdown products. Contamination was first confirmed at this location in 1979. In 1982, 20,000 cubic yards of contaminated soil and construction debris were excavated and sent offsite to a permitted secure landfill. The excavation went to bedrock and the area was subsequently back-filled and clay capped. Chemical contamination remains in the bedrock. The on-site production wells maintain hydraulic containment of this plume and inhibit migration of the remaining contaminants from the landfill. Groundwater contaminants consist of chlorinated organic solvents, principally TCE and PCE.

Area D

The Area D plume is located in the northwest part of the facility within the Water Pollution Control Facility (WPCF) at B/325. Contamination was confirmed at this location in 1979. Contamination found in Area D resulted from fire training operations which occurred during the mid-1970s. All fire training structures and contaminated surficial soils were removed. IBM operates a pump and treat system which discharges directly to the WPCF where groundwater is combined with sanitary and treated industrial wastewater, undergoes treatment, and is then discharged under a State Pollution Discharge Elimination System (SPDES) permit to Gildersleeve Brook. Groundwater contaminants consist of chlorinated organic solvents, principally TCE, PCE and cis-1,2 DCE. Contamination is limited to the upper aquifer

Building 322 Area of Concern

The B/322 Area of Concern source area is located in the central part of the facility approximately 1000 feet east of Gildersleeve Brook. Contamination in the B/322 Area of Concern is believed to emanate largely from two areas: (1) in the area of the B/320B-B/322 linkway in the vicinity of a closed waste solvent tank farm; and (2) within B/322 along the western side of the building. The B/322 plume is located primarily in the overburden aquifer. Groundwater contamination associated with B/322 was discovered during the mid-1980s. IBM implemented a pump and treat system for the B/322 plume. Water is pumped from four extraction wells (three active, one backup), which limit migration of VOCs toward Gildersleeve Brook. The pumped groundwater is combined with sanitary and treated industrial wastewater and treated at the WPCF prior to discharge. Identified constituents in the groundwater are PCE, FTF and their associated breakdown products.

Building 330 Area of Concern

The B/330 Area of Concern is located beneath and adjacent to B/330C and B/330D. The sources of this plume are associated with historical waste solvent tank farms, one located on the south side of B/330C and the other located to the east of B/330C, and underground waste piping within the buildings. Groundwater contamination associated with B/330 was discovered during the mid-1980s and the primary contaminants of concern are PCE, and breakdown products and FTF. Both the overburden and the bedrock aquifers have been impacted. A pump and treat system was constructed in order to contain the B/330 AOC plume near the source. Water is pumped from a deep bedrock extraction well. The extracted water is treated at the B/316 Centralized Carbon Treatment System (CCTS) and then utilized for process uses only.

Southeast Quadrant Area of Concern

The Southeast Quadrant Area of Concern is a former contractors' staging area (used from the 1970s to the mid-1980s) located in a filled area adjacent to a New York State Freshwater Wetland (HJ-52) in the southeast corner of the facility.

The groundwater contamination from this area is located in the fill, native soil and very shallow, fractured bedrock. Small concentrations of PCE and its breakdown products are the principal

contaminants of concern. Contamination in this area was first discovered in 1980. A pump and treat system was installed. The extracted water is treated at the B/316 Centralized Carbon Treatment System (CCTS) and then used on-site for process purposes.

Bedrock Remediation Area

Contamination in the Bedrock Remediation Area is primarily from sources within the Area A, Area C (landfill) and B/330 Areas of Concern migrating vertically through the soil and till into the bedrock. The primary contaminants of concern are PCE and FTF and their respective breakdown products. The bedrock plume is contained to the Facility through the continuous pumping of on-site production wells. This pumping, at approximately 1 million gallons per day, has created strong inward gradients thus containing contaminated groundwater in the bedrock to the IBM East Fishkill Facility. Water from these production wells is pumped to B/316 and treated with granular activated carbon at the CCTS. Treated water from the pumping production wells is discharged to the deionized water plant or to the raw water storage tanks which feed the various process water systems. Treated water from all on-site production wells also may be discharged directly to the tributary to Gildersleeve Brook (Central Drainage) or the IWTF after carbon treatment (SPDES Permit # NY0005096).

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary.

Nature and Extent of Contamination:
This section describes the findings of the RCRA Facility Investigation (RFI) for all environmental media that were evaluated. The field activities and findings of the investigation are described:

At the IBM East Fishkill facility, the RFI identified elevated levels of hazardous constituents, especially volatile organic compounds (VOCs), in the soil, groundwater, soil vapor, and indoor air. Several major sources of releases were identified and remediated including:

Area A

Soil
One source area is associated with a former tank farm which contained both virgin and waste solvents located north of B/309, adjacent to the east side of B/310. This tank farm was closed in accordance with RCRA requirements; however, some contamination was allowed to remain as an inaccessible SWMU. Another source area is located adjacent to both sides of the linkway connecting B/308 with B/310. A tank, associated piping, and contaminated soil were removed south of the B/308-B/310 linkway. This area was remediated as an ICM.

Groundwater
The Area A plume is located in the northeast portion of the IBM East Fishkill facility and underlies all or parts of buildings 303, 308, 309, 310, 316, 384, 385 and 386. Below ground tanks were the source of the Area A contamination which was confirmed in this area in 1979. Contaminants consist of chlorinated organic solvents, principally PCE and its associated breakdown products. PCE was initially detected up to approximately 150,000 ppb, which is near the upper solubility limit of PCE. Dense non-aqueous phase liquid (DNAPL) was initially found in the overburden aquifer. Fluoride has also been detected in groundwater in this area at concentrations ranging from 2,000 to 13,000 ppb.

The Area A plume has also impacted the deep bedrock aquifer (see the Deep Bedrock Remediation Area).

Area B

Soil
Contamination in this area is associated with fire training operations from the late 1960s. All fire training structures and soil underneath have been removed; these contaminated soils were removed and sent off-site to an approved landfill. Soil in this area was remediated as an ICM.

Groundwater
The Area B plume is located near the east-central border of the Complex along Development Drive, approximately 1,200 ft southeast of Building 316. Contamination was confirmed in this Area in 1979 and is associated with fire training operations in the late 1960s. Contaminants consist of chlorinated organic solvents, principally methylene chloride and/or PCE in the overburden and shallow bedrock aquifers. Table 4 shows the maximum concentration initially detected and the maximum concentration currently detected of contaminants in the groundwater for this area. Several parameters exceeded 1,000 ppb during the initial investigation period. Recent sampling shows that all parameters meet the Concentration Cleanup Goals.

Area C

Soil
The Area C source of contamination was a construction debris landfill which had been determined to contain hazardous chemicals, primarily chlorinated hydrocarbons and Freon TF (Trichlorotrifluoroethane). In 1982, the landfill was excavated to bedrock; 20,000 cubic yards of material was removed and sent off-site to an approved landfill. The excavation was backfilled with clean soil and capped with clay as an ICM.

Groundwater
The Area C plume consists of contaminated groundwater in the southeast part of the Facility associated with a former construction debris landfill located immediately east of B/330C. Contaminated soil was excavated to bedrock in 1982 as an ICM. Residual chemical contamination has penetrated into the bedrock. On-site production wells, see the Deep Bedrock Remediation Area, are pumped continuously to contain any migration from the area and monitoring wells are constructed upgradient and downgradient of the landfill. All water

discharged from the production wells is treated with granular activated carbon in the B/316 CCTS.

Area D

Soil
The source of contamination in Area D resulted from fire training operations which occurred during the mid-1970s. All fire training structures and contaminated surficial soils were removed and sent off-site to an approved landfill as an ICM.

Groundwater
The Area D plume is located in the northwest part of the IBM East Fishkill Facility, underlying the wastewater treatment plant at Building 325. Contamination was first detected at this site in 1979. The source of the contamination was related to a fire training operation. Contaminants consist of chlorinated organic solvents, principally TCE and PCE and contamination is limited to the overburden aquifer.

Initial groundwater concentrations in Area D were as high as 320 ppb for any individual parameter. The current maximum concentration is 5.8 ppb of TCE.

Southeast Quadrant Area of Concern

Soil
No sources were found in soil at the South East Quadrant (SEQ).

Groundwater
This AOC is the former IBM East Fishkill contractor storage area located in the southeast corner of the Facility. The area between the 330 buildings and Lime Kiln Road is designated the Southeast Quadrant (SEQ) plume and was discovered in 1980. The SEQ groundwater plume is in the fill, native soil and very shallow, fractured bedrock aquifers. Contamination in this AOC probably resulted from the handling of hazardous constituents during the 1970s. The primary contaminants in this area are PCE, TCE and DCE.

Historically, low levels of dissolved solvents in the groundwater, less than 5 ppb, migrated off site to the northeast before migrating back onto the site. Since the start of the pump and treat system, contaminants have not been detected above 1 ppb in monitoring wells east of Lime Kiln Road. This area was remediated as an ICM.

Building 322 Area of Concern

Soil
This AOC is a result of chemical handling within and adjacent to B/322. Contamination in the B/322 Area of Concern is believed to emanate largely from two areas: (1) in the area of the B/320B-B/322 linkway in the vicinity of a closed waste solvent tank farm; and (2) within B/322 along the western side of the building. This contamination is addressed in the corrective action module of the permit. During the remedial investigation, the Department determined that there has been a release of hazardous waste from the inaccessible solid waste management units

(SWMUs). These inaccessible SWMUs are listed under the current 373 permit module II condition E.1.b. When they become accessible, IBM will submit a RCRA Facility Investigation Work Plan.

Groundwater
The B/322 Area of Concern source area is located in the central part of the Facility approximately 1000 feet east of the Gildersleeve Brook. The B/322 plume is located primarily in the overburden aquifer. Indentified constituents are PCE, FTF and their associated breakdown products. To a lesser extent, arsenic, chromium, nickel and fluoride have been identified as substances of concern. Contamination is from a waste solvent tank farm and within the western side of B/322. This area was remediated as an ICM.

Building 330 Area of Concern

Soil
Contamination in this area is associated with historical waste solvent tank farms, one located on the south side of B/330C and the other located to the east of B/330C, and underground waste piping within the buildings. This contamination is addressed in the corrective action module of the permit. During the remedial investigation, the Department determined that there has been a release of hazardous waste from the inaccessible solid waste management units (SWMUs). These inaccessible SWMUs are listed under the current 373 permit module II condition E.1.b. When they become accessible; IBM will prepare a RCRA Facility Investigation Work Plan.

Groundwater
The B/330 AOC is located beneath and adjacent to B/330C and B/330D, as shown in Figure 2. The sources of this plume are associated with historical waste solvent tank farms and underground waste piping within the buildings. Primary contaminants of concern are PCE and FTF and their associated breakdown products. Both the soil and the bedrock aquifers have been impacted. PCE has been detected up to approximately 150,000 ppb in the upper aquifer, where dense non-aqueous phase liquid (DNAPL) has also been found. Table 9 shows the maximum concentration initially detected and the maximum concentration currently detected of contaminants in the groundwater for this area. This area was remediated as an ICM.

Bedrock Remediation Area

Groundwater
PCE in bedrock groundwater is found primarily in two plumes. In the northern portion of the site near Buildings 308 and 310, concentrations are up to 200,000 ug/L. In the southern portion of the site near Buildings 300, 330C, 330D, 334, and 338, PCE is found at concentrations up to 100,000 ug/L. Freon 113 is found in bedrock groundwater in the same two areas, but at lower concentrations and in smaller plumes. Freon concentrations in both the northern and southern areas are less than 300 ug/L. This area was remediated as an ICM.

Soil Vapor

In 2007 IBM initiated a site wide soil vapor and indoor air investigation. Site buildings are being evaluated for potential exposures from subsurface vapors. This investigation is on-going and its conclusions and recommendations will be detailed in a future decision document.

6.4: Summary of Human Exposure Pathways

The site is fenced; therefore, access to site contaminants is limited. In addition, the site is covered by asphalt, concrete and/or buildings, people will not come into contact with site-related contamination in soil unless they dig below these materials.

People are not expected to come into direct contact with or drink the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination.

Volatile organic compounds in the groundwater or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Sub-slab vapor extraction systems (systems that ventilate/remove the air beneath the building) have been installed in two on-site buildings to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the buildings.

Sampling indicates that soil vapor intrusion may be a concern for additional on-site buildings. Since these buildings are not currently occupied, an evaluation of the potential for soil vapor intrusion to occur will be completed should the use or occupancy of these buildings change. Environmental sampling indicates soil vapor intrusion is not a concern for off-site buildings.

6.5: Summary of Remedial Objectives

Cleanup goals have been established for the groundwater beneath the Facility. The goal of this remedial action is to restore the groundwater at the Facility to New York State Groundwater Quality Standards. Since this remedy is for groundwater only, remedial objectives for soils have not been established. It should be noted, however, that when soil removals were performed as part of the interim corrective measures, contaminated soils were removed until contamination could not be detected.

SECTION 7: SUMMARY OF SELECTED CORRECTIVE MEASURES

7.1: Summary of Selected Corrective Measures

Based on the results of the investigations at the site, the ICMs that are currently have proven to be effective in controlling the extent of the plume. The ICMs have prevented the contamination from migrating off-site, reducing the concentration of contaminants in the groundwater. The Department is selecting No Further Action with continued operation of the groundwater extraction and treatment systems that were installed as Interim Corrective Measures, and Site

Management as the remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The elements of the ICMs already completed have been detailed in Section 6.2 of this document. Under the 6 NYCRR 373 Permit required IBM East Fishkill to implement Institutional Control (IC) and to have Site Management Plan:

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- requires compliance with the Department approved Site Management Plan.

Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

   This plan includes, but may not be limited to:

   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
   - a provision for further investigation to refine the nature and extent of contamination in areas defined as inaccessible SWMUs
   - maintaining site access controls and Department notification; and
   - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
   - a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of groundwater to assess the performance and effectiveness of the remedy;
   - a schedule of monitoring and frequency of submittals to the Department;

b. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
    - compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
    - maintaining site access controls and Department notification; and
    - providing the Department access to the site and O&M records.

Site management will include the operation, maintenance and monitoring of the ICMs described in Section 6.2 as detailed in the facility's permit.

The NYSDEC 6 NYCRR Part 373 permit (Modules II and IX) provides detailed descriptions of the groundwater monitoring program requirements applicable to this corrective measures program. The goal of the groundwater extraction and treatment program is to restore the groundwater at the Facility to New York State Groundwater Quality Standards as shown on the Exhibit A, Tables 2 through 9. Extraction wells in each area and the treatment units will operate continuously until the monitoring data support cessation of activities.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the RCRA Facility Investigation (RFI) for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

Waste/Source Areas

Source areas are areas of concern at a site where substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium.

Source materials were identified at the site and are impacting groundwater and soil. The waste/source areas were addressed by the interim corrective measures ICM(s) described in Section 6.2 to the extent practicable without undermining facility structures. Any remaining source areas will be addressed as part of a site management plan. In addition, the 6 NYCRR Part 373 Permit Module II condition E.1 lists these source areas that require the facility to submit to NYSDEC a RCRA Facility Investigation Work Plan no later than 180 calendar days after the date when the SWMUs and/or AOCs become accessible for such an investigation.

Source areas include:

Area A - One source area is associated with a closed tank farm, which contained both virgin and waste solvents located north of B/309, adjacent to the east side of B/310. The tank farm was RCRA closed with some contamination remaining as an inaccessible SWMU. Inaccessible SWMUs will be addressed through the investigation / remediation process as identified in the facility's permit and Site Management Plan. Another source area is located adjacent to both sides of the linkway connecting B/308 with B/310. A tank, associated piping, and contaminated soil were removed south of the B/308-B/310 linkway and sent off-site to a permitted secure landfill. The other sources are the waste piping system underneath the following buildings: B308- IW (Industrial Wastewater), B309-SO (Solvent Waste), B310-IW (Industrial Wastewater), B310-FL (Fluoride/Heavy Metals Wastewater) and B310-SO (Solvent Waste). These sources are addressed under the 373 permit module II – Corrective Action.

Area B - Contamination in this area is associated with fire training operations from the late 1960s. All fire training structures and contaminated soil underneath have been removed; these contaminated soils were removed and sent off-site to an approved landfill.

Area C - The Area C source of contamination was a construction debris landfill which had been determined to contain hazardous chemicals, primarily chlorinated hydrocarbons and Freon TF (Trichlorotrifluoroethane). In 1982, the landfill was excavated to bedrock; 20,000 cubic yards of material was removed and sent off-site to an approved landfill. The excavation was backfilled with clean soil and capped with clay.

Area D - The source of contamination in Area D resulted from fire training operations which occurred during the mid-1970s. All fire training structures and contaminated surficial soils were removed and sent off-site to an approved landfill.

SEQ - No sources were found at the South East Quadrant (SEQ).

B/322 - This AOC is a result of chemical handling within and adjacent to B/322. Contamination in the B/322 Area of Concern is believed to emanate largely from two areas: (1) in the area of the B/320B-B/322 linkway in the vicinity of a closed waste solvent tank farm; and (2) within B/322 along the western side of the building. The B/320 waste piping systems: B320-SO, B320-IW and B320-FL, are addressed under the 373 permit module II – Corrective Action.

B-330 - The sources of this plume are associated with historical waste solvent tank farms, one located on the south side of B/330C and the other located to the east of B/330C, and underground waste piping within the buildings. The underground waste piping systems, B330-SO, B330-IW and B330-Fl, are addressed under the 373 permit module II – Corrective Action.

Soil

At the IBM East Fishkill Facility, IBM completed several investigations and detected elevated levels of hazardous constituents especially volatile organic compounds (VOCs) in the soil. Several major sources of releases were identified and remediated including: (1) former underground waste and raw material solvent tank systems; (2) former underground piping systems that transported wastewater with high concentrations of contaminants and spent solvents for recycling between buildings; (3) a former open burning fire-training areas B and C where spent solvents were used to start fires; (4) former landfills containing spent solvent hazardous waste mixed with solid waste; and (5) a former solid waste land-based storage area containing debris and other contractor waste materials.

Soil contamination identified during the RFI was addressed to the extent possible without undermining facility structures during the ICMs described in Section 6.2. As discussed in the previous section, any remaining soil contamination will be addressed through site management and by the facility's hazardous waste management permit.

Soil Vapor

In 2007 IBM initiated indoor air sampling in several on-site buildings; this is an on-going investigation and is not part of this Statement of Basis. Conclusions and recommendations of this investigation will be detailed in a future decision document.

Groundwater

A groundwater monitoring program, instituted at the Facility in 1978, discovered the presence of chlorinated organic solvents in groundwater at the Facility. At that time, four areas of elevated concentrations of chlorinated organic substances were identified underneath the Facility. These areas were designated areas A, B, C and D. In the mid to late 1980s, the B/322, B/330 and SEQ Areas of Concern were identified and additional investigations began. Area A, Area C and the B/330 Area of Concern are also associated with a larger zone of groundwater contamination identified as the Bedrock Remediation Area. Figure 2 shows the identified Areas of Concern. Several RFIs have been conducted. Chemical monitoring parameters for the program are presented in the 6 NYCRR Part 373 Permit Module II Table 11-3. Five chemicals of concern ("Key Compounds") have been detected in the groundwater: tetrachloroethene (PCE), trichloroethene (TCE), cis- 1,2dichloroethylene (DCE), 1,1,1-trichloroethane (TCA) and Freon TF (Trichlorotrifluoroethane). PCE is the principal contaminant.

Groundwater monitoring conducted in 1984 and 1985, done in conjunction with a study of the Southeast Quadrant Plume, yielded low level concentrations of chlorinated organics in off-site groundwater monitoring

wells along Lime Kiln Road, east of IBM. Additional sampling and investigation work conducted from 1985 to 1987 concluded that the shallow groundwater in the southeast quadrant was moving off site to the northeast. An off-site sampling program conducted from 1986 through 1988 concluded that organic chemicals found in groundwater at the East Fishkill site were not impacting homeowner wells. The study was terminated with an agreement to perform long-term monitoring and remediation of the Southeast Quadrant Plume. Long-term monitoring conducted since 1988 has shown that groundwater contamination levels have decreased and no contamination exceeding drinking water standards has migrated beyond the site boundary. Groundwater contamination identified during the RFI was addressed by the ICMs as described in Section 6.2.

Area A

The Area A plume is located in the northeast portion of the IBM East Fishkill facility and underlies all or parts of buildings 303, 308, 309, 310, 316, 384, 385 and 386. Below ground tanks were the source of the Area A contamination which was confirmed in this area in 1979. Contaminants consist of chlorinated organic solvents, principally PCE and its associated breakdown products. PCE was initially detected up to approximately 150,000 ppb, which is near the upper solubility limit of PCE. Dense non-aqueous phase liquid (DNAPL) was initially found in the overburden aquifer. Fluoride has also been detected in groundwater in this area at concentrations ranging from 2,000 to 13,000 ppb.

Since 1979 treatment has been conducted using production well PW-2 and a groundwater sump associated with the treatment system at Building 384. More than 285,000 pounds of chlorinated solvent has been recovered using these wells.

Remediation efforts in Area A consist of groundwater extraction and treatment. Shallow contaminated groundwater is collected using two small diameter wells and processed through an air stripper prior to discharge to the Industrial Wastewater Treatment Facility (IWTF). Currently Building 384 processes an average rate of 1.3 gallons per minute (gpm). The median influent chemical concentration to the treatment plant is approximately 28,000 ppb. The average effluent concentration is less than 10 ppb of volatile organic compounds.

The Area A plume has also impacted the fractured dolomite bedrock aquifer (see the Deep Bedrock Remediation Area).

Table 2 and Table 3 show the maximum concentration initially detected and the maximum concentration currently detected of contaminants in the groundwater for this area. Maximum concentrations of principal contaminants have declined over time.

Table 2 - Area A North

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	35	<500	50
Benzene	<25	<25	1
Chlorobenzene	<25	<25	5
1,2-Dichlorobenzene	<25	<25	3
1,3-Dichlorobenzene	<25	<25	3

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
1,4-Dichlorobenzene	<25	<25	3
Dichlorodifluoromethane (Freon 12)	<25	<25	5
1,1-Dichloroethene	**21**	<25	5
cis-1,2-Dichloroethene	**300**	**82**	5
1,2-Dichloro-1,2,2-Trifluoroethane (Freon 123A)	2.4	**7.8**	5
Ethyl Benzene	<25	<25	5
Methylene Chloride^	<25	<25	5
Tetrachloroethene	**2,800**	**1,100**	5
Toluene	<25	<25	5
1,2,3-Trichlorobenzene	<50	<50	5
1,2,4-Trichlorobenzene	<25	<25	5
1,1,1-Trichloroethane	**43**	**10**	5
Trichloroethene	**310**	**92**	5
Trichlorofluoromethane (Freon 11)	**58**	0.7	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	**330**	**91**	5
Vinyl Chloride	<25	<25	2
Xylenes (total)	<25	<25	5*
Fluoride	300	120	1,500
Arsenic (Filtered)	N/A	N/A	25
Chromium (Filtered)	250	1.5	50
Nickel (Filtered)	N/A	N/A	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 010 (overburden), 714 (overburden), and 716 (bedrock)
a 1990 - 1994
b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

Table 3 - Area A South

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	**2,700**	<500,000	50
Benzene	ND	<25,000	1
1,2-Dichlorobenzene	--	**11**	3
1,3-Dichlorobenzene	--	<25,000	3
1,4-Dichlorobenzene	--	<25,000	3
Dichlorodifluoromethane (Freon 12)	--	<25,000	5
1,1-Dichloroethene	--	<25,000	5
cis-1,2-Dichloroethene	**17,000**	**540**	5
Methylene Chloride^	**25,000**	**73**	5
Tetrachloroethene	**4,300,000[x]**	**270,000[y]**	5
Toluene	ND	<25,000	5
1,1,1-Trichloroethane	**2,300**	<25,000	5
Trichloroethene	**100,000**	**2,400**	5
Trichlorofluoromethane (Freon 11)	--	<25,000	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	**7,500**	**2,500**	5
Vinyl Chloride	--	<25,000	2
Xylenes (total)	**14,000**	<25,000	5*
Fluoride	**13,000**	**6,300**	1,500
Arsenic (Filtered)	N/A	N/A	25
Chromium (Filtered)	<5	4	50
Nickel (Filtered)	N/A	N/A	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 013(overburden), 015 (overburden), 118 (bedrock), 821 (overburden), 822 (overburden) for initial, 015 (overburden), 118 (bedrock), 821 (overburden), 822 (overburden), B/384 sump (overburden) for current.
a 1981 - 1985
b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
x Concentration indicates DNAPL present in sample.
y Near the solubility limit of PCE
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.
-- Not Analyzed
ND Not detected
N/A Not applicable. Data review for 6 NYCRR permit and subsequent Appendix 33 monitoring in 1996 - 1998 (Area A wells 010, 706, 716, PW-2, and the B/384 sump) determined that these parameters were not chemicals of concern.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

Area B

The Area B plume is located near the east-central border of the Complex along Development Drive, approximately 1,200 ft southeast of Building 316. Contamination was confirmed in this Area in 1979 and is associated with fire training operations in the late 1960s. Contaminants consist of chlorinated organic solvents, principally methylene chloride and/or PCE in the soil and shallow bedrock aquifers. Table 4 shows the maximum concentration initially detected and the maximum concentration currently detected of contaminants in the groundwater for this area. Several parameters exceeded 1,000 ppb during the initial investigation period. Recent sampling shows that all parameters meet the Concentration Cleanup Goals.

The groundwater in this area is treated through continuous pumping and GAC treatment. Following treatment the effluent is reinjected into a groundwater leachfield upgradient of the extraction well. Currently, the contaminant concentration levels in the extraction well are less than 2 µg/L of PCE and the average flow rate is approximately 10.2 gpm. The treated effluent concentration is less than 0.5 µg/L of PCE.

Table 4 - Area B

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	49	<10	50
Benzene	ND	<1.0	1
Dichlorodifluoromethane (Freon 12)	--	<1.0	5
1,1-Dichloroethene	--	<1.0	5
cis-1,2-Dichloroethene	**510**	<1.0	5
1,2-Dichloro-1,2,2-Trifluoroethane (Freon 123A)	--	<1.0	5
Ethyl Benzene	--	<1.0	5
Methylene Chloride^	**42,000**	<1.0	5
Tetrachloroethene	**23,000**	4.2	5
Toluene	**1,000**	<1.0	5
1,1,1-Trichloroethane	**290**	<1.0	5
Trichloroethene	**380**	0.6	5
Trichlorofluoromethane (Freon 11)	--	<1.0	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	**1200**	<1.0	5
Vinyl Chloride	--	<1.0	2
Xylenes (total)	ND	<2.0	5*
Fluoride	N/A	N/A	1,500
Arsenic (Filtered)	N/A	N/A	25
Chromium (Filtered)	N/A	N/A	50
Nickel (Filtered)	N/A	N/A	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 046 (soil), 047 (bedrock), and 863 (bedrock) for initial, 046 (soil) and 628 (bedrock) for current.
a 1981 - 1985

b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.
-- Not Analyzed
ND Not detected
N/A Not applicable. Data review for 6 NYCRR permit and subsequent Appendix 33 monitoring in 1996 - 1998 (Area B wells 064 and 065) determined that these parameters were not chemicals of concern.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

Area C Remediation Area (Landfill)

The Area C plume consists of contaminated groundwater in the southeast part of the Facility associated with a former construction debris landfill located immediately east of B/330C. Contaminated soil was excavated to bedrock in 1982. Residual chemical contamination has penetrated into the bedrock. On-site production wells are pumped continuously to contain any migration from the area and monitoring wells are constructed upgradient and downgradient of the landfill. All water discharged from the production wells is treated with GAC in the B/316 CCTS.

Table 5 shows the maximum concentration initially detected and the maximum concentration currently detected of contaminants in the groundwater for this area. Maximum concentrations of principal contaminants PCE, TCE, DCE and FTF have declined by approximately an order of magnitude between the initial sampling period and the current sampling period.

Table 5 – Area C (Landfill)

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	**52**	<100	50
Benzene	ND	0.8	1
Chlorobenzene	--	5.7	5
1,2-Dichlorobenzene	--	**99**	3
1,3-Dichlorobenzene	--	<5	3
1,4-Dichlorobenzene	--	1.6	3
Dichlorodifluoromethane (Freon 12)	--	**7.9**	5
1,1-Dichloroethene	--	1.2	5
cis-1,2-Dichloroethene	**5,000**	**280**	5
1,2-Dichloro-1,2,2-Trifluoroethane (Freon 123A)	--	9.4	5
Ethyl Benzene	--	<5	5
Methylene Chloride^	**18**	2.5	5
Tetrachloroethene	**690**	**84**	5
Toluene	**3,400**	<5	5

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
1,2,3-Trichlorobenzene	--	<10	5
1,2,4-Trichlorobenzene	--	<5	5
1,1,1-Trichloroethane	**79**	<5	5
Trichloroethene	**1,900**	**220**	5
Trichlorofluoromethane (Freon 11)	--	<5	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	**720**	**15**	5
Vinyl Chloride	--	**27**	2
Xylenes (total)	**350**	<5	5*
Fluoride	N/A	N/A	1,500
Arsenic (Filtered)	N/A	N/A	25
Chromium (Filtered)	N/A	N/A	50
Nickel (Filtered)	N/A	N/A	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 110 (bedrock) and 111 (bedrock) for initial, 559 (bedrock) and 561 (soil/bedrock) for current.
a 1990 - 1994
b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.
-- Not Analyzed
ND Not detected
N/A Not applicable. Data review for 6 NYCRR permit and subsequent Appendix 33 monitoring in 1996 - 1998 (Area C capture well PW-7) determined that these parameters were not chemicals of concern.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

Area D

The Area D plume is located in the northwest part of the IBM East Fishkill Facility, underlying the wastewater treatment plant at Building 325. Contamination was first detected at this site in 1979. The source of the contamination was related to a fire training operation. Contaminants consist of chlorinated organic solvents, principally TCE and PCE and contamination is limited to the overburden aquifer.

IBM operates a pump and treat system which discharges directly to the Water Pollution Control Facility (WPCF) where groundwater is combined with sanitary and treated industrial wastewater, undergoes treatment, and is then discharged under a State Pollution Discharge Elimination System (SPDES) permit to Gildersleeve Brook. Well GW-032A is pumped at an average flow rate of 2.4 gpm. Groundwater concentrations from GW-032A range from less than 3 ppb for TCE and less than or equal to 1 ppb for all other parameters, including PCE.

Initial groundwater concentrations in Area D, shown in Table 6, were as high as 320 ppb for any individual parameter. The current maximum concentration is 5.8 ppb of TCE.

Table 6 - Area D

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	7.4	<10	50
Benzene	3.0	<1.0	1
Dichlorodifluoromethane (Freon 12)	--	<1.0	5
1,1-Dichloroethene	--	0.7	5
cis-1,2-Dichloroethene	**110**	1.3	5
1,2-Dichloro-1,2,2-Trifluoroethane (Freon 123A)	--	<1.0	5
Methylene Chloride^	**11**	<1.0	5
Tetrachloroethene	**68**	2.1	5
Toluene	3.0	1.2	5
1,1,1-Trichloroethane	**67**	<1.0	5
Trichloroethene	**320**	**5.8**	5
Trichlorofluoromethane (Freon 11)	--	<1.0	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	**8.0**	<1.0	5
Vinyl Chloride	--	<1.0	2
Xylenes (total)	0.9	<2.0	5*
Fluoride	N/A	N/A	1,500
Arsenic (Filtered)	N/A	N/A	25
Chromium (Filtered)	N/A	N/A	50
Nickel (Filtered)	N/A	N/A	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 032 (overburden), 066 (overburden), 067 (overburden) for initial and 032A (overburden), 066 (overburden), 067 (overburden), and 757 (overburden) for current.
a 1981 - 1985
b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.
-- Not Analyzed
ND Not detected
N/A Not applicable. Data review for 6 NYCRR permit and subsequent Appendix 33 monitoring in 1996 - 1998 (Area D wells 032, 032A, 066, and 067) determined that these parameters were not chemicals of concern.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

Southeast Quadrant (SEQ) – Area of Concern

This AOC is the former IBM East Fishkill contractor storage area located in the southeast corner of the Facility. The area between the 330 buildings and Lime Kiln Road is designated the Southeast Quadrant (SEQ) plume and was discovered in 1980. The SEQ groundwater plume is in the fill, native soil and very shallow, fractured bedrock aquifers. Contamination in this AOC probably resulted from the handling of hazardous constituents during the 1970s. The primary contaminants in this area are PCE, TCE and DCE.

In 2001, IBM constructed a pump and treat system to contain and treat contaminated groundwater in the shallow bedrock. PW-23 was installed and plumbed to the B/316 CCTS for process purposes only. The flow rate averages 8.8 gpm and concentrations of volatile organics are less than 3 ppb.

Historically, low levels of dissolved solvents in the groundwater, less than 5 ppb, migrated off site to the northeast before migrating back onto the site. Since the start of the pump and treat system, contaminants have not been detected above 1 ppb in monitoring wells east of Lime Kiln Road. Additionally, Table 7 shows that all constituents of concern currently meet the Concentration Cleanup Goal.

Table 7 – Southeast Quadrant Area of Concern

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	4.0	1.7	50
Benzene	3.0	<1.0	1
Dichlorodifluoromethane (Freon 12)	--	<1.0	5
1,1-Dichloroethene	--	<1.0	5
cis-1,2-Dichloroethene	**91**	<1.0	5
1,2-Dichloro-1,2,2-Trifluoroethane (Freon 123A)	--	<1.0	5
Methylene Chloride^	ND	<1.0	5
Tetrachloroethene	**270**	4.3	5
Toluene	1.1	<1.0	5
1,1,1-Trichloroethane	**7.0**	<1.0	5
Trichloroethene	**14**	0.6	5
Trichlorofluoromethane (Freon 11)	--	<1.0	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	ND	<1.0	5
Vinyl Chloride	--	<1.0	2
Xylenes (total)	ND	<2.0	5*
Fluoride	N/A	N/A	1,500
Arsenic (Filtered)	N/A	N/A	25
Chromium (Filtered)	N/A	N/A	50
Nickel (Filtered)	N/A	N/A	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 048 (overburden) for initial, 048(overburden) and PW-23 (bedrock) for current.

a 1981 - 1985
b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.
-- Not Analyzed
ND Not detected
N/A Not applicable. Data review for 6 NYCRR permit and subsequent Appendix 33 monitoring in 1996 – 1998 (Southeast Quadrant wells 987 and 990) determined that these parameters were not chemicals of concern.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

B/322 – Area of Concern

The B/322 Area of Concern source area is located in the central part of the Facility approximately 1000 feet east of the Gildersleeve Brook. The B/322 plume is located primarily in the shallow soil aquifer. Identified constituents are PCE, FTF and their associated breakdown products. To a lesser extent, arsenic, chromium, nickel and fluoride have been identified as substances of concern. Contamination is from a waste solvent tank farm and within the western side of B/322.

In 2000, IBM implemented a pump and treat system for the B/322 plume. Water is pumped from three extraction wells (GW-612, GW-617 and GW-618, as shown in Figure 6) with one backup available (GW-613) which limit migration of VOCs toward the Gildersleeve Brook. The contaminated groundwater is pumped and fed into the sanitary wastewater treatment facility. Here the groundwater is combined with raw sanitary waste and pretreated industrial waste water. Treated water from WPCF is discharged to Gildersleeve Brook under IBM East Fishkill SPDES permit, outfall number #001. The combined flow rate averages 12.9 gpm and concentrations of volatile organics are less than 1 ppb.

As shown in Table 8, concentrations of principal contaminants TCE, DCE, VC and FTF have declined by an order of magnitude or more since the initial detection period.

Table 8 – B/322 Area of Concern

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	**110,000**	19	50
Benzene	42	<25	1
Chlorobenzene	**300**	4.3	5
1,2-Dichlorobenzene	**1,200**	5.0	3
1,3-Dichlorobenzene	<500	<25	3
1,4-Dichlorobenzene	**18**	<25	3
Dichlorodifluoromethane (Freon 12)	**300**	**11**	5
1,1-Dichloroethene	**37**	<25	5
cis-1,2-Dichloroethene	**8,000**	**710**	5

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
1,2-Dichloro-1,2,2-Trifluoroethane (Freon 123A)	**87**	**54**	5
Ethyl Benzene	**7,400**	<25	5
Methylene Chloride^	<500	<25	5
Tetrachloroethene	**1,400**	**1,800**	5
Toluene	**140**	<25	5
1,2,3-Trichlorobenzene	1.2	<50	5
1,2,4-Trichlorobenzene	**19**	<25	5
1,1,1-Trichloroethane	<500	<25	5
Trichloroethene	**1,100**	**65**	5
Trichlorofluoromethane (Freon 11)	**560**	<25	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	**1,600**	**210**	5
Vinyl Chloride	**1,500**	**6.6**	2
Xylenes (total)	**30,000**	<40	5*
Fluoride	**199,000**	**210,000**	1,500
Arsenic (Filtered)	**82**	**43**	25
Chromium (Filtered)	**200**	49	50
Nickel (Filtered)	**170**	**850**	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 202 (overburden), 735 (overburden), 740 (overburden), 766 (overburden), 767 (overburden) for initial 627 (overburden), 735 (overburden), 740 (overburden), 766 (overburden), and 767 (overburden) for current.
a 1990 - 1994
b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.
N/A Not applicable. Data review for 6 NYCRR permit and subsequent Appendix 33 monitoring in 1996 - 1998 (B/322 wells 202, 559, 735, and 960) determined that these parameters were not chemicals of concern.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

B/330 –Area of Concern

The B/330 AOC is located beneath and adjacent to B/330C and B/330D, as shown in Figures 2 and 3. The sources of this plume are associated with historical waste solvent tank farms and underground waste piping within the buildings. Primary contaminants of concern are PCE and FTF and their associated breakdown products. Both the soil and the bedrock aquifers have been impacted. PCE has been detected up to approximately 150,000 ppb in the upper aquifer, where dense non-aqueous phase liquid (DNAPL) has also been found. Table 9 shows the maximum concentration initially detected and the maximum concentration currently detected of contaminants in the groundwater for this area.

Historically, the B/330 AOC plume was contained by the pumping of PW-4. In 2002, a pump and treat system (PW-25) was constructed in order to contain the B/330 AOC plume near the source. The objective of PW-25 pumping is to shrink the plume by capture closer to the point of origin and enhancement of mass removal. Since PW-25 started in 2003, more than 7000 pounds of VOCs have been removed. PW-4 remains active, capturing a small segment of the B/330 AOC plume. PW-25 and PW-4 are plumbed to the B/316 CCTS. After carbon treatment, groundwater is further treated for process water.

Table 9 shows that the maximum concentration currently detected for PCE, TCE, DCE and FTF are lower than the maximum detected initial concentrations.

TABLE 9 – B/330 Area of Concern

Constituents	Maximum Concentration Initially Detected[a,d]	Maximum Concentration Currently Detected[b,d]	Concentration Cleanup Goal[c,d]
Acetone^	**1,200**	<100,000	50
Benzene	<2,500	<5,000	1
Chlorobenzene	0.7	<5,000	5
cis-1,2-Dichloroethene	**110,000,000**	**1,700**	5
1,2-Dichloro-1,2,2-Trifluoroethane (Freon 123A)	<2,500	<5,000	5
Methylene Chloride^	<2,500	<5,000	5
Tetrachloroethene	**1,000,000,000[x]**	**270,000[y]**	5
Toluene	<2,500	<5,000	5
1,1,1-Trichloroethane	3.1	<5,000	5
Trichloroethene	**4,500**	**2,700**	5
Trichlorofluoromethane (Freon 11)	**22**	<5,000	5
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon TF, Freon 113)	**310**	**210**	5
Vinyl Chloride	0.8	<5,000	2
Xylenes (total)	<2,500	<5,000	5*
Fluoride	N/A	N/A	1,500
Arsenic (Filtered)	N/A	N/A	25
Chromium (Filtered)	N/A	N/A	50
Nickel (Filtered)	N/A	N/A	100
Zinc (Filtered)	N/A	N/A	300

Wells used: 572 (overburden), 574 (bedrock), and 941 (bedrock) for initial, 572 (overburden), 574 (bedrock), 607 (bedrock), and 941 (bedrock) for current.
a 1990 - 1994
b 2006 - 2010
c Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).
d All concentrations are in ug/l.
x Concentration indicates DNAPL present in sample.
y Near the solubility limit of PCE
^ Acetone and Methylene Chloride are common laboratory contaminants.
* Refers to Cleanup Goal for m-Xylene, o-Xylene, and p-Xylene taken individually.

N/A Not applicable. Data review for 6 NYCRR permit and subsequent Appendix 33 monitoring in 1996 - 1998 (B/330 wells 181, 576, 930, 941, 953, and 957) determined that these parameters were not chemicals of concern.
< For samples collected prior to the fourth quarter of 2008, an initial reporting limit of 1.0 ug/l for 1,2,3-Trichlorobenzene, 10 ug/l for Acetone, and 0.5 ug/l for all other parameters was used. Beginning with the fourth quarter of 2008, the reporting limits reported by the laboratory have been used. When a parameter was not detected for the indicated wells, the maximum detection limit for all of the indicated wells was used in the table. No samples collected during the current time period were diluted.

Deep Bedrock Remediation Area

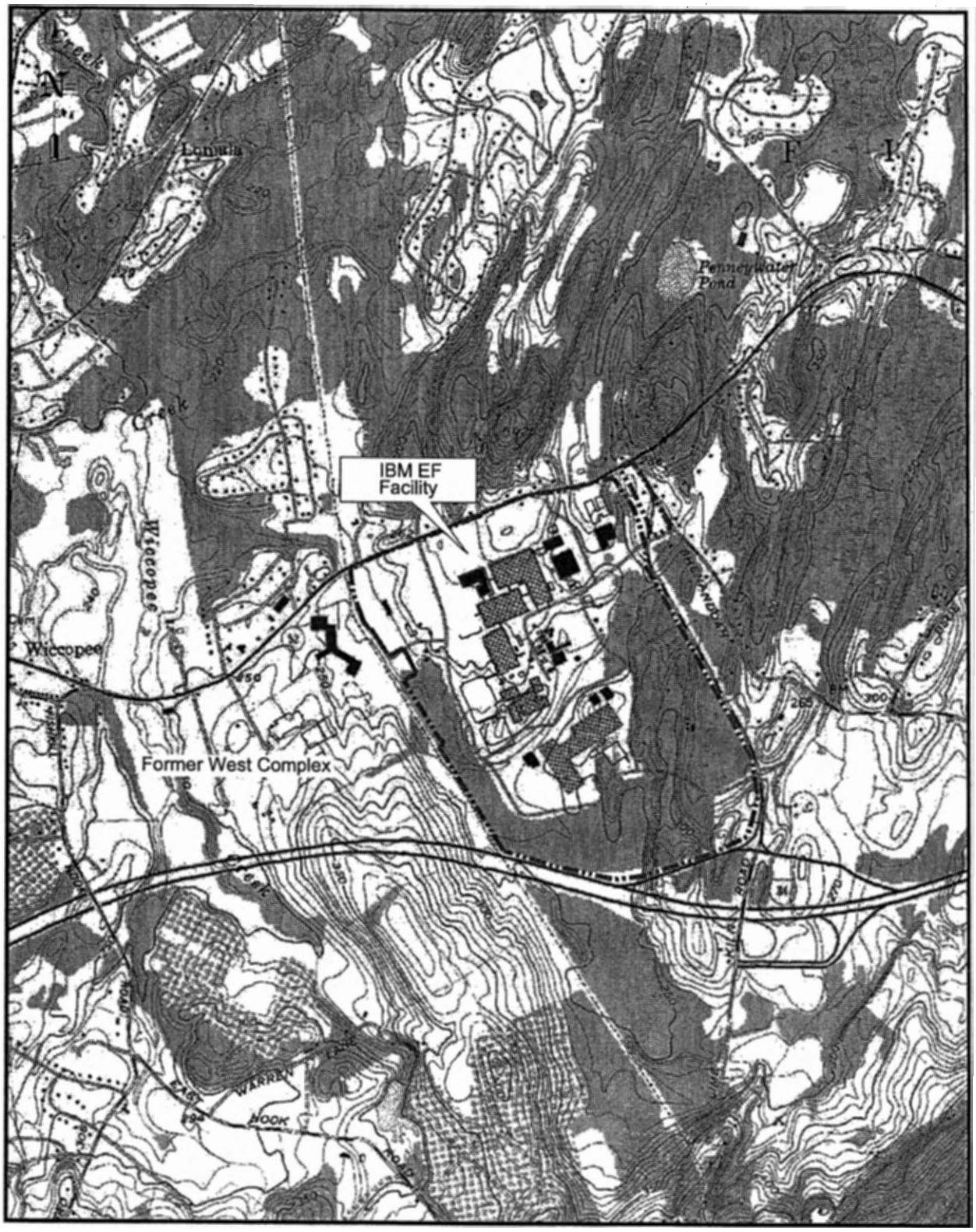
Contamination in the Deep Bedrock Remediation Area is primarily from sources within the Area A, Area C (landfill) and B/330 Areas of Concern migrating vertically through the soil and till into the bedrock. The bedrock area also includes contamination underlying buildings 300, 323, and 323A. The primary contaminants of concern are PCE, TCE, DCE and FTF and their respective breakdown products.

The bedrock plume is contained to the Facility through the continuous pumping of on-site production wells which collectively create a large cone of depression within the bedrock aquifer. The pumping, at approximately one million gallons per day, has created strong inward gradients onto the site thus containing contaminated groundwater in the bedrock to the IBM Facility. Eight (8) production wells are available for pumping. Currently five (5) wells, PW-1, PW-2, PW-4, PW-23 and PW-25, are continuously pumped.

Water from these production wells is pumped to B/316 and treated with granular activated carbon at the CCTS. The CCTS consists of five (5) trains of activated carbon. Each granular activated carbon train consists of two (2) 20,000 pound activated carbon units which are operated in series. After carbon treatment the groundwater feeds various process water systems.

Description of Remedial Alternatives

Based on the results of the investigations at the site, the ICMs that have been performed, and the evaluation presented here, the Department is selecting No Further Action with continued Site Management as the remedy for the site. This No Further Action remedy includes continued operation of the describe ICM and the implementation of Institutional Controls and Engineering Controls which are part of the selected remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.



Portion of the Hopewell Junction, NY
7.5-minute USGS Quadrangle
(1957, Photorevised 1981)

Figure 1

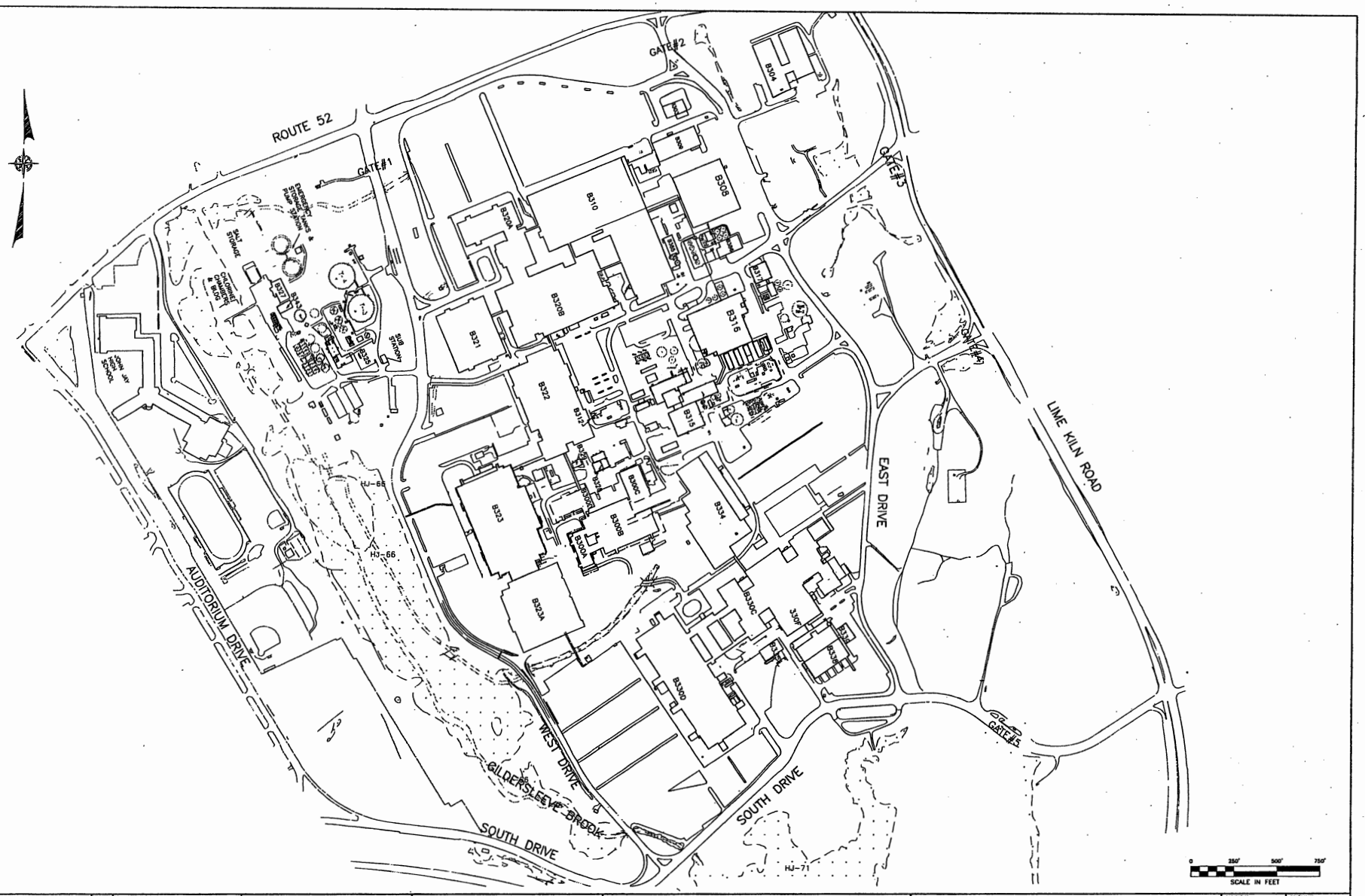
IBM
East Fishkill, New York

Site Location Map

Scale
0 1000' 2000'

GROUNDWATER SCIENCES CORPORATION

95007-044-B1 / 06-24-11


ROUTE 52
GATE #1
GATE #2
GATE #3
GATE #5
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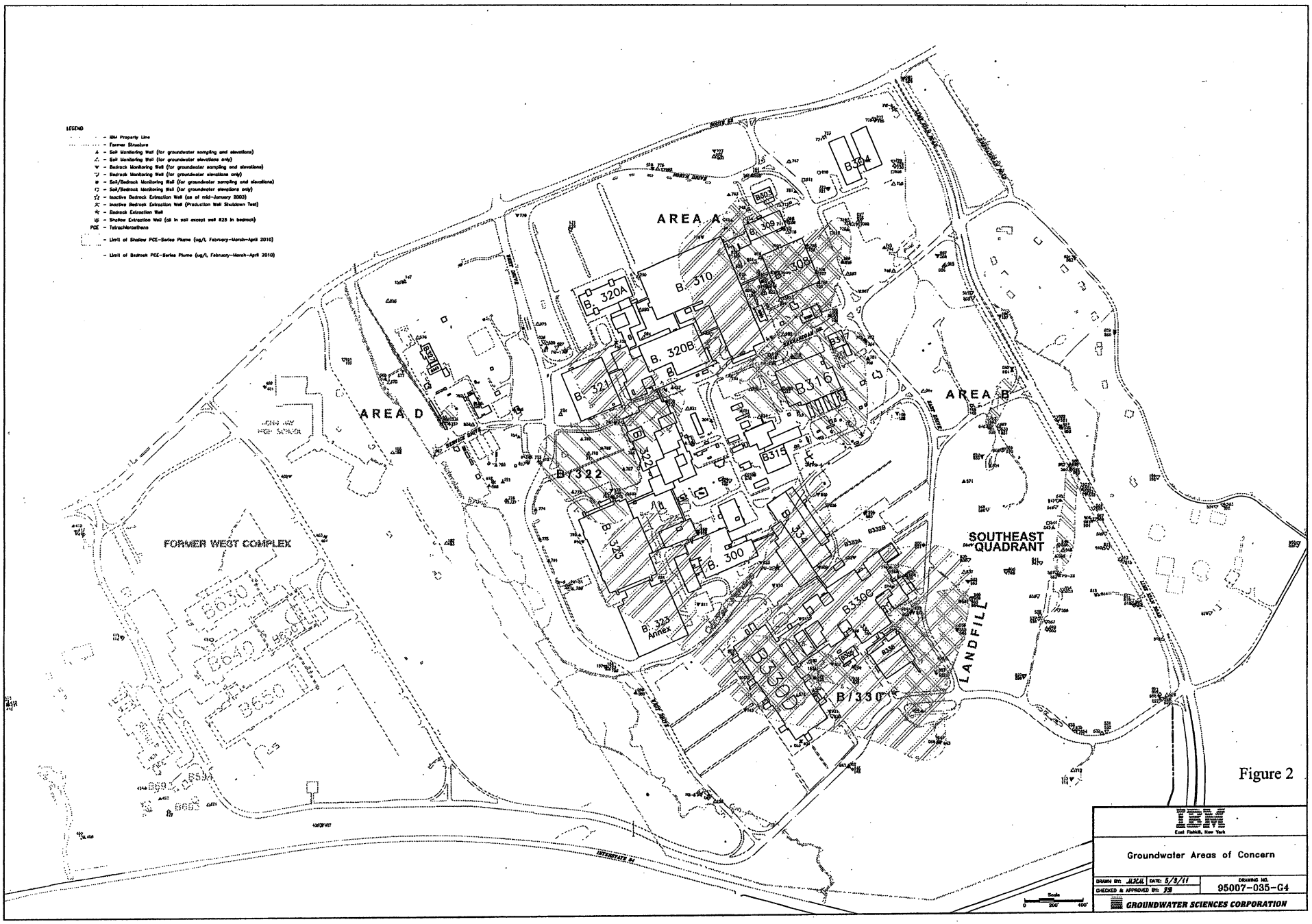
LEGEND
IBM Property Line
Former Structure
Soil Monitoring Well (for groundwater sampling and elevations)
Soil Monitoring Well (for groundwater elevations only)
Bedrock Monitoring Well (for groundwater sampling and elevations)
Bedrock Monitoring Well (for groundwater elevations only)
Soil/Bedrock Monitoring Well (for groundwater sampling and elevations)
Soil/Bedrock Monitoring Well (for groundwater elevations only)
Inactive Bedrock Extraction Well (as of mid-January 2003)
Inactive Bedrock Extraction Well (Production Well Shutdown Test)
Bedrock Extraction Well
Shallow Extraction Well (all in soil except well 828 in bedrock)
PCE - Tetrachloroethene
Limit of Shallow PCE-Series Plume (ug/L February-March-April 2010)
Limit of Bedrock PCE-Series Plume (ug/L February-March-April 2010)
AREA A
AREA B
AREA D
FORMER WEST COMPLEX
SOUTHEAST QUADRANT
LANDFILL
B. 320A
B. 320B
B. 321
B. 310
B. 309
B. 300
B. 323 Annex
B316
B315
B322
B330
B334
B3304
B3306
B3328
B3328A
B3307
B3308
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ATTACHMENT A

RESPONSE TO COMMENTS ON THE STATEMENT OF BASIS

RESPONSIVENESS SUMMARY

IBM-East Fishkill
East Fishkill, Dutchess County
EPA ID No. NYD 000707901
Site No. 314054

The Statement of Basis (SB) was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on March 6, 2013. The SB outlined the remedial measure proposed for the contaminated soil and groundwater at the following Areas of Concern/Operable Units:

Area A - Building 308, Building 309 and Building 310 Vicinity (Operable Unit 5)
Area B - Fire Brigade Training #1, leachfield and Silica Slurry Lagoon (Operable Unit 3)
Area C – Landfill (Operable Unit 6)
Area D - Fire Brigade Training #2 (Operable Unit 4)
B/322 AOC - Building 322 Vicinity (Operable Unit 7)
B/330 AOC - Building 330 Vicinity (Operable Unit 8)
Southeast Quadrant (SEQ) Contractors' Staging Area (Operable Unit 9)
Bedrock Remediation Area (Operable Unit 2)

The release of the SB was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

The public comment period for the SB ended on April 22, 2013.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: Are there groundwater monitoring wells in between the plant site and John Jay High School?

RESPONSE 1: Yes, as part of the Groundwater Monitoring Program, IBM installed 8 monitoring wells (5 shallow overburden wells and 3 deep bedrock wells) around John Jay High School. These monitoring wells are sampled for those chemicals listed in Module II Condition E.7.c.(ii) Table II-3. These wells have not shown contaminants related to IBM East Fishkill Site.

COMMENT 2: Are the John Jay water supply wells tested on a continuing basis?

RESPONSE 2: Yes, the John Jay High School supply wells are tested on a routine basis as per the State sanitary code for water supply systems. These supply wells have not shown contaminants related to IBM East Fishkill Site. As mentioned in Response No. 1, there are also monitoring wells located between the IBM facility and John Jay High School.

COMMENT 3: Are the pumping systems installed as interim measures working well?

RESPONSE 3: Yes, the groundwater pumping program has been effective in reducing the mobility and volume of contaminated groundwater by controlling the extent of the contaminant plume and removing the contaminants from the groundwater aquifer system.

COMMENT 4: What is the thickness of the unconsolidated material underlying the facility?

RESPONSE 4: Unconsolidated material varies between approximately 50 and 120 feet in thickness at the site.

COMMENT 5: How long will the system need to be operated?

RESPONSE 5: At this point, it is not possible to say with any degree of certainty how long the remediation system will need to operate; however, it is likely that the remedial program will continue for the next 20-30 years.

The following comments were submitted by Mr. Steven C. Hawkins on behalf of the IBM East Fishkill facility to Mr. James J. Eldred, Permit Administrator, NYSDEC, Region 3 and Mr. Henry Wilkie, NYSDEC, DER, Central Office on April 22, 2013 with the Department's responses:

COMMENT 6: The site's Part 373 Permit, Resource Conservation and Recovery Act Permit Condition 5 states:

> Site-wide groundwater corrective action Modules II and IX of this permit require the Permittee to undertake the site investigation and corrective action required by the Order on Consent dated April 27, 1981, captioned In the Matter of Compliance with Section 27-1313 of the Environmental Conservation Law ("ECL") by: International Business Machines Corporation (IBM). Therefore, as of and on the effective date of this permit, all Permittee's obligations arising under the Order on Consent are terminated and superseded by this permit.

Since the Part 373 Permit adequately addresses the corrective action and remediation requirements, and the Order on Consent was terminated and superseded by the Part 373 Permit (see Attachment A), we restate our request that all references to Part 375 be removed from the SB.

RESPONSE 6: Even though, the Part 373 Permit adequately addresses corrective action and remediation requirements, the facility is also listed as a Class 2 site on the New York State Registry of Inactive Hazardous Waste Disposal Sites and is therefore Subject to Part 375. While enforcement of remediation activities has been conducted under the authority of Part 373, the references to Part 375 are appropriate and will remain in the document.

COMMENT 7: In Section 7.1 of the SB, Site Management is defined as a Site Management Plan, Institutional Controls and Engineering Controls. IBM does not believe that a Site Management Plan, Institutional Controls and Engineering Controls are necessary because the elements of these documents are already addressed in the Part 373 Permit. The existing Part 373 Permit, Groundwater Monitoring Plan, and Inspection and Maintenance Plan for the Groundwater

Recovery and Treatment Systems include all of the information that would be required by Section 7.1. As a result, this section of the draft SB calls for unnecessary duplication.

Further, the Department noted in the Section 7.1 of the SB that "The NYSDEC 6 NYCRR Part 373 permit (Modules II and IX) provides detailed descriptions of the groundwater monitoring program requirements applicable to this corrective measures program" and IBM agrees.

If the Part 373 Permit were to be no longer in place IBM must continue corrective action. Part 373 Permit, Module I.C.8.b states:

> Should the Permittee cease the hazardous waste management activities allowed by this Permit prior to the expiration of this Permit, then, pursuant to 6 NYCRR Subpart 373-1.6(d), the Permittee must continue to comply with the applicable corrective action conditions and requirements stipulated in this Permit (refer to Module II Corrective Action). In addition, the Permittee shall submit a renewal application pursuant to 6 NYCRR Subpart 373-1.8(b) prior to this Permit's expiration unless and until all the Permittee's corrective action obligations have been completed. In the alternative, the Permittee may execute an order on consent for corrective action pursuant to Environmental Conservation Law (ECL) Section 71-2727(3) with the Commissioner at least 180 days prior to the expiration date of this Permit.

In the event the Part 373 Permit is revoked or no longer in existence, IBM will at that time submit a Site Management Plan including Institutional and Engineering Controls.

Therefore, we respectfully request that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 7: The Department requires a Site Management Plan for all final remedies where continued operation, maintenance, monitoring, institutional controls or engineering controls are included as part of the remedy. It is not intended that efforts be duplicated and when a permit is in place it may be appropriate for the Site Management Plan to reference existing portions of the permit as part of the site management plan requirements.

Also, as noted by the comment, should the Part 373 Permit be revoked, no longer in existence, or should an order in lieu of a permit be deemed appropriate for these activities, at that time IBM will be required to provide a stand-alone Site Management Plan.

COMMENT 8: The following is a discussion of the individual elements of the Site Management Plan, Institutional Controls and Engineering Controls as outlined in the SB section 7.1 and the equivalent elements in the existing Part 373 Permit, Groundwater Monitoring Plan, and/or Inspection and Maintenance Plan. Because equivalent requirements exist in the Part 373 Permit and associated documents, we respectfully request that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

SB Section 7.1, pages 15 - 16 state:

7.1: Summary of Proposed Remedy

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property that:

(1) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
(2) allows the use and development of the controlled property for industrial use as defined by Part 375-1.8 (g), although land use is subject to local zoning laws;
(3) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
(4) requires compliance with the Department approved Site Management Plan.

Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

This plan includes, but may not be limited to:

(1) an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
(2) a provision for further investigation to refine the nature and extent of contamination in areas defined as inaccessible SWMUs;
(3) maintaining site access controls and Department notification; and
(4) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
(5) A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
(6) monitoring of groundwater to assess the performance and effectiveness of the remedy;
(7) a schedule of monitoring and frequency of submittals to the Department;

b. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

(8) compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;

(9) maintaining site access controls and Department notification; and
(10) providing the Department access to the site and O&M records.

RESPONSE 8: See Response No. 7.

COMMENT 9: The Part 373 Permit Module IX.H - Reporting Requirements includes submission of an Annual Groundwater Corrective Action Status Report. The annual report addresses sampling, water quality results, remediation system operation, and assessment of the performance and effectiveness of the remediation systems and corrective measures. Therefore, we believe the SB requirement for periodic certification of institutional and engineering controls is already addressed and IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 9: A status report is not necessarily the same as a certification; however, it is possible to modify the report to include the required certification. The requirement for periodic certification will remain in the Statement of Basis.

COMMENT 10: The SB requirement for an environmental easement and control of property use is already addressed in the Part 373 Permit, Module II.B.10.c which states:

> Notification of Residual Contamination. If hazardous wastes or hazardous constituents in solid waste management units or areas of concern, or which have been released from a SWMU or AGC, will remain in or on the land, including groundwater, after the term of the permit has expired, the Commissioner may require the Permittee to record a notation in the deed to the facility property or in some other instrument which is normally examined during title search that will, in perpetuity, notify any potential purchaser of the property of the types, concentrations, and locations of such hazardous wastes or hazardous constituents. The Commissioner may require such notice as part of the corrective measures selection process.

Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 10: A notice in deed is not equivalent to an environmental easement and as this facility is a class 2 site it is required by Part 375. The requirement for an environmental easement will remain part of the Statement of Basis.

COMMENT 11: Until 2007, IBM was the nontransient noncommunity public water supplier (PWS) for the Hudson Valley Research Park facility and was regulated by the NYSDOH. In 2007, the site began receiving its potable water from a municipal supply. As a PWS, IBM had NYSDOH approval to use the carbon treated on-site production well water for potable and process systems. As specified in the Part 373 Permit, Module II.E.7.a - Corrective Measures Program, the carbon treatment for the on-site production wells must remain in place as part of the corrective actions. Therefore, the water for process systems will continue to be treated per NYSDOH approval and potable water will be provided by the municipality.

We believe that the SB requirement for DOH approval of groundwater use has already been addressed. Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 11: The requirement for DOH approval of groundwater use will remain in the Statement of Basis. If prior DOH approval to use on-site water is still in force, the requirement has been met and a new approval is not required. If the approval expires or is rescinded, or if the requirements / uses of the water change, then any new required approvals must be sought.

COMMENT 12: The elements of a Site Management Plan are already addressed in the Part 373 Permit, Modules II and IX, as well as the Groundwater Monitoring Plan and the Operation and Maintenance Plan required by the Part 373 Permit. IBM complies with all of these documents.

Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 12: See Response Nos. 7 and 10.

COMMENT 13: The Part 373 Permit, Module II, section B.4 - Guidance Documents and section B.9 – Compliance with Governmental Requirements requires the management of excavations per the Departments guidance documents and regulatory requirements in areas with remaining contaminants. Towards this end, work and sampling plans are submitted for Department approval, soil samples are collected, analyzed and compared to standards, and contained-in demonstrations are submitted for Department approval.

We believe that the SB requirement for an excavation plan is met by the current process. Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 13: See Response No. 7.

COMMENT 14: Maintenance of site access control is addressed in the Part 373 Permit, Section 6.1 - Security and NYSDEC notifications are addressed in the Part 373 Permit, Section 7 - Hazardous Waste Contingency Plan.

Section 6-1 includes requirements for security procedures and equipment, staffing and means to control entry to the site. Section 7 includes requirements for regulatory agency notification of emergencies.

Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 14: See Response No. 7.

COMMENT 15: The SB requirement for a Monitoring Plan is addressed in the Part 373 Permit, Module IX.C Groundwater Monitoring Plan and Module IX.D - Inability to Obtain Representative Samples.

As required in Module IX, IBM has a Groundwater Monitoring Plan.
The Groundwater Monitoring Plan includes sample locations, a schedule for monitoring well and remediation system water quality sample collection, sampling and analysis procedures, data management procedures, and well inspection and maintenance requirements. The sampling plan is based on the collection of data necessary to assess the performance and effectiveness of the remediation systems and the corrective measures.

The SB requirement for report submittal frequency is addressed in the Part 373 Permit, Module IX.H - Reporting Requirements. As required by the Part 373 Permit, IBM submits an Annual Groundwater Corrective Action Status Report.

Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 15: See Response No. 7.

COMMENT 16: The SB requirement for treatment system monitoring and appropriate O&M is addressed in the Part 373 Permit, Module II.E.8 - Corrective Measures Program Shut-Down Notification, Module II.E.10 - Corrective Measures Program Operation and Maintenance, Module IX.C – Groundwater Monitoring Plan, Module IX.E - Well Maintenance Plan and Module IX.H – Reporting Requirements.

As required in Module IX, IBM has a NYSDEC approved Groundwater Monitoring Plan and a NYSDEC approved Inspection and Maintenance Plan for Groundwater Recovery and Treatment Systems. These plans address treatment objectives, water quality sample collection, operation procedures and system inspection and maintenance.

Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 16: See Response No. 7.

COMMENT 17: The SB requirement for Department access to the site and records is addressed in the site's Part 373 Permit, General Conditions, Condition 1 which states:

> Facility Inspection by The Department. The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (The Department) to determine whether the permittee is complying with this permit and the ECL.

Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 17: See Response No. 7.

COMMENT 18: The Part 373 Permit, Module II.E.1.c states:

> The Permittee shall submit to the Commissioner for approval a RCRA Facility Investigation Work Plan that includes a Report on Current Conditions for the inaccessible SWMUs and/or AOCs identified in Module Condition E.1.b. and Table 11-2 no later than 180 calendar days after the date when the SWMUs and/or AOCs become accessible for such an investigation. Accessibility to the SWMUs and/or AOCs shall be considered achievable when the impediment to the RFI (e.g., building, utilities) is demolished, abandoned, or to be altered in a manner that would allow access to the SWMUs and/or AOCs.

Inaccessible SWMUs will be addressed by the Part 373 Permit, Module II.E.1.c investigation and remediation process in lieu of a Site Management Plan. Therefore, IBM respectfully requests that the requirement for a separate Site Management Plan, including Institutional and Engineering Controls, be removed from the SB.

RESPONSE 18: Yes, the remedial activities for the inaccessible SWMUs are addressed in the Part 373 Permit. However, these activities will also be required as part of the Site Management Plan. Please see Response No. 7.

COMMENT 19: SB Exhibit A, page 2, Groundwater section, paragraph 1 states:

> *Groundwater*
>
> *Chemical monitoring parameters for the program are presented in the 6 NYCRR Part 373 Permit Module II - Corrective Action Requirements, Appendix II-F. Six chemicals of concern have been detected in the groundwater: tetrachloroethene (PCE), trichloroethene (TCE), methylene chloride, cis-l,2-dichloroethylene (DCE), l,l,l-trichloroethane (TCA) and Freon TF (Trichlorotrifluoroethane). PCE is the principal contaminant.*

This statement is inconsistent with the current Part 373 Permit, Module II, section E.7.a, which states:

> Chemicals detected and confirmed are listed in Appendix II-F of this Permit Module. The chemicals which have been detected, confirmed and which exceed the Groundwater Cleanup Standard are listed in Module Condition E.7.c.(ii) Table 11-3. The "Key Compounds" are compounds with the highest concentrations and the greatest areal distribution. The "Key Compounds" will be used to determine plume boundaries. The "Key Compounds" are PCE, TCE, cis-l,2-DCE, VC, and FTF.

The current Part 373 Permit Appendix II-F lists the chemicals that have been detected and confirmed. The routine monitoring parameters are shown on Table 11-3 and are the chemicals from Appendix II-F that exceed the Groundwater Cleanup Standard.

The SB Exhibit A statement is also inconsistent with the SB Table 1 - Chemical(s) of Concern as the latter does not include methylene chloride and TCA.

We suggest the following as a revision in order to be consistent with the current Part 373 Permit:

> Chemical monitoring parameters for the program are presented in the 6 NYCRR Part 373 Permit Module II Table 11-3. Five chemicals of concern ("Key Compounds") have been detected in the groundwater: tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2dichloroethylene (DCE), 1,1,1-trichloroethane (TCA) and Freon TF (Trichlorotrifluoroethane). PCE is the principal contaminant.

Given the purpose of the SB is to determine final corrective measures under Part 373, IBM believes that the Department should make the recommended changes detailed above to the Draft SB. Doing so will accurately set out the final corrective measures and will not change the substantive requirements of the SB.

RESPONSE 19: The Department agrees. The Statement of Basis has been revised as follows:

"Chemical monitoring parameters for the program are presented in the 6 NYCRR Part 373 Permit Module II Table 11-3. Five chemicals of concern ("Key Compounds") have been detected in the groundwater: tetrachloroethene (PCE), trichloroethene (TCE), cis- 1,2dichloroethylene (DCE), 1,1,1-trichloroethane (TCA) and Freon TF (Trichlorotrifluoroethane). PCE is the principal contaminant."

ATTACHMENT B
Administrative Record

Administrative Record

IBM-East Fishkill
East Fishkill, Dutchess County
EPA ID No. NYD 000707901
Site No. 314054

RCRA Corrective Action Project

1. 6 NYCRR Part 373 Hazardous Waste Permit
2. RCRA Facility Investigation Final Report, B/322 Area of Concern (April 11, 1997)
3. RCRA Facility Investigation Final Report, B/330 Area of Concern (August 27, 1997)
4. Corrective Measures Study Task 1 and Voluntary Measures Report, B/322 Area of Concern (December 17, 1997)
5. RCRA Facility Investigation Final Report for Solid Waste Management Units at B/330, B/322, B/308-B/310, B/309-B/310, and the SEQ (February 6, 1998)
6. Final Design Report, B/322 Area of Concern (September 29, 1998)
7. B/322 Groundwater Containment System (October 15, 1999)
8. SEQ Design Report (October 15, 1999)
9. B/322 Technical Specifications and Record Drawings (March 3, 2000)
10. B/322 Performance Monitoring Report (June 29, 2000)
11. RCRA Corrective Measures Final Report, B/330 Area of Concern (March 12, 2001)
12. SEQ Record Drawings (February 12, 2002)
13. Final Design Report, B/330 Area of Concern (February 26, 2002)
14. SEQ Performance Monitoring Report (November 22, 2002)
15. B/330 Area of Concern Technical Specifications and Record Drawings (March 12, 2003)
16. B/330 Area of Concern Performance Monitoring Report (March 30, 2004)
17. Work Plan for Decontamination of West Complex Solid Waste Management Units (SWMUs) (February 15, 2006 and April 19, 2006)
18. Final Report for Decontamination of West Complex Solid Waste Management Units (SWMUs) (September 7, 2006)
19. Workplan: Field Observation of Alternate Groundwater Extraction Operations (April 19, 2006 and September 31, 2007)
20. Annual Groundwater Monitoring Reports (May 31, 1995 – May 31, 2012)

ATTACHMENT E-2
2026 Draft Statement of Basis

DRAFT Statement of Basis

FOR

Former IBM East Fishkill Facility

Town of East Fishkill, Dutchess County

NYSDEC Permit No.: 3-1328-00535/00002

DER Site No.: 314054

USEPA RCRA ID No.: NYD000707901

Prepared by:

Division of Environmental Remediation

New York State Department of Environmental Conservation

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Acronyms

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8. ***Proposed Final Corrective Measures***
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9. ***Post-Remedial Activities***
   - Groundwater Monitoring
   - Indoor Air Monitoring
   - Environmental Easement
10. ***Financial Assurance***

Appendix A- References

Figure 1- Site Boundary/Location Map

Figure 2-Facility/Lot Outline Map

ACRONYMS

1981 Order - Order on Consent signed by IBM in April 1981
1995 Part 373 Permit – 6 NYCRR Part 373 Hazardous Waste Management Permit issued by NYSDEC in September 1995
2011 Part 373 Permit – 6 NYCRR Part 373 Hazardous Waste Management Permit issued by NYSDEC in November 2011
2020 Order – Order on Consent signed by I.Park East Fishkill LLC, I.Park East Fishkill I, LLC, IBM and Global Foundries U.S. 2 LLC in April 2020

A
AOC - Administrative Order on Consent
AOC - Areas of Concern
AMSL - Above Mean Sea Level

B
B - B preceding a number indicates a Site building number. B/ was used historically to indicate the same information (Building)
bgs - below ground surface
BTOC - Below Top Of Casing

C
CA - Corrective Action
CAP - Corrective Action Program
CBI - Confidential Business Information
CFR - Code of Federal Regulations
CHG&E - Central Hudson Gas and Electric Corporation
CLCPA - Climate Leadership and Community Protection Act
CMI - Corrective Measures Implementation
CMS - Corrective Measures Study
CO - Consent Order
COCs - Constituents of Concerns
ConEdison - Consolidated Edison Company
CPP - Citizen Participation Plan
CPT - Comprehensive Performance Test
CQA - Construction Quality Assurance
CRRA - Community Risk and Resiliency Act

D
DAR - Division of Air Resources
DCE - dichloroethene
DEC - Department of Environmental Conservation
DER - Division of Environmental Remediation
Department - Department of Environmental Conservation

DIR(s) - Document(s) Incorporated by Reference
DMM - Division of Materials Management
DOH - NYS Department of Health
DOW - Division of Water
DR - Deed Restriction
DUSR - Data Usability Summary Report

E
EC - Emergency Coordinator
EC - Engineering Control
ECL - Environmental Conservation Law
ED - Emergency Director
EDS - Electronic Document Standards
EE - Environmental Easement
ELAP - Environmental Laboratory Approval Program

F
FER - Final Engineering Report
FS - Feasibility Study
FSB – Final Statement of Basis

G
GF – GlobalFoundries U.S. 2 LLC
GOL - General Obligations Law
GMP - Groundwater Monitoring Program
GTF – Groundwater Treatment Facility
GW - Groundwater
GWM - Groundwater Monitoring

H
HHERA - Multi-pathway Human Health and Ecological Risk Assessment
HHRA - Multi-pathway Human Health Risk Assessment
Hr – Hour
HVAC – Heating, Ventilation and Air Conditioning
HWM - Hazardous Waste Management
HWMU - Hazardous Waste Management Unit

I
IAWP – Intrusive Activities Work Plan
IBM – International Business Machines Corporation
IC - Institutional Control
ICM - Interim Corrective Measure
iPark - iPark collectively refers to any and all iPark East Fishkill entities unless a specific iPark entity is referenced in the text or other documents associated with this Permit
ISMP - Interim Site Management Plan

J

K

L
LDR - Land Disposal Restrictions
LQG - Large Quantity Generator

M
MCL - Maximum Contaminant Level
µg/L - micrograms per liter, in water
mg/kg - milligrams per kilogram, in soil
MNA - Monitored Natural Attenuation
MSL - Mean Sea Level
MTBE - Methyl Tert-Butyl Ether

N
NAPL – Non-Aqueous Phase Liquid
NFA - No Further Action
NFPA - National Fire Protection Association
NYCRR - New York State Codes, Rules & Regulations
NYS – New York State
NYSDEC - New York State Department of Environmental Conservation
NYSDOH - New York State Department of Health

O
O&M - Operation & Maintenance
OGC - Office of General Counsel
OM&M - Operation, Maintenance & Monitoring
onsemi - Semiconductor Components Industries, LLC (dba onsemi)
OSHA - Occupational Safety & Health Administration
OU - Operating Unit
OU - Operable Unit (under Corrective Action or 6NYCRR Part 375)

P
P&ID - Process and Instrumentation Drawing/Diagram
PCBs - Polychlorinated Biphenyls
PCE - Tetrachloroethene
PDF - Portable Document Format
PFAS - Per- and Polyfluoroalkyl Substance(s)
PFD – Process Flow Diagram
PHC - Principal Hazardous Constituents
PMP – Performance Monitoring Plan
POC - Point of Compliance

POHC - Principal Organic Hazardous Constituent
PPB - Parts per billion
PPM - Parts per million
PR - Preliminary Review
PR/VSI - Preliminary Review/Visual Site Inspection
PRR - Periodic Review Report

Q
QAPP - Quality Assurance Project Plan
QA/QC - Quality Assurance/Quality Control

R
RA - Remedial Action
RCRA - Resource Conservation & Recovery Act
RD - Remedial Design
RD/RA - Remedial Design/Remedial Action
RFA - RCRA Facility Assessment
RFI - RCRA Facility Investigation
RI - Remedial Investigation
ROD - Record of Decision
RP - Remedial Plan
RP - Responsible Party
RP – Remedial Party
RPL - Real Property Law
RSO - Remedial System Optimization
RTC(s) - Response(s) to TNOIA Comments

S
SAP – Sampling and Analysis Plan
SAPA - State Administrative Procedures Act
SB - Statement of Basis
SC - Site Characterization
SCADA - Supervisory Control And Data Acquisition
SCG - Standard, Criteria or Guidance
SCOs - Soil Cleanup Objectives
SEQR - State Environmental Quality Review
SHPC - Sanborn, Head Engineering & Geology, P.C.
SLERA - Screening Level Ecological Risk Assessment
SM - Site Management
SMP - Site Management Plan
SPDES - State Pollutant Discharge Elimination System
SSD – Sub-slab Depressurization
SSDS - Sub Slab Depressurization System
SV - Sampling Visit
SV – Soil Vapor

SVE – Soil Vapor Extraction
SVI – Soil Vapor Intrusion
SVOCs - Semi-Volatile Organic Compounds
SWMU - Solid Waste Management Unit

T
TCE - Trichloroethene
TOGS - NYSDEC's Division of Water's Technical and Operational Guidance Series
TNOIA(s) - Technical Notice(s) of Incomplete Application
TSDF - Treatment, Storage & Disposal Facility

U
UIC - Underground Injection Control
UL - Underwriters Laboratories
USDA - United States Department of Agriculture
USDOT - United States Department of Transportation
USEPA - United States Environmental Protection Agency
UV – Ultraviolet

V
VC – Vinyl Chloride
VI – Vapor Intrusion
VOCs - Volatile Organic Compounds
VSI - Visual Site Inspection

W
WAP - Waste Analysis Plan

X

Y

Z

1. *INTRODUCTION*

As a result of past waste management operations, a variety of chemicals used at the Former IBM (International Business Machines) East Fishkill Facility (Former IBM East Fishkill Facility or Facility or Site) located in the Town of East Fishkill in Dutchess County, New York have impacted various environmental media at the Facility. The New York State Department of Environmental Conservation (NYSDEC) has determined that hazardous wastes or hazardous constituents were released into the environment at the Former IBM East Fishkill Facility. As such, the NYSDEC is proposing the implementation of RCRA Final Corrective Measures to remediate the contaminated media.

This Statement of Basis (SB) includes a summary of the site investigations and Interim Corrective Measures which the Former IBM East Fishkill Facility performed, the Corrective Measures which were evaluated as potential remedies, and the proposed Final Corrective Measures for addressing the contamination at the Site. In addition, the Statement of Basis requests public review and comment on the proposed Final Corrective Measures.

The purpose of this SB is to describe the proposed Final Corrective Measures for this Facility and to provide an opportunity for the public to be informed of and participate in the development of the remedial program(s) for the Facility. It contains a summary of the contaminant investigations which were performed at the Site. It also describes the Final Corrective Measures which the NYSDEC proposes to implement. After the public comment period has ended and all comments have been reviewed and considered, the NYSDEC will either implement the proposed Final Corrective Measures or modify the Final Corrective Measures for the facility based on the comments received. Implementation of the Final Corrective Measures will be accomplished through issuance of the renewed Part 373 Hazardous Waste Management Permit.

2. *SCOPE OF DOCUMENT*

This document:

- Solicits public review and comment on the proposed remedies;
- Describes the contamination found at the Former IBM East Fishkill Facility;
- Describes corrective action activities already conducted at the Facility;
- Describes the remedial goals for contamination at the Facility;
- Identifies the proposed corrective action remedies for the impacted medias;
- Provides a brief overview of the regulatory requirements, site history and site investigations which were conducted at the facility.

3. *PUBLIC COMMENT OPPORTUNITY*

The NYSDEC has selected the proposed Final Corrective Measures. The proposed corrective measures were selected because the NYSDEC believes that when completed, the remedial activities will be protective of human health and the environment. Changes to the proposed Final Corrective Measures, or the selection of an alternative remedy may be made if public comments or additional data indicate that such changes would result in a more appropriate solution. The NYSDEC will select the Final Corrective Measures for the Former IBM East Fishkill Facility after the public comment period has ended and comments have been reviewed and considered.

We stress the importance of public comment, and encourage input on all alternative's studies, including options not previously studied. The NYSDEC has set a public comment period from March 25, 2026 to May 11,2026.

Document Availability

This document summarizes information that can be found in greater detail in the administrative record for the Facility. The administrative record contains many reports, including investigations and sampling results which the NYSDEC used to select the proposed final corrective measures. All reports referenced in this Statement of Basis (SB) are available for review. The NYSDEC encourages the public to review these documents in order to gain a more comprehensive understanding of the nature and extent of contamination at the Former IBM East Fishkill Facility and the corrective measures that have been proposed to address the contamination.

Copies of the Reports, Fact Sheet, Public Notice and the draft Part 373 Hazardous Waste Management Permit for this facility are available for review at the following repository(ies):

onsemi East Fishkill
2070 Route 52
Hopewell Junction, NY 12533

IBM
https://ibm.box.com/v/EFKrepository

iPark
i.Park East Fishkill LLC (PUBLIC ACCESS) - Dropbox

Access to project documents can also be found online through the DECinfo Locator at:
https://extapps.dec.ny.gov/data/DecDocs/314054/

Facility location information is also available on DECinfo Locator at:
https://gisservices.dec.ny.gov/gis/dil/

Written Comments

All written comments will be considered in making the final decision for remedies that will address contamination at the Former IBM East Fishkill Facility. Upon approval of the Final Corrective Measures, a response to any comments submitted will be issued which will identify any changes from the proposed version of this Statement of Basis. Such Response will describe the comment received and provide an appropriate response to the issues raised. A notice of the final Statement of Basis as well as the response to comments will be sent to each person who submits written comments or who requests such notice.

Comments must be sent to NYSDEC's Region 3 Office, 21 South Putt Corners Rd, New Paltz, NY 12561. In lieu of, or in addition to the submission of written comments, any interested person may request a public hearing. Any request for a public hearing, must be in writing and must state the nature of the issues proposed to be raised in the hearing. All comments must be submitted in writing no later than May 11, 2026.

4. *BACKGROUND*

Full Site Description and History

The Former IBM East Fishkill Facility is an approximately 460-acre area located in the Town of East Fishkill, Dutchess County, New York bounded by New York State Route 52 to the north, Interstate 84 (I-84) to the south, iPark Boulevard (County Road 27) to the east, and high voltage lines to the west owned by Consolidated Edison Company (ConEdison) of New York, a Central Hudson Gas and Electric Corporation (CHG&E) utility corridor and the John Jay High School.

The Site is currently a permitted Corrective Action facility (Permit) under Title 6 of the New York Codes, Rules & Regulations (6 NYCRR) Part 373 as well as in the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 314054, which is administered by the New York State Department of Environmental Conservation (NYSDEC).

Development of the Site by International Business Machines Corporation (IBM) began in 1963 with the construction of office and manufacturing buildings for research, development and manufacturing of semiconductors, semiconductor packaging, and electronic computing equipment. The typical chemicals used in the manufacturing process here were chlorinated solvents.

A groundwater protection program was initiated by IBM at the site in 1978. The initial activities included installation and sampling of groundwater monitoring wells. Upon the discovery of the presence of contaminated groundwater at the Site, IBM commenced a voluntary investigation of the Site in an effort to establish the source and to determine the concentration and location of the contamination. IBM also took voluntary remedial actions to remove the contamination, extract and treat the contaminated groundwater, and monitor

the groundwater within and outside the boundaries of the Site (April 1981 Order on Consent between IBM and NYSDEC).

Per the 1981 Order, IBM developed a program to monitor, evaluate and remediate contaminated groundwater. Beginning in early 1992, under the authority of the Resource Conservation and Recovery Act (RCRA) Corrective Action Program, NYSDEC received and reviewed documents submitted by IBM to fulfill RCRA Facility Investigation reporting requirements for contaminated groundwater in five areas of the Facility, designated as Area A, Area B, Area D, Deep Bedrock, and the Southeast Quadrant. In September 1995, NYSDEC issued IBM a 6 NYCRR Part 373 Hazardous Waste Management Permit (1995 Permit), including Modules III and IX which addressed Corrective Action. The permit indicated that IBM's obligations under the 1981 Order with NYSDEC were terminated by the 1995 Part 373 Permit. Seven Areas of Concern (AOCs) were identified in the 1995 Part 373 Permit, designated as Area A, Area B, Area C, Area D, Southeast Quadrant, Building 322 and the Deep Bedrock Aquifer. In November 2011, the 6 NYCRR Part 373 Permit was renewed (2011 Permit). The 2011 Permit addressed the storage and management of hazardous waste containers and the operation and maintenance of final Corrective Measures under a Statement of Basis (SB) for contaminated groundwater as well as requiring financial assurance for closure and corrective action. The B315 Catch Basin and B330 AOCs were designated in the 2011 Part 373 Permit in addition to the seven AOCs identified in the 1995 Part 373 Permit.

Since issuance of the 2011 Permit, the storage of hazardous waste containers was discontinued under Part 373/RCRA Closure and IBM has sold the Facility to other entities. The following paragraphs contain information regarding the sale(s) of parcel(s).

On July 1, 2015, the Site was acquired by GLOBAL-FOUNDRIES U.S. 2 LLC (GF) as two parcels: the larger of the two parcels consisted of the approximately 460 acres East Campus identified at the time as Tax Grid #05-6356-04-980140 and the smaller, adjacent parcel identified as Tax Grid #05-6456-03-116374.

In May 2017, GF subdivided the Site into eight Lots consisting of a total of approximately 433 acres as shown on **Plate 1-2 of Attachment B** of the Part 373 Permit (Parcel, Lots, Condominium and Condominium Unit Location Map). In addition, there are approximately 27.5 acres of roads within the Facility boundary. On September 1, 2017, iPark East Fishkill LLC and iPark East Fishkill I LLC, purchased Lots 2, 3, 4, 6, 7, and 8. Thereafter, iPark leased portions of the Site to industrial and commercial entities. Lots 1 and 5 remained GF property. On September 1, 2017, the Part 373 Permit was modified to reflect ownership transitions to include iPark East Fishkill I LLC for Lots 2 and 3; iPark East Fishkill LLC for Lots 4, 6, 7 and 8; and GF for Lots 1 and 5.

As of August 31, 2017, and as recorded with the Dutchess County Clerk on November 4, 2020, iPark East Fishkill I, LLC established a Plan of Condominium Ownership for Lots 2 and 3 with the name of The Hopewell Condominium I. The Plan for Hopewell

Condominium I established eight units, each with an associated tax parcel number. One unit, Unit 7GL, was a ground lease between GF and iPark East Fishkill I, LLC.

As of March 29, 2018, and as recorded with the Dutchess County Clerk on November 18, 2020, iPark East Fishkill LLC established a Plan of Condominium Ownership for Lot 7 with the name of The Hopewell Condominium II. The Plan for Hopewell Condominium II established nine units, each with an associated tax parcel number.

On January 1, 2023, Semiconductor Components Industries LLC (dba onsemi) acquired the GF East Fishkill facility, became owner of Lots 1 and 5 and the 2011 Permit was transferred from GF to onsemi.

In total, as of the submittal date of this 6 NYCRR Part 373 Permit Renewal Application, the Site consists of twenty-two tax parcels and seven fee roads that bisect the property (See **Plate 1-2** (Site Parcel, Lots, Condominium and Condominium Unit Location Map) and **Attachment A-1** (Site Ownership) within **Attachment B** of the Part 373 Permit).

The owner(s) of the site parcel(s) as of the submittal date of this 6 NYCRR Part 373 Permit Renewal Application are as described in **Table 1-1 (Site Ownership) of the Permit.**

The operator(s) responsible for the remediation of site parcel(s) as of the submittal date, May 5, 2021 (and modified on August 16, 2024), of this 6 NYCRR Part 373 Permit Renewal Application are:

- IBM Corporation (the Site, with the exception of the following iPark responsibilities for vapor intrusion mitigation systems in commercial use space as noted below).
- iPark East Fishkill 84 LLC (VE-32 sub-slab depressurization system (SSDS), B330C, Lot 7, Hopewell Condo II, Unit# 1B)
- iPark East Fishkill B338 LLC (VE-30 SSDS (B338) and VE-31 SSDS (B339), Lot 7, Hopewell Condo II, Unit # 5; the HVAC engineering control associated with a portion of B330C, Hopewell Condo II, Unit# 1B; the HVAC (presumptive) engineering controls associated with B308, Lot 2A, Hopewell Condo Unit I, Unit #3 and B330L, Lot 7, Hopewell Condo Unit II, Unit #1B)
- iPark East Fishkill LLC [the HVAC (presumptive) engineering control associated with B334, Lot 7 Hopewell Condo II, Unit #2];
- iPark East Fishkill I LLC [the HVAC engineering control associated with a portion of B310 Lot 2A, Hopewell Condo I, Unit #4]
- Onsemi [the HVAC (presumptive) engineering control associated with B300, a portion of B316, B317, B320B, B321, B322, B323, B323A, B386 and; the B320B Passive sub-slab depressurization (SSD) system (all located on Lot 5)].

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GF, iPark East Fishkill LLC, and iPark East Fishkill I LLC are listed as facility owners under the current NYSDEC Part 373 Permit, with IBM maintaining responsibility for Groundwater Corrective Action. IBM is currently conducting a Corrective Measures Program to monitor, collect and treat contaminated groundwater at the Site under Modules II and IX of the Site's Part 373 Permit. The Part 373 Permit requires IBM to investigate and remediate contaminated media at the Site. The current Corrective Measures Program is addressing the remedial work in the following Areas of Concern (AOCs): Area A, Building 330 (B330) Area, and the deeper bedrock aquifer **(Figure 1-2** (Site Layout and Operable Units Map) within **Attachment B** of the Part 373 Permit).

After completion of the remedial work, some of the contamination was left at this Site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Interim Site Management Plan (ISMP) (**Attachment G** of the Part 373 Permit) was prepared to manage remaining contamination.

Lot 8 has been investigated and NYSDEC has determined that Lot 8 is able to be released from the Part 373 permitted Facility and will be managed under an Environmental Easement and Site Management Plan by iPark. Groundwater monitoring by IBM on Lot 8 is required as part of the overall groundwater monitoring (GWM) for the facility.

In 2021, Lots 2 and 3 were divided into Lots 2A, 3A, and Lot 9. Rolling Frito-Lay Sales, LP purchased Lot 9 on December 17, 2021.-Lot 9 has been investigated and the NYSDEC has determined that Lot 9 is able to be released from the Part 373 permitted facility and will be managed under an Environmental Easement and Site Management Plan by Frito-Lay. Groundwater monitoring by IBM on Lot 9 is required as part of the overall GWM for the Facility. Lots 2A and 3A remain under iPark ownership and as part of the Part 373 permitted Facility.

Regulatory Overview

On January 23, 1981, the New York State Department of Environmental Conservation (NYSDEC) placed the IBM East Fishkill Facility on the registry of Inactive Hazardous Waste Disposal Sites. Pursuant to Section 27-1313 of the Environmental Conservation Law, in April 1981, IBM signed an Order on Consent (1981 Order) with NYSDEC. The 1981 Order stipulated that IBM would:

- Contain, collect, and treat contaminated groundwater;
- Implement remedial action programs;
- Establish a groundwater monitoring program.

In June 1986, three provisions were added to the 1981 Order on Consent to supplement and clarify the obligations of IBM. These provisions further stipulated that NYSDEC retained the right to obtain for the purpose of comparative analysis split samples, IBM

would submit periodic monitoring reports, and IBM would notify the NYSDEC if there was a significant change in water quality at the perimeter of the Site or in IBM's production wells within the Site.

Subsequent to the 1981 Order, IBM developed a program to monitor, evaluate and remediate contaminated groundwater. Beginning in early 1992, under the authority of the Resource Conservation and Recovery Act (RCRA) Corrective Action Program, NYSDEC reviewed documents submitted by IBM to fulfill RCRA Facility Investigation reporting requirements for contaminated groundwater in five areas of the Property, designated as Area A, Area B, Area D, Deep Bedrock and the Southeast Quadrant. In a letter dated March 10, 1993, NYSDEC approved the following four groundwater collection and treatment systems as RCRA Interim Corrective Measures:

- The Area A Groundwater Collection and Treatment System
- The Area B Groundwater Collection and Treatment System
- The Area D Groundwater Collection and Treatment System
- The Central Carbon system (treating groundwater withdrawals from deep bedrock production wells)

In September 1995, NYSDEC issued IBM a 6 NYCRR Part 373 Hazardous Waste Management Permit (1995 Part 373 Permit), including Modules III and IX which address Corrective Action. The permit indicated that IBM's obligations under the 1981 Order with NYSDEC were terminated by the 1995 Part 373 Permit. Seven Areas of Concern (AOCs) were identified in the 1995 Part 373 Permit, designated as Area A, Area B, Area C, Area D, Southeast Quadrant, Building 322 and the Deep Bedrock Aquifer.

In July 2002, a catch basin located on the north side of B315 was identified as AOC E. Following sampling and subsequent excavation with the catch basin being removed, NYSDEC approved the remediation of this area with No Further Action required for AOC E.

As an outcome of IBM's 2009 RCRA Facility Investigation Work Plan and subsequent assessments that focused on indoor air quality, vapor intrusion mitigation measures have been implemented for certain Site buildings. The vapor intrusion mitigation measures include sub-slab depressurization systems (SSDSs) and heating, ventilation, and air conditioning (HVAC) systems. In addition, a passive sub-slab venting system is installed beneath a portion of one building (B320B) as a vapor intrusion mitigation measure. Further information on the types, locations, and operators of the vapor intrusion mitigation systems is provided in the Operable Units and Engineering Controls Table provided in Attachment A-2 of the Part 373 Permit Renewal Application Update (August 16, 2024).

In November 2011, the 6NYCRR Part 373 Permit was renewed (2011 Part 373 Permit). The 2011 Part 373 Permit addresses: (1) the storage and management of hazardous waste containers; (2) the operation and maintenance of Interim Corrective Measures (ICMs) for contaminated groundwater; (3) the monitoring and maintenance of the groundwater monitoring well network used to assess the performance of the interim corrective measures; and (4) financial assurance for closure and corrective action. The B315 Catch Basin, annotated as removed, and B330 AOCs were designated in the 2011 Part 373 Permit in addition to the seven AOCs identified in the 1995 Part 373 Permit.

As of September 2013, eight AOCs had been identified at the Site and designated as Operable Units (OUs): the Bedrock Remediation Area (OU2); Area B (OU3); Area D (OU4); Area A (OU5); Area C (OU6); B322 AOC (OU7); B330C AOC (OU8) and the SEQ Area (OU9).

In February 2015, closure of the permitted hazardous waste storage rooms in Building 309 was initiated. This process was completed in April 2015 with submission of closure certification documentation to NYSDEC, and closure certification acceptance by NYSDEC on May 21, 2015. On May 28, 2015, the 2011 Part 373 Permit was modified pursuant to 6NYCRR 373-1.7 (c)(15); the modification transitioned the Permit to Corrective Action only. There are no longer any permitted hazardous waste management units at the Facility.

In June 2015, IBM submitted requests to perform shutdown testing at the Area B groundwater extraction well GW-628; the groundwater recovery operations at GW-032B in Area D; the SEQ Area groundwater extraction well PW-23, and at three extraction wells associated with B322 AOC (GW-612, GW-613 and GW-617). In July 2015, following NYSDEC approval, the wells associated with Area B, Area D and the SEQ were shut down for a period of two years. In July 2015, NYSDEC approved the request for shutdown and requested an evaluation of remedial alternatives in the B322 AOC source area wells (wells (GW-627 and GW-635), discussed in more detail in Section 5. As part of the planned shutdown test, on August 1, 2015, the three extraction wells (GW-612, GW-613 and GW-617) were shutdown. Following completion of the testing, IBM submitted reports summarizing the shutdown test results for the four systems. In July 2018, NYSDEC approved the permanent shutdown of the groundwater remediation and extraction at Area B, Area D the SEQ Area and B322 AOCs.

In 2017 and 2018, IBM designed and constructed three new groundwater treatment facilities (GTF) to replace the Central Carbon treatment system for the extraction and treatment of the bedrock aquifer underlying the site (Bedrock Remediation Area (OU2)). During the first quarter of 2019, treatment operations shifted to the use of the newly constructed standalone GTFs. The groundwater treatment facilities meet the requirements for the RCRA Wastewater treatment Unit exemption and are not subject to RCRA permitting.

Following IBM's request to conduct a shutdown test at B322 AOC, NYSDEC approved the shutdown request and requested an evaluation of remedial alternatives in the B322 AOC source area. In November 2016, IBM informed NYSDEC that the future of B322 was uncertain and that the majority of the building may be demolished. Following the demolition work, completed in July 2019, IBM conducted an RFI. NYSDEC approved the B322 RFI in July 2020 with No Further Action required.

On May 1, 2020, iPark East Fishkill LLC, iPark East Fishkill I LLC, IBM and GlobalFoundries entered an Order on Consent, Case No.CO-1-20181004 (Consent Order) with the NYSDEC for violation of the 2011 Part 373 Permit and violation of the Environmental Conservation Law (ECL) Article 27, Title 9 as established in 6NYCRR 373-1.6(a)(1). Respondent iPark (collectively iPark East Fishkill LLC, iPark East Fishkill I LLC) is the sole owner of the portion of the property that was the subject of noncompliance. Respondent iPark leased a property within its portion of the Site to Sloop Brewing Co., which was operating as a commercial business activity on a Site only authorized to have industrial activities. As such, Respondent IBM and Respondent GlobalFoundries were not the cause of the violations. Pursuant to the Consent Order, Respondent iPark was ordered to, in accordance with work plan(s) approved by NYSDEC, design, install, operate, and maintain active sub-slab depressurization systems (SSDSs) on the ground floor of all indoor areas within the Commercial Use Area (Use Modification Parcel).

On May 4, 2021, the Permittees submitted a timely Part 373 Permit Renewal Application. Based on this submittal, the conditions of the 2011 Permit have been extended pending issuance of a Renewal Permit. A draft of this Renewal Permit and a draft Statement of Basis for proposed Final Remedy Selections for corrective action activities at Building 335, Indoor Air, Lot 8 and Lot 9, are being public noticed in conjunction with issuance of this Executive Summary/Fact Sheet. Lot 8 and 9, will be removed from the Facility boundary at renewal of this permit.

5. *RCRA FACILITY INVESTIGATIONS (RFIs)*

Beginning in 1978, a groundwater protection program was initiated by IBM at the Facility. The initial activities included installation and sampling of groundwater monitoring wells. Upon the discovery of the presence of contaminated groundwater, IBM commenced a voluntary investigation of the Facility to establish the source and to determine the concentration and location of the contamination. IBM also took voluntary remedial actions to remove the contamination, extract and treat contaminated groundwater, and monitor the groundwater within and outside the boundaries of the Facility (1981 Order).

Subsequent to the 1981 Order, IBM developed a program to monitor, evaluate and remediate contaminated groundwater. Beginning in early 1992, under the authority of the Resource Conservation and Recovery Act (RCRA) Corrective Action Program, NYSDEC reviewed documents submitted by IBM to fulfill RCRA Facility Investigation (RFI)

reporting requirements for contaminated groundwater in five areas of the Property, designated as Area A, Area B, Area D, Deep Bedrock and the Southeast Quadrant.

IBM conducted Corrective Action activities with NYSDEC oversight from 1981-1995 under the 1981 Order on Consent and from 1995 to present under a 6 NYCRR Part 373 permit. In a letter dated April 7, 2008, the Departments required that IBM perform a RFI related to the presence of VOCs in indoor air at the Site. IBM had self-initiated indoor air quality sampling in September 2007 (prior to receipt of the Departments' letter) and detected VOCs in indoor air, leading to establishment of engineering controls and Interim Corrective Measures (ICMs) around the vapor intrusion/indoor air pathway as further described below.

Based on the results of the investigations conducted by IBM, the Interim Corrective Measures (ICMs) have proven to be effective in controlling the extent of the groundwater plume. Further, the ICMs have prevented the contamination from migrating off-site, reducing the concentration of contaminants in the groundwater via groundwater pump and treat systems. More recently, RFIs were conducted at the following areas of the Facility and the information on these areas and their RFIs is presented below.

B322 AOC (OU7) Source Area Evaluation

As described in Section 4, following IBM's request to conduct a shutdown test at three extraction wells associated with B322 AOC (GW-612, GW-613 and GW-617), NYSDEC approved the shutdown request and requested an evaluation of remedial alternatives in the B322 AOC source area wells (wells (GW-627 and GW-635). In November 2016, IBM informed NYSDEC that the future of B322 was uncertain and that the majority of the building may be demolished. Following the demolition work, completed in July 2019, IBM completed an RFI. Results of the investigation did not identify residual VOC source areas. All soil sample detections were at least an order of magnitude below New York State Part 375.6-8 Soil Cleanup Objectives for commercial use. Groundwater grab sample results were consistent with previous sampling. NYSDEC approved the B322 RFI in July 2020 with No Further Action required.

Building 335

IBM conducted a Vapor Intrusion (VI) investigation in Building 335 (B335) in 2019 in response to iPark's intent to market B335 for lease. B335 formerly housed IBM's Tetrachloroethene (PCE) recycling plant for the Site and was unoccupied at the time of the VI investigation. The work included indoor air grab sampling, passive diffusion sampling, building pressure testing, indoor air screening, sub-slab vapor sampling and mass flux testing. The results of the VI investigation indicated that three transport mechanisms are likely contributing to the PCE presence in indoor air: off gassing of PCE from the building slab, vapor intrusion through the slab by diffusion, and vapor intrusion through floor cracks and other advective pathways. Based on these results, it was concluded that a multi-faceted mitigation approach would likely be needed to adequately lower PCE concentrations in indoor air.

The B335 RFI was conducted in 2019 to 2020, which included a subsurface investigation within and surrounding B335 consisting of shallow soil vapor screening, high resolution soil and upper bedrock sampling and analysis, installation of multilevel (CMT®) implants, and groundwater and soil vapor sampling from the CMT® implants.

The aggregated data pointed to two main source areas that contributed to PCE in the subsurface of the B335 Area: (1) B335 and just to its north, and (2) the closed underground tank area located in the B330D south loading dock area. Hydrogeologic analysis of the data suggested that mass discharge into bedrock from the B335 Area is negligible compared to mass removal from PW-25 and the site remedial program overall. In addition, a qualitative exposure assessment indicated that soil vapor, soil/rock, and groundwater in B335 source areas do not present a risk under current site conditions due to existing site controls. However, typical vapor intrusion engineering controls may not be sufficient to reduce PCE concentrations in indoor air due to the off gassing of PCE from the concrete building materials and other VI pathways.

At the request of NYSDEC, IBM performed a focused Corrective Measures Study (CMS) for the B335 Area. The focused CMS report concluded that the presumptive remedy of demolition of B335, continued operation of PW-25 for mass removal, and institutional controls in the B335 Area would be retained as the Final Corrective Measure for the B335 Area.

Indoor Air

During the second half of 2007, IBM conducted a program of indoor air sampling to support an energy cost reduction assessment focused on reduction of fresh makeup air into buildings. Results of the sampling indicated the presence of low concentrations of PCE in Building 310 and 330C, and relatively higher PCE concentrations in portions of Building 330D. As a result of those findings, IBM initiated an investigation of the source(s) of the PCE in B330D indoor air. The investigation included a review of relevant historical records and reports, indoor air screening and sampling, review of the Heating, Ventilation and Air Conditioning (HVAC) systems, sampling of sub-slab vapor, and testing of sub-slab vapor extraction.

In April 2008 (NYSDEC to IBM, April 7, 2008), while the investigation of B330D was ongoing, the NYSDEC and NYSDOH requested that IBM commence a vapor intrusion (VI) investigation of buildings within the Site; this request was part of a state-wide initiative focused on legacy sites where corrective measures have been implemented. In October 2008, IBM received concurrence from NYSDEC that the vapor intrusion assessment be performed using a focused scientific approach that prioritized buildings for VI assessment based upon location, use, and indoor air VOC concentrations.

In June 2009, IBM submitted a VI RFI work plan to identify and evaluate sources of VOC vapors in occupied buildings (*Work Plan RCRA Facility Investigation (RFI) VOC*

Source Assessment (Sanborn Head Engineering, PC (SHPC), June 15, 2009). The work plan included: a summary of the hydrogeology and VOC distribution in groundwater within the Site; a discussion of the site conceptual model and potential issues related to sub-slab VOC vapors; and a summary of building use, HVAC systems, and indoor air data for 29 buildings.

The information for these 29 buildings was reviewed and each building was classified as requiring either a "source investigation" work scope, a "confirmatory sampling" work scope, or no further assessment. The scoping considerations included human occupancy, historical solvent use and/or storage release history, probable or confirmed vadose zone contamination, and historical indoor air data. Sampling, investigations, and testing were proposed in 12 of 29 buildings within the Site. Building 310 and 330D were proposed for a source investigation assessment, while ten (10) buildings (B300, B308, B309, B320B, B322, B323, B330C, B334, B338, and B386) were proposed for confirmatory sampling. Assessment methods proposed in the work plan included passive diffusion samplers, sorbent tube samplers, SUMMA® -type samplers, sub-slab vapor sampling, and sampling of porous building materials.

Confirmatory indoor air sampling was subsequently performed in the ten (10) proposed buildings.

Source investigations were subsequently completed in B310 and B330D. The work included phased investigations of the possible source(s) for VOCs in indoor air, investigation of the HVAC systems, and sampling of sub-slab vapor.

The results of the confirmatory sampling and source investigations were used to assess whether the buildings required VI engineering controls (ECs) to reduce VOC concentrations in indoor air. The implemented ECs rely upon either active or passive components. Active ECs comprise active mechanical measures to maintain appropriate indoor air quality. Active ECs implemented include sub-slab depressurization (SSD) and HVAC systems. Passive ECs do not employ mechanical systems. Passive ECs implemented include a sub slab passive venting system which is not connected to an electrically powered fan in building B320B.

Additionally, a Performance Monitoring Plan for Vapor Intrusion Engineering Controls (PMP) (SHPC, May 2021) was submitted to the Departments to establish VI EC conditions which would result in acceptable indoor air quality (IAQ) and ensure long-term effectiveness of the VI ECs in certain buildings. The PMP is also intended to provide a procedure for determining whether an IAQ assessment is necessary prior to occupying a vacant space in buildings within the central portion of the Site. As documented in the PMP, and based on the results of the confirmatory sampling and source investigations, the buildings were grouped into the following categories:

Category 1: Sub slab depressurization (SSD) implemented for full building footprint. Buildings within this category include B330D, B338, B339, and B308/310 Linkway
Category 2: SSD implemented for partial building footprint, with HVAC system controls for remainder. Buildings within this category include B310 and B330C.
Category 3: HVAC systems serve as VI engineering controls for entire building footprint (no site buildings are currently in this category).
Category 4: HVAC systems presumed to serve as VI engineering controls under normal operating conditions. Buildings within this category include B300, B308, B316, B317, B320B, B321, B322, B323, B323A, B330L, B334, and B386.

The first SSD system in B330D (VE-1) was put into operation on October 6, 2010, and covered the former 80K area in the north portion of the building (SHPC, December 2011). Two interim SSD systems (VE-5 and VE-6) were put into operation in February 2017. VE-5 operated until June 2020, and VE-6 operated until July 2020. Both systems were shut down upon the expansion of VE-1 and the start-up of a second SSD system (VE-10), which was put into operation on August 27, 2020 (SHPC, November 2020). The combined VE-1 and VE-10 SSD systems cover the full building footprint of B330D. The expansion of VE-1 and start-ups of VE-1 and VE-10 were documented in reports submitted and approved by the Departments.

The first SSD system in B310 (VE-2) was put into operation on February 2, 2012, and covered the central portion of the building (SHPC, May 2013). SSD System VE-9 began operating in B310 on June 16, 2020 (SHPC, October 2020a). In October 2020, the VE-2 and VE-9 SSD systems were combined by shutting down VE-2 and allowing vapor from the VE-2 extraction ports to flow to the VE-9 blower through interconnected piping. The start-ups and modifications of VE-2 and VE-9 were documented in reports submitted and approved by the Departments.

While not a VI EC, an exterior soil vapor extraction (SVE) system (VE-3) was installed during the second quarter of 2015 to address the presence of VOCs in soil vapor located in Area A. VE-3 is operated seasonally (spring to fall, to protect against potential excessive generation of condensation and freezing in exposed pipes) as an extended pilot system for VOC source reduction. The start-up of VE-3 was documented in a report submitted and approved by the Departments (SHPC, February 2016a)

The first SSD system in B330C (VE-4) was put into operation from March 2016 to June 2020 as a temporary system. Two additional SSD systems (VE-7 and VE-8) were installed and put into operation on April 30, 2019 and June 11, 2020, respectively, to cover the southern and western areas of B330C. VE-7 and VE-8 replaced and expanded upon the area addressed by the former VE-4, which was shut down on June 11, 2020 upon the startup

of VE-8. The start-ups of VE-7 (SHPC, October 2019) and VE-8 (SHPC, October 2020b) were documented in reports submitted and approved by the Departments.

In September and October 2015, an SSD system (VE-11) was constructed within the linkway connecting B308 and B310. The system was put into operation on October 7, 2015, which was documented in a report (SHPC, February 2016b) submitted and approved by the Departments. In 2018, the linkway was walled-off at the entrance to B308; thus, the linkway is no longer in use.

Although B320B was considered a category 4 building because changes were not required to HVAC to achieve acceptable IAQ (SHPC, August 2019), a passive sub slab venting system was installed beneath a portion of the building in accordance with a figure titled "Sub-slab Depressurization System Plan" prepared by D&B Engineers and Architects, P.C. (D&B) and dated October 2020, which was approved by NYSDEC in a November 6, 2020 email to D&B.

After establishment of the Commercial Use Area and per the 2021 Consent Order, iPark performed indoor air testing and installed SSD systems in B338 (VE-30), B339 (VE-31), and a portion of B330C (VE-32) to provide protection against potential vapor intrusion inside of the Commercial Use Area. Following the commissioning of each system, SSD startup reports were submitted to the Departments for VE-30 (Walden, August 2020), VE-31 (Walden, April 2021), and VE-32 (GZA, October 2021).

Lot 8

The groundwater data provided in the *2020 Annual Corrective Action Status Report* (IBM, May 2021) shows that Lot 8 is not located within the PCE, TCE, cis-1,2-DCE, VC, or Freon® TF plumes in the soil groundwater unit. The bedrock groundwater samples collected in 2020 from Well 943 contained PCE and TCE at concentrations slightly above the respective New York State Class GA groundwater standards. All other VOC concentrations detected in groundwater samples collected at Lot 8 meet the respective New York State Class GA groundwater standards or guidance values.

The August 2021 soil and sediment sampling results supported a boundary modification for Lot 8 and its removal from the RCRA Part 373 Permit. All of the reported VOC and SVOC concentrations in the Lot 8 soil samples were less than the respective Unrestricted Residential Use SCOs. No 1,4-dioxane, PCBs, or herbicides were detected in any of the samples. All of the metal concentrations were less than the respective Commercial Use SCOs except the concentration of copper detected at one location, which was well below the Industrial Use SCO. Several pesticides were detected at concentrations above the respective Unrestricted SCOs, but well below the respective Residential Use SCOs. The majority of the PFOS and PFOA concentrations reported for the soil samples were below the respective Unrestricted Use guidance values established by NYSDEC. All detected PFOS concentrations were below the respective Residential Use guidance value. The PFOS

concentration detected in one soil sample was slightly above the respective Residential Use guidance value but less than the Commercial Use guidance value.

Based on the soil and sediment sampling results, any materials excavated from Lot 8 would be suitable for on-site reuse as fill material. The investigation results are presented in the *Lot 8 Boundary Modification Field Investigation Summary Report*, dated October 12, 2021.

Lot 9

Groundwater data that was provided in *2020 Annual Corrective Action Status Report* (IBM, May 2021), indicated that Lot 9 is not located within the PCE, Trichloroethene (TCE), 1,2-dichloroethylene (cis-1,2-DCE), Vinyl Chloride (VC), or 1,1,2-Trichloro-1,2,2-trifluoroethane, (also called trichlorotrifluoroethane (Freon TF®)) plumes in the soil groundwater unit. A small portion of the central-southern perimeter of Lot 9 is situated in the PCE, TCE, and Freon TF plumes in the bedrock groundwater unit. However, these plumes are all being managed by bedrock extraction well PW-2R, which is located south of Lot 9.

The May 2021 soil sampling results supported a boundary modification for Lot 9 and its removal from the Part 373 Permit. All of the reported VOC concentrations in the soil samples were less than their respective Unrestricted Residential Use Soil Cleanup Objectives (SCOs). No 1,4-Dioxane, Polychlorinated Biphenyls (PCBs) or herbicides were detected in any of the samples. Several Semi-Volatile Organic Compounds (SVOCs) characteristic of fill material and asphalt were detected in shallow soil samples, with the majority of detected concentrations less than respective Unrestricted Use SCOs. All of the SVOC concentrations were less than the respective Commercial Use SCOs, except for benzo(a)pyrene concentrations reported for the shallow soil samples collected from the 0 to 1ft depth interval at two locations (the reported concentration at a third location was equal to the Commercial Use SCO). Several metals and pesticides were detected at concentrations above their respective Unrestricted SCOs, but were below their respective Restricted Residential Use SCOs.

Based on current and intended future use, coupled with the Commercial or Industrial use restrictions identified in the Environmental Easement (EE), Lot 9 would not require a soil cover engineering control based on the soil analytical results meeting applicable SCOs for the intended Site Use. In addition, based on soil sampling results, any soil excavated from Lot 9 would be suitable for on-site reuse as fill material and under a cover, such as asphalt pavement, concrete or soil cover.

6. *INTERIM CORRECTIVE MEASURES (ICM)*

Indoor Air

The ICMs for Indoor Air consisted of active VI ECs including SSD and HVAC systems as described above, and a passive VI EC in the form of a sub-slab venting system not

connected to an electrically powered fan. Additional information on which buildings is provided in Section 7 Corrective Measures Study.

7. *CORRECTIVE MEASURES STUDY (CMS)*

Building 335

Based on the results of the VI assessment (see *Indoor Air*), NYSDEC requested that IBM also complete a RCRA Facility Investigation (RFI) to assess for potential sources of PCE beneath and around B335.

Overburden soils encountered in the B335 Area generally consist of a descending sequence of soil fill, silt and clay (limited extent), till, and pre-glacial channel deposits (limited extent). The depth to the zone of overburden saturation ranges in the B335 Area from about 2 to 21 feet below ground surface (bgs) dependent on the geology. Groundwater flow in the overburden soils within the B335 Area is driven by a combination of horizontal and vertical gradients, and by the distribution and hydraulic properties of the soils. Horizontal gradients calculated as part of the RFI indicate that there is a somewhat radial flow inward toward B335. The horizontal gradients were observed to be generally comparable in magnitude or less than the vertical gradients observed, indicating that although there will be some horizontal flow within the area, the predominant trend is that of a downward vertical transport from the overburden soils into underlying bedrock.

Bedrock groundwater in the B335 Area is under the direct influence of the PW-25 pumping and treatment system, with on-going pumping from this well acting to depress bedrock groundwater levels and controlling the overall direction of bedrock groundwater flow toward PW-25. PCE was observed during the RFI in soil, upper bedrock, and groundwater, with the highest concentrations in all of these media being located beneath B335 and the former waste solvent USTs.

The highest concentrations of PCE in groundwater in the B335 area, occur in the fill and till beneath the former tank area, and in the till and weathered bedrock beneath B335 itself. The distribution of PCE in soil and upper bedrock generally coincides with that of the groundwater.

At the request of NYSDEC, IBM performed a focused corrective measures study (CMS) for the B335 area. This focused CMS followed discussion and agreement between the permittees and NYSDEC on a pragmatic and presumptive remedy. The focused CMS report concluded that the presumptive remedy of demolition of B335 continued operation of PW-25 for mass removal, and institutional controls in the B335 Area would be retained as the Final Corrective Measure for the B335 area.

Indoor Air

Buildings 330D, 338, 339, and Building 310/308 Linkway

These buildings have SSD systems installed that mitigate the VI pathway for the full building footprint.

Buildings 310 and 330C
These buildings have SSD systems installed that mitigate the VI pathway for a portion of the building footprint. In areas outside the influence of the SSD systems, the HVAC systems are considered to be ECs for VI mitigation.

Buildings 300, 308, 316, 317, 320B, 321, 322, 323, 323A, 330L, 334, and 386
These buildings have acceptable indoor air quality under existing HVAC operations and building use; no alterations of HVAC operations are necessary for VI mitigation purposes. Although changes to HVAC operations are not needed for VI control, the presumption is that existing HVAC operations may be acting as an EC; therefore, HVAC checks will consist of verifying that the HVAC systems are running in occupied areas. Monitoring of building conditions and HVAC systems will be conducted to confirm no major changes, such as HVAC shut-downs or system reconfigurations. In addition, visual checks of the above-grade piping for the passive SSD system in B320B will be conducted to assess system integrity.

Building 335
This building is not routinely occupied. A VI assessment was conducted inside B335 for the purpose of evaluating potential risks associated with reoccupying the building. The VI assessment was conducted in 2019 and summarized in the B335 Data Summary Report (VI Summary Report) dated April 19, 2019 (SHPC, 2019). The VI Summary Report presented the findings that volatile organic compounds (VOCs) were present in indoor air in B335 at concentrations greater than ambient air. The PCE concentrations in indoor air were likely due to a combination of off-gassing of PCE from concrete surfaces (e.g., floor slab and walls), vapor intrusion through the floor slab by diffusion, and vapor intrusion through floor cracks and other advective pathways.

Buildings 303, 309, 384, 385, PW-1 GTF, PW-2 GTF, and PW-25 GTF
These buildings have potential occupational VOC presence.

Buildings 312, 315, 320, 320A, 328, and 329
These buildings have no known underlying VOC presence in groundwater.

Lot 8
No Corrective Measures Study was required for Lot 8 as the August 2021 soil and sediment sampling results supported a boundary modification for Lot 8 and its removal from the RCRA Part 373 Permit. In addition, based on the soil and sediment sampling results, any materials excavated from Lot 8 would be suitable for on-site reuse as fill material. The investigation results are presented in the Lot 8 Boundary Modification Field Investigation Summary Report, dated October 12, 2021.

Lot 9

The *Route 52 Corridor Boundary Modification Field Investigation Summary Report (Revised)* dated September 30, 2021, is being used as the corrective measures study to support the boundary modification, which encompasses the removal of Lot 9 from the Part 373 permit to an EE and Site Management Plan (SMP), as the Corrective Measure.

The May 2021 subsurface investigation at the Site included the advancement of twenty (20) soil borings (SB-01 through SB-20) and the subsequent collection of numerous soil samples. The investigation was performed to characterize existing soil conditions in the "Route 52 corridor area" (Lot 9) in support of iPark's planned petition for a boundary modification that would be reflected in subsequent modifications to the Part 373 Permit and the SMP for the iPark 84 Facility.

On-site soils consist mainly of medium brown, fine to medium sand and silty sand/clay or clay with trace gravel. No odor was detected at any of the soil boring locations.

Laboratory analytical data revealed the following:

- All of the reported VOC concentrations were less than the respective Unrestricted Residential Use SCOs
- No 1,4-dioxane, PCBs or herbicides were detected in any of the samples.
- Several SVOCs characteristic of fill material and asphalt were detected in shallow soil samples. The majority of detected SVOC concentrations were less than their respective Unrestricted Use SCOs and all were less than their respective Commercial Use SCOs, except for the benzo (a) pyrene concentrations reported for the shallow soil samples collected from the 0 to 1ft depth interval at SB-01, SB-11, and SB-19.
- Several metals and pesticides were detected at concentrations above their respective Unrestricted SCOs, but well below their respective Residential Use SCOs
- None of the PFAS concentrations detected in the soil samples exceeded the guidance values established by NYSDEC in April 2023 *Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs* document.

The soil sampling results support a boundary modification for Lot 9 and its removal from the Part 373 permit as long as it remains subject to an EE and SMP. Air monitoring in accordance with a State-approved Community Air Monitoring Plan (CAMP) would be performed during any excavation within the Lot 9 area. The soils within the Lot 9 area are suitable for reuse within Lot 9 as fill material.

Based on the groundwater data provided in the 2020 Annual Corrective Action Status Report (IBM, May 2021 [The Annual Report]), a small portion of the central-southern perimeter of Lot 9 is situated in the PCE, TCE, and Freon TF® plumes in the bedrock

groundwater unit. However, these plumes are being effectively managed by the PW-2 system. The data from the well network in the project area supports the Lot 9 area boundary modification.

8. *PROPOSED FINAL CORRECTIVE MEASURES*

In this SB, the NYSDEC, in consultation with the New York State Department of Health, has selected proposed Final Corrective Measures to implement at four areas of the Former IBM East Fishkill Facility and has determined the proposed remedies will be protective of human health and the environment. Implementation of the remedies will not commence until the Department reviews and responds to any public comments on the proposed actions. Changes to the proposed corrective measures or the selection of an alternative remedy may be made if public comments or additional data indicate that such changes would result in a more appropriate solution. Once all comments have been addressed and any necessary change have been incorporated into the proposed remedy(ies), the NYSDEC will issue a Final Statement of Basis for the areas listed below.

Building 335:
The Final Corrective Measure for the B335 Area is the presumptive remedy as proposed in the focused CMS report (SHPC, 2023) and as approved by NYSDEC on July 31, 2023. The Final Corrective Measure includes the following components:

- Demolish B335 (except for the floor slab, below grade foundation components, and the portions of the three walls acting as retaining walls).
- Coat and/or seal the remaining floor slab and walls to prevent direct contact with PCE-impacted concrete after building demolition.
- Use the remaining B335 floor slab, surrounding existing concrete and asphalt ground coverings, and the existing site soil cover system to serve as a barrier where deep soil (i.e., greater than 3 feet bgs) exceeds the industrial use SCO for PCE.
- Maintain operation of the Site's existing PW-25 groundwater extraction and treatment system for hydraulic control of impacted bedrock groundwater sourced from the B330 complex, including the B335 Area.
- Implement institutional controls to prevent new building construction and underground infrastructure within a surveyed area around B335.
- Cap/seal inactive subsurface solvent transfer pipes and drain lines at their connection points within B335.
- Continue to maintain applicable engineering controls which are in effect for the Site.

Indoor Air:
Buildings 330D, 338, 339, and Building 310/308 Linkway
For these buildings, SSD systems that cover the entire building footprint serve as corrective measures and engineering controls for vapor intrusion mitigation. Indoor Air monitoring to be performed if SSD system is terminated.

Buildings 310 and 330C
For these buildings, a combination of SSD systems that cover part of the building footprint, and HVAC systems that serve the remainder, serve as corrective measures and engineering controls for vapor intrusion mitigation. Indoor Air monitoring to be performed if changes of use occur, HVAC conditions are modified outside of the SSD areas, or SSD systems are terminated.

Buildings 300, 308, 316, 317, 320B, 321, 322, 323, 323A, 330L, 334, and 386
For these buildings, the HVAC systems on the ground level serve as corrective measures and engineering controls for vapor intrusion mitigation. Indoor Air monitoring to be performed if changes of use occur

Buildings 303, 309, 384, 385, PW-1 GTF, PW-2 GTF, and PW-25 GTF
For these buildings, no vapor intrusion mitigation is being implemented because the potential exists for occupational presence of VOCs from chemical/waste storage, groundwater remediation systems, or treatment residuals handling. Indoor Air monitoring to be performed if changes of use occur.

Buildings 312, 315, 320, 320A, 328, and 329
These buildings located in the central portion of the Site are not known to overlie VOC-impacted groundwater; however, as a conservative measure, indoor Air monitoring to be performed if changes of use occur.

Lot 8
The Final Corrective Measure for Lot 8 is that based on current information and future use, no further action is necessary. Supporting evidence for this decision may be found in the *Route 52 Corridor Boundary Modification Field Investigation Summary Report (Revised)* (Walden Environmental Engineering, PLLC, September 30, 2021) as well as having the Environmental Easement and SMP in place, in perpetuity. If there is any work that is performed on Lot 8 that includes removals/excavation or soils, occupancy of newly constructed buildings, future developments that will impact IBM's groundwater remediation, then the need for corrective measures will be revisited. This property is intended to be removed from the Part 373 Renewal Permit.

Lot 9
The Final Corrective Measure for Lot 9 is that based on current information and future use, no further action is necessary. Supporting evidence for this decision may be found in the *Route 52 Corridor Boundary Modification Field Investigation Summary Report (Revised)* (Walden Environmental Engineering, PLLC, September 30, 2021) as well as having the Environmental Easement and SMP in place, in perpetuity. If there is any work that is performed on Lot 9 that includes removals/excavation or soils, occupancy of newly constructed buildings, future developments that will impact IBM's groundwater

remediation, then the need for corrective measures will be revisited. This property is intended to be removed from the Part 373 Renewal permit.

9. *POST REMEDIAL ACTIVITIES*

Groundwater Monitoring

Following implementation of the corrective measures to be approved upon finalization of this Statement of Basis, the permitted owner(s) and operator(s) must perform any groundwater monitoring and provide any monitoring reports as required in their Department-approved Groundwater Monitoring Plan(s)/Program.

Indoor Air Monitoring

Following implementation of the corrective measures to be approved upon finalization of this Statement of Basis, the permitted owner(s) and operator(s) must perform any indoor air monitoring and provide any monitoring reports as required in their Department-approved Performance Monitoring Plan(s)/Program.

10. *FINANCIAL ASSURANCE*

The permitted owner(s) and operator(s) must maintain the necessary financial assurance for any remaining, or additional, corrective measures being undertaken by the Permittees at the Facility. This includes the provision of financial assurance for the final corrective measures contained in this Statement of Basis once finalized. Additional requirements for Financial Assurance are set forth in **Condition P of Module I** of the Part 373 department's RCRA Permit.

Appendix A - References

2020 Annual Corrective Action Status Report (IBM, May 2021)

B335 Area RCRA Facility Investigation Work Plan (SHPC, September 2019)

B335 Area RCRA Facility Investigation Summary Report (SHPC, September 10, 2020).

B335 Data Summary Report VI Summary Report, (SHPC, April 19, 2019)

Building 330D VOC Source Investigation and Mitigation (SHPC, December 24, 2008)

Letter to IBM approving RCRA Corrective Action for Groundwater Investigation/Treatment Documents, (DEC, March 10, 1993).

Letter to IBM requiring submission of an RFI Work Plan to determine VI at the site, (DEC, April 7, 2008)

Lot 8 Boundary Modification Field Investigation Summary Report, (Walden Environmental Engineering, PLLC, October 12, 2021)

Order on Consent for IBM to Implement Groundwater Extraction and Treatment of Chemicals (NYSDEC April 23, 1981)

Performance Monitoring Plan For Vapor Intrusion Engineering Controls, (SHPC, May 2021).

PFAS and 1,4-Dioxane Sampling Results, (IBM, March 2020)

Route 52 Corridor Boundary Modification Field Investigation Summary Report (Revised) (Walden Environmental Engineering, PLLC, September 30, 2021)

Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs (NYSDEC, April 2023)

Work Plan RCRA Facility Investigation (RFI) VOC Source Assessment (SHPC, June 15, 2009)

N

W E

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Scale (feet)

0 200 400 800

LEGEND

Site Boundary

Aerial photo is a composite of NYS GIS Clearinghouse and Google Earth imagery (dated 2020 and 2024 respectively).

IBM

East Fishkill, New York

Plate 1-1
Aerial Site Map

DRAWN:	CHECKED:	APPROVED:	DATE:	FIGURE:
JPB	RCW	RCW	7/30/2024	

GROUNDWATER SCIENCES CORPORATION

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2A
23.75 AC.
3A
20.87 AC.
4
13.72 AC.
5
98.94 AC. (TOTAL)
96.26 AC. (PART OF LOT 5)
2.68 AC.
(PART OF LOT 5)
6
56.19 AC.
7
71.73 AC. (PART OF LOT 7)
85.05 AC. (TOTAL)
13.32 AC.
(PART OF LOT 7)
8
59.41 AC.
9
28.42 AC.
LOT 2 REVERSIONARY PARCEL – 6.64 AC.
PROPERTY LINE NOT IN HOPEWELL
UNIT 1A
AREA =10.875 AC.
603,206 SF
UNIT #2
AREA =10.000 AC.
435,608 SF
UNIT #3
AREA =3.872 AC.
168,640 SF
UNIT 4A
AREA =10.568 AC.
603,206 SF
UNIT 5A
AREA =9.390 AC.
603,206 SF
UNIT #7GL
AREA =6.639 AC.
289,282 SF
UNIT 5B
AREA =4.128 AC.
179,824 SF
UNIT 5C
AREA =4.128 AC.
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UNIT 5D
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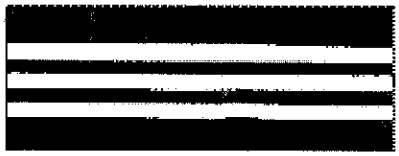
ATTACHMENT F
Environmental Easement(s) or DEC-approved Covenant (Easements to be provided during the Permit period)

ATTACHMENT F-1

iPark Easement

ATTACHMENT F-2
onsemi Easement

ATTACHMENT F-3
IBM Deed Restriction and First Amendment



Dutchess County Clerk Recording Page

Record & Return To:

JILL S FELDMAN
TITLE ASSOCIATES
825 THIRD AVENUE 30TH FL
NEW YORK, NY 10022

Date Recorded: 7/9/2015
Time Recorded: 10:11 AM

Document #: 02 2015 4059

Received From: STEWART TITLE INS

Grantor: INTERNATIONAL BUSINESS MACHINES CORP
Grantee: INTERNATIONAL BUSINESS MACHINES CORP

Recorded In: Deed
Instrument Type: DECLAR

Tax District: East Fishkill

Examined and Charged As Follows :

Recording Charge:	$365.00
Transfer Tax Amount:	$0.00
Includes Mansion Tax:	$0.00
Transfer Tax Number:	6252

Red Hook Transfer Tax:

RP5217: N
TP-584: Y

Number of Pages: 64

*** **Do Not Detach This Page**
*** **This is Not A Bill**

County Clerk By: msp
Receipt #: 94461
Batch Record: 1957

Bradford Kendall
County Clerk

0220154059

DECLARATION OF RESTRICTIONS, EASEMENTS AND COVENANTS

This Declaration of Restrictions, Easements and Covenants (this "**Declaration**") is made as of this 17 day of June, 20 15, by INTERNATIONAL BUSINESS MACHINES CORPORATION ("**Declarant**"), a New York corporation and having an address of One New Orchard Road, Armonk, New York.

WITNESSETH:

WHEREAS, Declarant is the owner of certain land situated in the Town of East Fishkill, Dutchess County, New York, containing +/- 455 acres with the street address of 2070 Route 52, Hopewell Junction, New York, being designated as (i) Section 6.356, Block 4, Lot 980140 (being Dutchess County Tax Grid # 6356-04-980140), and (ii) Section 4.456, Block 3, Lot 116374 (being Dutchess County Tax Grid # 05-6456-03-116374-000), and being more particularly described in **EXHIBIT A** attached hereto (collectively, the "**Land**", and together with the improvements thereon, the "**Property**"), and which Property includes areas subject to efforts to remediate certain environmental conditions;

WHEREAS, Declarant has certain obligations to perform groundwater remediation and monitoring as required by New York State Department of Environmental Conservation ("**NYSDEC**") Permit No. 3-1328-00025/00249, dated April 16, 2014, issued pursuant to 6 N.Y.C.R.R. Part 373, and as such Permit may be amended, supplemented, rescinded or replaced from time to time with an agreement or order or other instrument (the "**Work**");

WHEREAS, certain Environmental Remediation Activity and/or Utility Systems Work (as such terms are defined below) is and will be required on or at the Property in connection with environmental obligations, at the direction of a Governmental Body (as defined below) and/or as Declarant deems reasonably necessary, to study, investigate, monitor, assess, sample, test, remove, remediate, or otherwise address Hazardous Materials or to prevent or mitigate any Release or threatened Release of Hazardous Materials (as such terms are defined below);

WHEREAS, Declarant desires to reserve for itself a non-exclusive easement to access the Property to perform the Work, the Environmental Remediation Activity and/or the Utility Systems Work, subject to the conditions, obligations and rights set forth herein;

WHEREAS, Declarant desires and intends to reduce, eliminate and/or mitigate threats to human health and the environment presented by contamination that exists on the Property and to restrict the future use and development of the Property as hereinafter provided.

NOW THEREFORE, Declarant does hereby declare and agree that the Property shall hereafter be held, sold, transferred, conveyed, leased, and occupied subject to the restrictions, easements, covenants and obligations set forth in this Declaration.

1. Purpose. It is the purpose of this Declaration to provide access to the Property to Declarant and to restrict or prevent the use or development of the Property by any owner, operator or user of the Property in any manner that may increase threats to human health and the environment presented by contamination that currently exists on the Property.

2. Declaration of Restrictions, Easements and Covenants. Declarant hereby declares that the Property shall be held, sold, transferred, conveyed, leased, occupied or otherwise disposed of and used subject to the restrictions, easements, covenants and obligations set forth in this Declaration, which shall run with the Land and be binding on all successors, heirs, assigns, transferees, lessees and occupants of Declarant or of any of them, including any mortgagees, owners and/or users of the Property.

3. Duration. Except as otherwise provided herein, the provisions of this Declaration shall be deemed to be covenants running with the Land and the Property, and shall continue in perpetuity.

4. Access. Declarant, as the current owner of the Property, hereby reserves for itself, which shall include Declarant's employees, agents, operators, licensees, invitees, contractors and consultants (collectively, the "**Declarant Parties**" and individually, each a "**Declarant Party**"), a non-exclusive easement, together with rights of ingress, egress and access to, from, over and across the Property, for any and all access to the Property necessary and appropriate to conduct, complete or monitor the Work, the Environmental Remediation Activity and/or Utility Systems Work, subject to the conditions, obligations and rights set forth in this Declaration. Such non-exclusive easement shall remain in full force and effect, and owners, operators or users of the Property shall provide to Declarant Parties safe and unencumbered access to the Property, when such access is necessary and appropriate. For the removal of doubt, safe access to the Property means, among other things, that Work areas are free of exposure to asbestos-containing materials or other Hazardous Materials or conditions, where such exposure was created by the owners, operators or users of the Property. Subject to the provisions in Section 6(c) herein, the obligations and requirements of this Section 4 shall survive until such time as Declarant has met the cleanup objectives of all Governmental Bodies and received a no further action status (or a similar notification that the Work is complete) from NYSDEC; provided that, if based on subsequent information, NYSDEC determines that such standards have not been met, such obligations of this Section 4 shall be deemed to be in full force and effect.

5. Installation and Maintenance of Remediation Systems and/or Utility Systems.

a. Declarant hereby reserves for the Declarant Parties a non-exclusive easement for the purposes of repairing, replacing, constructing, reconstructing, removing and maintaining the Work, the Environmental Remediation Activity and/or the Utility Systems Work and, subject to other provisions of this Declaration, the right to remove, trim, and cut trees, bushes, undergrowth, and other obstructions interfering with the location, construction, operation, repair and maintenance of the Work, the Environmental Remediation Activity and/or Utility Systems Work. For the removal of doubt, this easement grants the Declarant Parties the right to construct treatment buildings, pump houses and/or sub-slab depressurization systems, among other things, on the Property, and will allow reasonable access to and use of utilities or the construction of new rights of way for utilities, subject to notice and coordination with Owner.

b. Owners, operators or users of the Property shall not remove, move or otherwise disturb, tamper with or damage any existing or future wells, conveyance piping, treatment buildings, including but not limited to B384, pump houses, sub-slab depressurization systems, vapor extraction systems or other equipment or facilities which are installed or may be installed at, in, on, from or under the Property by any Declarant Party associated with the Environmental Remediation Activity (collectively, the "**Remediation Systems**") and/or the Utility Systems Work, unless otherwise directed by a Governmental Body. Existing Remediation Systems are shown in **EXHIBIT B** attached hereto. Within 45 days after any future installation, removal or relocation within the Property of any Remediation Systems and/or Utility Systems Work by Declarant, Declarant shall prepare and the owner of the Property shall record a supplement to this Declaration which shall show the location(s) of Remediation Systems and/or Utility Systems Work existing at, in, on, from or under the Property as of the date of such supplement.

Subject to the terms of this Declaration, the owners, operators or users of the Property shall allow the Declarant Parties to install and maintain any Remediation Systems and/or Utility Systems Work reasonably necessary for Declarant to conduct any Environmental Remediation Activity at, in, on, from or under the Property; provided, however, that Declarant Parties shall locate such Remediation Systems and/or Utility Systems Work devices in a manner to avoid any unreasonable interference with operations at the Property.

c. Upon the reasonable request of the owner of the Property and with the approval of all relevant Governmental Bodies, Declarant Parties shall use commercially reasonable efforts to relocate any Remediation Systems and/or Utility Systems Work placed at, in, on, from or under the Property by Declarant as necessary so as not to disrupt or encumber the operations at the Property of the owners, operators or users of the Property (including the modification, expansion or development of any facilities associated therewith) or the development of the Property by owners; provided that the relocation of any Remediation Systems and/or Utility Systems shall not impair the effectiveness of the Work or the EFK Remediation Action; provided further, owners, operators or users of the Property shall reimburse Declarant for (i) in the case the owners, operators or users of the Property requests that Declarant relocate previously installed or existing Remediation Systems and/or Utility Systems, the full cost of such relocation and (ii) in the case the owners, operators or users of the Property requests that Declarant relocate Remediation Systems and/or Utility Systems that Declarant is otherwise planning to install at a different location, the incremental cost to Declarant to install such Systems at the new requested location. Owners, operators or users of the Property shall bear the costs to prepare a supplement to this Declaration which shall show the new location(s) of Remediation Systems and/or Utility Systems Work, if necessary, and owners, operators or users of the Property shall bear the costs to record such supplement.

d. Owners, operators or users of the Property shall, as soon as reasonably practicable, deliver to Declarant any written notice, information or other communication received from (or notify Declarant of any material oral communications with) any Governmental Body, in each case which relates to the Environmental Remediation Activity or the existing or future Remediation Systems associated with the Work. Declarant shall, as soon as reasonably practicable, deliver to the owner of the Property copies of any material written notice, material information or other material communication received from, or submitted to, (or notify the owner of the Property of any material oral communications with) any Governmental Body, in each case which relates to the Environmental Remediation Activity or the existing or future Remediation Systems associated with the Work; provided that, upon request of the owner of the Property, Declarant shall provide to the owner Declarant's relevant communications with any Governmental Body, which relates to the Environmental Remediation Activity or the existing or future Remediation Systems associated with the Work.

e. Except as provided in Section 5(b), any existing or, to the extent installed by or on behalf of Declarant, future Remediation Systems and/or Utility Systems Work shall remain the property and in the control of Declarant.

f. The obligations and requirements of this Section 5 shall survive until such time as Declarant met the cleanup objectives of all Governmental Bodies and received a no further action status (or a similar notification that the Work is complete) from the NYSDEC.

6. Obligations and Prohibitions.

a. The owners, operators and users of all or any portion of the Property shall be obligated to comply with the following restrictions, covenants and obligations:

i. With respect to **groundwater underlying all or any portion of the Property**, the pumping or extraction of groundwater underlying the Property, other than in connection with the EFK Remedial Action, is prohibited; unless such pumping or extraction is affirmatively required by NYSDEC of the owners, operators or users of the Property under Environmental Law, and only then in consultation with Declarant. The use of groundwater for any purpose is prohibited; except to the extent such use is under the direction of and with the written approval of Declarant; provided that, under no circumstances is the use of groundwater for potable purposes allowed.

ii. With respect to **any future use of all or any portion of the Property**, any future change in use of the Property (other than those portions of the Property designated as Area A, the Core Area and the Landfill on **EXHIBIT C** attached hereto) that does not constitute Industrial Use (as defined herein) permitted hereunder must be approved, to the extent required, by NYSDEC and any other Governmental Body and the owners, operators or users of the Property must provide Declarant with reasonable advance written notice of such proposed future change in use. All costs associated with any future change in use of the Property permitted hereunder that requires development of any kind and/or requires remediation (other than the EFK Remedial Action), as determined by NYSDEC and any other Governmental Body, shall be paid by the owners or users of the Property. Notwithstanding the foregoing, in no case shall the owners, operators or users of the Property use, operate or develop, and shall prohibit the use, development or operation of the Property for any purpose other than Commercial Use or Industrial Use (as such terms are defined below).

iii. With respect to **structures on all or any portion of the Property**, if at any time, any owners, operators or users of the Property elects, or is required, to demolish any structures (other than any equipment or facilities that are related to the EFK Remedial Action and that are owned by the Declarant) located on the Property, such owners, operators or users shall (i) pay the entire cost of such demolition and of the disposal of all debris in accordance with applicable law and (ii) provide Declarant with reasonable advance written notice. After such demolition is complete, the owners, operators or users of the Property shall allow the Declarant a reasonable period of time to investigate and remediate the demolished area in connection with the EFK Remedial Action. At any time after the date of this Declaration, for any new structures that are constructed on the Property, the owners, operators or users of the Property shall install, maintain and pay for the installation of vapor mitigation systems in such new structures sufficient to cause the air quality in such structures as reasonably necessary to comply with all requirements established by NYSDEC, to the extent applicable, and with all other applicable Laws. The owners, operators or users of the Property shall operate air handling, heating, ventilation and air conditioning (HVAC) systems in occupied spaces of all buildings in accordance with American Society of Heating, Refrigerating and Air Condition Engineers standards for the designated use(s) of such occupied spaces in the buildings; provided that HVAC systems in all occupied spaces shall be operated in a manner to avoid negative building air pressure relative to ambient outside air.

iv. With respect to **all or any portion of the Property** during excavation of any soils thereon, if allowed under this Declaration, the owners, operators and users thereof shall sample, manage and dispose of such soils in accordance with the Site Management Plan, Environmental Laws and any other applicable regulatory requirements.

v. With respect those portions of the Property designated as **Area A**, the **Core Area** and the **Landfill** on **EXHIBIT C** attached hereto, the owners, operators or users thereof shall not use, operate or develop, and shall prohibit the use, development or operation of Area A, the Core Area and the Landfill for any purposes other than Industrial Use (as the term is defined below).

vi. With respect that portion of the Property designated as **Area A** on **EXHIBIT C** attached hereto, the owners, operators or users thereof shall not penetrate or excavate, and shall prohibit any third party from penetrating any building slabs that are in direct contact with the ground, or penetrate or excavate any soil; provided that, if, due to an emergency event, the owners, operators or users require access to infrastructure in the soil or beneath any building slabs in Area A, including utility or fire lines, the owners, operators or users shall notify Declarant within 24 hours of the event, shall notify NYSDEC and any other Governmental Body, as required, and as soon as possible and shall follow appropriate regulatory procedures to protect human exposure to contaminants; provided further that the penetration or excavation of soil shall be allowed for up to three (3) feet below existing grade for the purposes of planting or replacing trees and shrubs or other landscaping and repairing sidewalks and parking lots subject to compliance with Environmental Laws and the Site Management Plan (as defined herein). The owners, operators or users of Area A shall not disrupt or impair the operation of any vapor mitigation systems that have been installed or will be installed in any structures located in Area A.

vii. With respect to that portion of the Property designated as the **Landfill** on **EXHIBIT C** attached hereto, the owners, operators or users thereof shall not disturb, penetrate or excavate, and shall prohibit any third party from disturbing, penetrating or excavating, the soil or within the Landfill.

b. The Declarant Parties shall be obligated to comply with the following restrictions, covenants and obligations:

i. The Declarant Parties shall perform the Work, the Environmental Remediation Activity and the Utility Systems Work in compliance with all applicable Laws.

ii. The Declarant Parties shall obtain at their sole cost and expense all governmental permits and authorizations of whatever nature required by any and all applicable Governmental Bodies for the Work, the Environmental Remediation Activity and/or the Utility Systems Work.

c. Upon request by the owner of the Property, Declarant and the owner of the Property shall use commercially reasonable efforts to terminate this Declaration, to the extent permitted by Law and the relevant

Governmental Bodies, with respect to any portion of the Property where Declarant, or another person or entity, has permanently met the cleanup objectives of all Governmental Bodies and received a no further action status (or a similar notification that the Work is complete) from NYSDEC; provided that, to effectuate such termination, Declarant shall prepare, and the owner of the Property shall record, a supplement to this Declaration indicating those areas of the Property that are no longer subject to the obligations and restrictions set forth in this Declaration.

7. Cooperation. Declarant and any owners, operators or users of the Property (including any transferees, lessees and occupants of such owners, operators or user) shall reasonably cooperate with each other to accomplish the requirements of, or to ensure compliance with, this Declaration; provided that, when performing the Work, Declarant will comply with the owner of the Property's health, safety, security and continuous operations requirements; provided further that such health, safety, security and continuous operations requirements are reasonable and are supplied to Declarant in advance of the Work. For the removal of doubt, reasonable cooperation may include, but is not limited to, Declarant's prior notice to, or consultation with, the owner of the Property regarding construction design in the event of planned, non-routine Environmental Remediation Activity and/or Utility Systems Work.

8. Successors. The covenants, terms and restrictions of this Declaration shall be binding upon and inure to the benefit of Declarant hereto and its successors, heirs and assigns.

9. Subsequent Transfers. The terms of this Declaration shall be incorporated by reference into any deed or other legal instrument by which Declarant or any successor owner of the Property divests itself by sale, exchange, devise or gift of all or any portion of the Property. Declarant shall be furnished with written notice of the transfer of any such interest, accompanied by a copy of the document utilized to affect such transfer, within thirty (30) days of the date of such transfer. Failure of any successor owner of the Property to perform any act required by this Section 9 shall not impair the validity of this Declaration or limit its enforceability in any way.

10. Recordation. Declarant shall record this instrument in the Official Records of the Dutchess County Clerk and shall pay all recording costs in connection therewith.

11. Notices. All notices, consents, approvals or other communications required under the provisions of this Declaration shall be in writing and shall be deemed properly given if hand delivered, sent by a nationally recognized overnight courier, or sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor in interest, at the addresses below:

a. For Declarant:

Manager, Environmental Remediation
International Business Machines Corporation
8976 Wellington Road
Manassas, VA 20109
(703) 257-2587

Environmental Counsel
International Business Machines Corporation
294 Route 100
Somers, NY 10589
(914) 766-2684

b. For current Property owner:

Environmental Manager
2070 Route 52
Hopewell Junction, NY 12533

Director, Global EHS
GLOBALFOUNDRIES U.S. Inc.
2600 Great America Way, Santa Clara, CA 95054

12. Remedies and Enforcement. Monetary damages would not be adequate or sufficient to compensate Declarant for a breach of any of the restrictions, covenants and/or obligations of this Declaration. Accordingly, in addition to any other remedies available to Declarant administratively, at law, in equity, by statute or otherwise under this Declaration or otherwise, Declarant may obtain a mandatory and/or prohibitory injunction compelling any owner or user of the Property from time to time of all or any portion of the Property and/or any of its successors, heirs, assigns, transferees, lessees and occupants, to specifically perform and observe the restrictions, covenants and obligations contained in this Declaration or to remedy any failure to perform or observe any such restriction, covenant or obligation. No right or remedy conferred upon Declarant in this Declaration is intended to be exclusive of any other right or remedy contained in this Declaration or at law or equity. Every such right or remedy shall be cumulative and shall be in addition to each other right and remedy contained in this Declaration or now or hereafter available to Declarant at law, in equity, by statute or otherwise.

13. Miscellaneous Provisions.

a. Severability. If any provision of this Declaration or the application of it to any person or circumstance is found to be invalid, the remainder of the provisions of this Declaration and the application of the provisions to

persons or circumstances other than those as to which it is found to be invalid, shall not be affected by the invalid provision.

b. Amendment. This Declaration may be modified by the mutual consent of the owner of the Property and Declarant, which consent shall not be unreasonably withheld.

c. Controlling Law. The interpretation and performance of this Declaration shall be governed by the laws of the State of New York.

d. Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

e. Definitions.

i. "**Commercial Use**" means the primary purpose of buying, selling or trading of merchandise or services. For the avoidance of doubt, Commercial Use does not include any uses that are residential, educational, religious or primarily recreational in nature, including but not limited to residences of any type, schools, churches, hospitals, child day care facilities, senior care facilities or centers, private or commercial stables or riding academies, camps or recreational developments.

ii. "**EFK Remedial Action**" means the ongoing Remedial Action at the Property required pursuant to the Part 373 Hazardous Waste Treatment, Storage and Disposal Facility Permit, No. 3-1328-00025/00249, dated April 16, 2014, or any subsequent replacement order or permit by or with NYSDEC, to address Releases of Hazardous Materials on or prior to the date of this Declaration.

iii. "**Environmental Law**" means any applicable Law in any way relating to the protection of human health and safety, the indoor or outdoor environment or natural resources or, to the extent relating to exposure to hazardous or toxic materials, human health and safety, including the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. § 9601 et seq.), the Hazardous Materials Transportation Act (49 U.S.C. App. § 1801 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.), the Clean Water Act (33 U.S.C. § 1251 et seq.), the Clean Air Act (42 U.S.C. § 7401 et seq.), the Toxic Substances Control Act (15 U.S.C. § 2601 et seq.) and the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. § 136 et seq.), as each

has been or may be amended and the regulations promulgated pursuant thereto.

iv. "**Environmental Remediation Activity**" means any response, removal, remedial or corrective action; any activity to clean up, detoxify, decontaminate, treat or contain any Hazardous Material; any actions to prevent, remediate or mitigate any Release or threatened Release of any Hazardous Material; and any investigation (including subsurface investigations), study, monitoring, assessment, sampling and testing (including soil and/or groundwater sampling activities) or laboratory or other analysis relating to any Hazardous Material, in each case, performed in connection with the Work.

v. "**Governmental Body**" means any government or governmental or regulatory body thereof, or political subdivision thereof, whether foreign, federal, state, or local, or any agency, instrumentality or authority thereof, or any court, arbitrator or mediator (public or private), having jurisdiction over the Property.

vi. "**Hazardous Materials**" means any substance, material or waste that is regulated, classified, or otherwise characterized under or pursuant to any Environmental Law as "hazardous," "toxic," "pollutant," "contaminant," "radioactive," or words of similar meaning or effect, including petroleum and its by-products, asbestos, polychlorinated biphenyls, radon, mold or other fungi and urea formaldehyde insulation.

vii. "**Industrial Use**" means the primary purpose of manufacturing, production, fabrication or assembly processes, information technology equipment siting and ancillary warehouse and office use. For the avoidance of doubt, Industrial Use does not include any uses that are residential, recreational, educational, or religious in nature, including but not limited to residences of any type, schools, churches, hospitals, child day care facilities, senior care facilities or centers, private or commercial stables or riding academies, camps or recreational developments, retail stores or gymnasiums.

viii. "**Law**" or "**Laws**" means any foreign, federal, state or local law (including common law), statute, code, ordinance, rule, regulation, order or other legal requirement issued, promulgated or enforced by any Governmental Body.

ix. "**Release**" means any release, spill, emission, leaking, pumping, pouring, injection, deposit, dumping, emptying, disposal, discharge, dispersal, leaching or migration into the outdoor environment or any intruding or emanating from the outdoor environment into the indoor environment.

x. "**Site Management Plan**" means the document developed by Declarant with NYSDEC, in consultation with the owner of the Property, if not Declarant, at the time such Site Management Plan is agreed with NYSDEC, which details the components of the EFK Remedial Action and related requirements, as such document may be amended, supplemented, rescinded or replaced from time to time with an agreement or order or other instrument as approved by Declarant, NYSDEC and the owner of the Property owner, such approval not to be unreasonably withheld, conditioned or delayed.

xi. "**Utility Systems Work**" means any installation, construction, operation, maintenance, repair, replacement of, or connection to any existing electric utility, telephone communication lines, water lines, and/or wastewater or storm water sewer lines, in connection with or related to the support of any Environmental Remediation Activity, including, without limitation, any activity concerning above-ground electricity lines and associated underground and above-ground apparatus, water lines, and above-ground or underground sewer lines and associated apparatus.

[*Signature on following page*]

IN WITNESS WHEREOF, the undersigned, being the Declarant herein, has hereunto set its hands and seals on the day and year first above written.

INTERNATIONAL BUSINESS MACHINES CORPORATION

MKG By: Nick D'Anniballe

Name: **Nick D'Anniballe**
Title: **Director, Real Estate Investments**

State of New York
County of Westchester ss.:

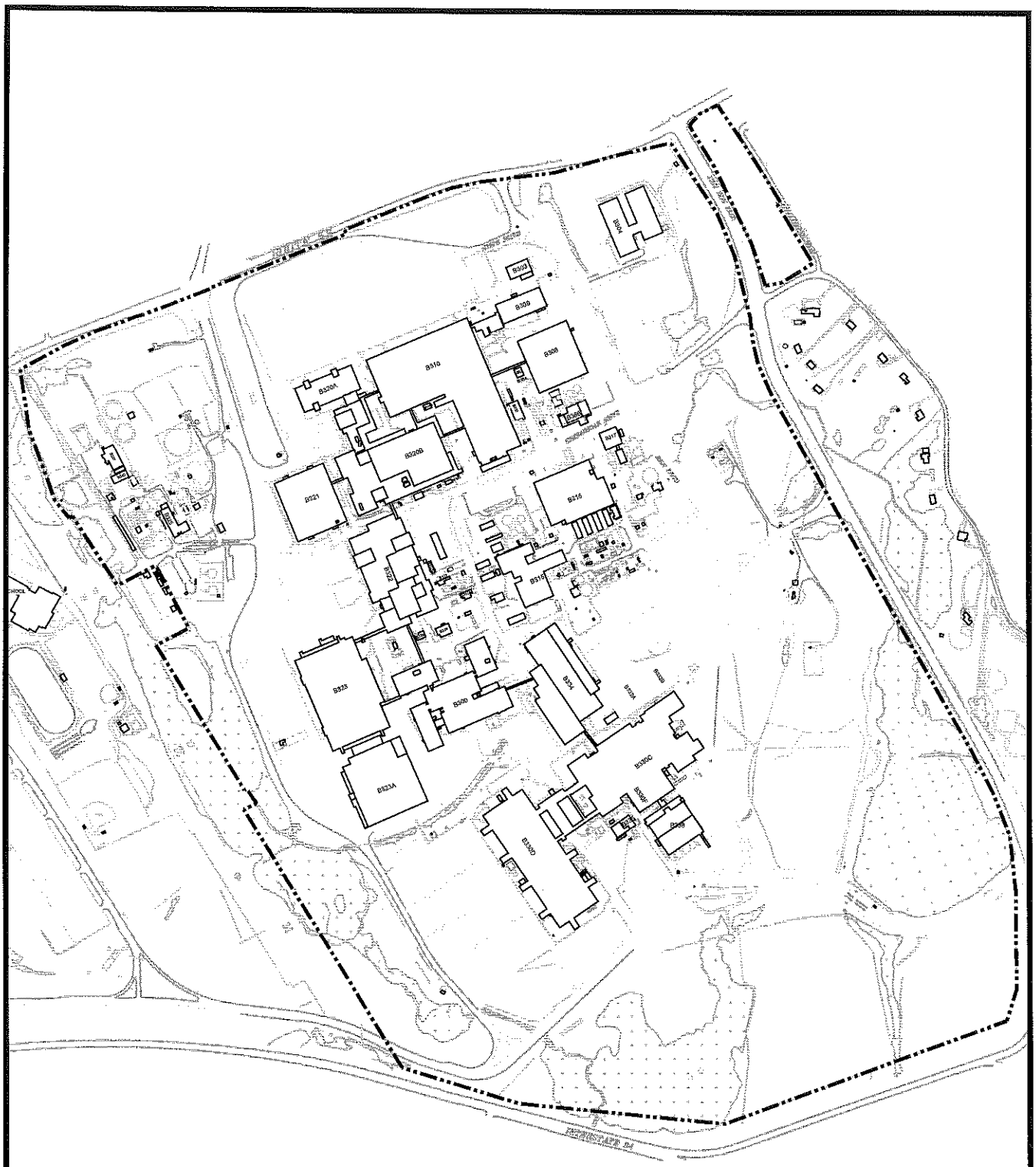
On the 17th day of June in the year 2015 before me, the undersigned, personally appeared Nick D'Anniballe, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Ann C. McEvily
Notary Public- State of New York

ANN C. McEVILY
NOTARY PUBLIC, State of New York
No. 4929713
Qualified in Westchester County
Commission Expires August 8, 2018

Exhibit A

Figure and Description of the Land



LEGEND

- PROPERTY Line

IBM

East Fishkill, New York

Exhibit A
Figure of PROPERTY

DRAWN BY: MHM/JPB	DATE: 6/24/15	DRAWING NO.
CHECKED & APPROVED BY: DAB		95007-094-A1

GROUNDWATER SCIENCES CORPORATION

SURVEYORS PROPERTY DESCRIPTION
IBM East Complex
Parcel I

All that parcel of land situate in the Town of East Fishkill, County of Dutchess and State of New York, bounded and described as follows:

Beginning at a point on the southerly line of NYS Route 52 (SH 627) as widened in 1977 (L. 1455 P. 895) at its intersection with the division line between lands now or formerly of Consolidated Edison Co. of New York, Inc., on the west and lands now or formerly of International Business Machines Corporation on the east; thence along said line of said Route 52 the following two (2) courses and distances:

1. North 60° 19' 06" East 265.74 feet to a point located North 67° 23' 22" East 0.47 feet from a monument found and
2. North 64° 48' 16" East 214.08 feet; thence continuing along the southerly line of Route 52 as widened in 1987 (L. 1768 P. 749) the following seven (7) courses and distances:
3. North 69° 52' 05" East 159.00 feet
4. North 68° 28' 58" East 67.89 feet
5. North 73° 59' 43" East 45.68 feet
6. North 68° 41' 36" East 412.51 feet
7. North 21 ° 01' 44" West 6.00 feet
8. North 68° 08' 56" East 836.09 feet
9. North 22° 16' 05" West 24.21 feet; thence continuing along the southerly line of Route 52 the following six (6) courses and distances:
10. North 67° 43' 55" East 515.98 feet
11. North 69° 55' 35" East 133.68 feet
12. North 77° 48' 15" East 183.18 feet
13. North 82° 10' 05" East 220.08 feet
14. North 83° 11' 55" East 194.19 feet
15. North 73 ° 51' 05" East 331.64 feet to its intersection with the southerly line of the relocated Lime Kiln Road (CR 27) (L. 1884 P. 182 & P. 188); thence easterly and southerly along the last mentioned Lime Kiln Road the following five (5) courses and distances:
16. North 76° 54' 55" East 347.92 feet to a point located South 66° 02' 40" East 0.47 feet from a monument found
17. South 75° 34' 57" East 15.00 feet to a point located North 57° 34' 47" East 0.82 feet from a monument found
18. South 33° 19' 34" East 469.92 feet to a point located South 87° 13' 29" East 1.50 feet from a monument found
19. South 22° 17' 32" East 271.64 feet to a point located South 84° 38' 16" East 1.52 feet from a monument found
20. South 14° 06' 02" East 354.31 feet to a point located South 79° 05' 08" East 1.20 feet from a monument found and; thence continuing along the westerly line of Lime Kiln Road (L. 1268 P. 09 & L. 1270 P. 298) the following ten (10) courses and distances:
21. South 06° 40' 51" East 149.64 feet to a point located South 84° 22' 56" East 1.08 feet from a monument found
22. South 13° 32' 44" East 119.98 feet to a point marked by a highway monument found
23. South 23° 31' 55" East 178.65 feet to a point located South 16° 26' 02" West 0.15 feet from a remains of a monument found

24. South 29° 09' 25" East passing 0.60 feet southwesterly of a monument found, a distance of 943.17 feet, passing 0.22 feet southwesterly of another highway Monument found, a distance of 1,743.33 feet, for a total distance of 2,330.21 feet to a point located South 60° 54' 54" East 0.22 feet from a monument found
25. South 26° 29' 30" East 271.75 feet to a point being located North 29° 30' 15" East 0.62 feet from a highway monument found,
26. South 21 ° 06' 55" East 256.40 feet to a point located North 23° 31' 43" East 0.52 feet from a highway monument found,
27. South 05° 56' 15" East 317.32 feet to a point located South 49 ° 48' 04" East 0.93 feet from a highway monument found; thence continuing along the westerly and northerly lines of lands of
the People of the State of New York, Interstate Route 84 the following seven (7) courses and distances:
28. South 00° 24' 10" East 563.39 feet to a point located North 26° 00' 15" West 0.31 feet from a highway monument found,
29. South 17° 59' 15" West 185.61 feet to a point located North 30° 15' 53" West 0.61 feet from a highway monument found,
30. South 70° 03' 25" West, passing 0.44 feet north of another highway monument found, a distance of 299.58 feet, for a total distance of 603.47 feet to a point located North 63° 14' 23" East 0.84 feet from a highway monument found,
31. South 69° 55' 16" West, passing 0.54 south of another highway monument found, a distance of 491.88 feet, for a total distance of 983.50 feet to a point located South 60° 31' 38" East 1.45 feet from a highway monument found,
32. South 70° 03' 25" West 109.24 feet to a point located South 40° 04' 47" East 1.32 feet from a highway monument found,
33. North 84° 25' 20" west 1,177.18 feet to a point located South 28° 48' 42" West 0.61 feet from a highway monument found,
34. North 73° 04' 15" West 695.36 feet to its intersection with the division line between lands now or formerly of said Consolidated Edison Co. of New York, Inc. on the west and lands now or
formerly of International Business Machines Corporation on the east, the last mentioned point being located South 79° 38' 10" East 1.44 feet from a highway monument found: thence along the
last mentioned division line,
35. North 31 ° 43' 30" West, 1,718.35 feet to its intersection with the division line between lands now or formerly of Central Hudson Gas and Electric Corporation on the north and lands now or
formerly of International Business Machines Corporation on the south; thence easterly, northerly, and westerly the following three (3) courses and distances:
36. North 64° 33' 49" East crossing a stream, 80.27 feet
37. North 33° 48' 15" West 100.00 feet
38. South 58° 23' 55" West 14.71 feet to its intersection with said division line between lands now or formerly of Consolidated Edison Co. of New York, Inc. on the west and lands now or formerly of International Business Machines Corporation on the east; thence along the last mentioned division line
39. North 31 ° 29' 15" West 965.04 feet to its intersection with lands now or formerly of Central Hudson Gas and Electric Corp. on the north and lands now or formerly of
International Business Machines Corporation on the south, thence easterly, northerly, and westerly along the last mentioned division line
40. North 62° 17' 11" East 208.56 feet
41. North 27" 42' 49" West 400.00 feet
42. South 62° 17' 11" West passing 0.37 feet northerly of a monument found at a distance of 235.13 feet for a total distance of 242.65 feet to its intersection with the division line between lands now or formerly of said Consolidated Edison Co. of New York, Inc. on the west and lands now or formerly of

International Business Machines Corporation on the east, said point being located South 74° 13' 44" West 0.28 feet from an iron rod found; thence along the last mentioned division line the following five (5) courses and distances:

43. North 32° 45' 15" West 460.67 feet to a point
44. South 63° 46' 45" West 22.00 feet to a point located North 06° 32' 49" West 0.12 feet from IBM Monument #54 found,
45. North 39° 23' 15" West 124.90 feet to a point located North 28° 23' 09" East 0.12 feet from IBM monument #55 found,
46. North 19° 28' 15" West, 419.69 feet to a point located South 26° 46' 38" East 0.89 feet from an IBM monument found disturbed,
47. North 08° 07' 15" West 349.96 feet to the point of beginning.

Containing: 458.62 acres of land more or less

July 28, 2014
Revised June 16, 2015

SURVEYORS PROPERTY DESCRIPTION
IBM East Complex
Parcel II

ALL that plot, piece or parcel of land situate and being in the Town of East Fishkill, County of Dutchess, State of New York bounded and described as follows:

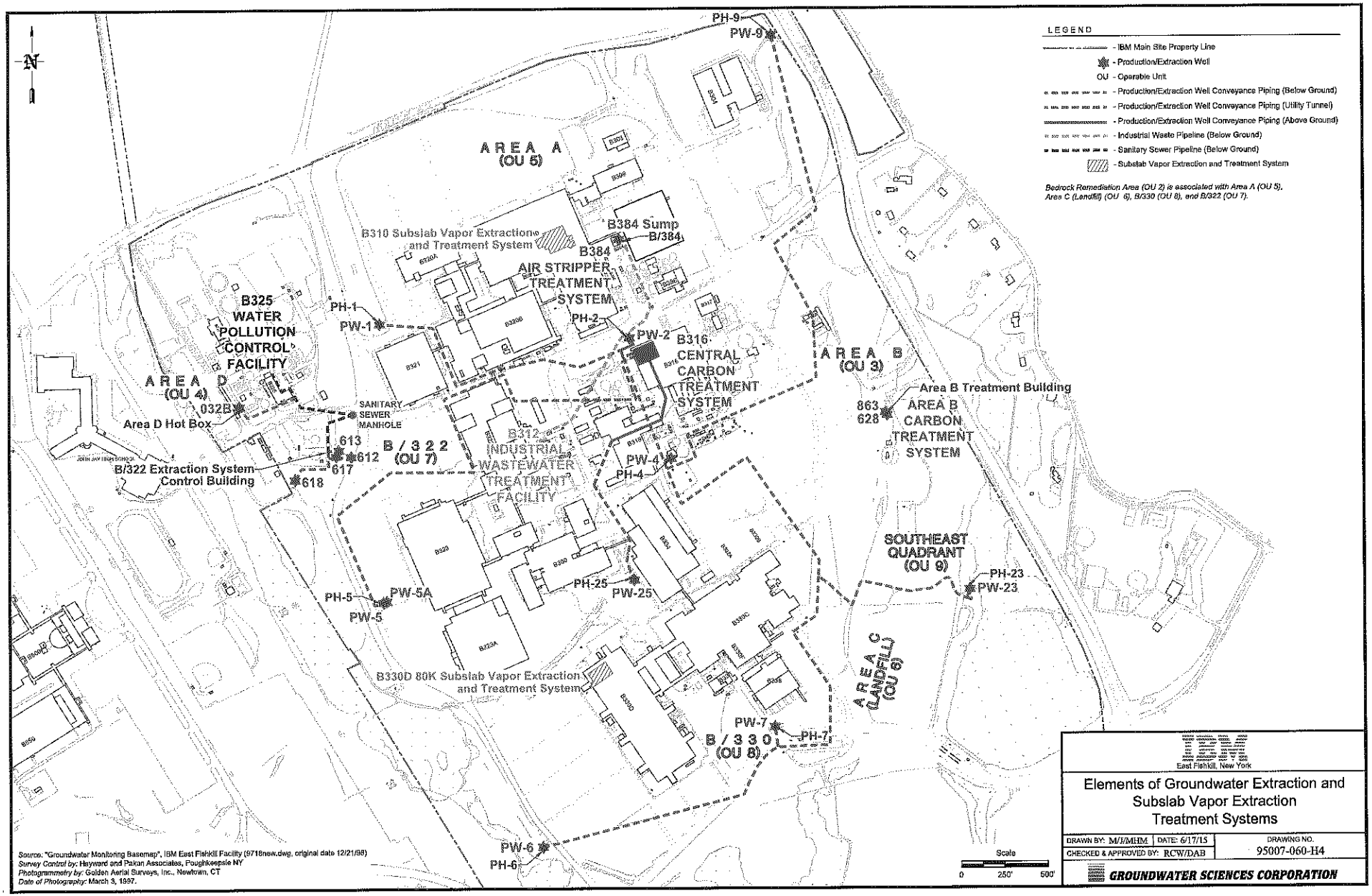
BEGINNING at a point at the intersection of the southerly side of New York State Route 52, (State Highway #627) with the easterly side of Lime Kiln Road, (County Route #27), said point being the northwesterly corner of the herein described parcel and said point being located N 52 °18' 50" E 0.25 feet from a concrete monument found; thence along the southerly side of New York State Route 52, N 40°13'44" E 85.03 feet and N 63°03'26" E 142.67 feet to a point at the intersection of the southerly side of New York State Route 52 with the approximate centerline of the former Shenandoah Road; thence along the approximate centerline of the former Shenandoah Road and also the existing approximate centerline of the Shenandoah Road; S 32°10'11" E 300.06 feet, S 32°04'31"E 200.00 feet and S 31°32'11" E 157.28 feet to a point; thence S 58°42'02" W 35.96 feet to a point on the westerly side of Shenandoah Road, said point being located N 69°21'01" E 0.47 feet from a concrete monument found; thence along the westerly side of Shenandoah Road, S 31°07'45" E 395.87 feet to the southeasterly corner of the herein described parcel, said point being located S 61°30'01" W 0.08 feet from a concrete monument found ; thence along the northerly side of the roadway that connects Shenandoah Road with lime Kiln Road, S 57°59'29" W 210.05 feet to a point located S 86°34'19" W 0.20 feet from a concrete monument found; thence continuing along the northerly side of the roadway that connects Shenandoah Road with lime Kiln Road, S 79°48'48" W 94.70 feet to the southwesterly corner of the herein described parcel; thence along the easterly side of Lime Kiln road, N 17°46'44" W 122.67 feet to a point located S 14°32'31" W 0.23 feet from a concrete monument found; thence continuing along the easterly side of Lime Kiln road, N 18°26'26" W 126.84 feet to a point located S 17°38'39" W 0.32 feet from a concrete monument found; thence continuing along the easterly side of Lime Kiln road, N 25°56'12" W 491.00 feet to a point located N 09°59'15" W 0.22 feet from a concrete monument found; thence continuing along the easterly side of Lime Kiln road, N 30°54'12" W 273.76 feet to the point or place of beginning.

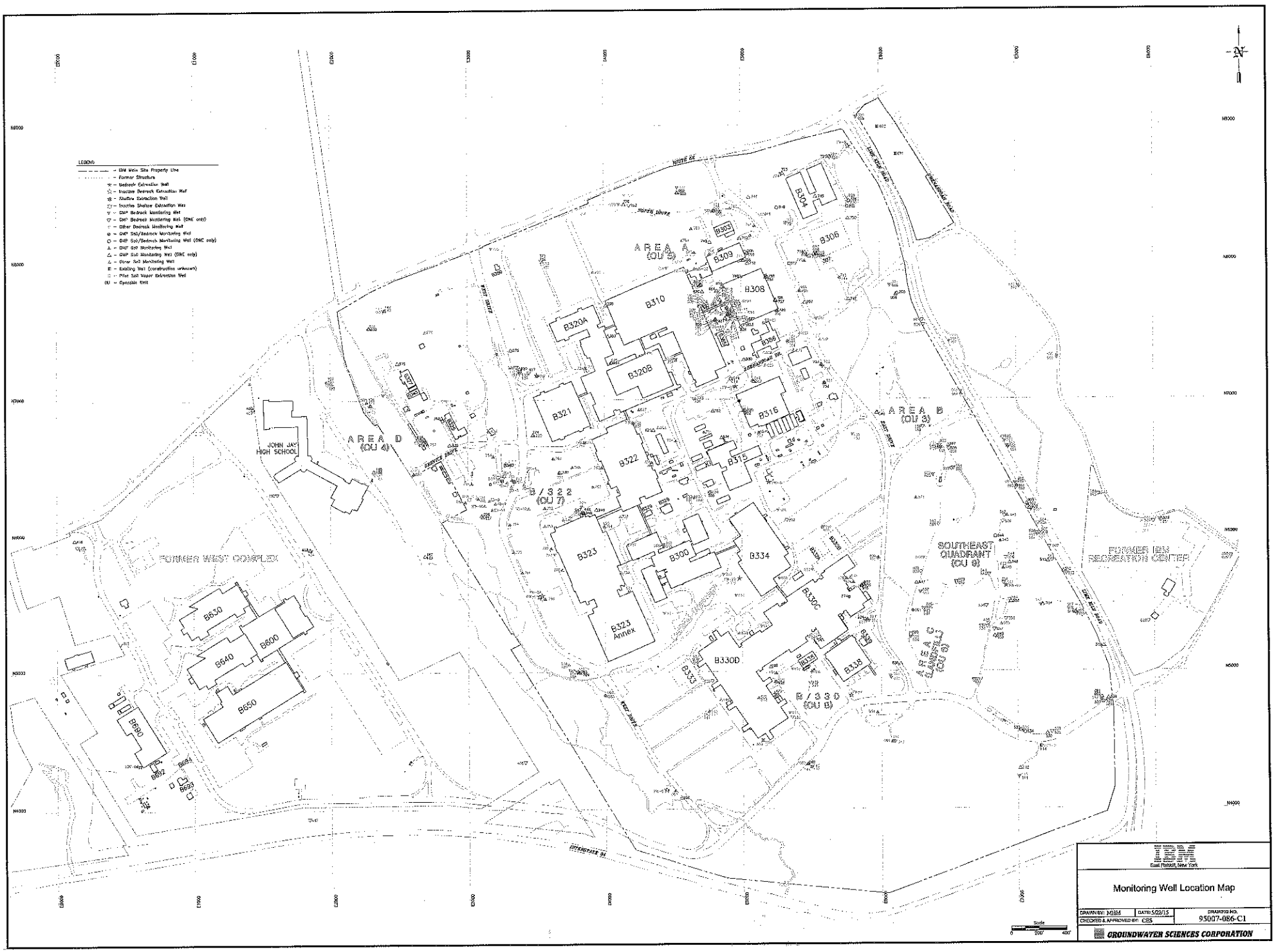
CONTAINING 5.97 ACRES OF LAND MORE OR LESS.

June 16, 2015

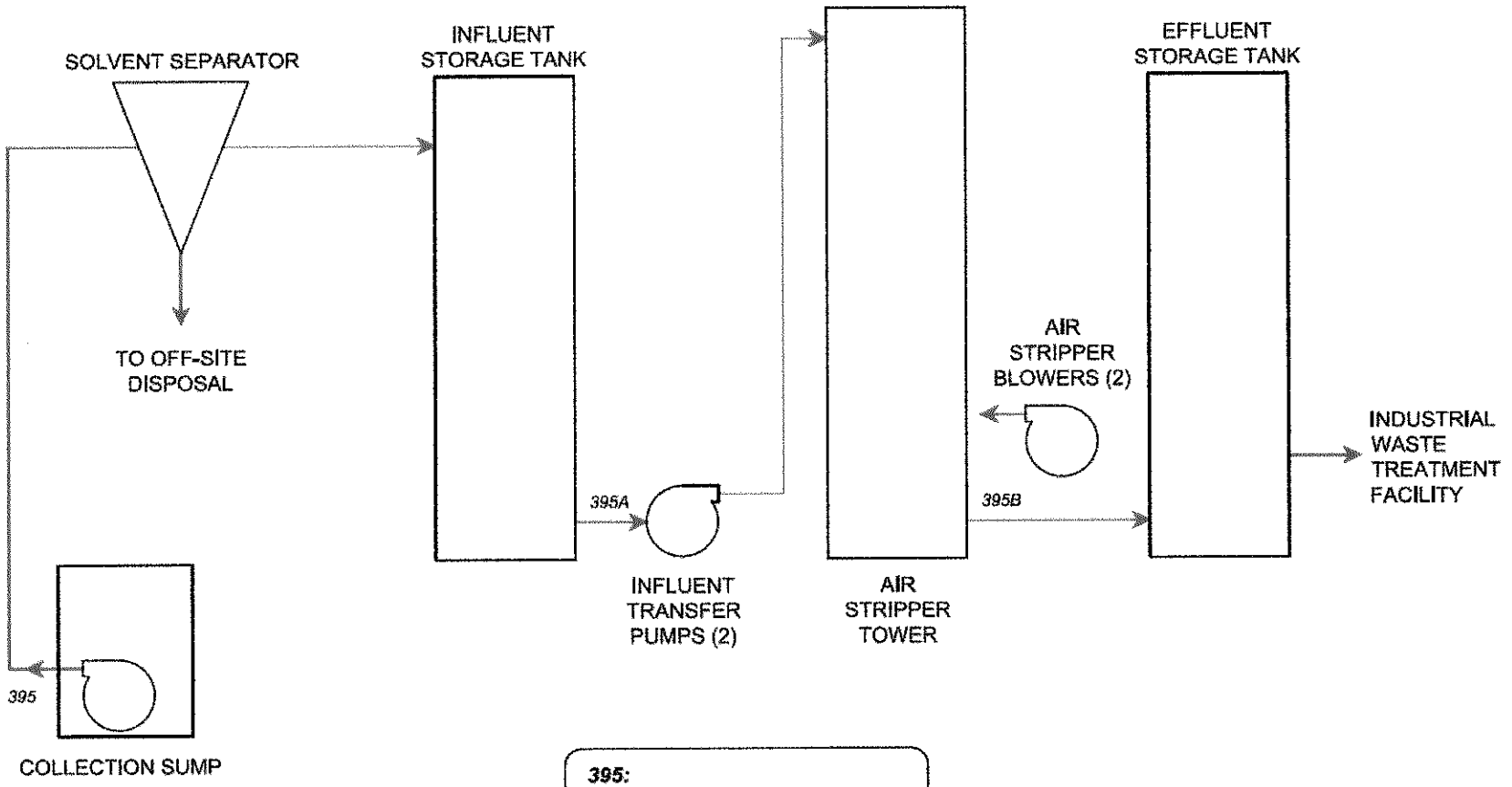
Exhibit B

Existing Remediation System


N
LEGEND
IBM Main Site Property Line
Production/Extraction Well
OU - Operable Unit
Production/Extraction Well Conveyance Piping (Below Ground)
Production/Extraction Well Conveyance Piping (Utility Tunnel)
Production/Extraction Well Conveyance Piping (Above Ground)
Industrial Waste Pipeline (Below Ground)
Sanitary Sewer Pipeline (Below Ground)
Subslab Vapor Extraction and Treatment System
Bedrock Remediation Area (OU 2) is associated with Area A (OU 5), Area C (Landfill) (OU 6), B/330 (OU 8), and B/322 (OU 7).
AREA A (OU 5)
AREA B (OU 3)
AREA C (LANDFILL) (OU 6)
AREA D (OU 4)
B/322 (OU 7)
B/330 (OU 8)
SOUTHEAST QUADRANT (OU 9)
B325 WATER POLLUTION CONTROL FACILITY
B384 AIR STRIPPER TREATMENT SYSTEM
B384 Sump B/384
B310 Subslab Vapor Extraction and Treatment System
B316 CENTRAL CARBON TREATMENT SYSTEM
B312 INDUSTRIAL WASTEWATER TREATMENT FACILITY
AREA B CARBON TREATMENT SYSTEM
Area B Treatment Building
B330D 80K Subslab Vapor Extraction and Treatment System
B/322 Extraction System Control Building
Area D Hot Box
SANITARY SEWER MANHOLE
PH-1
PW-1
PH-2
PW-2
PH-4
PW-4
PH-5
PW-5
PW-5A
PH-6
PW-6
PH-7
PW-7
PH-9
PW-9
PH-23
PW-23
PH-25
PW-25
032B
863
628
613
612
617
618
Scale
0
250'
500'
Source: "Groundwater Monitoring Basemap", IBM East Fishkill Facility (9716new.dwg, original date 12/21/98)
Survey Control by: Hayward and Pakan Associates, Poughkeepsie NY
Photogrammetry by: Golden Aerial Surveys, Inc., Newtown, CT
Date of Photography: March 3, 1997.
East Fishkill, New York
Elements of Groundwater Extraction and Subslab Vapor Extraction Treatment Systems
DRAWN BY: MJ/MHM
DATE: 6/17/15
CHECKED & APPROVED BY: RCW/DAB
DRAWING NO. 95007-060-H4
GROUNDWATER SCIENCES CORPORATION


LEGEND
EBM Main Site Property Line
Former Structure
Bedrock Extraction Well
Inactive Bedrock Extraction Well
Shallow Extraction Well
Inactive Shallow Extraction Well
GWP Bedrock Monitoring Well
GWP Bedrock Monitoring Well (GWC only)
Other Bedrock Monitoring Well
GWP Soil/Bedrock Monitoring Well
GWP Soil/Bedrock Monitoring Well (GWC only)
GWP Soil Monitoring Well
GWP Soil Monitoring Well (GWC only)
Other Soil Monitoring Well
Existing Well (construction unknown)
Pilot Soil Vapor Extraction Well
Operable Unit
AREA A (OU 2)
AREA B (OU 3)
AREA D (OU 4)
B / 3 2 2 (OU 7)
B / 3 3 0 (OU 8)
SOUTHEAST QUADRANT (OU 9)
FORMER WEST COMPLEX
FORMER IBM RESEARCH CENTER
JOHN JAY HIGH SCHOOL
B304
B303
B309
B306
B308
B310
B320A
B320B
B321
B316
B322
B315
B323
B323 Annex
B300
B334
B330C
B330D
B338
B333
B630
B600
B640
B650
B690
B692
B694
B693
NORTH AVE
NORTH WHITE
EAST WHITE
FARMER DRIVE
LUKE READ WAY
INTERNATIONAL DRIVE
INTERSTATE 84
Scale
0
200'
400'
N
Monitoring Well Location Map
DRAWN BY: MBM
DATE: 5/22/15
CHECKED & APPROVED BY: CBS
DRAWING NO.
95007-086-C1
GROUNDWATER SCIENCES CORPORATION

B/384 Air Stripper Treatment System



395:
Influent sample point

395A:
Influent storage tank sample point

395B:
Effluent storage tank sample point

East Fishkill, New York

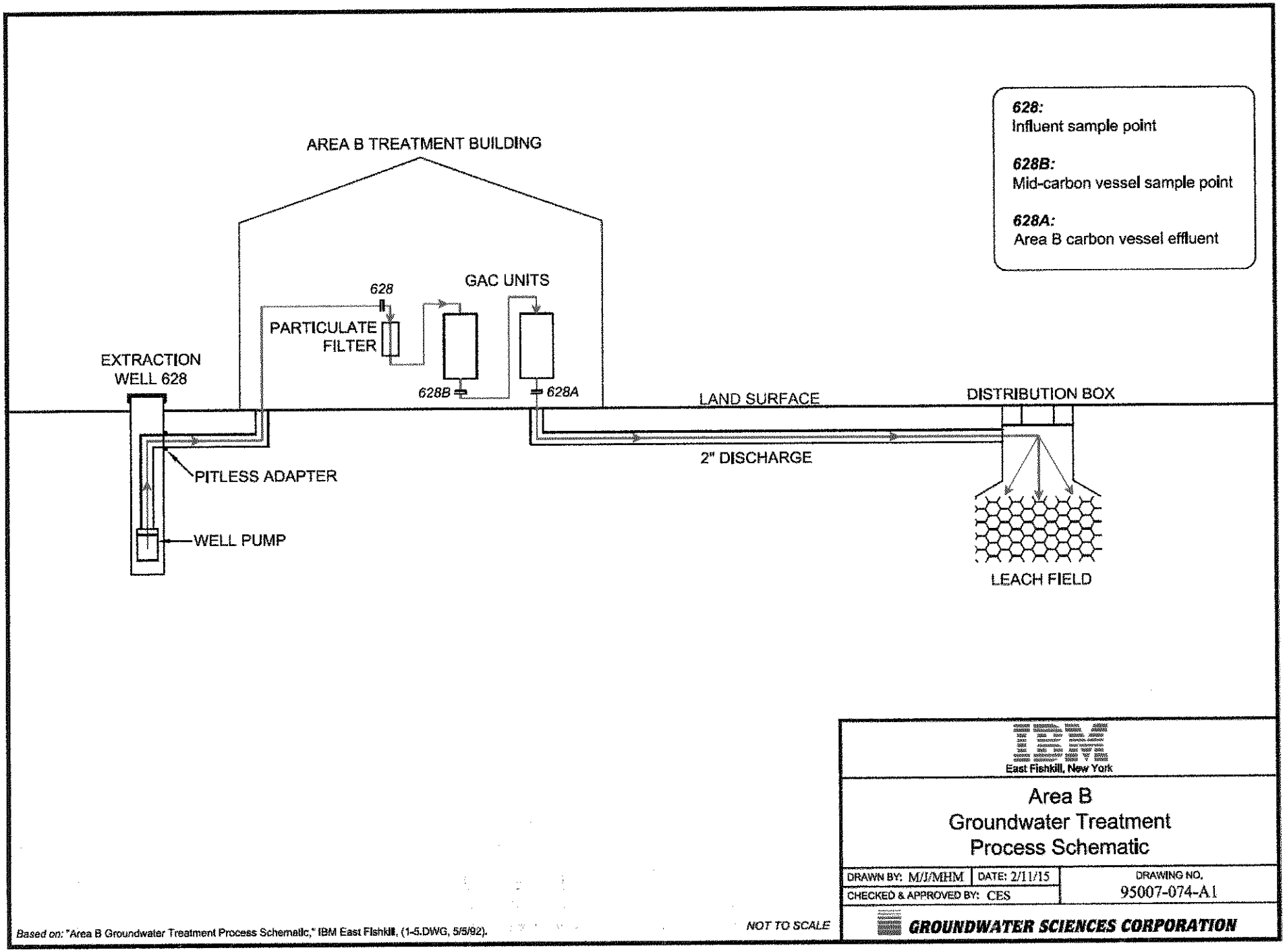
Area A Groundwater Treatment Process Schematic

DRAWN BY: MJ/MHM	DATE: 2/11/15	DRAWING NO.
CHECKED & APPROVED BY: CES		95007-073-A1

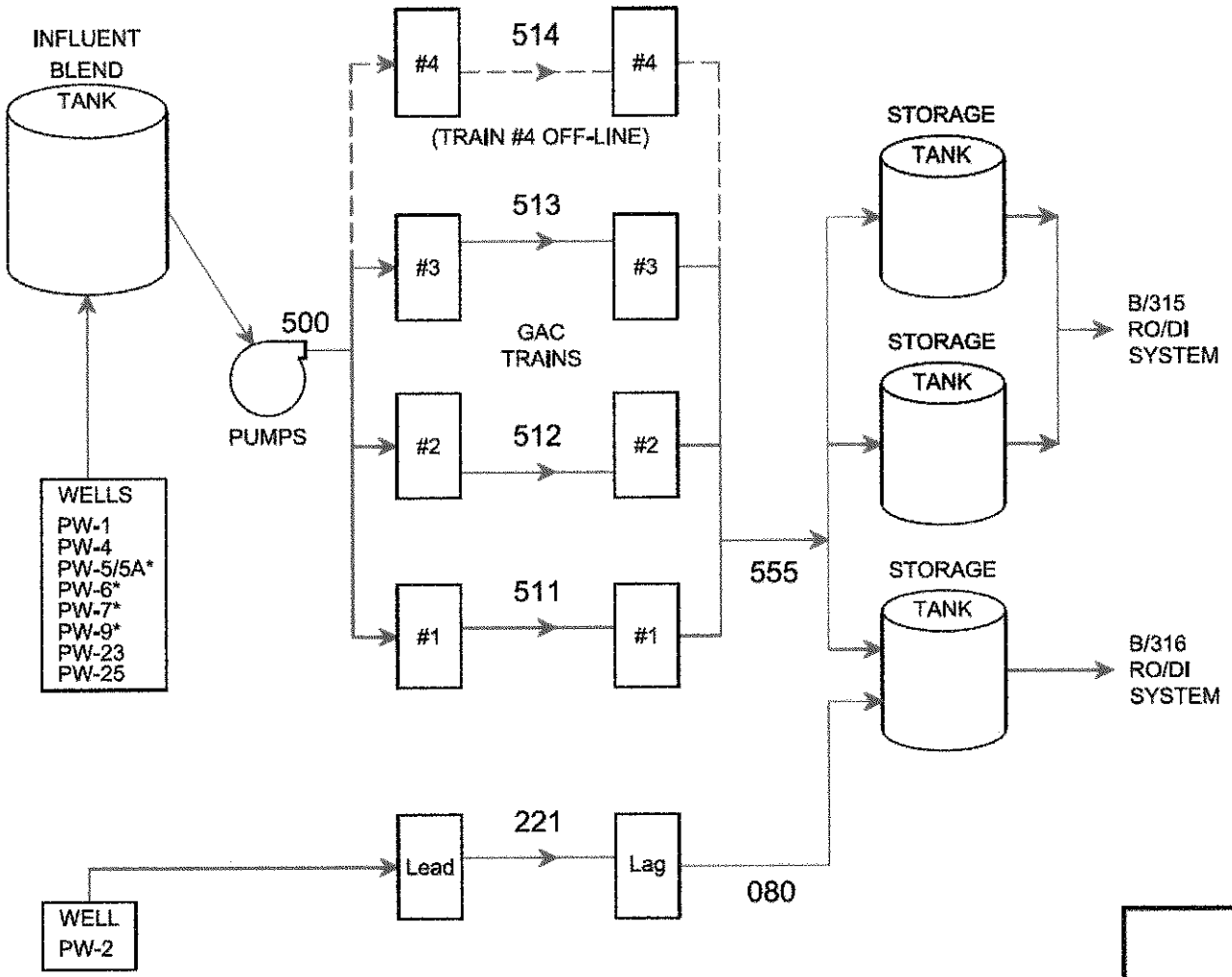
GROUNDWATER SCIENCES CORPORATION

Based on: "Area A Groundwater Treatment Process Schematic," IBM East Fishkill, (1-4.DWG, 5/5/92).

NOT TO SCALE


AREA B TREATMENT BUILDING
628:
Influent sample point
628B:
Mid-carbon vessel sample point
628A:
Area B carbon vessel effluent
GAC UNITS
628
PARTICULATE FILTER
EXTRACTION WELL 628
628B
628A
LAND SURFACE
DISTRIBUTION BOX
2" DISCHARGE
PITLESS ADAPTER
WELL PUMP
LEACH FIELD
East Fishkill, New York
Area B
Groundwater Treatment
Process Schematic
DRAWN BY: MJ/MHM
DATE: 2/11/15
CHECKED & APPROVED BY: CES
DRAWING NO.
95007-074-A1
GROUNDWATER SCIENCES CORPORATION
Based on: "Area B Groundwater Treatment Process Schematic," IBM East Fishkill, (1-5.DWG, 5/5/92).
NOT TO SCALE

B/316 Central Carbon Treatment System



500:
Influent sample point

221, 511, 512, 513, 514:
Mid-carbon train sample point

555:
Combined effluent sample point

080:
PW-2 carbon train effluent point

* PW-5/5A, PW-6, and PW-7 are used for water-supply emergencies only beginning in the fourth quarter of 2014 *(NYSDEC to IBM Environmental Engineering, October 29, 2014, GMP Modification for PW-5/5A, PW-6, PW-7).* PW-9 is also used only for water supply emergencies; it has not been pumped since 2002.

East Fishkill, New York

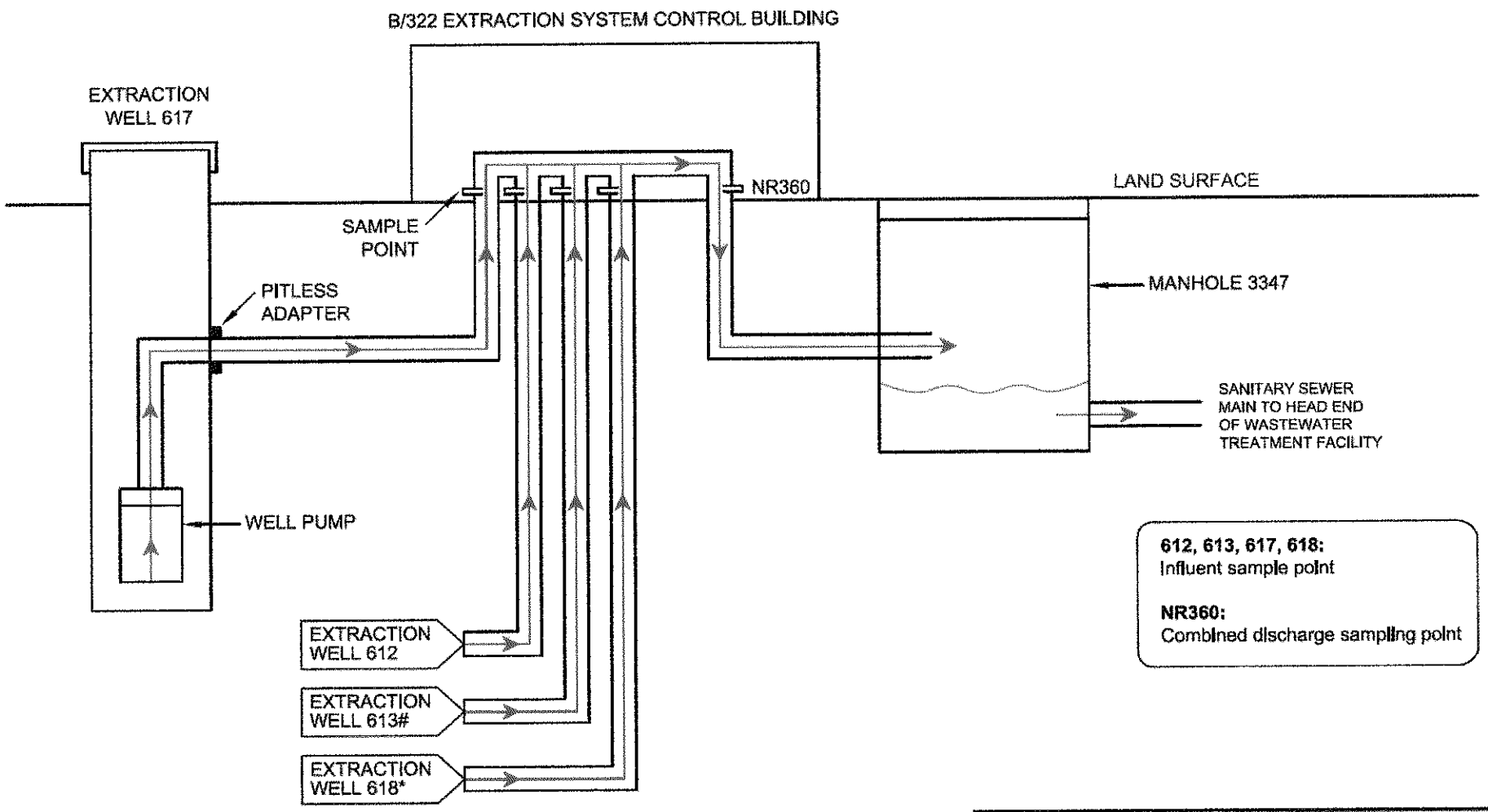
Central Carbon and PW-2 Systems Process Schematic

DRAWN BY: MHM	DATE: 2/11/15	DRAWING NO.
CHECKED & APPROVED BY: CES		95007-076-C1

GROUNDWATER SCIENCES CORPORATION

Based on: "Central Carbon Process Schematic," IBM East Fishkill, (1-3.DWG, 5/5/92).

NOT TO SCALE



Extraction well 613 is a backup well that is currently not in operation.

* Pumping was terminated in January 2014 at extraction well 618 with approval from NYSDEC *(NYSDEC to IBM Environmental Engineering, January 15, 2014, Termination Petition, Extraction Well 618, B/322 Remediation Area)*. Post-shutdown monitoring is scheduled to continue through the first quarter of 2017.

Based on: "Piping and Flow Schematic," B322 AOC Final Design Report, Fig. 3; Sanborn, Head Engineering, P.C. (Sept. 1998).

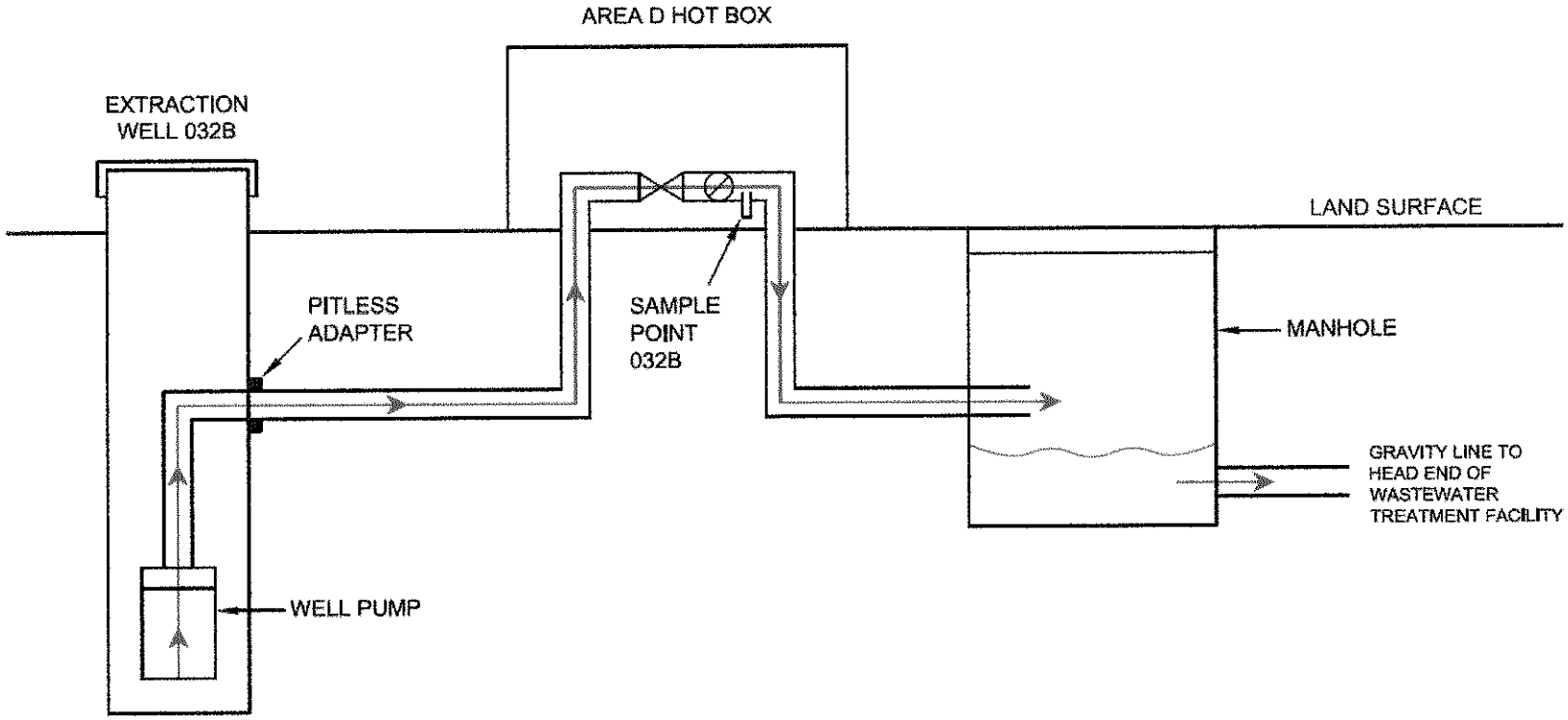
NOT TO SCALE

East Fishkill, New York

B/322 Treatment System Process Schematic

DRAWN BY: MHM	DATE: 2/11/15	DRAWING NO. 95007-077-B1
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION



East Fishkill, New York

Area D
Groundwater Treatment
Process Schematic

DRAWN BY: MJJ/MHM	DATE: 2/11/15	DRAWING NO. 95007-075-A1
CHECKED & APPROVED BY: CES		

GROUNDWATER SCIENCES CORPORATION

NOT TO SCALE

Based on: "Area D Groundwater Treatment Process Schematic," IBM East Fishkill, (1-8.DWG, 5/5/92).

Exhibit B - IBM Remediation Systems
Equipment Assets
East Fishkill, NY

Bedrock Production Wells

Location	Influent	Effluent	Number	Equipment	Detail	Flow Meter	Notes
PW-1	Bedrock GW	Central Carbon B316	1	Submersible pump	75hp/480vac	Polysonic DCT6088	Active well, power for B350 is tapped from mains in PH-1, communications for B350 also run through building
PW-2	Bedrock GW	Central Carbon B316	1	Submersible pump	American Marsh S8LC-4, 50HP/480vac	Polysonic DCT6088	Active Well, Calibration by Malcon Industrial Controls 9/24/14, 914-666-7146, Tool Box and Pipe Vise (Westech Owned?)
PW-4	Bedrock GW	Central Carbon B316	1	Submersible pump	40HP/480vac	Polysonic DCT6088	Active Well, inside building with fire suppression equipment
PW-5	Bedrock GW	Central Carbon B316	1	Turbine pump	75HP/480vac	Polysonic DCT6088	Inactive well.
PW-5A	Bedrock GW	Central Carbon B316	1	Submersible pump	Pleuger, 75HP/480vac	Polysonic DCT6088	Inactive well.
PW-6	Bedrock GW	Central Carbon B316	1	Submersible pump	25HP/480vac	Polysonic DCT6088	Inactive well.
PW-7	Bedrock GW	Central Carbon B316	1	Submersible pump	50HP/480vac	Polysonic DCT6088	Inactive well.
PW-9	Bedrock GW	Central Carbon B316	1	Turbine pump	75HP/480vac	Polysonic DCT6088	Inactive well.
PW-23	Bedrock GW	Central Carbon B316	1	Submersible pump	Goulds Model 55GS30, 5HP/480vac	Polysonic DCT6088	Active well
PW-25	Bedrock GW	Central Carbon B316	1	Submersible pump	75HP/480vac	Polysonic DCT6088	Active well

B316 Central Carbon Treatment System

Location	Equipment	Number	Notes
B316	Carbon adsorption systems, 10-foot diameter, 20,000 lb capacity. Five trains, 2 tanks per train.	10	Identified in the Tanks.DBF as Tank numbers: 504, 505, 506, 507, 508, 509, 510,511, 512, 513

Exhibit B - IBM Remediation Systems
Equipment Assets
East Fishkill, NY

Stripper Treatment System B384

Location	Influent	Effluent	Number	Equipment	Detail	Flow Meter	Notes
B384 Sump	GW Sump B384	B312 industrial wastewater treatment system				1/2" Data Industrial Model 8410201-0022, Series 1500 display, Main sump pump	
			5	Submersible Pump Motors	Grundfos MS402, 0.5 HP, 3ph/208V, P/N 96465633	1" Data Industrial Model 8402200-0023, Series 1500 display, total from two sump pumps	Spare in Box
			1	Submersible Pump Motors	franklin 1.5 HP, 200V, 3W, 3 PH, 23450423035	1-1/2" Data Industrial Model 8228PV1505-0023, Series 1500 display, Stripper influent	Spare in Box
			1	Submersible Pump End	Goulds 7GS10422C, 4"		Spare in Bubble Wrap
			4	Centrifugal Pumps	Ebara Model ACDU70/17T3C, 0.75 HP, 3ph, 208/460V		Spare, Influent/Effluent
			1	Centrifugal Pumps	Flowserve Model STX, 0.75 HP, 3ph, 208/230/460V		Spare, Influent/Effluent
			4	Centrifugal Pumps	Flowserve Model STX, 0.75 HP, 3ph, 208/230/460V		Installed Influent/Effluent
			2	AOD Pumps	Sandpiper 1/2-SGN6SS		Installed Groundwater Collection Pumps
			2	AOD Pumps	Wilden M4-V-TF-TF-SS		Sump to inf or eff pumps
			2	Blowers	GS Ceilcote, model CMHB6 1985		fiberglass stripper blowers
			1	Air Stripper	Ceilcote Model SPTTB-360, 325 CFM		
			1	Influent tank	5900 gallon, FRP		
			1	Effluent Tank	5900 gallon, FRP		

Area B Carbon Treatment

Location	Influent	Effluent	Number	Equipment	Detail		Notes
628	GW to carbon	surface discharge	1	Submersible pump	Goulds 7GS10, 1.0 HP, 200vac 3ph	Data Industrial Series 1500	Active Well
			2	Cartridge Filters	Harmsco Hurricane HUR-90-HP		two (2) spare HC/90-5 cartridges in boxes
			2	Liquid Phase Carbon Filters	Fiberglass, approx. 10 cu. ft. capacity each vessel		
863							Inactive well

Exhibit B - IBM Remediation Systems
Equipment Assets
East Fishkill, NY

Area D

Location	Influent	Effluent	Number	Equipment	Detail		Notes
032B	GW	B325 Sanitary Wastewater Treatment Plant	1	Submersible pump	1/2hp, 115vac, 1DSQE05-110		Active Well, Well stand alone, pitless to hotbox transfer enclosure

B322

Location	Influent	Effluent	Number	Equipment	Detail		Notes
612	GW	B325 Sanitary Wastewater Treatment Plant	1	Submersible pump	Grundfos 5S05-9	Data Industrial Series 1500	Active Well
613	GW	B325 Sanitary Wastewater Treatment Plant	1	Submersible pump	Grundfos 5S05-9	Data Industrial Series 1500	Inactive Well
617	GW	B325 Sanitary Wastewater Treatment Plant	1	Submersible pump	Grundfos 5S05-9	Data Industrial Series 1500	Active Well
618	GW	B325 Sanitary Wastewater Treatment Plant	1	Submersible pump	Grundfos 5S05-9	Data Industrial Series 1500	Inactive Well

B310 SVE System

Location	Influent	Effluent	Number	Equipment	Detail		Notes
B330D SVE System/Exterior, south side of B330D Mechanical Tower 7	sub-slab vapor	discharge after carbon into TMAH discharge stack	1	Moyno transfer pump	Model 33352, 1/2hp 1ph		Electrical source - QMR Panel PPM2-4
			1	Rotron Blower	DR 909, 15HP, 3ph		blower interlock with TMAH discharge stack
			1	Vapor Liquid Separator			
			1	Bisco Environmental Control Panel			
			1	Actuated Valve			Electrical source - EPPM2A-1-A6
			2	Vapor Phase Carbon Filters	VSC-1000		Rental from Evoqua

Exhibit B - IBM Remediation Systems
Equipment Assets
East Fishkill, NY

B330D SVE System

Location	Influent	Effluent	Number	Equipment	Detail		Notes
B330D SVE System/Exterior, south side of B330D Mechanical Tower 7	sub-slab vapor	discharge after carbon into TMAH discharge stack	1	Moyno transfer pump	Model 33352, 1/2hp 1ph		Electrical source - QMR Panel PPM2-4
			1	Rotron Blower	DR 909, 15HP, 3ph		blower interlock with TMAH discharge stack
			1	Vapor Liquid Separator			
			1	Bisco Environmental Control Panel			
			1	Actuated Valve			Electrical source - EPPM2A-1-A6
			2	Vapor Phase Carbon Filters	VSC-1000		Rental from Evoqua

Area A SVE Pilot System

Location	Influent	Effluent	Number	Equipment	Detail		Control
Area A SVE/Exterior,east side of B310, north of B310/308 linkway	Soil vapor	discharge to atmosphere after carbon treatment	1	Conex enclosure	20' length		Electrical source - MCC-K2-1 postion 201
			1	Vapor Liquid Separator			
			1	Goulds transfer pump	Model 1ST1D5D4	GF Signet 3-8512-P0 with 3-9900-1 display transmitter	
			1	FPZ Blower	SCL K08-MS, 7.5HP, 3ph		
			1	NES control panel			
			2	Vapor phase carbon vessels	VSC-1000		Rental from Evoqua

Exhibit B - IBM Remediation Systems
Structures
East Fishkill, NY

Production Wells B316

Equipment	Structure	Structure Dimensions	Access	Housing	Location
PH-1/PW-1	Building	10'x14'x10' steel roof, concrete walls	Well roof Hatch, man door - double steel 71" wide x 83" tall	Well Head, Pump, Local Controls, Electrical	West of B316 Central Carbon
PH-2/PW-2	Building	17' x 13' x 11" tall, steel flat roof, concrete walls	Well roof hatch, man door - double steel 71" wide x 83" tall	Well Head, Pump, Local Controls, Electrical	Between buildings south of the Biologic Waste Treatment Plant reactors on East Road (BWTP)
PW-4	Shares Building w/ Plant Fire Protection		Well roof hatch, man door - double steel 71" wide x 83" tal	Well Head, Pump, Local Controls, Electrical	north of Bldg. 964 near the northwest corner
PH-5/PW-5	Building	22'x14'x10' steel roof, concrete walls	Well roof hatch, man door - double steel 71" wide x 83" tal	Well Head, Pump, Local Controls, Electrical	central west edge of site, west of B323
PH-5/PW-5A	Building	10'x14'x10' steel roof, concrete walls, extension of PH-5	Well roof hatch, man door - double steel 71" wide x 83" tal	Well Head, Pump, Local Controls, Electrical	central west edge of site, west of B323
PH-6/PW-6	Building	22'x14.5'x10.5' steel flat roof, concrete walls	Well roof hatch, man door - double steel 71" wide x 83" tal	Well Head, Pump, Local Controls, Electrical	Southwest corner of site
PH-7/PW-7	Building	9'x14'x10' steel flat roof, concrete walls	Well roof hatch, man door - double steel 71" wide x 83" tal	Well Head, Pump, Local Controls, Electrical	South center of site, south of B338
PH-9/PW-9	Building	10'x15'x10' steel flat roof, concrete walls	Well roof hatch, man door - double steel 71" wide x 83" tal	Well Head, Pump, Local Controls, Electrical	North east corner of site, north east of B304
PW-23	Building	7'x7'x8' pre-fab concrete	man door - single steel 36" wide x 83" tall	Local Controls, Electrical	Southeast, south central area of the site
PW-25	Building	11'x19'x9' cinderblock	man door - single steel 36" wide x 83" tall	Local Controls, Electrical, well head in hotbox	Center of site west of B384

Stripper Treatment System B384

Equipment	Structure	Structure Dimensions	Access	Housing	Location
B384	Building	Steel, approx. 20'x40'x20'	man door (2) - double steel 71" wide x 83" tall, man door (1) - single steel 36" wide x 83" tall	pumps, flow meters, tanks, stripping tower, blowers, controls, walls/sump	West of B308

Area B Carbon Treatment

Equipment	Structure	Structure Dimensions	Access	Housing	Location
628	Building	Pre-Fab Concrete, 8'x8'x8'	man door - double steel 71" wide x 83" tall	Controls, carbon filters, cartridge filters	Eastern central edge of site

Area D

Equipment	Structure	Structure Dimensions	Access	Housing	Location
032B	Hotbox type enclosure	Aluminum, 3' x 3' x 3'	hinged lid	Rotrimbox 3 controller, KPSI transducer, Nanmac flow meter, heater	northwest corner of site, west of Sanitary Wastewater Treatment plant

B322

Equipment	Structure	Structure Dimensions	Access	Housing	Location
B322	Building	Pre-fab concrete	Steel Man door	Local Controls, Electrical	northwest corner of site, south of Sanitary Wastewater Treatment plant

Exhibit B - IBM Remediation Systems
Electrical Connections
East Fishkill, NY

Production Wells B316

Equipment	Discharge Piping	Estimated Discharge Piping Length	Power	Electrical Connection Location	Notes
PW-1	4"Steel through backflow preventer then 8" to underground conveyance to B316	1800 feet	200 Amp 480vac 3ph, 480V/208V/120V	Fed From J094MCC-LF-9 SECT-1 BKR-1D	Power for B350 is tapped from mains in PH-1, communications for B350 also run through building
PW-2	4" Stainless Steel through backflow preventer then 8" to underground conveyance to B316	250 feet	200 Amp 480vac 3ph, TCI KLCUL80A2 power filter before VFD, GE Model 9T21A15G3 15kVA dry type Transformer 480V/208V/120V, LP-P-1 (120/208V)	Fed From MCC X4-S SW.E-6, LOC. B316 COL. Q-3	
PW-4	6" from well, 4"Steel through backflow preventer then 8" to underground conveyance to B316	775 feet	100 Amp 480vac 3ph		
PW-5	6" from well, 4"Steel through backflow preventer then 8" to underground conveyance to B316	3575 feet	400 Amp, 480V main, J104MCC-LE9	Fed From J104MCC-LE9, SECT 4, BKR 4A	
PW-5A	6" from well, 4"Steel through backflow preventer then 8" to underground conveyance to B316	same piping as PW-5	same power as PW-5, power switch installed	same power as PW-5	
PW-6	4" from well, 2"Steel through backflow preventer then 6" to underground conveyance to B316	5250 feet	400 Amp, 480V main		
PW-7	2" from well, 2"Steel through backflow preventer then 6" to underground conveyance to B316	3825 feet	Power 200 amp, 480V, 15 KVA MINI- Power center		
PW-9	6"Steel through backflow preventer then 8" to underground conveyance to B316	4125 feet	400 Amp, 480V main	Fed From PP-K12-5, B304	
PW-23	2" stainless steel from well then 6" to underground conveyance to B316	3425 feet	100 Amp 480vac 3ph	Fed From X17-EDP-1, B351	
PW-25	6" HDPE inside 10" HDPE from well then 6" HDPE inside 10" HDPE underground conveyance to B316	900 feet buried, 700 feet on trestle	200 Amp 480vac 3ph,	Fed From PDP-2-K14, B334, Floor 2	

Stripper Treatment System B384

Equipment	Discharge Piping	Estimated Piping Length	Power	Electrical Connection Location	Notes
B384 Sump		1450 feet buried, 725 feet on trestle	Main Power 3-module MCC "PPM" GE (480V) 8000 Line, CAT # 514X0035101,		for EMON use spare CKT, GE TBE breaker type
			Transformer FF C2 MCC PPM, ACME 480/208/120, 15 KVA		
			subpanel (FF C2 MCC-PPM, LP-Panel (120V)		
			MCC-EMG (for control panel) FF MCC-PPM (LPEE-2), LP-CKT 14		

Area B Carbon Treatment

Equipment	Discharge Piping	Estimated Piping Length	Power	Electrical Connection Location	Notes
628			480vac 100amp, 3ph, 45KVA transformer, 200amp, 120/208vac service to building	Fed From X17-EDP-1, B351	
863					

Area D

Equipment	Discharge Piping	Estimated Piping Length	Power	Electrical Connection Location	Notes
032B		275 feet			

B322

Equipment	Discharge Piping	Estimated Piping Length	Power	Electrical Connection Location	Notes
612	Manifold	500 feet	Main power - 60A 480 in 30 KVA transformer 120/208, NQOD Square D LP, 120/208V 3-ph		
613	Manifold	375 feet			
617	Manifold	400 feet			
618	Manifold	650 feet			
	2" pvc				

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
002	8518.014	4537.868	
003	8515.747	4538.284	
005	7772.055	6134.484	
006	7764.886	6126.095	
007	7592.128	5547.170	
008	8072.229	5042.508	
009	8067.344	5043.589	
010	8076.990	4661.237	
011	7831.768	4697.559	
012	7841.578	4717.249	
013	7630.268	4904.651	
014	7626.342	4906.258	
015	7622.508	4907.920	
016	7140.621	5083.247	
017	7133.611	5089.249	
018	7150.694	4924.310	
019	7155.420	4922.857	
020	6920.006	5024.650	
021	6918.169	5020.237	
022	6916.125	5015.190	
027	7204.062	3450.750	
028	7244.167	3358.706	
030	7531.247	2282.942	
031	7532.041	2279.179	
032B	6701.970	2690.670	
035	6773.709	3152.987	
038	6320.836	4765.408	
039	6322.183	4769.064	
044	6897.844	5984.595	
045	6902.566	5986.169	
046	6649.354	6428.358	
047	6651.918	6430.454	
048	5756.458	6897.932	
049	5256.598	6835.595	
050	5251.734	6838.602	
053	4965.757	6073.504	
054	4696.491	5978.780	
059	4833.049	3997.592	
060	4828.527	4000.564	
061	4136.068	4504.733	
062	4322.084	5469.567	
063	4320.995	5467.872	
064	7040.533	6596.366	
065	7055.103	6595.751	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
066	6987.994	2265.582	
067	6463.455	2607.405	
068	6253.894	2982.574	MOSF well
069	4482.364	6084.653	
071	8789.620	6130.393	
072	8983.054	5995.630	
074	7618.145	4897.690	
075	7366.983	3317.645	
085	9058.705	5844.268	
086	9058.705	5844.268	
087	7832.757	6082.700	
088	7832.757	6082.700	
089	6001.388	7154.997	
090	6001.388	7154.997	
091	4806.212	7610.031	
092	4806.212	7610.031	
095	8066.420	5550.380	
096	8066.420	5550.380	
097	8070.910	5548.480	
098	8070.910	5548.480	
099	8383.665	4803.894	
100	8383.665	4803.894	
101	8384.262	4808.809	
102	8384.262	4808.809	
103	7422.942	5337.874	
104	7422.942	5337.874	
105	7426.962	5342.224	
106	7426.962	5342.224	
108	6742.206	5806.444	
109	6742.206	5806.444	
112	4285.998	7014.122	
113	4227.305	7004.293	
114	4227.305	7004.293	
115	7592.823	4812.621	
116	7581.103	4812.767	
117	7579.473	4816.285	
118	7579.473	4816.285	
119	8011.287	3547.146	
120	8011.287	3547.146	
121	8015.845	3544.898	
122	8015.845	3544.898	
127	6284.905	4655.414	
128	6284.905	4655.414	
129	6282.508	4651.089	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
130	6282.508	4651.089	
133	7207.980	3392.558	
134	7207.980	3392.558	
135	7218.202	3369.305	
136	7188.085	3384.926	
140	4707.127	4752.644	
141	4707.127	4752.644	
142	4709.970	4756.984	
143	4709.770	4756.370	
144	4299.078	5494.313	
145	4301.093	5498.184	
146	4301.093	5498.184	
147	7663.575	2397.319	
148	7663.575	2397.319	
149	7659.624	2386.796	
150	7659.624	2386.796	
151	6279.506	3076.270	
152	6279.506	3076.270	
153	6280.491	3068.831	
154	4999.973	3797.404	
155	4999.973	3797.404	
156	5003.112	3793.197	
157	5009.063	3786.807	
158	4084.387	4549.216	
161	7206.137	3378.741	
168	6794.614	6318.692	
169	6794.614	6318.692	
170	6965.743	2292.464	
171	6965.743	2292.464	
172	6960.069	2282.810	
173	6960.069	2282.810	
174	5055.534	3731.979	
175	5055.534	3731.979	
178	5685.196	5758.662	
180	5035.183	5203.440	
181	4988.890	5242.059	
200	7694.652	4014.447	
201	7936.519	3918.934	
203	6791.579	4391.172	
204	6694.859	4521.394	
224	6741.816	3477.018	
225	6739.864	3484.393	
226	6151.658	3101.790	
227	6144.019	3108.542	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
500	7545.320	6326.260	
501	7580.570	6317.010	
502	6219.330	7079.510	
503	6183.280	7102.810	
504	6087.120	7153.830	
505	6087.120	7153.830	
506	6010.120	7146.450	
507	6014.130	7163.870	
508	6014.130	7163.870	
509	5912.440	7234.330	
510	5808.400	7224.900	
511	5812.890	7254.280	
512	5734.740	7337.260	
513	5717.960	7357.420	
514	5488.000	7183.300	
515	5486.400	7170.800	
516	5428.830	7424.550	
517	5445.700	7419.710	
518	5445.700	7419.710	
519	5182.090	7626.300	
526	4797.560	7658.790	
527	4770.130	7620.990	
528	4773.360	7625.630	
529	4773.360	7625.630	
530	4538.130	7213.110	
531	4549.280	7245.530	
532	4549.280	7245.530	
533	4566.230	7019.720	
534	4548.820	7051.260	
535	4555.640	7037.660	
536	5346.300	6788.300	
537	5324.500	6780.240	
538	5324.500	6780.240	
539	5478.760	6773.550	
540	6759.900	5136.800	
541	5711.500	6793.650	
542	5711.500	6793.650	
543	5956.040	6877.880	
544	5988.650	6843.350	
545	6143.040	6928.740	
546	6098.760	6897.090	
547	6140.200	6908.280	
548	5796.160	6945.380	
549	5833.700	6918.700	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
550	5833.700	6918.700	
551	5648.190	6900.200	
553	5510.740	6953.610	
554	5525.200	6942.580	
555	5342.750	6883.990	
556	5382.290	6916.300	
557	5304.090	6831.390	
558	5270.310	6223.150	
559	5251.530	6221.420	
560	5251.530	6221.420	
561	5445.740	6239.810	
562	5584.350	6294.510	
563	5584.350	6294.510	
564	5835.500	6318.800	
565	6081.080	6428.040	
566	6081.080	6428.040	
567	6656.400	6502.600	
568	6487.650	6526.560	
569	6491.880	6539.820	
570	6491.880	6539.820	
571	6274.080	6265.500	
572	4806.400	5115.400	
573	4805.600	5116.200	
574	5547.400	5776.000	
575	5689.700	5785.500	
576	5657.000	5807.900	
577	7043.390	2387.000	
578	8434.860	4112.480	
579	6219.930	3829.970	
580	6538.850	4344.560	
581	8381.000	4797.100	
600	5838.318	5989.885	
601	5833.022	5988.055	
602	4841.290	5230.675	
603	4493.647	5141.553	
604	4497.252	5144.622	
605	4931.463	4777.329	
606	6115.035	5326.621	
607	5020.203	5360.277	
608	5688.197	5270.023	
609	6188.755	5261.662	
610	5562.575	4953.575	
611	5433.000	4432.100	
612	6407.200	3337.800	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
613	6445.900	3265.700	
614	6719.000	2684.000	
615	6710.600	2688.600	
616	6692.800	2698.500	
617	6410.800	3250.200	
618	6276.600	3011.900	
619	6635.600	6432.000	
620	7232.300	3381.700	
621	6776.700	4356.100	
622	5752.000	5510.200	
623	5719.497	4864.655	
624	5592.540	4175.380	
627	6925.360	4251.830	
628	6642.200	6446.750	
629	7249.210	5173.910	
630	7340.130	5218.530	
631	7358.990	5381.920	
632	7436.660	5572.320	
633	7482.430	5426.900	
634	7623.100	4917.910	
635	7650.460	4927.550	
636	7586.120	4919.550	
637	7568.170	4944.990	
638	5281.515	4974.372	
639	5085.732	4644.769	
640	4792.669	4837.987	
700	7121.200	5605.400	
701	7124.900	5603.600	
702	7252.100	5584.800	
703	7255.900	5582.500	
704	7239.500	5591.700	
705	7651.700	5262.600	
706	7649.400	5260.000	
707	7722.600	5252.000	
708	7727.700	5249.900	
709	8017.500	5015.800	
710	7996.700	5047.200	
711	8023.400	5014.200	
712	8180.400	4989.600	
713	8063.600	4776.500	
714	8063.100	4772.200	
715	8008.800	4561.900	
716	7964.440	4457.970	
717	8063.080	5531.360	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
718	8048.650	5496.710	
719	8076.750	5467.890	
720	8012.780	5463.900	
721	8290.600	5327.000	
722	8294.500	5330.900	
723	8653.200	5304.700	
724	8649.400	5298.500	
725	8775.600	5647.800	
726	8769.300	5650.200	
727	8779.800	5645.200	
728	8454.300	5785.900	MOSF well
729	8480.800	5776.200	
730	8448.000	5788.100	
731	7290.600	4521.900	
732	7294.800	4520.600	
733	7008.000	4663.800	
734	7004.400	4656.100	
735	6828.700	4210.900	
736	6831.800	4209.700	
737	6824.500	4211.700	
738	7235.100	3862.300	
739	7240.400	3863.800	
740	6685.900	3852.800	
741	6688.000	3856.500	
742	6687.600	3858.300	
743	7234.500	3862.800	
744	7887.200	5717.200	
745	7890.300	5716.300	
746	7731.800	5780.900	
747	8480.700	5057.300	
748	8152.000	4774.100	
749	8484.600	5544.700	MOSF well
750	8325.200	5779.300	MOSF well
751	6760.000	4728.100	MOSF well
752	6913.000	4791.600	MOSF well
753	6755.800	5125.000	MOSF well
754	6587.200	3187.000	MOSF well
755	6392.400	3029.900	MOSF well
756	5000.100	5501.900	MOSF well
757	6678.800	2706.900	
758	7896.780	5188.710	
759	7893.170	5179.772	
760	7897.478	4995.327	
761	8271.640	5101.240	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
762	8402.719	4923.581	
763	8252.690	4640.574	
764	8162.886	4568.548	
765	8079.330	4487.300	
766	6501.571	3979.481	
767	6363.480	3913.980	
768	6506.100	3763.540	
769	6569.128	3624.668	
770	6469.710	3671.010	
771	6466.790	3664.890	
772	6208.100	3561.150	
773	6417.860	3323.160	
774	6089.045	3305.752	
775	5886.936	3333.238	
776	8431.465	4148.300	
777	8555.239	4540.041	
778	8497.717	4158.695	
779	8113.332	3177.082	
780	6076.239	3560.580	
781	6541.387	4343.833	
782	6868.581	2812.497	
783	4995.956	3803.820	
789	5542.741	3561.687	
790	5755.000	3687.600	
791	5736.641	3395.917	
792	5913.540	3607.460	
793	6174.694	3830.274	
794	6069.887	3998.143	
795	5733.244	4115.264	
797	5936.025	4165.257	
798	6143.451	4112.159	
799	4995.150	3809.957	
816	7821.917	4858.527	
817	7738.635	4893.319	
818	7728.867	4846.227	
819	7683.873	4739.418	
820	7587.709	4815.166	
821	7595.669	4883.064	
822	7611.786	4925.902	
823	7546.746	5030.185	
824	7533.202	4998.828	
826	7787.289	4717.390	
827	7838.292	4706.758	
828	5935.007	4416.150	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
830	6631.393	6507.576	
831	6631.393	6507.576	
832	6446.260	6390.277	
833	6446.260	6390.277	
835	5732.456	6298.291	
836	5732.456	6298.291	
837	5650.743	6266.199	
838	5053.607	6148.528	
839	6671.416	2869.429	
863	6658.536	6436.742	
864	7793.411	4822.753	
895	5420.504	7427.220	
896	5414.132	7431.928	
897	4934.338	6682.141	
898	4928.359	6679.239	
899	5649.460	6555.720	
900	5658.950	6554.370	
902	6196.074	7092.091	
903	6231.299	7073.207	
910	8404.686	5263.731	
913	5760.220	6897.705	
914	4444.094	7167.387	
921	5383.703	5909.176	
922	5370.449	5919.909	
923	5366.539	5900.128	
924	5382.716	5890.598	
928	4924.716	5240.517	
929	4924.716	5240.517	
930	4664.774	5357.051	
931	4697.190	5340.540	
932	4950.680	6078.512	
934	6719.264	4854.781	MOSF well
935	4921.320	5488.640	
936	4921.320	5488.640	
940	5339.839	5131.560	
941	5331.321	5137.291	
942	5093.254	4639.029	
943	4481.165	6103.694	
944	4488.497	6097.271	
945	6158.767	3815.646	
946	6172.939	3845.249	
947	6176.877	3837.508	
948	6170.128	3845.793	
949	6194.257	3939.047	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
950	6073.259	3993.823	
951	6121.744	3696.270	
952	5869.760	3631.250	
953	5090.590	4671.000	
954	5627.761	5859.991	
955	5631.698	5865.731	
956	5636.339	5872.566	
957	5640.382	5878.574	
958	4786.231	7605.657	
959	5923.400	4432.322	
960	5938.559	4428.870	
961	6487.932	2594.687	
962	8425.917	4187.017	
963	6001.330	7144.318	
964	6001.330	7144.318	
965	6056.588	5582.108	
966	6064.807	5592.027	
967	5257.910	5484.861	
968	5257.910	5484.861	
974	7500.589	2691.449	
976	7274.448	2489.640	
980	7292.800	5019.300	
981	7533.000	4932.300	
983	5459.845	6315.578	
984	5459.845	6315.578	
985	5466.675	6322.653	
986	5466.675	6322.653	
987	6384.320	6988.373	
988	6379.532	6995.451	
989	6379.532	6995.451	
990	6361.989	6999.717	
991	6355.954	7002.989	
992	6355.954	7002.989	
993	7465.500	4029.200	
994	7274.400	4052.900	
995	7272.600	4048.900	
996	7338.000	4294.900	
997	7710.200	5463.800	
998	7789.600	5428.600	
999	7794.100	5426.400	
PW-8	4443.870	7190.387	
SD-1	6427.100	3228.900	
SD-2	6444.800	3261.400	
SD-3	6398.800	3287.900	

Exhibit B - IBM Remediation Systems
Main Site Monitoring Well Assets
East Fishkill, NY

Main Site Monitoring Wells

Well ID	Northing	Easting	Comment
SD-4	6403.600	3336.900	
SD-5	6367.900	3318.800	
SD-6	6478.400	3440.200	
SD-7	6379.300	3411.100	
SD-8	6262.200	3158.100	
SD-9	6242.250	3200.650	
SD-10	6227.180	3122.340	
SD-11	6195.640	3177.930	
SD-12	6204.097	3444.632	
SD-13	7713.450	4751.140	
SD-14	7701.680	4800.260	
SD-15	7643.300	4776.010	
SD-16	7659.450	4819.220	
SD-17	7623.010	4853.840	
SD-18	7581.970	4896.070	
SD-19	7645.940	4929.270	
SD-20	7561.080	4942.080	
SD-21	7565.280	5162.990	
SD-22	7955.230	4662.090	
SD-23	7941.260	4615.650	
SDV-1	7700.480	4813.410	
SDV-2	7696.360	4793.750	
SDV-3	7671.490	4745.350	
SDV-4	7674.630	4757.460	
SDV-5	7688.420	4758.880	
SDV-6	7703.200	4751.170	

Exhibit B - IBM Remediation Systems
Main Site Production Well Assets
East Fishkill, NY

Main Site Production Wells

Well ID	Northing	Easting	Comment
PW-1	7183.220	3504.870	
PW-2	7096.400	4954.600	
PW-4	6392.780	5193.370	
PW-5	5558.920	3520.550	
PW-5A	5565.750	3539.260	
PW-6	4139.370	4438.940	
PW-7	4823.440	5787.560	
PW-9	8846.920	5782.930	
PW-23	5627.580	6918.600	
PW-25	5686.600	4977.300	

Exhibit B - IBM Remediation Systems
Off Site Monitoring Well Assets
East Fishkill, NY

Off Site Monitoring Wells

WELL	NORTHING	EASTING	Comment
182	5859.220	2687.226	John Jay High School
183	5859.220	2687.226	John Jay High School
184	5806.294	2718.375	John Jay High School
185	6481.471	2316.242	John Jay High School
186	6481.471	2316.242	John Jay High School
187	6458.458	2323.647	John Jay High School
188	6458.458	2323.647	John Jay High School
189	7144.321	1972.850	John Jay High School
190	7144.321	1972.850	John Jay High School
191	7123.366	1981.277	John Jay High School
192	7123.366	1981.277	John Jay High School
166	7422.875	6512.986	East of Lime Kiln Road
167	7422.875	6512.986	East of Lime Kiln Road
520	6648.150	6936.870	East of Lime Kiln Road
521	6688.820	6912.930	East of Lime Kiln Road
522	6713.370	6899.050	East of Lime Kiln Road
857	6655.420	6927.500	East of Lime Kiln Road
858	6639.380	6938.800	East of Lime Kiln Road
859	7312.421	7300.249	East of Lime Kiln Road
860	7298.574	7298.820	East of Lime Kiln Road
861	7826.369	7016.729	East of Lime Kiln Road
862	7816.150	7025.670	East of Lime Kiln Road
400	6939.843	1437.518	Former West Complex
401	6935.937	1437.490	Former West Complex
402	6315.556	1611.175	Former West Complex
403	5909.759	1848.452	Former West Complex
404	5905.340	1856.890	Former West Complex
405	4341.985	3409.956	Former West Complex
407	3941.830	1834.730	Former West Complex
415	5224.890	461.160	Former West Complex
416	5985.020	129.180	Former West Complex
418	5938.351	149.519	Former West Complex
163	6297.365	7605.548	Former Recreation Center
164	6299.089	7593.114	Former Recreation Center
165	6299.089	7593.114	Former Recreation Center
523	6108.470	8049.880	Former Recreation Center
524	6095.860	7992.490	Former Recreation Center
525	6106.720	8040.160	Former Recreation Center
626	5357.900	7953.800	Former Recreation Center
855	5839.970	8554.478	Former Recreation Center
856	5824.081	8548.398	Former Recreation Center

Exhibit B - IBM Remediation Systems
Monitoring Equipment Assets
East Fishkill, NY

Monitoring Equipment

Manufacturer	Item Description	Serial Number
Solinst	Levelogger Series Software 4	
Solinst	USB Optical Reader	248486
Solinst	Levelogger Model 3001 LT F100/M30	52040964
Solinst	Levelogger Model 3001 LT F100/M30	52040966
Solinst	Levelogger Model 3001 LT F100/M30	52040995
Solinst	Levelogger Model 3001 LT F100/M30	52040980
Solinst	Levelogger Model 3001 LT F100/M30	52040969
Solinst	Barologger Model 3001 LT 55/M15	12040631

Exhibit B - IBM Remediation Systems
B/316 Sampling Area Equipment Assets
East Fishkill, NY

B/316 Sampling Area Equipment

Manufacturer	Item Description	Serial Number
AIM	Logic 601 Gas Detector, Waterproof	
Armstrong	Bench vise	79147
Assorted	Cables for HydroLab	
Assorted	hand tools (wrenches, screw drivers, measurement tapes)	
Assorted	Repair, replacement parts, o-rings, clamps, fittings	
Baldor	Variable Frequency Drive, 240V, Style Flint & Walling	
Craftsman	Rolling tool chest and cabinet (2 pieces) plus assorted tools	
Dayton	Batter Charger, 60 amp, booster 3Z362A	
EMD	pH test strips (12 boxes)	
Flex O Lite	Sundowner, Safety Light (10 units)	
GasTech	GasTechtor, Model 1214	9249227
GeoTech	Battery pack, portable	
GeoTech	Control 2 for Bladder Pump	
GeoTech	Hose Reel, with bladder pump	
GeoTech	Hose Reel, with bladder pump	
Grundfos	Variable Frequency Drive, PN0094A01	H0509190095
Grundfos	Variable Frequency Drive, PN0095A00	T1335000209
HACH	Turbidimeter, Model 2100P	05110CO14621
HACH	Turbidimeter, Model 2100P	050400038740
HACH	Turbidimeter, Model 2100P	054000035483
HACH	Turbidimeter, Model 2100P	050400038745
Honda	Generator , EB3000C	EZBP1150956
Honda	Generator, 5500	
Honda	Generator, EB3000C	EZBP1150958
Honda	Portable air compressor with Honda Generator, GC 160	GCAHA 5566701
HydroLab	HydroLab pH, temperature, conductivity sonde, 2 inch	
HydroLab	HydroLab pH, temperature, conductivity sonde, 2 inch	
HydroLab	HydroLab pH, temperature, conductivity sonde, 2 inch	
HydroLab	HydroLab pH, temperature, conductivity sonde, 2 inch	
HydroLab	HydroLab pH, temperature, conductivity sonde, 2 inch	
HydroLab	HydroLab pH, temperature, conductivity sonde, 2 inch	
HydroLab	HydroLab pH, temperature, conductivity sonde, 4 inch	25605
HydroLab	HydroLab pH, temperature, conductivity sonde, 4 inch	34640
HydroLab	HydroLab pH, temperature, conductivity sonde, 4 inch	37353
HydroLab	HydroLab pH, temperature, conductivity sonde, 4 inch	19345
HydroLab	HydroLab pH, temperature, conductivity sonde, 4 inch	19156
HydroLab	Quanta Handheld Display Unit	
HydroLab	Quanta Handheld Display Unit	
HydroLab	Quanta Handheld Display Unit	
HydroLab	Quanta Handheld Display Unit	
HydroLab	Quanta Handheld Display Unit	
HydroLab	Quanta Handheld Display Unit	
HydroLab	Scout 2 Handheld Display Unit	18789
HydroLab	Scout 2 Handheld Display Unit	19336
HydroLab	Scout 2 Handheld Display Unit	34631
HydroLab	Scout 2 Handheld Display Unit	30187
Karcher	Steam Cleaner, Model HDS600C	28309
Keck	Keck instruments, KIR-89	911
MasterFlex	E/S Portable Sampler, peristaltic pump, Model 7518-12	K02006039
MasterFlex	E/S Portable Sampler, peristaltic pump, Model 7518-12	F06007470
MasterFlex	E/S Portable Sampler, peristaltic pump, Model 7518-12	F06007486
MasterFlex	E/S Portable Sampler, peristaltic pump, Model 7518-12	H02005979
MasterFlex	E/S Portable Sampler, peristaltic pump, Model 7518-12	B02003764
MSA	Calibration Test System Model RP Check Kit	
MSA	Passport Personal Alarm	
QED	Well Wizard Control Unit, Model 3013	18405
QED	Well Wizard Control Unit, Model 3013	21464

Exhibit B - IBM Remediation Systems
B/316 Sampling Area Equipment Assets
East Fishkill, NY

B/316 Sampling Area Equipment

Manufacturer	Item Description	Serial Number
QED	Well Wizard Control Unit, Model 3013	18446
QED	Well Wizard Control Unit, Model 3013	21465
QED	Well Wizard Controller 3013	18406
RAE Systems	MiniRAE 2000	103853
RAE Systems	MiniRAE Plus Classic calibration kit	
RAE Systems	MiniRAE Plus Classic Model PGM-761S	103853
RAE Systems	MiniRAE Plus Classic Model PGM-761S	103844
Redi-Flo	RediFlo Pump on reel	Unknown
Redi-Flo	RediFlo Pump on reel	
Redi-Flo	RediFlo Pump on reel	
Redi-Flo	RediFlo Pump on reel	
Redi-Flo	RediFlo Pump on reel	
Redi-Flo	RediFlo Pump on reel	
Redi-Flo	RediFlo Pump on reel	
Redi-Flo	RediFlo Pump on reel	
Redi-Flo	VFD	190225
Redi-Flo	VFD	151135
Royer	8.75 well caps (4 caps)	
Slope Indicator	M-scope Water Level Indicator	15897
Slope Indicator	M-scope Water Level Indicator	1019
Slope Indicator	M-scope Water Level Indicator, 300 ft	14158
Slope Indicator	M-scope Water Level Indicator, 300 ft	14154
Solinst	Interface Meter, Model 122	122 001440-1
Solinst	Water Level Indicator, Model 101	41402
Solinst	Water Level Indicator, Model 101	35993
Solinst	Water Level Indicator, Model 101	32211
Solinst	Water Level Indicator, Model 101	43468
Solinst	Water Level Indicator, Model 101	30459
Solinst	Water Level Indicator, Model 101	2224
Solinst	Water Level Indicator, Model 101	101300
Solinst	Water Level Indicator, Model 102	206019
Solinst	Water Level Indicator, with teflon coated stainless steel cable	39331
Solinst	Water Level Meter	34958
Solinst	Water Level Meter	29066
Solinst	Water Level Meter, RediFlo pump wire extension	39086
Solinst	Waterra Pump	HL0720
Stenner Pump Co	Peristaltic Pump, Model 85MHP5, 85MJH1A1STAA	040208 11243
Thomas	Pneumatic Compressor, portable	
Thomas	Pneumatic Compressor, portable	
Thomas	Pneumatic Compressor, portable	
Thomas	Pneumatic Compressor, portable	
Unknown	Bench Grinder, Model 27341K	
Unknown	Red cable reel with teflon coated stainless steel cable	
VWR	Infrared thermometer and temperature probe	P869131
Water Mark	Small Water Level Meter, 75 ft	13185
Water Mark	Small Water Level Meter, 75 ft	13187
Water Mark	Water Level Indicator, 300 ft	30418
Water Mark	Water Level Indicator, 300 ft	30417
Waterra	Assorted bailer parts, check valves, stopcocks	
Well Wizard	Well Wizard Control Unit, Model 3013	1871
WPI	Well Wizard Water Analyzer, FC4000	192083R
WPI	Well Wizard Water Analyzer, FC4000	192084R
Yamaha	EF5000 Generator, blue	
Yamaha	EF5000 Generator, blue	
	Bailer holders, aluminum (4 units)	
	Bolt cutters, 3 ft, large, red (2 units)	

Exhibit B - IBM Remediation Systems
B/316 Sampling Area Equipment Assets
East Fishkill, NY

B/316 Sampling Area Equipment

Manufacturer	Item Description	Serial Number
	Gasoline driven compressor	
	Portable air compressor with Honda Generator	
	Water Level Indicator, orange reel	

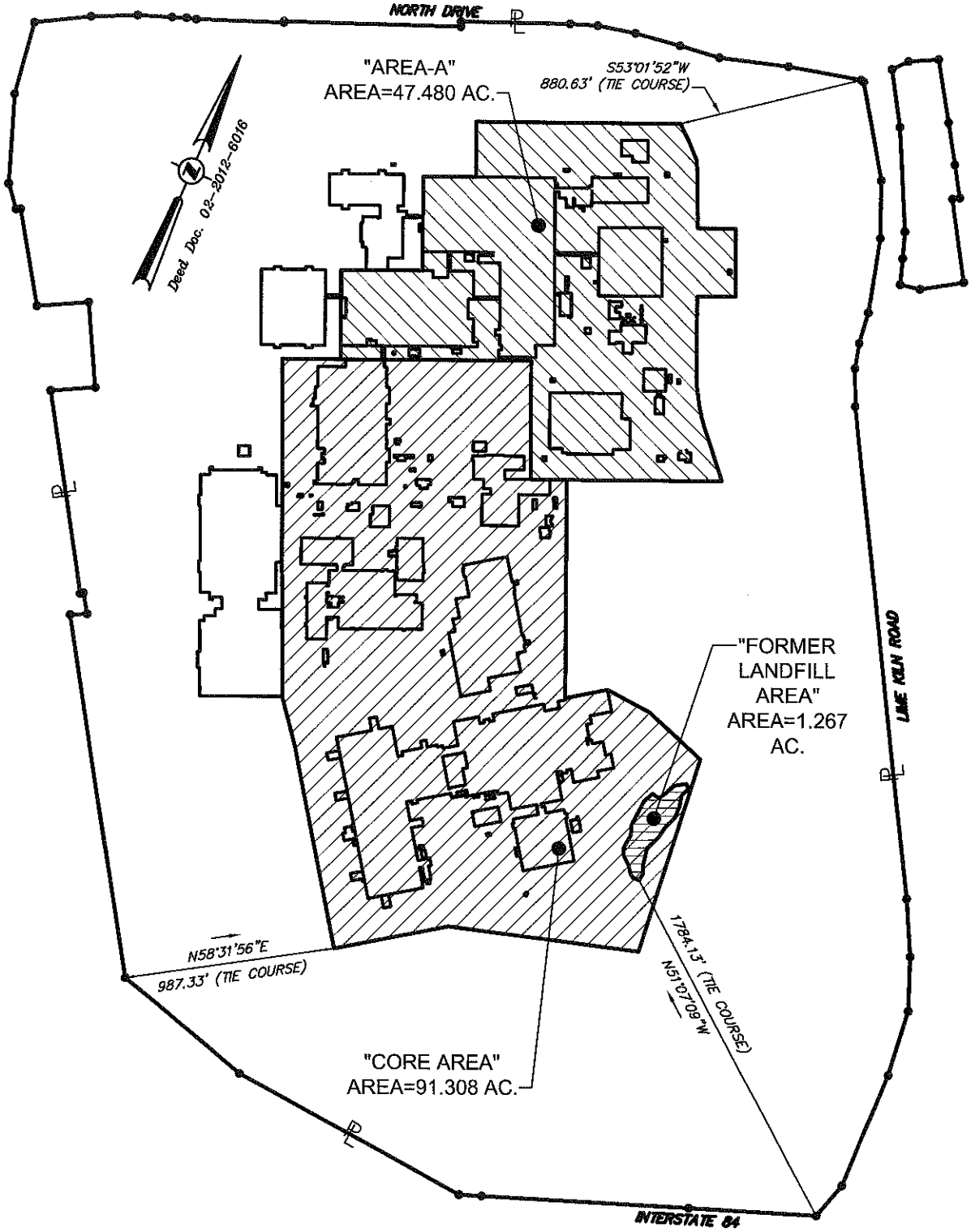
Exhibit B - IBM Remediation Systems
B/316 Office Area Equipment Assets
East Fishkill, NY

B/316 Office Area Equipment

Manufacturer	Item Description	Serial Number	Notes
Hewlett Packard	LaserJet 6MP		
Jackson-Hirsch	Laminator, Model 7200		
Samsung	Monitor	V89IH4LC601030L	
Steelcase	Steel 5-drawer locking filing cabinets		office equipment, key 5112
Steelcase	Steel 5-drawer locking filing cabinets		office equipment, key 7N56
Steelcase	Steel 5-drawer locking filing cabinets		office equipment, key 8N45
TAB	Steel 5-drawer lateral locking filing cabinet		IBM 3537921
TAB	Steel 5-drawer lateral locking filing cabinet		IBM 35479A
	Desk, steel, gray		IBM 317156A
	Desk, steel, tan		IBM 639436A
	Desk, modern, tan		
	ThinkCentre Desktop	8SSS50D0405FWH38702PN	
	Chairs, Rolling office (5 units)		
	Table		

Exhibit C

Figures and Descriptions of Area A, the Core Area and the Landfill



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THE Chazen COMPANIES
Engineers/Surveyors
Planners
Environmental Scientists
Landscape Architects

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21 Fox Street Poughkeepsie, NY 12601
Phone: (845) 454-3980

Capital District Office:
547 River Street Troy, NY 12180
Phone: (518) 273-0055

North Country Office:
375 Bay Road Queensbury, NY 12804
Phone: (518) 812-0513

IBM EAST COMPLEX - 2070 ROUTE 52

MAP OF USE RESTRICTION PARCELS OVERVIEW WITH TIE COURSES LANDS OF IBM CORPORATION

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORK

drawn	checked
FJM	SJA
date	scale
06/18/15	1"=700'
project no.	
51519.00	
sheet no.	
SV1	

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Drawing Name: X:\5\51500-51599\51519.00 Groundwater Sciences, P.C\SVY\dwg\05_51519-00_USE-RESTRICTION-MAPS-IBM-EAST.dwg Date Printed: Jun 22, 2015, 2:40

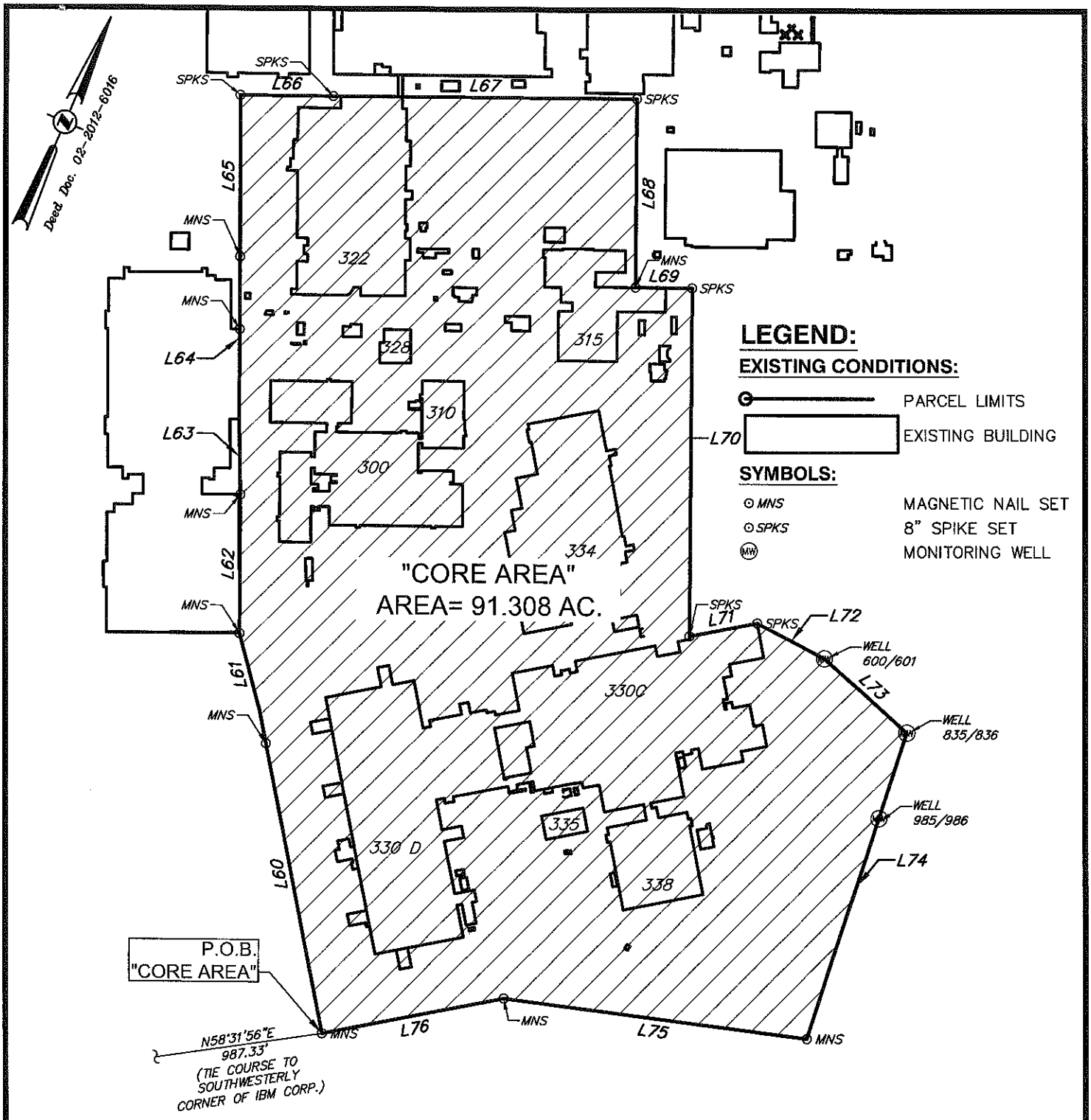
SURVEY DESCRIPTION
PROPERTY RESTRICTIVE USE PARCEL CORE AREA

All that plot, piece or parcel of land situate and being in the Town of East Fishkill, County of Dutchess and State of New York, bounded and described as follows:

BEGINNING at a mag nail set at the southwesterly corner of the herein described parcel, said point being located N 58°31'56" E 987.33 feet from the southwesterly corner of the lands now or formerly of the International Business Machines Corporation as described in Deed document #02-2012-6016 and as shown on a map entitled "Map of Property Use Restriction Parcels", prepared by Chazen Engineering, Land Surveying and Landscape Architecture Co., D.P.C., dated June 22, 2015; thence through said lands now or formerly of the International Business Machines Corporation, N 34°13'10" W 970.42 feet to a mag nail set; thence N 38°00'00" W 234.46 feet to a mag nail set; thence N 23°00'28" W 407.32 feet to a mag nail set; thence N 24°10'12" W 222.24 feet to a mag nail set; thence N 23°00'28" W 481.48 feet to a mag nail set; thence N 23°19'12" W 477.63 feet to a spike set; thence N 67°01'50" E 275.38 feet to a spike set; thence in part along the northerly face of building 322, N 66°55'07" E 903.12 feet to a spike set; thence S 22°55'06" E 558.20 feet to a mag nail set; thence N 67°15'31" E 169.00 feet to a spike set; thence S 22°51'51" E 1027.46 feet to a spike set at the northerly face of building 330C; thence along the northerly face of building 330C, N 55°49'18" E 205.10 feet to a spike set at the northeasterly corner of said building; thence S 85°48'51" E 226.40 feet to the center of monitoring well 600/601; thence S 71°00'03" E 326.04 feet to the center of monitoring well 835/836; thence S 05°14'30" E 951.31 feet to a mag nail set; thence S 74°07'09" W 910.99 feet to a mag nail set; thence S 55°46'50" W 548.70 feet to the point or place of beginning.

CONTAINING: 91.308 acres of land more or less.

February 10, 2015
Revised: June 22, 2015



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Phone: (518) 812-0513

IBM EAST COMPLEX - 2070 ROUTE 52

MAP OF USE RESTRICTION PARCELS "CORE AREA" LANDS OF IBM CORPORATION

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORK

drawn	checked
FJM	SJA
date	scale
06/18/15	1"=400'
project no.	
51519.00	
sheet no.	
SV2	

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Drawing Name: X:\5\51500-51599\51519.00 Groundwater Sciences, P.C\SVY\dwg\05_51519-00_USE-RESTRICTION-MAPS-IBM-EAST.dwg Date Printed: Jun 22, 2015, 2:41

Core Area Parcel		
Line Table		
Line #	Direction	Length
L60	N34°13'10"W	970.42'
L61	N38°00'00"W	234.46'
L62	N23°00'28"W	407.32'
L63	N24°10'12"W	222.24'
L64	N23°00'28"W	481.48'
L65	N23°19'12"W	477.63'
L66	N67°01'50"E	275.38'
L67	N66°55'07"E	903.12'
L68	S22°55'06"E	558.20'
L69	N67°15'31"E	169.00'
L70	S22°51'51"E	1027.46'
L71	N55°49'18"E	205.10'
L72	S85°48'51"E	226.40'
L73	S71°00'03"E	326.04'
L74	S05°14'30"E	951.31'
L75	S74°07'09"W	910.99'
L76	S55°46'50"W	548.70'

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IBM EAST COMPLEX - 2070 ROUTE 52

MAP OF USE RESTRICTION PARCELS "CORE AREA" LINE TABLE LANDS OF IBM CORPORATION

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORK

drawn	checked
FJM	SJA
date	scale
06/18/15	NA
project no.	
51519.00	
sheet no.	
SV3	

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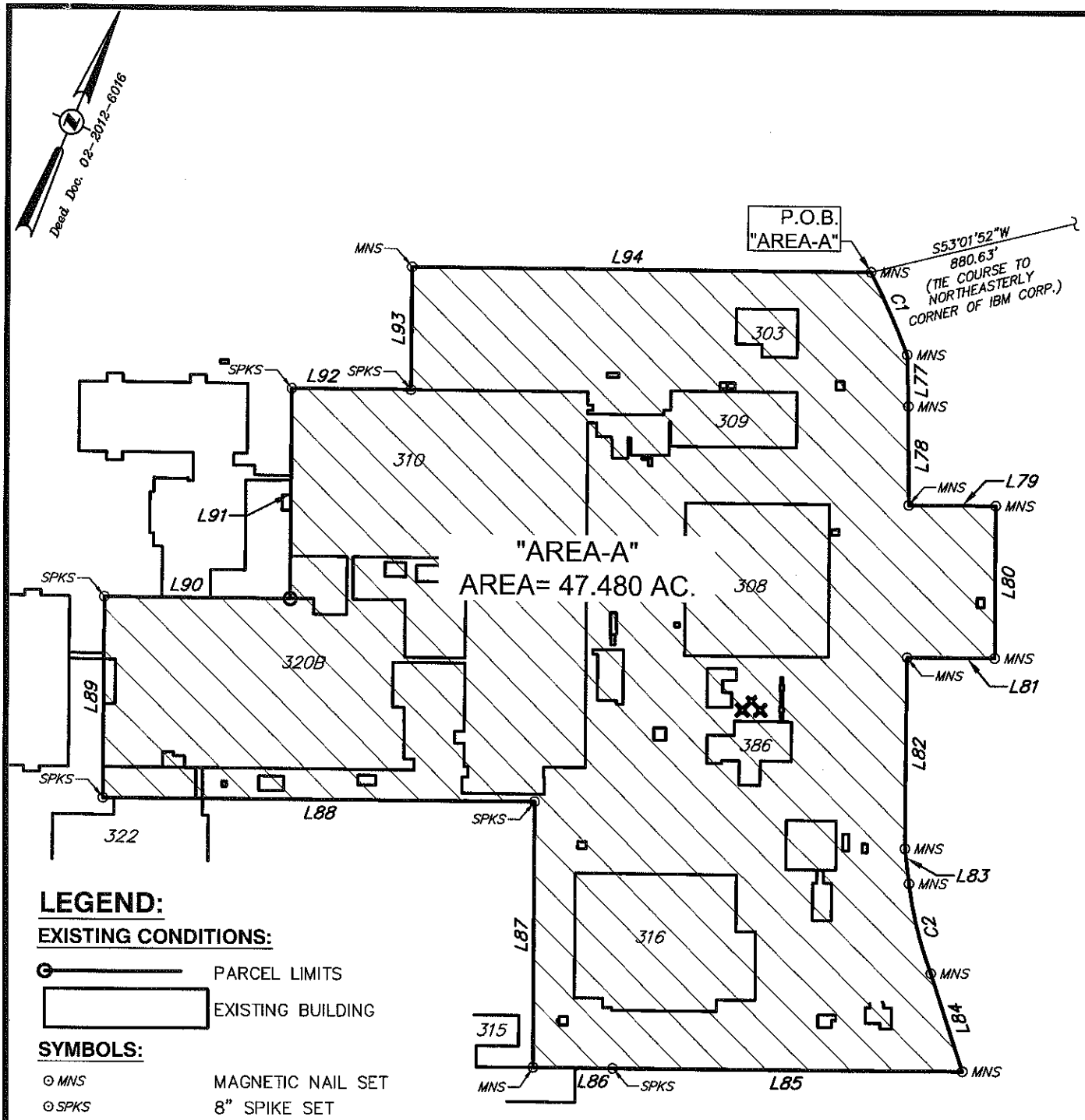
SURVEY DESCRIPTION
PROPERTY RESTRICTIVE USE PARCEL AREA A

All that plot, piece or parcel of land situate and being in the Town of East Fishkill, County of Dutchess and State of New York, bounded and described as follows:

BEGINNING at a mag nail set at the northeasterly corner of the herein described parcel, said point being located S 53°01'52" W 880.63 feet from the northeasterly corner of the lands now or formerly of the International Business Machines Corporation as described in Deed document #02-2012-6016 and as shown on maps entitled "Map of Property Use Restriction Parcels", prepared by Chazen Engineering, Land Surveying and Landscape Architecture Co., D.P.C., dated June 18, 2015; thence through said lands now or formerly of the International Business Machines Corporation, southerly along a non-tangent curve to the right having a radius of 1600.00 feet, an arc length of 190.18 feet and a chord bearing of S 47°12'56" E 190.07 feet to a mag nail set; thence continuing through said lands now or formerly of the International Business Machines Corporation, S 24°48'44" E 108.55 feet to a mag nail set; thence S 23°35'41" E 208.05 feet to a mag nail set; thence N 66°59'17" E 182.09 feet to a mag nail set; thence S 23°00'43" E 320.40 feet to a mag nail set; thence S 66°59'17" W 183.51 feet to a mag nail set; thence S 22°42'03" E 399.19 feet to a mag nail set; thence S 30°09'23" E 74.24 feet to a mag nail set at the point of curvature of a curve to the left having a radius of 834.80 feet; thence southerly along said curve having an arc length of 194.95 feet and a chord bearing of S 36°50'48" E 194.51 feet to the point of tangency of said curve and a mag nail set; thence continuing through said lands now or formerly of the International Business Machines Corporation, S 41°00'54" E 216.50 feet to a mag nail set; thence S 67°04'22" W 738.15 feet to a nail set; thence in part along the northerly face of building 315, S 67°15'31" W 169.00 feet to a mag nail set; thence N 22°55'06" W 558.20 feet to a spike set; thence in part along the northerly face of building 322, S 66°55'07" W 903.12 feet to a spike set; thence in part along the west face of building 320B, N 22°59'35" W 419.19 feet to a spike set at the corner of building 320B; thence along the north face of building 320B, N 67°00'25" E 384.98 feet to a point; thence in part along the west face of building 310, N 22°59'35" W 441.81 feet to a spike set at the northwesterly corner of building 310; thence along the north face of building 310, N 67°00'25" E 250.03 feet to a spike set; thence N 22°59'35" W 258.45 feet to a mag nail set; thence N 67°00'25" E 971.46 feet to the point or place of beginning.

CONTAINING: 47.480 acres of land more or less.

February 10, 2015.
Revised June 22, 2015



LEGEND:

EXISTING CONDITIONS:

PARCEL LIMITS

EXISTING BUILDING

SYMBOLS:

⊙ MNS — MAGNETIC NAIL SET

⊙ SPKS — 8" SPIKE SET

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Phone: (518) 812-0513

IBM EAST COMPLEX - 2070 ROUTE 52

MAP OF USE RESTRICTION PARCELS "AREA-A" LANDS OF IBM CORPORATION

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORK

drawn	checked
FJM	SJA
date	scale
06/18/15	1"=300'
project no.	
51519.00	
sheet no.	
SV4	

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Area–A Parcel			
Curve Table			
Curve #	Radius	Length	CHORD
C1	1600.00'	190.18'	S47°12'56"E 190.07'
C2	834.80'	194.95'	S36°50'48"E 194.51'

Area–A Parcel		
Line Table		
Line #	Direction	Length
L77	S24°48'44"E	108.55'
L78	S23°35'41"E	208.05'
L79	N66°59'17"E	182.09'
L80	S23°00'43"E	320.40'
L81	S66°59'17"W	183.51'
L82	S22°42'03"E	399.19'
L83	S30°09'23"E	74.24'
L84	S41°00'54"E	216.50'
L85	S67°04'22"W	738.15'
L86	S67°15'31"W	169.00'
L87	N22°55'06"W	558.20'
L88	S66°55'07"W	903.12'
L89	N22°59'35"W	419.19'
L90	N67°00'25"E	384.98'
L91	N22°59'35"W	441.81'
L92	N67°00'25"E	250.03'
L93	N22°59'35"W	258.45'
L94	N67°00'25"E	971.46'

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IBM EAST COMPLEX - 2070 ROUTE 52

MAP OF USE RESTRICTION PARCELS "AREA-A" LINE TABLES LANDS OF IBM CORPORATION

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORK

drawn	checked
FJM	SJA
date	scale
06/18/15	NA
project no.	
51519.00	
sheet no.	
SV5	

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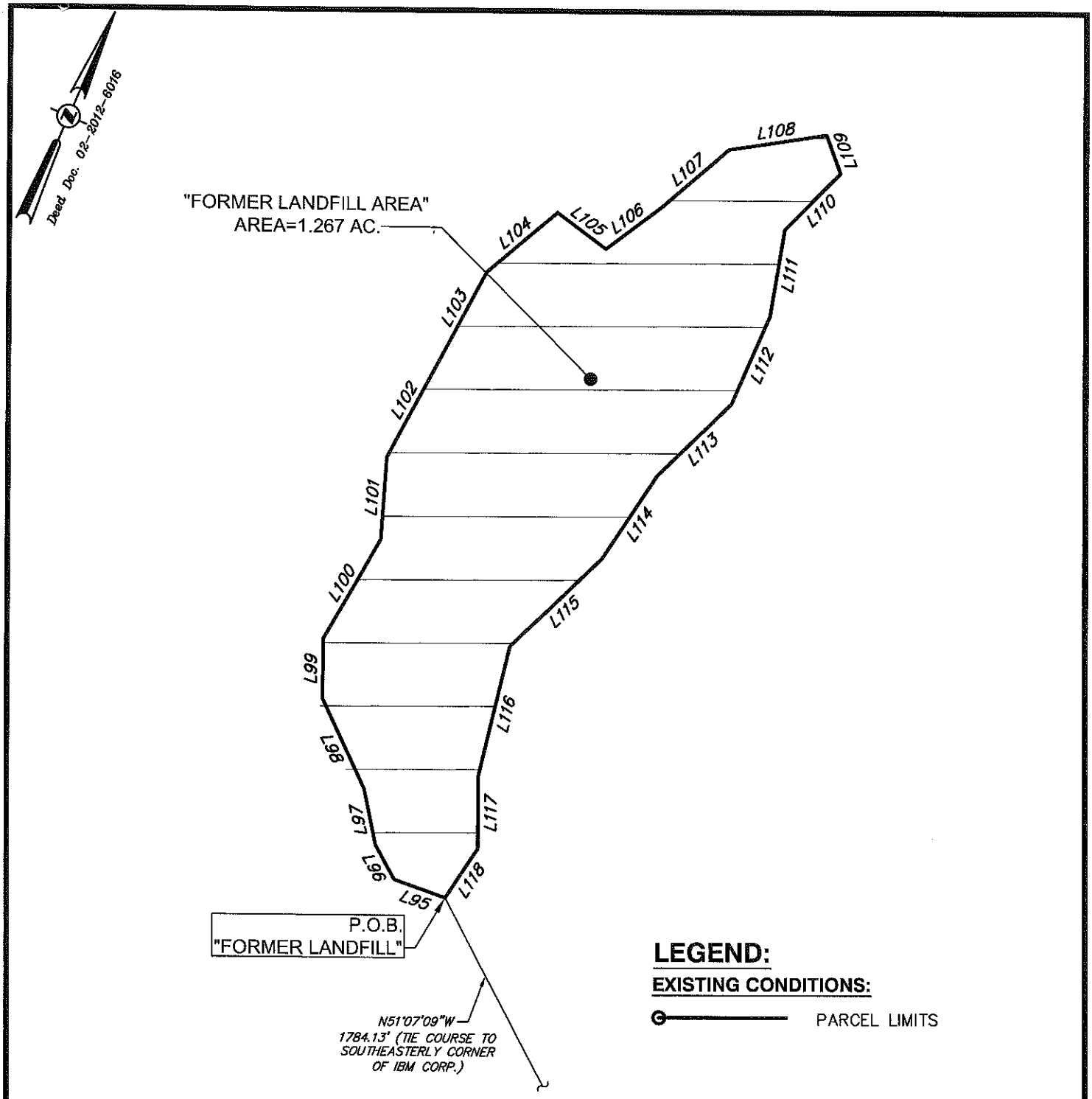
SURVEY DESCRIPTION
PROPERTY RESTRICTIVE PARCEL-FORMER LANDFILL

All that plot, piece or parcel of land situate and being in the Town of East Fishkill, County of Dutchess and State of New York, bounded and described as follows:

BEGINNING at the southeasterly corner of the herein described parcel, said point being located within the Lands now or formerly of the International Business Machines Corporation as described in Deed document #02-2012-6016 and said point being located N 51°07'09" W 1784.13 feet from the southeasterly corner of said lands and as shown on a map entitled "Map of Property Use Restriction Parcels", prepared by Chazen Engineering, Land Surveying and Landscape Architecture Co., D.P.C., dated June 22, 2015; thence through said Lands of the International Business Machines Corporation, S 86°07'47" W 32.30 feet, N 52°30'46" W 23.40 feet, N 35°05'27" W 33.76 feet, N 48°09'00" W 58.80 feet, N 23°01'26" W 35.73 feet, N 06°44'01" E 68.16 feet, N 19°14'36" W 48.47 feet, N 05°14'45" E 69.31 feet, N 04°54'34" E 56.15 feet, N 26°17'04" E 54.80 feet, S 76°52'30" E 36.19 feet, N 29°55'06" E 42.56 feet, N 25°30'04" E 51.68 feet, N 57°48'27" E 58.93 feet, S 43°05'59" E 24.43 feet, S 21°23'45" W 47.18 feet, S 13°43'00" E 52.34 feet, S 00°04'12" W 56.76 feet, S 22°25'24" W 61.19 feet, S 10°28'06" W 58.93 feet, S 23°02'58" W 75.78 feet, S 09°51'00" E 79.16 feet, S 22°48'27" E 43.28 feet, S 10°38'07" W 35.16 feet to the point or place of beginning.

CONTAINING: 1.267 acres of land more or less.

June 10, 2015,
Revised: June 22, 2015



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Phone: (518) 812-0513

IBM EAST COMPLEX - 2070 ROUTE 52

MAP OF USE RESTRICTION PARCELS "FORMER LANDFILL" LANDS OF IBM CORPORATION

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORK

drawn	checked
FJM	SJA
date	scale
06/18/15	1"=80'
project no.	
51519.00	
sheet no.	
SV6	

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Former Landfill Area		
Line Table		
Line #	Direction	Length
L95	S86°07'47"W	32.30'
L96	N52°30'46"W	23.40'
L97	N35°05'27"W	33.76'
L98	N48°09'00"W	58.80'
L99	N23°01'26"W	35.73'
L100	N06°44'01"E	68.16'
L101	N19°14'36"W	48.47'
L102	N05°14'45"E	69.31'
L103	N04°54'34"E	56.15'
L104	N26°17'04"E	54.80'
L105	S76°52'30"E	36.19'
L106	N29°55'06"E	42.56'

Former Landfill Area		
Line Table		
Line #	Direction	Length
L107	N25°30'04"E	51.68'
L108	N57°48'27"E	58.93'
L109	S43°05'59"E	24.43'
L110	S21°23'45"W	47.18'
L111	S13°43'00"E	52.34'
L112	S00°04'12"W	56.76'
L113	S22°25'24"W	61.19'
L114	S10°28'06"W	58.93'
L115	S23°02'58"W	75.78'
L116	S09°51'00"E	79.16'
L117	S22°48'27"E	43.28'
L118	S10°38'07"W	35.16'

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IBM EAST COMPLEX - 2070 ROUTE 52

MAP OF USE RESTRICTION PARCELS "FORMER LANDFILL" LINE TABLE LANDS OF IBM CORPORATION

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORK

drawn	checked
FJM	SJA
date	scale
06/18/15	NA
project no.	
51519.00	
sheet no.	
SV7	

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FIRST AMENDMENT TO DECLARATION OF RESTRICTIONS, EASEMENTS AND COVENANTS

THIS FIRST AMENDMENT TO DECLARATION OF RESTRICTIONS, EASEMENTS AND COVENANTS (this "Amendment") is made as of this __ day of April, 2020, by and among **INTERNATIONAL BUSINESS MACHINES CORPORATION**, a New York corporation, having an address at One New Orchard Road, Armonk, New York ("Declarant"), **I.PARK EAST FISHKILL LLC**, a Delaware limited liability company, having an address at 485 West Putnam Avenue, Greenwich, Connecticut 06830 ("i.Park EF").

RECITALS

WHEREAS, Declarant is the "Declarant" under that certain Declaration of Restrictions, Easements and Covenants, recorded with the Dutchess County Clerk on July 9, 2015, Document # 02 2015 4059 (the "Declaration");

WHEREAS, i.Park EF owns the portion of the Property (as defined in the Declaration) wherein the Designated Area (as hereinafter defined) is located.

NOW, THEREFORE, Declarant does hereby modify the Declaration such that the Property (as defined in the Declaration) shall hereafter be held, sold, transferred, conveyed, leased and occupied subject to the restrictions, easements, covenants and obligations set forth in the Declaration, as modified herein:

1. Undefined Capitalized Terms. All capitalized terms used in this Amendment but not defined herein shall have the same meanings ascribed to such terms in the Declaration.

2. Modification of Core Area. The Declaration is hereby modified to remove from the Core Area that portion of the Property shown in Exhibit A-1 attached hereto and made a part hereof, as more particularly described in Exhibit A-2 attached hereto and made a part hereof (the "Designated Area"), which Designated Area may be used for Commercial Uses.

3. Miscellaneous.

(a) This Amendment has been duly authorized, executed and delivered by each party and is a valid and binding obligation of such party enforceable against it in accordance with the terms hereof.

(b) Except as amended herein, the Declaration shall remain in full force and effect. In the event of any conflicts or inconsistencies between the provisions of the Declaration and the provisions of this Amendment, the provisions of this Amendment shall control.

(c) This Amendment may be executed in any number of counterparts, each of which shall be deemed to be an original, and all such counterparts shall constitute one agreement.

(d) If any term, covenant or condition of this Amendment shall be held to be invalid, illegal or unenforceable in any respect, this Amendment shall be construed without such provision.

(e) This Amendment may not be modified, amended, waived, changed or terminated orally, but only by an agreement in writing signed by the owner of the Property impacted and Declaration, which consent shall not be unreasonably withheld.

(f) The provisions hereof shall inure to the benefit of, and be binding upon, the parties hereto and their successors and assigns.

(g) The interpretation and performance of this Amendment shall be governed by the laws of the State of New York.

(h) The captions of the various sections of this Amendment are solely for the purpose of convenience. Such captions are not a part hereof and shall not be deemed in any manner to modify, explain, enlarge or restrict any of the provisions of this Amendment.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals to this Amendment as of the day and year first above written.

INTERNATIONAL BUSINESS MACHINES CORPORATION

Edan Dionne

Digitally signed by Edan Dionne
Date: 2020.04.07 12:29:11 -04'00'

By: ----------

Name:

Title:

State ofNew York

ss.:

County of Westchester

On the_ day of_____in the year of 2019, before me, the undersigned, personally appeared _____. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the

executed the instrument.

_____

Notary Public - State of New York

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals to this Amendment as of the day and year first above written.

INTERNATIONAL BUSINESS MACHINES CORPORATION

By: _____

Name: Edan Dionne

Title: Vice President, Environmental, Energy & Chemical Management Programs, IBM Corporate Environmental Affairs

State of Connecticut

County of Fairfield ss.:

On the 14 day of April, 2020, before me, Chip Keating, the undersigned officer, personally appeared Edan Dionne, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged that he/she executed the same for the purposes therein contained.

_____

Signature of Notary Public

Date Commission Expires:

Chip Keating

Printed name of Notary Public

CHIP KEATING
NOTARY PUBLIC - CONNECTICUT
MY COMM. EXPIRES 12/31/2021

I.PARK EAST FISHKILL LLC

By: _____
Name: Joseph Cotter
Title: President

State of New York

ss.:

County of Westchester

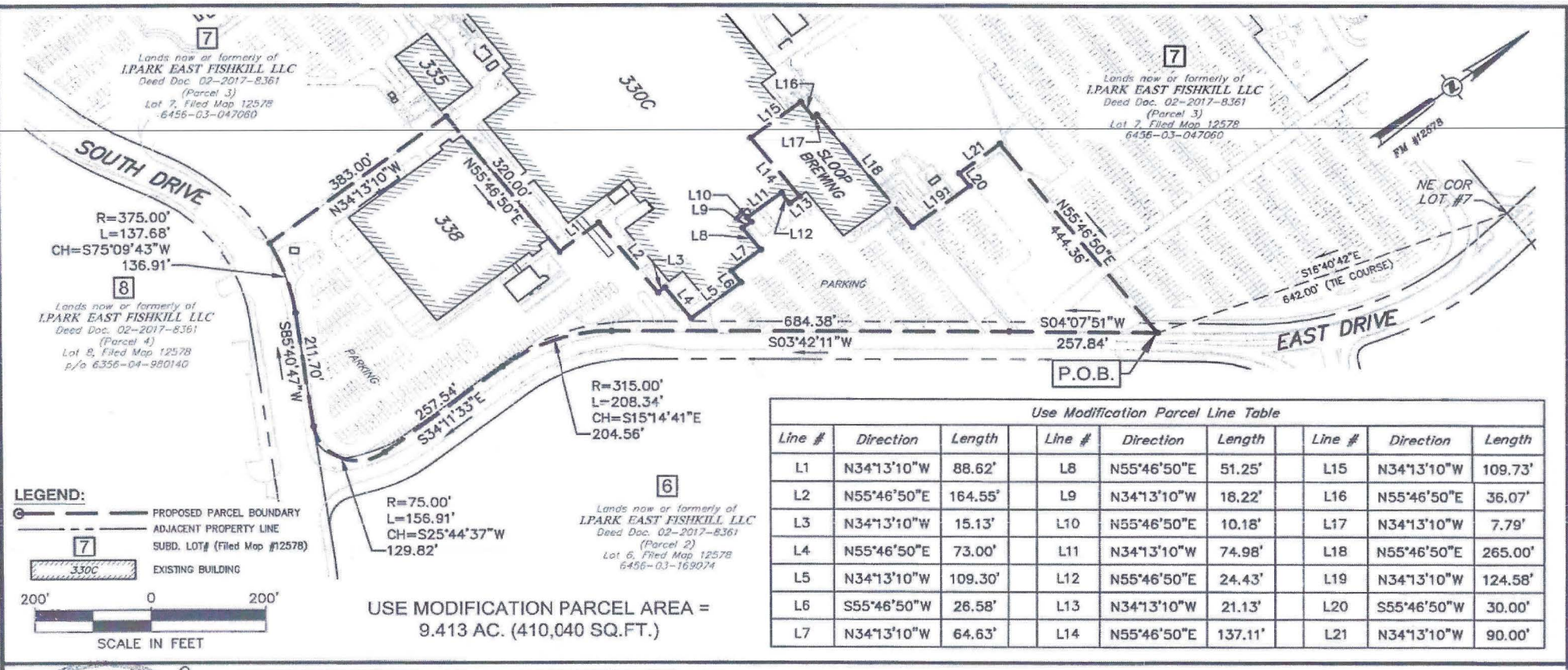
On the 2nd day of April in the year of 2019, before me, the undersigned, personally appeared Joseph Cotter, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the executed the instrument.

_____
Notary Public – State of New York

DANIEL SCHUYLER
Notary Public, State of New York
No. 01SC5084025
Qualified in Orange County
Commission Expires Aug. 25, 2021

Exhibit A-1

Map of Designated Area



LEGEND:

- PROPOSED PARCEL BOUNDARY
- ADJACENT PROPERTY LINE
- 7 SUBD. LOT# (Filed Map #12578)
- 330C EXISTING BUILDING

200' 0 200'

SCALE IN FEET

USE MODIFICATION PARCEL AREA =
9.413 AC. (410,040 SQ.FT.)

Use Modification Parcel Line Table

Line #	Direction	Length	Line #	Direction	Length	Line #	Direction	Length
L1	N34°13'10"W	88.62'	L8	N55°46'50"E	51.25'	L15	N34°13'10"W	109.73'
L2	N55°46'50"E	164.55'	L9	N34°13'10"W	18.22'	L16	N55°46'50"E	36.07'
L3	N34°13'10"W	15.13'	L10	N55°46'50"E	10.18'	L17	N34°13'10"W	7.79'
L4	N55°46'50"E	73.00'	L11	N34°13'10"W	74.98'	L18	N55°46'50"E	265.00'
L5	N34°13'10"W	109.30'	L12	N55°46'50"E	24.43'	L19	N34°13'10"W	124.58'
L6	S55°46'50"W	26.58'	L13	N34°13'10"W	21.13'	L20	S55°46'50"W	30.00'
L7	N34°13'10"W	64.63'	L14	N55°46'50"E	137.11'	L21	N34°13'10"W	90.00'

STATE OF NEW YORK
JASON M. TOMMELL
LICENSED LAND SURVEYOR
050606
JASON M. TOMMELL, L.S. #050606

CHAZEN ENGINEERING, LAND SURVEYING
& LANDSCAPE ARCHITECTURE CO., D.P.C.

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Phone: (845) 454-3980

☐ Capital District Office:
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Troy, New York 12180
Phone: (518) 273-0055

☐ North Country Office:
20 Elm Street (Suite 110)
Glens Falls, New York 12801
Phone: (518) 812-0513

☐ Westchester NY Office:
1 North Broadway, Suite 803
White Plains, New York 10601
Phone: (914) 997-8510

Nashville Tennessee Office:
2416 21st Ave S. (Suite 103)
Nashville, Tennessee 37212
Phone: (615) 380-1359

Chattanooga Tennessee Office:
427 E. 5TH ST. (Suite 201)
Chattanooga, Tennessee 37403
Phone: (423) 241-6575

SLOOP BREWING COMPANY

EXHIBIT MAP OF USE MODIFICATION PARCEL

TOWN OF EAST FISHKILL, DUTCHESS COUNTY, NEW YORL

designed FJM	checked JMT
date 08/12/19	scale 1"=200'
project no. 51718.03	
sheet no. SV1	

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I HEREBY CERTIFY THAT THIS SURVEY MAP IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED JULY 24, 1995 AND THAT THIS SURVEY MAP WAS MADE BY ME OR UNDER MY DIRECTION, AND CONFORMS WITH THE MINIMUM STANDARD OFPRACTICE ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.

Exhibit A-2

Description of Designated Area

THE Chazen COMPANIES
Civil Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects
Transportation Planners & Engineers
Proud to be Employee Owned

HUDSON VALLEY OFFICE
21 Fox Street
Poughkeepsie, NY 12601
P: 845.454.3980 or 888.539.9073
www.chazencompanies.com

SURVEY DESCRIPTION

ALL that certain plot, piece or parcel of land situate, lying and being in the Town of East Fishkill, County of Dutchess, and State of New York, being more particularly bounded and described as follows:

BEGINNING at a point on the westerly edge of the paved road of East Drive at the northeasterly corner of the herein described parcel, said point being located S 16°40'42" E 642.00 feet from the northeasterly corner of Lot 7 as shown a map entitled "Final Subdivision Plat Globalfoundries U.S. 2 LLC" prepared by Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C., dated April 1, 2016 and recorded in the Office of the Dutchess County Clerk on August 3, 2017 as Filed Map No. 12578;

Thence running southerly through East Drive, along the easterly side of the herein described parcel, and generally along the westerly side of the paved road of East Drive, S 04°07'51" W 257.84 feet, S 03°42'11" W 684.38 feet to a point;

Thence continuing through East Drive on a curve to the left having a radius of 315.00 feet, an arc length of 208.34 feet, and a chord bearing S 15°14'41" E 204.56 feet to a point;

Thence along the westerly line of East Drive, S 34°11'33" E 257.54 feet, and on a curve to the right having a radius of 75.00 feet, an arc length of 156.91 feet, and a chord bearing S 25°44'37" W 129.82 feet to a point on the southerly side of the herein described parcel, said point also being on the division line between Lot 7 and South Drive as shown on said Filed Map;

Thence running westerly along the northerly line of said South Drive and the southerly line of said Lot 7, S 85°40'47" W 211.70 feet, on a curve to the left having a radius of 375.00 feet, an arc length of 137.68 feet, and a chord bearing S 75°09'43" W 136.91 feet to a point being the southwesterly corner of the herein described parcel,

Thence through said Lot 7, N 34°13'10" W 383.00 feet to a point in range with the north line of a building, easterly along the north line of said building, N 55°46'50" E 320.00 feet to a point, N 34°13'10" W 88.62 feet, N 55°46'50" E 164.55 feet, N 34°13'10" W 15.13 feet, N 55°46'50" E 73.00 feet to a point in range with the east line of a building, and N 34°13'10" W 109.30 feet to a building corner;

Thence running along the lines of said building the following courses and distances, S 55°46'50" W 26.58 feet to a building corner, N 34°13'10" W 64.63 feet to a building corner, S 55°46'50" W 51.25 feet to a building corner, N 34°13'10" W 18.22 feet to a building corner, S 55°46'50" W 10.18 feet to a building corner, N 34°13'10" W 74.98 feet to a building corner, N 55°46'50" E 24.43 feet to a building corner, N 34°13'10" W 21.13 feet to a point along said building line;

Thence through said building, S 55°46'50" W 137.11 feet, and N 34°13'10" W 109.73 feet to a building corner;

Thence running easterly along the northerly lines of said building, N 55°46'50" E 36.07 feet to a building corner, N 34°13'10" W 7.79 feet to a building corner, and N 55°46'50" E 265.00 feet to a point,

Thence continuing through Lot 7, N 34°13'10" W 124.58 feet, S 55°46'50" W 30.00 feet, and N 34°13'10" W 90.00 feet to the northwest corner of the herein described parcel;

Thence easterly continuing through Lot 7 and along the northerly line of the herein described parcel, N 55°46'50" E 444.36 feet to the point or place of **BEGINNING**.

CONTAINING 9.413 ACRES MORE OR LESS

August 12, 2019

ATTACHMENT F-4
GlobalFoundries Deed Restriction

Dutchess County Clerk Recording Page

Record & Return To:

WINDELS MARX LANE & MTTENDORF LLP
156 WEST 56TH STREET

NEW YORK, NY 10019

Date Recorded: 11/8/2017
Time Recorded: 11:48 AM

Document #: 02 2017 8358

Received From: ACCREDITED TITLE AGENCY INC

Grantor: GLOBALFOUNDRIES U S 2 LLC
Grantee: GLOBALFOUNDRIES U S 2 LLC

Recorded In: Deed
Instrument Type: DECLAR

Tax District: East Fishkill

Examined and Charged As Follows :

Recording Charge:	$90.00
Transfer Tax Amount:	$0.00
Includes Mansion Tax:	$0.00
Transfer Tax Number:	2309

Red Hook Transfer Tax:

RP5217: N
TP-584: Y

Number of Pages: 9

***** Do Not Detach This Page**
***** This is Not A Bill**

County Clerk By: cth
Receipt #: 37373
Batch Record: 313

Bradford Kendall
County Clerk

0220178358

dorot Doc #: 0220178358 Printed Page 1 of 9

Declar. 8p
7/05 85
5
90

EXECUTED VERSION

DECLARATION OF RESTRICTIONS AND COVENANTS

THIS DECLARATION OF RESTRICTIONS AND COVENANTS (this "**Declaration**") is made as of the 31st day of August, 2017 by GLOBALFOUNDRIES U.S. 2 LLC (together with its successors and/or assigns, "**Declarant**"), a Delaware limited liability company, having an office at 2070 Route 52, Hopewell Junction, New York 12533.

WITNESSETH:

WHEREAS, Declarant is the fee owner of real property located in the Town of East Fishkill, County of Dutchess and State of New York containing 458.62 acres and shown on the Tax Map of the Town of East Fishkill as Section 6356, Block 4, Lot 980140 (the "**Property**");

WHEREAS, on August 3, 2017, 2017, Declarant filed a certain map in the Office of the Dutchess County Clerk as Map No. 23-1111-12578 ("**Map**") entitled "Final Plat Subdivision GLOBALFOUNDRIES U.S. 2 LLC" dated April 1, 2016 prepared by Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C., which depicts the subdivision of the Property into eight (8) lots identified as Lots 1 through 8 ("**Lots**") and Fee Roads I, II, III, IV, V, VI and South Drive ("**Roads**");

WHEREAS, effective May 8, 2017, the New York State Department of Environmental Conservation ("**NYSDEC**") issued to Declarant a Title V Permit Renewal 3 of that certain Title V Air Permit having DEC ID # 3-1328-00025/01028 for Facility DED ID 3132800025 (the "**Air Permit**");

WHEREAS, Declarant desires to impose restrictions (a) on certain transfers of the Property and (b) on the use and operation of certain portions of the Property to prohibit their use for any purposes other than Industrial Use (as hereinafter defined).

NOW THEREFORE, Declarant does hereby declare and agree that the Property shall hereafter be held, sold, transferred, conveyed, leased, and occupied subject to the restrictions, covenants and obligations set forth in this Declaration.

1. Restricted Areas. With respect those portions of Lot 2, Lot 5 and Lot 7 as shown in cross-hatching on EXHIBIT A attached hereto (collectively, the "**Restricted Areas**"), the owners, operators or users thereof shall not use or operate, and shall prohibit the use or operation of the Restricted Areas for any purposes other than Industrial Use, except as otherwise provided in Section 4 below.

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2. Restrictive Transfers. A portion of the semiconductor microchip fabrication operations conducted by Declarant on Lot 5 include manufacturing activities performed for the United States government. As a consequence of such activities, except as otherwise provided in Section 4 below, (i) a transfer of ownership interests in any entity owning all or any portion of the Property or (ii) a sale, exchange, lease, license or conveyance of all or any portion of the Property (collectively, a "**Transfer**") may be subject to review by the Committee on Foreign Investment in the United States (known as "**CFIUS**"). The parties to such Transfer are responsible to ascertain whether such Transfer is subject to a CFIUS review and to comply with any and all applicable governmental requirements.

3. Declaration of Restrictions and Covenants. Declarant hereby declares that the Property shall be held, sold, transferred, conveyed, leased, occupied or otherwise disposed of and used subject to the restrictions, covenants and obligations set forth in this Declaration, which shall run with the land and be binding on all successors, heirs, assigns, transferees, lessees and occupants of Declarant or of any of them, including any mortgagees, owners and/or users of the Property.

4. Duration. Except as otherwise provided herein, the provisions of this Declaration shall be deemed to be covenants running with the Property, and shall continue until all semiconductor microchip fabrication operations have "permanently ceased" on Lot 5. For purposes of this Section 4, semiconductor microchip fabrication operations shall be deemed to have "**permanently ceased**" upon the earlier to occur of (i) the commencement of decommissioning operations to remediate the semiconductor fabrication improvements utilized on Lot 5 or (ii) the lapse of twelve (12) months following the cessation of semiconductor microchip fabrication operations on Lot 5 without the reinstatement of such operations (except if such cessation is due to damage caused by fire or other casualty and the owner of Lot 5 has elected to restore the semiconductor microchip fabrication operations on Lot 5).

5. Obligations and Prohibitions.

   a. Except as provided in subparagraph (b) below, the owners, operators or users of the Restricted Areas shall not use, operate or develop, and shall prohibit the use, development or operation of the Restricted Areas for any purpose other than Industrial Use.

   b. With respect **to any future use of all or any portion of the Restricted Areas**, any future change in use of the Restricted Areas that does not constitute Industrial Use (as defined herein) permitted hereunder must be approved in writing by Declarant, which approval shall be in Declarant's sole and absolute discretion (and Declarant may disapprove of such future change in use for any reason or for no reason), and, to the extent required, any Governmental Body and the owners, operators or users of the Restricted Areas must provide Declarant with reasonable advance written notice of such proposed future change in use. All costs associated with any future

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change in use of the Restricted Areas permitted hereunder that requires development of any kind and/or requires remediation (other than remediation that is the responsibility of another party, such as the EFK Remedial Action (as hereinafter defined)), as determined by any Governmental Body, shall be paid by the owners or users of the Restricted Area(s).

c. If all semiconductor microchip fabrication operations have "permanently ceased" on Lot 5, Declarant and such subsequent owner of the affected Restricted Areas, Lots and/or Roads shall, upon request of such subsequent owner, use commercially reasonable efforts to terminate this Declaration as to the Property, to the extent permitted by Law and the relevant Governmental Bodies. In such case, Declarant shall prepare and record at its cost, a full termination of or supplement to this Declaration indicating the part of the Restricted Areas, Lots and/or Roads that are no longer subject to the obligations and restrictions set forth in this Declaration.

6. Cooperation. Declarant and any owners, operators or users of the Property (including any transferees, lessees and occupants of such owners, operators or user) shall reasonably cooperate with each other to accomplish the requirements of, or to ensure compliance with, this Declaration.

7. Successors. The covenants, terms and restrictions of this Declaration shall be binding upon and inure to the benefit of Declarant hereto and its successors, heirs and assigns.

8. Subsequent Transfers. Any deed or other legal instrument by which Declarant or any successor owner of the Property divests itself by sale, exchange, devise or gift of all or any portion of the Property shall include therein an express reference to this Declaration. Failure of any successor owner of the Property to perform any act required by this Section 8 shall not impair the validity of this Declaration or limit its enforceability in any way.

9. Recordation. Declarant shall record this instrument in the Official Records of the Dutchess County Clerk and shall pay all recording costs in connection therewith.

10. Notices. All notices, consents, approvals or other communications required under the provisions of this Declaration shall be in writing and shall be deemed properly given if hand delivered, sent by a nationally recognized overnight courier, or sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor in interest, at the addresses below:

a. For Declarant:

GLOBALFOUNDRIES U.S. 2 LLC
2070 Route 52
Hopewell Junction, New York 12533
Att: Site Manager

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b. For any subsequent owner of the Property, at such address as such subsequent owner of the Property has provided to Declarant in a prior written notice delivered to Declarant in the manner provided for in this Section 10.

11. Remedies and Enforcement. The parties hereto shall have all rights and remedies at law, in equity by statute or otherwise, including, without limitation, injunctive relief. No right or remedy conferred upon the parties hereto in this Declaration is intended to be exclusive of any other right or remedy contained in this Declaration or at law or equity. Every such right or remedy shall be cumulative and shall be in addition to each other right and remedy contained in this Declaration or now or hereafter available to the parties hereto at law, in equity, by statute or otherwise.

12. Miscellaneous Provisions.

a. Severability. If any provision of this Declaration or the application of it to any person or circumstance is found to be invalid, the remainder of the provisions of this Declaration and the application of the provisions to persons or circumstances other than those as to which it is found to be invalid, shall not be affected by the invalid provision.

b. Amendment. This Declaration may be modified by the mutual consent of the owner(s) of the portion of the Property impacted by such modification and Declarant, which consent shall not be unreasonably withheld, conditioned or delayed.

c. Controlling Law. The interpretation and performance of this Declaration shall be governed by the laws of the State of New York.

d. Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

e. Definitions.

i. "**EFK Remedial Action**" means the ongoing Remedial Action at the Property required pursuant to the Part 373 Hazardous Waste Treatment, Storage and Disposal Facility Permit, No. 3-1328-00025/000249, dated April 16, 2014, as amended, or any subsequent replacement order or permit by or with NYSDEC.

ii. "**Governmental Body**" means any government or governmental or regulatory body thereof, or political subdivision thereof, whether foreign, federal, state, or local, or any agency, instrumentality or authority thereof, or any court, arbitrator or mediator (public or private), having jurisdiction over the Property.

iii. "**Industrial Use**" means the primary purpose of manufacturing,

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production, fabrication or assembly processes, information technology equipment siting and ancillary warehouse and office use. For the avoidance of doubt, Industrial Use does not include any uses that are residential, recreational, educational, or religious in nature, including but not limited to residences of any type, schools, churches, hospitals, child day care facilities, senior care facilities or centers, private or commercial stables or riding academies, camps or recreational developments, retail stores or gymnasiums.

iv. "**Law**" or "**Laws**" means any foreign, federal, state or local law (including common law), statute, code, ordinance, rule, regulation, order or other legal requirement issued, promulgated or enforced by any Governmental Body.

[***Signature Page Follows***]

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IN WITNESS WHEREOF, the undersigned, being the Declarant herein, has hereunto set its hands and seals on the day and year first above written.

GLOBALFOUNDRIES U.S. 2 LLC

By: _____
Name: Steve Groseclose
Title: Sr. Director, Risk Management, Sustainability & Real Estate

State of New York

ss.:

County of ~~Dutchess~~ Saratoga

On the 22 day of August in the year of 2017, before me, the undersigned, personally appeared Steve Groseclose, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to this instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the executed the instrument.

_____
Notary Public – State of New York

BRENDAN F. CHUDY
NOTARY PUBLIC, State of New York
No. 02CH5065967
Qualified in Saratoga County
Commission Expires September 29, 2021

Signature Page to Declaration of Restrictions and Covenants

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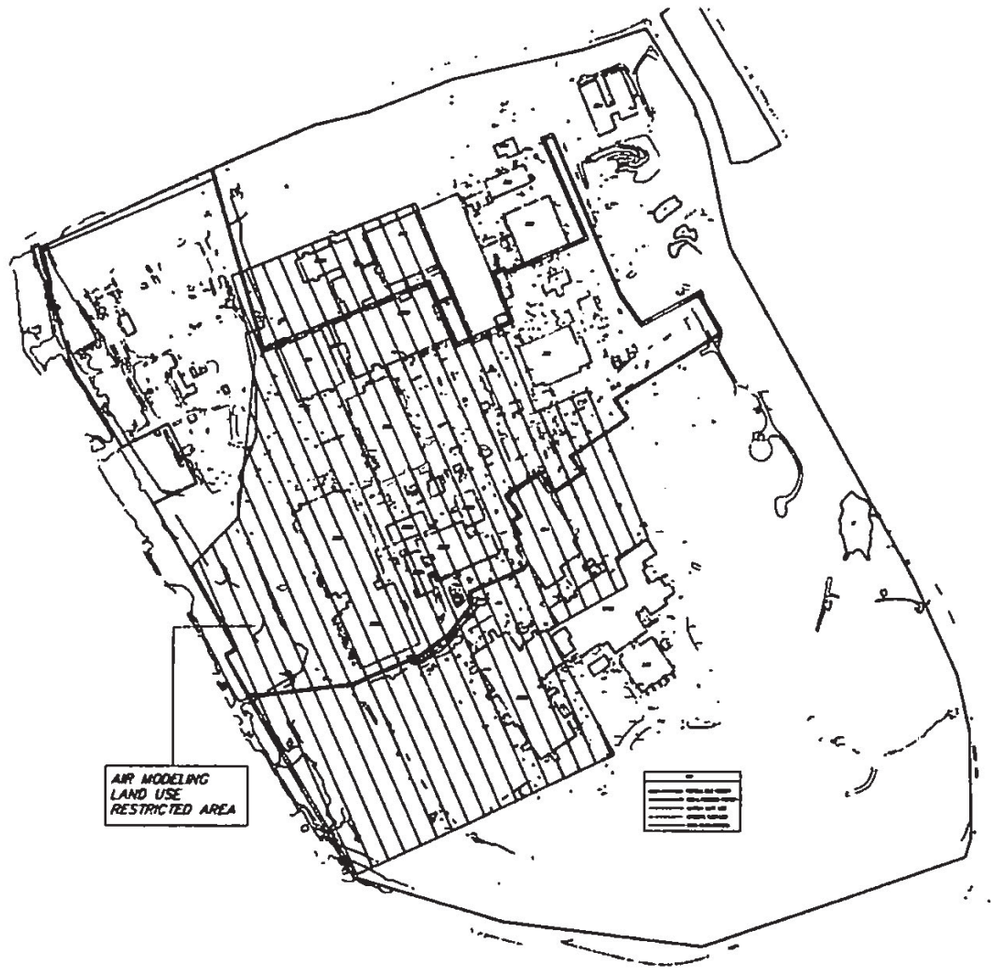
EXHIBIT A

Location of Restricted Areas



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DECLARATION OF RESTRICTIONS AND COVENANTS

by

GLOBALFOUNDRIES U.S. 2 LLC

Dated: August 31, 2017

Property known as

Address: 2070 **Route 52**

Town of East Fishkill

County of Dutchess

State of New York

Section: 6356

Block: 04

Lot: 80140

Record and Return to:

Windels Marx Lane & Mittendorf, LLP
156 West 56th Street
New York, New York 10019
Attn: Thomas A. Banahan, Esq.

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ATTACHMENT G Site Management Plan (Interim Site Management Plan to be replaced by updated approved document during the Permit period)

ATTACHMENT H

Closure, Post Closure and/or Corrective Action Cost Estimate(s)

ATTACHMENT H-1
IBM Corrective Action
Cost Estimate

8976 Wellington Road
Manassas, VA 20109

March 30, 2024

Mr. Basil Seggos
Commissioner
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7011

Subject: RCRA Financial Assurance
- Former IBM East Fishkill NYD000707901
- Former IBM Owego NYD986874501
- IBM Poughkeepsie NYD080480734
- IBM Yorktown NYD084006741

Dear Mr. Seggos:

Please find enclosed an amended Irrevocable Standby Letter of Credit for IBM's facilities in Poughkeepsie and Yorktown, New York, and IBM's former facilities in Owego and East Fishkill, New York (LC# 093127-793) issued by Intesa SanPaolo. The value of the Letter of Credit has been increased from ninety-nine million, six hundred thirty-one thousand, four hundred eighty-three dollars ($99,631,483) to one hundred three million, six hundred ninety thousand, seven hundred forty dollars ($103,690,740). This represents an increase in value of four million, fifty-nine thousand, two hundred fifty-seven dollars ($4,059,257). These values are allocated as follows:

IBM Facility	**Address**	
East Fishkill (former)	Route 52 Hopewell Junction, NY 12533	Corrective Action $59,174,000
Owego (former)	Route 17C East Owego, NY 13827	Corrective Action $14,884,100
Poughkeepsie	South Road Poughkeepsie, NY 12602	Closure $1,346,040 Corrective Action $27,551,800
Yorktown	Route 134 Yorktown Heights, NY 10598	Closure $734,400

An amended Schedule A of the Standby Trust Agreement issued by Wells Fargo Bank is enclosed to reflect the changes. The remaining portions of the original Standby Trust Agreement remain valid.

Please also find enclosed our updated Hazardous Waste Facility Certificate of Liability Insurance.

If you have any questions regarding IBM's submission, please contact Linda Daubert of my staff at 720-397-5670.

Very truly yours,

Edan Dionne
Vice President
Corporate Environmental Affairs

cc: Ms. Linda Daubert – IBM CEA
Ms. Shong Liu – IBM Treasury
Mr. Stephen Brannen – IBM Poughkeepsie
Mr. Frank Langone – IBM Yorktown
Ms. Jessica LaClair – NYSDEC
Mr. Daniel Bendell – NYSDEC
Ms. Jennifer Dawson – NYSDEC

IBM – 2024
STANDBY TRUST AGREEMENT

For the Benefit of the
New York State Department of Environment Conservation

SCHEDULE A

This Agreement demonstrates financial assurance for the cost estimates at the following facilities in New York State:

Hazardous Waste Facility Identification Number	Facility Name	Facility Address	Cost Estimate
NYD000707901	East Fishkill (former)	Route 52 Hopewell Junction, NY 12533	Corrective Action $59,174,400
NYD986874501	Owego (former)	Route 17C East Owego, NY 13827	Corrective Action $14,884,100
NYD080480734	Poughkeepsie	South Road Poughkeepsie, NY 12602	Corrective Action $27,551,800 Closure $1,346,040
NYD084006741	Yorktown	Route 134 Yorktown Heights, NY 10598	Closure $734,400

CHUBB®

HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

Named Insured			Endorsement Number
International Business Machine Corporation			005
Policy Symbol	Policy Number	Policy Period	Effective Date of Endorsement
PPL	G24883942 015	10/09/2023 to 10/09/2024	10/09/2023
Issued By (Name of Insurance Company)			
Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the Insured's obligation to demonstrate financial responsibility under **6 NYCRR Part 370 et seq**. The coverage applies at:

EPA ID Number	**Facility Name**	**Facility Address**
NYD000707901	International Business Machine Corporation	2070 Route 52, Hopewell Junction, NY 12533
NYD986874501	International Business Machine Corporation	1801 Route 17C East, Owego, NY 13827
NYD080480734	International Business Machine Corporation	2455 South Road, Poughkeepsie, NY 12601
NYD084006741	International Business Machine Corporation	1101 Kitchawan Rd, Yorktown Heights, NY 10598

for **sudden accidental occurrences.** The limits of liability are **$1,000,000** each occurrence and **$2,000,000** annual aggregate, exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all the terms and conditions of the policy; provided, however, that any provision of the policy inconsistent with subsections **(a)** through (f) of this Paragraph 2. are hereby amended to conform with such subsections **(a)** through **(f)**:

(a) Bankruptcy or insolvency of the Insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with the right of reimbursement from the Insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated by virtue of the insured satisfying the financial test for liability coverage as established by the New York State Department of Environmental Conservation (hereinafter "NYSDEC") or by the Commissioner of NYSDEC (hereinafter referred to as the "Commissioner"), and as specified in 6 NYCRR Part 370 et seq.

(c) Whenever requested by the Commissioner, the Insurer agrees to furnish to the Commissioner a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer or the Insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice, certified mail, return receipt requested, and only after the expiration of sixty (60) days after a copy of such written notice is received by the Commissioner.

(e) Any other termination of this endorsement will be effective only upon written notice, certified mail, return receipt requested, and only after the expiration of thirty (30) days after a copy of such written notice is received by the Commissioner.

(f) This endorsement shall be Attached to and forming part of policy No. **PPL G24883942 015** issued by **Illinois Union Insurance Company**, herein called the Insurer, of **P.O. Box 1000, 436 Walnut Street, Philadelphia, PA 19106** to **International Business Machine Corporation** of **1 New Orchard Road, Armonk, New York 10504** this **9th** day of **October**, **2023**. The effective date of said policy is **9th** day of **October**, **2023**.

I hereby certify that the wording of this endorsement is identical to the wording specified in **6 NYCRR 373-2.8(j)(7)**, as such regulation was constituted on the date first above written, and that the Insurer is authorized by the Superintendent of the New York State Insurance Department to conduct the business of insurance within the State of New York or is eligible to provide insurance, where applicable, as an excess or surplus lines insurer within the State of New York.

Steven Roth
Vice President, Chubb Environmental Risk
Authorized Representative of Illinois Union Insurance Company
436 Walnut Street, WA07A
Philadelphia, PA 19106phia, PA 19106

All other terms, conditions and limitations of this Policy shall remain unchanged.

Authorized Representative

GROUNDWATER SCIENCES, P.C.

2601 Market Place Street, Suite 310
Harrisburg, PA 17110-9340
(717) 652-6832
Fax: (717) 657-1611

June 30, 2024

Linda N. Daubert, P.E.
IBM Corporate Environmental Affairs
8976 Wellington Road
Manassas, VA 20109

Re: Financial Assurance Cost Estimate Breakdown
6NYCRR Part 373 RCRA Corrective Action Permit (3-1328-00535/00002)
Former IBM East Fishkill Remediation
East Fishkill, New York
NYSDEC Site ID: 314054

Dear Ms. Daubert:

Groundwater Sciences, P.C. (GSPC) is pleased to provide this letter providing a breakdown of costs for thirty years of Resource Conservation and Recovery Act (RCRA) Corrective Action activities projected to be performed by International Business Machines (IBM) at the Former IBM East Fishkill Remediation facility in the Town of East Fishkill, New York (Site). The environmental remediation program at the Site is regulated pursuant to the terms and conditions of a 6NYCRR Part 373 RCRA Corrective Action Permit, Permit Number *3-1328-00535/00002* (Part 373 Permit), issued by the New York State Department of Conservation (NYSDEC).

Elements of the RCRA Corrective Action program being implemented by IBM at the Site include:

- Containment and reduction of constituents of concern in bedrock and overburden groundwater plumes by groundwater extraction and treatment operations.

- Reduction of constituents of concern in vadose zone soil by soil vapor extraction and treatment operations.

- Mitigation of the potential for vapor intrusion into human-occupied buildings by operation of subslab depressurization systems.

- Monitoring of groundwater, soil vapor, indoor air, and treatment system influent/effluent to verify the three types of above-listed engineering controls are effective and are operating as designed.

COST CATEGORY DEFINITIONS

For the purposes of developing a cost estimate breakdown of IBM's projected 30-year financial assurance obligations, elements of the RCRA Corrective Action program implemented by IBM at the Site have been subdivided into five general categories and further subdivided into sixteen cost projection subcategories as defined below:

Remediation Systems - Operation, Maintenance, and Monitoring (OM&M)
Labor, equipment, materials, and services to operate, maintain and monitor groundwater and vapor extraction wells, pipeline conveyance systems, groundwater treatment facilities, soil vapor extraction systems, and sub-slab depressurization systems. Includes, but is not necessarily limited to: inspections of systems and equipment; remote monitoring of operations; instrument calibrations; process sampling and analysis; preventative maintenance; procurement of parts, supplies, carbon, and treatment chemicals; utilities; engineering support; facility services; regulatory fees; and regulatory compliance and reporting.

A breakdown of cost projection subcategories for this general category of Corrective Action activity includes the following:

- **Groundwater Remediation OM&M** – Year-round operation and maintenance of three bedrock groundwater extraction wells with separate volatile organic compound (VOC) treatment facilities, including aqueous-phase granular activated carbon (GAC) units or a combination of ultraviolet oxidation treatment units and aqueous-phase GAC units. Year-round operation of overburden groundwater extraction in Area A with a treatment system consisting of air stripping with vapor-phase GAC for treatment of VOCs and aqueous-phase GAC for treatment of PFAS. The cost projection is based on average historical costs with the expectation that future years would provide cost savings due to improvements in groundwater quality, reductions in the scope of extraction and treatment system operations, and OM&M optimization.

- **Soil Remediation OM&M** – Seasonal (May through October) operation of one soil vapor extraction system with portable vapor-phase GAC units. The cost projection is based on average historical costs.

- **Vapor Intrusion (VI) Mitigation OM&M** – Year-round operation and maintenance of six sub-slab depressurization (SSD) systems with fixed vapor-phase GAC units. The cost projection is based on average historical costs with the expectation that future years would provide cost savings due to improvements in sub-slab vapor quality and OM&M optimization.

- **Utilities** – Costs for electricity, municipal water, wastewater, and communications for the above-listed Corrective Action activities. The cost projection is based on average historical costs.

- **Regulatory Fees and Facility Services** – Projected costs for SPDES permit fees, plus average historical costs for facility service charges.

Remediation Systems - Repair and/or Replacement (R&R)
Labor, equipment, materials, and services to repair and/or replace components of groundwater and vapor extraction wells, pipeline conveyance systems, groundwater treatment facilities, soil vapor extraction systems, and sub-slab depressurization systems. Includes routine and non-routine equipment repairs and/or replacements.

A breakdown of cost projection subcategories for this general category of Corrective Action activity includes the following:

- **Groundwater Remediation Repairs/Replacements** – Routine repairs and/or replacements of groundwater remediation system components. The cost projection is based on average historical costs.

- **Non-Annual Groundwater Remediation Repairs/Replacements** – Projected large repairs and/or replacements of groundwater remediation system components that occur on a non-annual basis, including but not limited to: repairs/replacement of major pumping systems and conveyance piping; extraction well rehabilitations; and repairs or replacements/upgrades to control systems. The cost projection is based on past relevant experience at the Site and at other sites concerning the frequency of remediation system repairs/replacements.

- **Soil Remediation Repairs/Replacements** – Repairs/replacements to SVE system components. The cost projection is based on average historical costs for routine repairs/replacements.

- **VI Mitigation Repairs/Replacements** – Repairs/replacements to components of six sub-slab depressurization (SSD) systems. The cost projection is based on average historical costs for routine repairs/replacements with additional projected costs for future repairs/replacements for larger system components, such as blowers and controls.

- **Monitoring Well Repair** – Repairs to groundwater monitoring wells. The cost projection is based on average historical costs.

Environmental Consulting and Engineering
Labor and expenses to provide hydrogeologic and environmental consulting and engineering services. Includes, but is not necessarily limited to: data management, validation, analysis and interpretation; regulatory and technical reviews and evaluations; preparation and submittal of technical reports and permit applications; communications with regulatory and other stakeholders; and related consulting services.

A breakdown of cost projection subcategories for this general category of Corrective Action activity includes the following:

- **Groundwater Consulting & Engineering** – Routine consulting and engineering associated with implementation of groundwater corrective action. The cost projection is

based on average historical costs with the expectation that future years would provide cost savings due to improvements in groundwater quality, reductions in the scope, management, and reporting of groundwater corrective actions.

- **Indoor Air Consulting & Engineering** – Routine consulting and engineering associated with implementation of VI mitigation. The cost projection is based on average historical costs with the expectation that future years would provide cost savings due to decreases in VI potential and reductions in the scope, management, and reporting of VI mitigation activities.

Sampling and Analysis of Environmental Media

Labor, equipment, materials, supplies and services to sample and analyze environmental media (e.g., groundwater, surface water, soil, soil gas, indoor air). Does not include sampling and analysis of environmental media conducted as part of remediation systems OM&M or as part of Non-Routine investigations.

A breakdown of cost projection subcategories for this general category of Corrective Action activity includes the following:

- **Sampling of Environmental Media** – Routine quarterly groundwater sampling as per the Groundwater Monitoring Plan and indoor air sampling to support design and/or assessment of the effectiveness of VI mitigation systems. The cost projection is based on average historical costs.

- **Analytical Laboratory** – Analytical laboratory costs associated with routine quarterly groundwater sampling as per the Groundwater Monitoring Plan and indoor air sampling to support design and/or assessment of the effectiveness of VI mitigation systems. The cost projection is based on average historical costs.

Non-Routine Investigations, Engineering Design, and Construction

Labor, equipment, materials, and services to perform environmental investigations, remediation evaluations, and implementation. Includes, but is not necessarily limited to: RCRA Facility Assessments; RCRA Facility Investigations; RCRA Corrective Measures Studies, such as pilot tests; remediation system design, construction, and startup/shakedown testing.

COST ESTIMATE

GSPC prepared this 30-year cost estimate breakdown based upon:

1) Actual costs incurred by IBM over the past three years, under the current configuration of RCRA Corrective Action elements at the Site.

2) Soil vapor extraction and vapor intrusion mitigation cost projections provided to IBM by Sanborn, Head Engineering, P.C.

3) Over 20 years of site experience and professional judgement regarding potential trends in costs of annual operations and the projected long-term frequency of maintenance and repairs.

The estimated costs projected for the next thirty years are rounded to the nearest thousand dollars. A tabular summary of the estimated costs for each of the cost categories and cost subcategories is provided in the following table.

COST CATEGORY	Annual ($K)	30-Year ($K)
Remediation Systems – Operation, Maintenance & Monitoring (OM&M)		
Groundwater Remediation OM&M	$745.4	$22,363
Soil Remediation OM&M (Area A SVE)	$15	$450
VI Mitigation OM&M	$285.5	$8,565
Utilities	$182.0	$5,460
Regulatory Fees, Facility Services	$28.4	$853
	Subtotal	**$37,691**
Remediation Systems – Repair and/or Replacement (R/R)		
Groundwater Remediation R/R	$15.1	$452
Non-Annual Groundwater Remediation R/R	n/a	$1,125
Soil Remediation R/R (Area A SVE)	$1	$30
VI Mitigation R/R	$1	$30
Monitoring Well Repair	$25.0	$750
	Subtotal	**$2,387**
Environmental Consulting & Engineering		
Groundwater Consulting & Engineering	$292.0	$8,760
Indoor Air Consulting & Engineering	$108.7	$3,260
	Subtotal	**$12,020**
Sampling & Analysis of Environmental Media		
Sampling of Environmental Media	$116.2	$3,485
Analytical Laboratory	$43.3	$1,300
	Subtotal	**$4,785**
Non-Routine Activities		
Investigations	-	$400
Engineering Design & Construction	-	$1,891
	Subtotal	**$2,291**
TOTAL		**$59,174**

As indicated in the table, the overall financial assurance cost estimate is $59,174,000, including $37,691,000 for OM&M of remediation systems, $2,387,000 for remediation system equipment repairs/replacements, $12,020,000 for environmental consulting and engineering, $4,785,000 for environmental media sampling and analytical laboratory analyses, and $2,291,000 for non-routine projects.

This 30-year cost estimate breakdown represents our best judgement based on the sources of information listed above and our professional judgement of the projected level of effort required by IBM to continue implementation of RCRA Corrective Action at the Site.

We appreciate the continued opportunity to be of service to IBM on this important project. Please do not hesitate to contact us if you have any questions or if you need additional information.

Very truly yours,

GROUNDWATER SCIENCES, P.C.

Matthew T. Luckman, P.E.
President

Dorothy A. Bergmann, P.G.
Vice President

ATTACHMENT H-2
iPark Corrective Action
Cost Estimate

iPARK 84 CORRECTIVE ACTION ACTIVITIES
ESTIMATED COSTS FOR ANNUAL MONITORING & MAINTENANCE
SUB-SLAB DEPRESSURIZATION SYSTEMS VE-30, VE-31 & VE-32[1]

Estimated Monitoring & Maintenance Cost[2]

Description	*Estimated Cost*	
Regular System Inspections and Annual System Monitoring [3,5]		
Labor - General	$	3,600.00
Labor - Supervisor	$	1,440.00
Equipment Rental	$	200.00
Reporting	$	3,000.00
Contingencies @ 20%	$	1,648.00
Annual Subtotal Per SSD System	**$**	**9,888.00**
Corrective Action Cost for Systems VE-30, VE-31 & VE-32 over 30-Year Timeframe	**$**	**889,920.00**
Indoor Air Quality Sampling [4,5]		
Labor - General	$	1,500.00
Labor - Supervisor	$	720.00
Equipment Rental	$	150.00
Laboratory Analysis	$	2,500.00
Reporting	$	3,500.00
Contingencies @ 20%	$	1,674.00
Corrective Action Cost for One Sampling Event	**$**	**10,044.00**

Total Corrective Action Cost Estimate ***$*** ***899,964.00***

Notes:

1 - iPark operates sub-slab depressurization systems to mitigate potential soil vapor intrusion impacts in B338/B730 (System VE-30), B339/B740 (System VE-31), and the Sloop Brewing space in B330C/B755 (System VE-32). The tenants occupying the spaces controlled by these SSD systems are responsible for the electrical costs associated with operating the respective systems.

2 - The SSD system monitoring and maintenance is performed in accordance with the following Operation and Maintenance Plans: B338/B730 Vapor Mitigation System VE-30 O&M Manual, B339/B740 Vapor Mitigation System VE-31 O&M Manual, and Sloop Brewery O&M Manual.

3 - The SSD system monitoring and maintenance tasks include regular checks to verify the vacuum extraction fans (VE-30 and VE-32) and vacuum blower (VE-31) are operating effectively and to identify any equipment issues that must be addressed. During the annual inspection events conducted during the fourth quarter of each year, sub-slab pressure readings are recorded at the monitoring points throughout each space using a micromanometer to verify that the slab is effectively depressurized. Reporting costs are also included.

4 - SSD system monitoring and maintenance requirements include indoor air sampling upon system restart after a prolonged period of system downtime. Corrective action cost estimate assumes one indoor air sampling event is required (sample collection, laboratory analysis, and reporting).

5 - The cost for PE certifications related to iPark's corrective actions is included in the estimated annual monitoring, maintenance, and indoor air sampling costs above.

ATTACHMENT I
On-going Corrective Action Documents

ATTACHMENT J
Other Laws

ATTACHMENT J
OTHER LAWS

The Facility holds a number of permits that were issued pursuant to the Clean Water Act, the Clean Air Act, the Resource Conservation & Recovery Act, and the New York State Environmental Conservation Law. These permits are identified in Section 4 - Other Environmental Permits of **Attachment B** of this Permit.

Other laws applicable or potentially applicable to site operations include the Atomic Energy Act, the Safe Drinking Water Act, the Federal Insecticide, Fungicide, Rodenticide Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Superfund Amendments and Reauthorization Act of 1986. The site is currently in compliance with applicable provisions of these statutes.

ATTACHMENT K
Performance Monitoring Program

ATTACHMENT K-1

IBM Vapor Intrusion Engineering Controls PMP

SANBORN HEAD ENGINEERING

Building Trust. Engineering Success.

PERFORMANCE MONITORING PLAN FOR VAPOR INTRUSION ENGINEERING CONTROLS

Former IBM East Fishkill Facility
Hopewell Junction, New York

Corporate Environmental Affairs

Prepared for IBM Corporation
File No. 2999.20
May 2021

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ATTACHMENTS

Attachment A Historical Information
- Attachment A.1 Department Approval Letters
- Attachment A.2 Tables 3 through 5 of IBM's 2009 RFI Work Plan
- Attachment A.3 References

Attachment B Log Sheets for VI EC Monitoring
- Attachment B.1 Building Use, Occupancy, and Infrastructure Log Sheets
- Attachment B.2 SSD Operations and Differential Pressure Measurements Log Sheets
- Attachment B.3 HVAC System Operations Log Sheets
- Attachment B.4 Area A SVE Operations and Differential Pressure Measurements Log Sheets

1.0 INTRODUCTION

This document comprises the performance monitoring plan (PMP, or plan) for soil vapor intrusion (VI) engineering controls (ECs) that have been established to maintain acceptable indoor air quality (IAQ)[1] conditions in certain buildings at the former IBM East Fishkill facility (the site). The site is located at 2070 Route 52, Hopewell Junction, New York. A Site Location Plan is provided as Figure 1. This PMP serves as the site monitoring plan for the VI ECs and a component of the overall Site Management Plan (SMP).

The purpose of this PMP is to ensure the long-term effectiveness of VI ECs to maintain previously reported acceptable IAQ in certain buildings. To meet this objective, the PMP describes the procedures and protocols to operate, maintain, monitor, and document the implemented VI ECs. These VI ECs include subslab depressurization (SSD) systems and building heating, ventilating, and air conditioning (HVAC) systems. While not a VI EC, the exterior Area A soil vapor extraction (SVE) system has also been included as part of the PMP given the similar operational checks and schedule as the SSD systems.

The PMP is also intended to provide a procedure for determining whether an IAQ assessment is necessary prior to occupancy of a currently vacant space in buildings within the central portion of the site.

IBM owned the East Fishkill facility property from approximately 1962 until 2015. In 2015, site ownership was transferred from IBM to Global Foundries, who subdivided the property into eight lots and sold six lots to iPark East Fishkill LLC and iPark East Fishkill I LLC (collectively referred to as iPark) in September 2017. Since that time, certain parcels owned by iPark have been transferred to other iPark entities. The lots are shown on Figure 2, and building ownership information is provided for each building in Tables 1 through 3.

Site owners are required to provide notification of changes in building use, occupancy, and infrastructure to IBM, and the New York State Department of Conservation (NYSDEC) and the New York State Department of Health (NYSDOH), collectively referred to as the Departments, as described in the Site Management Plan. The monitoring requirements described within this PMP are intended to supplement the notification requirements and are not a replacement for notification.

This PMP was prepared on behalf of IBM by Sanborn, Head Engineering P.C. in substantial conformance with NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006) and NYSDEC's Technical Guidance for Site Investigation and Remediation (DER-10).

1.1 Report Organization

This document is organized into the following sections:

---

[1] Acceptable indoor air quality (IAQ) in the context of this document refers to acceptable indoor air concentrations of the site-specific list of volatile organic compounds (VOCs) identified in IBM's 2009 RCRA Facility Investigation Work Plan.

Section 2.0 provides a brief background summary of prior indoor air and VI assessments, a description of the types of VI ECs that were implemented at the site, and building category designations based on VI EC types;

Section 3.0 presents the long-term monitoring plan for each building, including monitoring for building use and occupancy, SSD operational checks, HVAC operational checks, and Area A SVE operational checks;

Section 4.0 includes a description of the indoor air re-assessment process and HVAC VI EC termination assessments; and

Section 5.0 includes a description of the reporting and certification procedures for the PMP.

1.2 VI EC Demonstration Project Results Summary

In 2018, IBM completed a one-year VI EC demonstration project at the IBM Poughkeepsie and former IBM Endicott facilities.[2] The purpose of the demonstration project was to collect data and information to evaluate the long-term effectiveness of HVAC systems, and associated operational monitoring and observational checks, to maintain appropriate indoor air quality. Overall, the demonstration project was intended to address the general lack of data in the State of New York, as noted by the Departments to IBM, on the long-term reliability and consistency of HVAC systems for VI mitigation.

Under the demonstration project, routine checks of HVAC operations and other controls were coupled with indoor air monitoring of various types and durations to obtain data on the consistency of HVAC systems as VI ECs over one year/four seasons for the buildings. The project effectively condensed multiple years of annual VI EC performance and verification sampling and monitoring into one year.

In summary, the demonstration project results confirmed the consistency and reliability of the HVAC VI ECs to maintain appropriate indoor air quality in buildings where VI is a concern. The results demonstrated the validity of the overall premise that once ECs are shown to be effective in achieving appropriate indoor air quality, then indoor air quality will be consistent if the ECs are consistently monitored/checked and maintained. The results also support the use of ECs, coupled with periodic checks of building use, occupancy, and infrastructure, as the long-term VI management approach for the site, without a need for indoor air monitoring unless there are changes to building conditions.

The demonstration project methods and results have been applied to the East Fishkill facility and provide the framework for this PMP as described further in the sections below.

---

[2] *Vapor Intrusion Engineering Control Demonstration Project Summary Report, IBM Poughkeepsie and Former IBM Endicott Facilities*, IBM Corporation and Sanborn Head Engineering P.C., June 2019.

2.0 BACKGROUND ON VI ASSESSMENTS AND ENGINEERING CONTROLS

In June 2009, IBM submitted a RCRA Facility Investigation Work Plan (RFI Work Plan)[3] for assessing the anomalous presence of volatile organic compounds (VOCs) in indoor air within certain buildings on the East Fishkill facility, which was approved by the Departments in a July 10, 2009 letter to IBM. The Departments' approval letter and IBM's associated responses are included in Attachment A.1.

The RFI Work Plan designated 29 site buildings into three groups: (1) source investigation buildings; (2) confirmatory indoor air sampling buildings; and (3) no further assessment buildings. The RFI Work Plan designation for each building is provided in Table 1. The specific criteria used to categorize the buildings are provided in the RFI Work Plan, Tables 3 through 5, copies of which are provided in Attachment A.2.

Indoor air sampling, and subslab vapor assessments in some buildings, were subsequently completed in accordance with RFI Work Plan for the buildings designated for source investigation and confirmatory indoor air sampling. The purpose of the assessments was to evaluate the potential presence of certain VOCs in indoor air related to potential VI from subsurface VOC sources beneath certain occupied buildings on the site.

Additional VI assessments were completed in 2015 through 2016 to assess the impact of HVAC adjustments in various buildings following acquisition of the property by Global Foundries. Further VI assessments were completed in 2017 through 2020 to accommodate the re-occupancy of certain buildings by iPark, which leases building spaces to various tenants. These VI assessments led to the installation of VI ECs in several buildings as further discussed in the following sections.

The Area A SVE system was installed during the second quarter of 2015 to address the presence of VOCs, primarily PCE, in soil vapor located in Remediation Area A to the north of the Building 310/308 linkway, as documented in a February 2016 report[4] to NYSDEC. The SVE system operates from the spring to fall due to the potential for excessive condensate generation in the exposed aboveground pipe network and freezing in cold weather.

Individual VI and SVE-related work plans and reports were submitted and approved by the Departments. A reference list of work plans and reports is provided in Attachment A.3.

2.1 Summary of VI Assessment Results

The results of the VI assessments were used to assess whether the buildings required VI ECs. Table 1 lists the site buildings, and Figure 2 shows their locations in relation to the footprint of VOC presence in groundwater.

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[3] *Work Plan, RCRA Facility Investigation (RFI), VOC Source Assessment, IBM East Fishkill Facility*, Sanborn Head Engineering P.C., June 2009.

[4] *Installation and Performance Monitoring Report – Area A Pilot SVE System, Hopewell Junction, NY, Former IBM East Fishkill Facility,* Sanborn, Head Engineering, PC, February 2016.

On Table 1 and Figure 2, the buildings are grouped and identified by color as follows:[5]

- Category 1 – Buildings Subject to Full Building SSD ECs: Full building SSD ECs were implemented in three buildings, and the linkway between Buildings 310 and 308 (pink buildings on Table 1 and Figure 2).

- Category 2 – Buildings Subject to Partial Building SSD ECs: Partial building SSD ECs were implemented in two buildings (grey buildings on Table 1 and Figure 2). HVAC ECs were implemented in areas outside the influence of the SSD systems.

- Category 3 – Buildings Subject to HVAC ECs (i.e., HVAC modifications were implemented to achieve acceptable IAQ). HVAC ECs were implemented only in buildings that have partial SSD ECs (Category 2); therefore, no site buildings fall under this category.

- Category 4 – Acceptable IAQ with HVAC Running Normally: Indoor air assessments showed acceptable indoor air VOC results when sampling with the HVAC running normally in eleven buildings (one tentative)[6] (light blue buildings on Table 1 and Figure 2).[7] Although changes to HVAC operations were not needed for VI control, the presumption is that existing HVAC operations may be acting as an EC.

- Buildings that were not subject to indoor air assessment are grouped as follows:

  - Not Routinely Occupied: One building is currently not routinely occupied, and a second building that will not be routinely occupied is proposed for construction (green buildings on Table 1 and Figure 2);

  - Potential Occupational VOC Presence: Six buildings with underlying VOC presence in groundwater currently may be subject to occupational VOC presence in indoor air due to the presence of chemical / waste storage, groundwater remediation systems, or treatment residuals handling (dark blue buildings on Table 1 and Figure 2);

  - No Known Underlying VOC Presence in Groundwater:

    - Seven buildings are located outside the area of known presence of VOCs in groundwater but are within the central area of the site (tan buildings on Table 1 and Figure 2).

    - Five buildings are located outside the area of known presence of VOCs in groundwater and are outside the central area of the site (brown buildings on Table 1 and Figure 2).

The building groupings above may change in the future. For example, a building with potential occupational VOC presence may be re-purposed for uses in which VOCs would not

[5] Categories 1 through 4 were established as part of the VI EC Demonstration project and are discussed further in Section 2.2.

[6] Building 317 is tentatively included as a Category 4 building pending indoor air sampling.

[7] VOC concentrations in indoor air were also acceptable under existing HVAC conditions in B309. This building has potential occupational VOC exposure and is grouped as such throughout this document.

be expected to be present in indoor air. This PMP is intended to identify such changes and make sure that the building meets appropriate indoor air VOC levels for its use.

2.2 Description of VI Engineering Controls and Building Categories

Implemented VI ECs at the site include SSD and HVAC systems, which are examples of active ECs because they rely upon active mechanical measures to maintain appropriate indoor air quality. In addition, one passive SSD system is installed beneath a portion of B320B. Note that B320B is considered category 4 building because changes were not required to HVAC to achieve acceptable indoor air quality as documented in an April 2019 report.[8]

The buildings that were subject to indoor air assessments under the RFI work plan are further organized into four categories by the type of active EC used. The four categories were established as part of the VI EC Demonstration Project, but they are not all applicable to the buildings at this site (i.e., there are no Category 3 buildings at the site). The Area A SVE System will follow the same monitoring checks and frequency as the category 1 and 2 buildings listed below, given the similarity of its operations and monitoring to the SSD systems.

Exhibit 1: Building Categories by Engineering Control Type

Category	Building
Category 1: SSD system for full building footprint.	B310/B308 linkway, B330D, B338, B339
Category 2: SSD system for partial building footprint. HVAC EC outside SSD footprint.	B310, B330C
Category 3: HVAC EC for either full or partial building footprint	Not Applicable to Site Buildings
Category 4: No changes to HVAC - A portion of the building overlies VOC-containing groundwater, but HVAC adjustments were not necessary in these buildings to achieve acceptable indoor air quality.	B300, B308, B317 (tentative), B320B, B321, B322, B323, B323A, B330L, B334, B386

Table 2 provides a summary of the VI ECs established in site buildings (i.e., category 1 and 2 buildings), including the party responsible for the operation, maintenance, and monitoring (OM&M) of the SSD systems.

3.0 MONITORING PLAN FOR VI ENGINEERING CONTROLS

Long-term monitoring will be conducted in each of the buildings on Table 1 and Figure 2, except for the buildings that are not overlying or proximate to VOC-impacted groundwater (brown buildings). Any future buildings or building additions must be assessed for potential need for VI ECs and included in this monitoring plan.

This section describes the monitoring plan for VI ECs and other checks of building use, occupancy, and infrastructure to ensure the long-term effectiveness of these measures to

[8] *B320B IAQ Re-Sampling Summary Report*, Sanborn Head Engineering PC, August 12, 2019.

maintain appropriate indoor air quality in buildings with VI ECs. The effectiveness of these measures has been demonstrated by post-EC implementation indoor air sampling results. The ongoing effectiveness of the ECs will be ensured by operating, maintaining, monitoring, and documenting the EC operating parameters and building conditions, as described below.

3.1 Overview of Long-Term VI Management Approach

Table 3 provides a summary of the long-term VI management and EC monitoring plan for the buildings that potentially overlie, or are proximate to, groundwater with VOC presence. The monitoring components include the following:

- Routine, periodic checks of building use, occupancy, and infrastructure for each building;
- Routine, periodic checks of SSD system operations, including subslab vacuum monitoring for all buildings with these systems (categories 1 and 2);
- Routine, periodic checks of HVAC operations for buildings where HVAC settings were established as ECs (i.e., category 2 for areas outside the influence of the SSD system), or where the building overlies the groundwater plume and HVAC changes were not required for IAQ purposes, but HVAC is presumed to be acting as an EC (category 4);
- Indoor air sampling will be conducted if changes are identified that could affect indoor air quality, as discussed in Section 4.0; and
- Routine, periodic checks of the Area A SVE system operations and vacuum monitoring.

Long-term monitoring will be completed in accordance with the frequency and schedule provided in Table 3.

Further details on the ECs and monitoring plan for each building are provided in the following section. Operations and maintenance (O&M) manuals for each of the systems are included as an Appendix to the SMP. Indoor air sampling in the event of certain changes to building conditions, including when vacant space will be re-occupied, is described in Section 4.

3.2 Monitoring and Record Keeping

The type and frequency of EC monitoring for each building and Area A SVE system is provided in Table 3. Log sheets to document monitoring events and operational parameters are provided as follows:

- Attachment B.1 Building Use, Occupancy, and Infrastructure Log Sheets
- Attachment B.2 SSD Operation Manual Checks and Subslab Differential Pressure Measurements Log Sheets
- Attachment B.3 HVAC System Manual Check Log Sheets

- Attachment B.4 Area A SVE Operation Manual Checks and Differential Pressure Measurements

The format of the log sheets may change over time, but the general content will remain consistent.

3.3 Category 1 – Buildings 330D, 338, 339, and Building 310/308 Linkway

The buildings in this category have SSD systems installed that mitigate the VI pathway for the full building footprint. Additional information on the VI ECs in category 1 buildings is provided in Table 2. The type and frequency of EC monitoring for these buildings is listed in Table 3.

3.4 Category 2 – Buildings 310 and 330C

The buildings in this category have SSD systems installed that mitigate the VI pathway for a portion of the building footprint. In areas outside the influence of the SSD systems, the HVAC systems are considered to be ECs. Additional information on the VI ECs in category 2 buildings is provided in Table 2. The type and frequency of monitoring for these buildings is listed in Table 3.

3.5 Category 3 – Not Applicable

Category 3 buildings have HVAC systems that were adjusted for VI mitigation purposes, establishing them as an EC, with no SSD ECs in the building.

There are currently no category 3 buildings at the facility.

3.6 Category 4 – Buildings 300, 308, 320B, 321, 322, 323, 323A, 330L, 334, and 386

The buildings in this category had acceptable indoor air quality under existing HVAC operations and building use; no alterations of HVAC operations were necessary for VI mitigation purposes. Although changes to HVAC operations were not needed for VI control, the presumption is that existing HVAC operations may be acting as an EC; therefore, HVAC checks will consist of verifying that the HVAC systems are running in occupied areas. Monitoring of building conditions and HVAC systems will be conducted to confirm no major changes, such as HVAC shut-downs or system reconfigurations. In addition, visual checks of the above-grade piping for the passive SSD system in B320B will be conducted to assess system integrity. The type and frequency of monitoring for these buildings is listed in Table 3.

3.7 Plan for Other Site Buildings

As noted in Section 2.1, several other buildings not included in the above four categories potentially overlie VOC presence in groundwater, but they were not subject to indoor air assessment because either: 1) they are vacant or not routinely occupied, or 2) the potential exists for occupational presence of VOCs from chemical/waste storage, groundwater remediation systems, or treatment residuals handling.

In addition, seven buildings in the central portion of the site were not subject to indoor air assessment because they are not thought to overlie VOC-impacted groundwater (tan buildings on Table 1 and Figure 2) based on groundwater monitoring data; however, these buildings have been retained for usage and occupancy checks as a conservative measure given that they are located in areas proximate to VOC-impacted groundwater.

The type and frequency of monitoring for these buildings is listed in Table 3.

Finally, any future buildings or building additions must be assessed for potential need for VI ECs and included in this monitoring plan.

3.8 Area A SVE System

The Area A SVE system consists of six soil vapor extraction wells, and a blower and treatment system that are housed in a shipping container located along the east side of Building 310, within Area A. The extraction wells are screened in the lower portion of the soil fill at a depth of approximately 7.5 to 10 feet below ground surface (bgs). The wells that operate each year vary to best meet the objectives of achieving the greatest mass removal compared to other wells while attaining a reasonable extent of vacuum influence. Subsurface differential pressures (DPs) are collected from monitoring points installed at 5 and 10 feet bgs.

Additional information on the Area A SVE system is provided in Table 2, and the type and frequency of EC monitoring is listed in Table 3.

4.0 INDOOR AIR RE-ASSESSMENT AND HVAC SYSTEM EC TERMINATION PROCESS

This section describes the changes to building conditions or ECs that will trigger re-assessment of indoor air quality due to potential VI. Indoor air re-assessments may be undertaken when there are changes to building use, occupancy, infrastructure, or ECs. Changes that will require indoor air re-assessment also include if new or existing tenants are to occupy, re-locate, or expand into new or additional space, or if potential termination of HVAC system ECs is being considered.

4.1 Indoor Air Re-assessment

Re-assessment of possible effects on indoor air quality related to VI, including possible indoor air sampling, may be conducted in the event of changes to building conditions and ECs noted during routine monitoring described in Section 3.

Before undertaking indoor air sampling, a work plan describing the rationale and scope will be submitted to the Departments for review and approval.

4.1.1 General

Any changes to building use, occupancy, infrastructure, or ECs may be reason to conduct indoor air sampling. For buildings where HVAC adjustments were not necessary to maintain acceptable IAQ (i.e., Category 4 buildings), indoor air sampling may be conducted if there are

changes to building use, occupancy, or infrastructure. Similarly, for other buildings that overlie subsurface VOC presence in groundwater, but that are currently vacant or subject to occupational VOC presence, indoor air sampling may be conducted in the event of changes to building use, occupancy, or infrastructure.

For buildings that are not thought to overlie subsurface VOC presence in groundwater, but that are located in the central portion of the site (tan buildings on Table 1 and Figure 2), indoor air assessments may be completed if significant changes are made to occupancy, building use, infrastructure, or HVAC systems.

For buildings in all categories, if changes are found that are unintentional and the former conditions are re-established, then indoor air sampling may not be justified.

It will be the responsibility of the building owner to notify the building occupants / tenants of the indoor air sampling results in accordance with the tenant notification requirements of New York Environmental Conservation Law ENV Section 27-2405.

4.1.2 New Occupancy by New or Existing Tenants

In accordance with the Site Management Plan, notification by the building owner shall be provided to the Departments if new or existing tenants are to occupy, re-locate, or expand into new or additional spaces in buildings in the central portion of the site.

Indoor air sampling may be required prior to the space being occupied if any of the following actions are taken to accommodate the new tenant:

- Changes to the building infrastructure (e.g., constructing or demolishing walls, installing new subsurface structures / floor drains, etc.);
- Changes to HVAC and/or exhaust systems; or
- Change in use.

If none of these changes apply, then indoor air sampling prior to occupancy may not be required.

4.2 HVAC EC Termination Assessment

Termination of HVAC ECs outside the influence of the SSD systems in B310 and B330C may be appropriate if/when they are no longer needed to address VI and maintain appropriate indoor air quality. In the event of this possibility, a trial cessation of HVAC ECs, or HVAC system shutdown, coupled with indoor air and subslab vapor sampling, would be conducted. Before undertaking such an assessment, a work plan describing the rationale and scope will be submitted to the Departments for review and approval.

5.0 REPORTING

This section describes the reporting associated with this PMP.

5.1 VI EC Annual Report

An annual report will be prepared and submitted to the Departments regarding the results of VI EC monitoring. The annual report will be included as a component of the annual Periodic Review Report (PRR) under the site-wide SMP.

The VI EC Annual Report will include:

- A summary of the results and findings of building use and HVAC system checks;
- For the SSD systems:
  - a summary of the results and findings of SSD operation manual checks;
  - figures depicting the subslab vacuum field for comparison to prior conditions in support of evaluation of continued effectiveness; and
  - VOC mass removal estimate summaries.
- For the Area A SVE system:
  - Dates of spring start-up and winter shut-down;
  - a summary of the results and findings of SVE operation manual checks;
  - figures depicting the vacuum field at two depth intervals for comparison to prior conditions in support of evaluation of continued effectiveness; and
  - VOC mass removal estimate summaries.
- A summary of actions and responses taken, if any, to the results of VI EC checks and monitoring;
- The results and findings of indoor air re-assessments, if any;
- Proposed changes to the monitoring program, if any; and
- Certification that the VI ECs are operating as intended.

5.2 Certification of Engineering Controls

The VI EC Annual Report will be certified by a Professional Engineer licensed and registered to practice in New York State indicating that the VI ECs are operating as intended, using the following statement:

"I, _____, certify that I am currently a NYS registered professional engineer and that the vapor intrusion engineering controls employed at this site are protective of public health and the environment, based on the data and information provided to me, and my inquiry of those persons responsible for operating the engineering controls and gathering the data and information."

Each party under the SMP will provide the above certification for the VI ECs for which they are responsible.

5.3 Non-Routine Reporting

Non-routine reports to the Departments may be submitted under several circumstances, such as:

- Data and information obtained under this PMP indicate conditions where indoor air re-assessment may be appropriate;
- To report the results of indoor air sampling conducted under a Department-approved work plan;
- To request a modification to the monitoring program; or
- Other unexpected circumstances.

TABLES

Table 1
Site Buildings and Designations
VI EC Performance Monitoring Plan
Former IBM East Fishkill Facility
Hopewell Junction, New York

Building	Building Owner	iPark Building Designation	Current Use	June 2009 RFI Work Plan Building Designation (Note 1)	PMP Grouping Considerations						Rationale for PMP Grouping
					Overburden GW VOC Presence	Bedrock GW VOC Presence	Routinely Occupied (Current or Proposed)	Building Subject to VI EC	Current Occupational VOC Presence	Outside Central Area of Site	
Category 1 - Buildings Subject to Subslab Depressurization Engineering Controls for Full Building Footprint											
B308 / B310 Linkway	**iPark EFK II LLC and iPark EFK 84 LLC**	NA	Connects B310 to B308. Linkway doors currently closed going into B308.	Linkway not specifically identified in 2009 Work Plan	X	X					SSDS engineering controls installed in full building. SSDS engineering controls in the B310/B308 linkway have achieved acceptable indoor air VOC levels in B308.
330D	**iPark EFK LLC and iPark EFK 84 LLC**	700	Offices, laboratories, cleanroom manufacturing, food manufacturing, semiconductor manufacturing	Source Investigation	X	X	X	X			SSDS engineering controls installed in full building
338	**iPark EFK B338 LLC**	730	Gym in northeast portion of building. Remaining areas vacant. Visitor's center under construction.	Confirmatory IA Sampling	X	X	X	X			SSDS engineering controls proposed for full building
339	**iPark EFK B338 LLC**	740	Bakery	Not included in RFI Work Plan	X	X	X	X			SSDS engineering controls installed in full building
Category 2 - Buildings Subject to Subslab Depressurization Engineering Controls for Partial Building Footprint											
310	**iPark EFK I LLC**	220	Model Shop (southern area); Warehousing (central and northern areas)	Source Investigation	X	X	X	X			SSDS engineering control have been implemented in partial building footprint. HVAC engineering controls have have been implemented in building areas outside of SSDS influence.
330C	**iPark EFK III LLC and iPark EFK 84 LLC**	755	Offices, laboratories, cleanroom manufacturing, food manufacturing, knife sharpening, brewery	Confirmatory IA Sampling	X	X	X	X			SSDS engineering control have been implemented in partial building footprint. HVAC engineering controls have have been implemented in building areas outside of SSDS influence.

Table 1
Site Buildings and Designations
VI EC Performance Monitoring Plan
Former IBM East Fishkill Facility
Hopewell Junction, New York

Building	Building Owner	iPark Building Designation	Current Use	June 2009 RFI Work Plan Building Designation (Note 1)	PMP Grouping Considerations						Rationale for PMP Grouping
					Overburden GW VOC Presence	Bedrock GW VOC Presence	Routinely Occupied (Current or Proposed)	Building Subject to VI EC	Current Occupational VOC Presence	Outside Central Area of Site	
Category 4 - Alteration of HVAC Systems Was Not Necessary for VI Mitigation Purposes											
300	**Global Foundries**	NA	Offices, laboratories, storage, data center	Confirmatory IA Sampling		X	X	X			Confirmatory sampling indicated acceptable indoor air VOC results when sampled with the HVAC system running normally and variable dampers fixed in their minimum positions.
308	**iPark EFK II LLC and iPark EFK 84 LLC**	308	Offices, shipping/receiving warehouse, emergency control	Confirmatory IA Sampling	X	X	X	X			Confirmatory sampling indicated acceptable indoor air VOC results when sampled with the HVAC system running normally and variable dampers fixed in their minimum positions. Linkway doors currently closed going into B308, cutting off impacts of VOC-containing indoor air migrating from linkway.
317	**Global Foundries**	NA	Ammonia treatment	No Further Assessment	X		X				An operator recently began occupying this building on a more routine basis. Building categorization is tentative pending indoor air sample analysis.
320B	**Global Foundries**	NA	Cleanroom manufacturing, storage, laboratories	Confirmatory IA Sampling	X	X	X	X			Confirmatory sampling indicated acceptable indoor air VOC results when sampled with the HVAC system running normally and variable dampers fixed in their minimum positions.
321	**Global Foundries**	NA	Cleanroom manufacturing, office, electrical test laboratories, and data center	No Further Assessment		X	X	X			Pre-RFI Work Plan indoor air sampling indicated acceptable indoor air VOC results.
322	**Global Foundries**	NA	Northern 2/3 of building was demolished in 2019. Telephone panel room, vacant space, and hallways remain.	Confirmatory IA Sampling	X	X		X			Indoor air sampling indicated acceptable indoor air VOC results in the telephone room when sampled with the HVAC system running normally.
323	**Global Foundries**	NA	Cleanroom manufacturing	Confirmatory IA Sampling	X	X	X	X			Confirmatory sampling indicated acceptable indoor air VOC results when sampled with the HVAC system running normally and variable dampers fixed in their minimum positions.
323A	**Global Foundries**	NA	Cleanroom manufacturing	No Further Assessment		X	X	X			Confirmatory sampling in adjoining B323 indicated acceptable indoor air VOC results when sampled with the HVAC system running normally and variable dampers fixed in their minimum positions.
330L	**iPark EFK II LLC and iPark EFK 84 LLC**	710	Cafeteria, offices, food manufacturing (under construction), dental equipment manufacturing (under construction)	Grouped with B330D in RFI Work Plan (Source Investigation)	X	X	X	X			Confirmatory sampling indicated acceptable indoor air VOC results when sampled with the HVAC system running normally.
334	**iPark EFK I LLC**	745	Mask manufacturing	Confirmatory IA Sampling		X	X	X			Confirmatory sampling indicated acceptable indoor air VOC results when sampled with the HVAC system running normally and variable dampers fixed in their minimum positions.
386	**Global Foundries**	NA	Fluoride waste treatment facility, some offices.	Confirmatory IA Sampling	X	X	X	X			Confirmatory sampling indicated acceptable indoor air VOC results when sampled with the HVAC system running normally.

Table 1
Site Buildings and Designations
VI EC Performance Monitoring Plan
Former IBM East Fishkill Facility
Hopewell Junction, New York

Building	Building Owner	iPark Building Designation	Current Use	June 2009 RFI Work Plan Building Designation (Note 1)	PMP Grouping Considerations						Rationale for PMP Grouping
					Overburden GW VOC Presence	Bedrock GW VOC Presence	Routinely Occupied (Current or Proposed)	Building Subject to VI EC	Current Occupational VOC Presence	Outside Central Area of Site	
Building is Not Routinely Occupied											
335	**iPark EFK I LLC**	720	Former PCE recycling plant. Currently used for non-chemical storage.	No Further Assessment	X	X					Building is not routinely occupied.
B330L Freezer Structure (Proposed for Construction)	**iPark EFK II LLC and iPark EFK 84 LLC**	NA	Freezer structure (proposed for construction)	NA (building not yet constructed in 2009)	X	X		X			Building has not yet been constructed. Building will not be routinely occupied.
Potential Occupational VOC Presence											
303	**iPark EFK II LLC and iPark EFK 84 LLC**	303	Bulk chemical storage	No Further Assessment	X				X		Building is a chemical bulk storage facility as normal occupational use. Building is not routinely occupied.
309	**iPark EFK II LLC and iPark EFK 84 LLC**	309	Offices, warehouse for hazardous and special waste storage	Confirmatory IA Sampling	X		X		X		Building is used for storage of hazardous and special waste as normal occupational use. Confirmatory sampling indicated acceptable indoor air VOC results.
316	**Global Foundries**	NA	DI water production, chilled water plant, and a small portion of building used for office, laboratories, and storage.	No Further Assessment	X		X		X		Until recently this building served as the Central Carbon treatment system where VOC-containing groundwater was treated for process and potable use. Indoor air sampling to be conducted after carbon treatment vessels are removed, and the building will be re-categorized based on the results. Small proportion of building used for office, laboratories, and storage.
384	**iPark EFK II LLC and iPark EFK 84 LLC**	384	Area A groundwater treatment facility	No Further Assessment	X	X			X		Building is used for treatment of chlorinated ethene-contaminated groundwater as normal occupational use. Building is not routinely occupied.
385	**Global Foundries**	NA	Recycling, decontamination, former fluoride waste treatment facility	No Further Assessment	X				X		Building is used as a chemical storage, recycling, decontamination, and waste water treatment facility as part of normal occupational use. Building is not routinely occupied.
PW-2 GW Treatment Facility (GTF)	**IBM**	NA	Groundwater treatment facility	NA (building not yet constructed in 2009)	X	X			X		Building houses a groundwater treatment system where VOC-containing groundwater is treated daily as normal occupational use. Building is not routinely occupied.
No Known Underlying VOC Presence in Groundwater and Located in Central Area of Site											
312	**Global Foundries**	NA	Industrial waste treatment	No Further Assessment					X		No known underlying groundwater VOC presence. Building located in central area of site.
315	**Global Foundries**	NA	Central utility plant housing industrial boilers and cooling systems. Process water treatment.	No Further Assessment			X		X		No known underlying groundwater VOC presence. Building located in central area of site. Pre-RFI Work Plan indoor air sampling indicated acceptable indoor air VOC results.
320	**iPark EFK I LLC**	200	Lobby, offices	Grouped with B320A in RFI Work Plan (NFA)			X				No known underlying groundwater VOC presence. Building located in central area of site. Pre-RFI Work Plan indoor air sampling indicated acceptable indoor air VOC results.
320A	**iPark EFK I LLC**	210	Warehouse, offices	No Further Assessment			X				No known underlying groundwater VOC presence. Building located in central area of site. Pre-RFI Work Plan indoor air sampling indicated acceptable indoor air VOC results.
328	**Global Foundries**	NA	Bulk non-solvent chemical distribution	No Further Assessment							No known underlying groundwater VOC presence. Building located in central area of site.
329	**Global Foundries**	NA	Electrical utility building	No Further Assessment							No known underlying groundwater VOC presence. Building located in central area of site.
PW-25 GTF	**IBM**	NA	Groundwater treatment facility	NA (building not yet constructed in 2009)					X		No known underlying groundwater VOC presence. Building located in central area of site.

Table 1
Site Buildings and Designations
VI EC Performance Monitoring Plan
Former IBM East Fishkill Facility
Hopewell Junction, New York

Building	Building Owner	iPark Building Designation	Current Use	June 2009 RFI Work Plan Building Designation (Note 1)	PMP Grouping Considerations						Rationale for PMP Grouping
					Overburden GW VOC Presence	Bedrock GW VOC Presence	Routinely Occupied (Current or Proposed)	Building Subject to VI EC	Current Occupational VOC Presence	Outside Central Area of Site	
No Further Assessment - No Known Underlying VOC Presence in Groundwater and Located Outside Central Area of Site											
304	**iPark EFK II LLC and iPark EFK 84 LLC**	304	Container chemical storage/warehouse, offices	No Further Assessment			X		X	X	No known underlying groundwater VOC presence. Building located outside central area of site. Pre-RFI Work Plan indoor air sampling indicated acceptable indoor air VOC results.
325	**Global Foundries**	NA	Offices and laboratories for site water and wastewater treatment. Control instrumentation for WWTF.	No Further Assessment			X			X	No known underlying groundwater VOC presence. Building located outside central area of site.
327	**Global Foundries**	NA	Offices and maintenance shop	No Further Assessment			X			X	No known underlying groundwater VOC presence. Building located outside central area of site.
343	**Global Foundries**	NA	Demolished	No Further Assessment						X	No known underlying groundwater VOC presence. Building located outside central area of site.
PW-1 GTF	**IBM**	NA	Groundwater treatment facility	NA (building not yet constructed in 2009)							No known underlying groundwater VOC presence. Building located outside central area of site.

Notes:

1. *Work Plan, RCRA Facility Investigation (RFI), VOC Source Assessment, IBM East Fishkill Facility*, prepared by Sanborn Head Engineering P.C. on behalf of IBM, June 2009.

Table 2
Summary of VI Engineering Controls - Category 1 and 2 Buildings
VI EC Performance Monitoring Plan
Former IBM East Fishkill Facility
Hopewell Junction, New York

Building	Building Owner	iPark Building Designation	Vapor Intrusion (VI) Engineering Control (EC)										
			Subslab Depressurization (SSD) System VI EC	Full or Partial Building Coverage	SSD System Designation	Building Coverage Area	Start-Up Date	Party Responsible for Installation and OM&M of SSD System	VI EC Start-Up Regulatory Reports	SSD System Notes	HVAC VI EC	HVAC VI EC Coverage Area	Summary of HVAC Adjustments
Category 1 - SSD for Full Building Footprint													
B308 / B310 Linkway	**iPark EFK II LLC and iPark EFK 84 LLC**	NA	Yes	Full	VE-11	Length and width of linkway	10/7/2015	IBM	Sanborn, Head Engineering, P.C., "Subslab Depressurization System Startup Report, Building 308/Building 310 Linkway," February 9, 2016	SSD consists of three extraction ports (EPs) with each connected to a separate radon fan.	No	NA	NA
330D	**iPark EFK LLC and iPark EFK 84 LLC**	700	Yes	Full	VE-1	Northern and Central	October 6, 2010 (Original System) July 1, 2020 (Expanded System)	IBM	Sanborn, Head Engineering, PC, "Performance Monitoring and Confirmatory Sampling Results – Building 330D VOC Source Assessment," December 2011 Sanborn, Head Engineering, P.C., "Subslab Depressurization System Completion and Startup Report, Building 330D North System," December 2019	The original VE-1 system was expanded in July 2019 and July 2020 to cover additional areas of the building footprint.	No	NA	NA
					VE-10	Central and Southern	August 26, 2020	IBM	Sanborn, Head Engineering, P.C., "Subslab Depressurization System Completion and Startup Report, Building 330D Central & South Systems," November 2020				
338	**iPark EFK B338 LLC**	730	Yes	Full	Gym (VE-30)	Individual systems serve each tenant space	August 24, 2020	iPark	Walden Environmental Engineering, PLLC, "Building 730 (Formerly B338) Powerhouse Gym Space Vapor Mitigation System Start-Up Report", August 27, 2020.	SSD consists of seventeen individual EPs connected to radon fans (one fan per EP). The individual systems will be brought online in phases as new tenants occupy the various building areas.	No	NA	NA
					Remaining SSD Systems Pending Construction (including Visitor's Center)		Not yet operating	iPark	NA		No	NA	NA
339	**iPark EFK B338 LLC**	740	Yes	Full	B339 (VE-31)	Full	August 24, 2020	iPark	Walden Environmental Engineering, PLLC, "B339/B740 Vapor Mitigation System VE-31 Start-Up Summary Report", April 8, 2021.		No	NA	NA
Category 2 - SSD for Partial Building Footprint													
310	**iPark EFK I LLC**	220	Yes	Partial	VE-2	Central	February 22, 2012	IBM	Sanborn, Head Engineering, P.C., "Performance Monitoring and Confirmatory Sampling Results – Building 310 VOC Source Assessment," May 2013	VE-2 extraction ports were connected to the VE-9 system on October 22, 2020 and VE-2 was shut-down. A request for SSD system reconfiguration letter was submitted to NYSDEC by IBM on April 1, 2021. Response pending.	Yes	North and northwest areas outside the influence of the SSDS	Subsurface soil conditions limited the effectiveness of SSD in the northern and northwestern areas of the building. In these areas, HVAC ECs were implemented.
					VE-9	Southern	June 16, 2020	IBM	Sanborn, Head Engineering, P.C., "Subslab Depressurization System Completion and Startup Report, Building 310," October 2020	VE-9 constructed in response to infrastructure changes consisting of a new partitioning wall that limited the effectiveness of HVAC to serve as a VI EC in the southern area of the building			
330C	**iPark EFK III LLC and iPark EFK 84 LLC**	755	Yes	Partial	VE-7	Southern	April 30, 2019 (Phase I) June 11, 2020 (Phase II)	IBM	Sanborn, Head Engineering, P.C., "Subslab Depressurization System Completion and Startup Report (Phase I), Building 330C," October 2019 Sanborn, Head Engineering, P.C., "Subslab Depressurization System Completion and Startup Report (Phase II) - Building 330C," October 2020		Yes	Central and northern areas outside the influence of the SSDS	A portion of the central and northern areas of the building are outside the influence of the SSD systems due to the lower PCE concentrations in subslab vapor and indoor air. In these areas, HVAC ECs were implemented.
					VE-8	Western	April 30, 2019 (Phase I) June 11, 2020 (Phase II)	IBM					
					Brewery (VE-32)	Northeastern	Under construction	iPark	NA				
Area A Soil Vapor Extraction (SVE) System													
Area A SVE System (Note 1)	**iPark EFK II LLC and iPark EFK 84 LLC**	NA	No (Exterior SVE System)	NA	VE-3	NA	May 13, 2015 - Initial Start-Up Shut-down annually for the winter months	IBM	Sanborn, Head Engineering, P.C., "Installation and Performance Monitoring Report - Area A Pilot SVE System," February 19, 2016	The Area A SVE system operates in the spring through fall and is shut down for the winter months.	NA	NA	NA

Notes:
1. While the exterior Area A SVE system is not a VI EC, it has been included on this table as an overall site EC.

Table 3
Summary of Long-Term VI Management Plan by Building
VI EC Performance Monitoring Plan
Former IBM East Fishkill Facility
Hopewell Junction, New York

Building Category	Building	Building Owner	iPark Building Designation	Monitoring Type and Frequency (Note 5)									
				Building Use, Occupancy, and Infrastructure		SSD Operation Manual Checks (Note 1)		SSD Subslab Vacuum Field		HVAC System Manual Checks (Note 2)		Indoor Air Monitoring	
Category 1 - Subslab Depressurization (SSD) for Full Building Footprint	308 - B310 Linkway	iPark EFK II LLC and iPark EFK 84 LLC	NA	√	Annually	√	Annually	√	Annually		None	√	If SSD system is terminated
	330D	iPark EFK LLC and iPark EFK 84 LLC	700	√	Annually	√	Annually	√	Annually		None	√	If SSD system is terminated
	338	iPark EFK B338 LLC	730	√	Annually	√	Annually	√	Annually		None	√	If SSD system is terminated
	339	iPark EFK B338 LLC	740	√	Annually	√	Annually	√	Annually		None	√	If SSD system is terminated
Category 2 - SSD for Partial Building Footprint	310	iPark EFK I LLC	220	√	Annually	√	Annually	√	Annually	√	Semi-Annually	√	If changes occurred, or SSD system is terminated
	330C	iPark EFK III LLC and iPark EFK 84 LLC	755	√	Annually	√	Annually	√	Annually	√	Semi-Annually	√	If changes occurred, or SSD system is terminated
Category 4 - Alteration of HVAC Systems Was Not Necessary for VI Mitigation Purposes	300	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	308	iPark EFK II LLC and iPark EFK 84 LLC	308	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	317	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	320B	Global Foundries	NA	√	Annually	√	Annually (Note 6)		Not Applicable	√	Annually	√	If changes occurred
	321	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	322	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	323	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	323A	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	330L	iPark EFK II LLC and iPark EFK 84 LLC	710	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	334	iPark EFK I LLC	745	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
	386	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable	√	Annually	√	If changes occurred
Area A Soil Vapor Extraction (SVE) System (Note 4)	NA	iPark EFK II LLC and iPark EFK 84 LLC	NA		NA	√	Monthly (Spring - Fall)	√	Annually		NA		NA
Building is Not Routinely Occupied	335	iPark EFK I LLC	720	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	B330L Freezer Structure	iPark EFK II LLC and iPark EFK 84 LLC	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
Potential Occupational VOC Presence	303	iPark EFK II LLC and iPark EFK 84 LLC	303	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	309	iPark EFK II LLC and iPark EFK 84 LLC	309	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	316	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	384	iPark EFK II LLC and iPark EFK 84 LLC	384	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	385	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	PW-2 GTF	IBM	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred

Table 3
Summary of Long-Term VI Management Plan by Building
VI EC Performance Monitoring Plan
Former IBM East Fishkill Facility
Hopewell Junction, New York

Building Category	Building	Building Owner	iPark Building Designation	Monitoring Type and Frequency (Note 5)									
				Building Use, Occupancy, and Infrastructure		SSD Operation Manual Checks (Note 1)		SSD Subslab Vacuum Field		HVAC System Manual Checks (Note 2)		Indoor Air Monitoring	
No Known Underlying VOC Presence in Groundwater (Located in Central Area of Site)	312	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	315	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	320	iPark EFK I LLC	200	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	320A	iPark EFK I LLC	210	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	328	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	329	Global Foundries	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred
	PW-25 GTF	IBM	NA	√	Annually		Not Applicable		Not Applicable		None	√	If changes occurred

Notes:

1. SSD system manual checks will be supplemented by continuous, automated monitoring of operations, including alarms that cause system shut-down. In addition, weekly manual checks will be conducted in accordance with the site SMP.
2. For Category 2 buildings, HVAC system operational checks will only be conducted for the area outside the influence of the SSD system.
3. Indoor air monitoring will only be conducted if changes are identified that could impact indoor air quality and/or occupant exposures (e.g., vacant areas becoming re-occupied, long-term changes to HVAC system operating conditions for Category 2 and 4 buildings, infrastructure changes).
4. While the exterior Area A SVE system is not a VI EC, it has been included on this table as an overall site EC.
5. Semi-annual checks will be conducted in the months of June and December, and annual checks will be conducted in the month of December,
6. Checks to include a visual inspection of the above-grade piping for the passive SSD system in B320B to assess system integrity.

FIGURES

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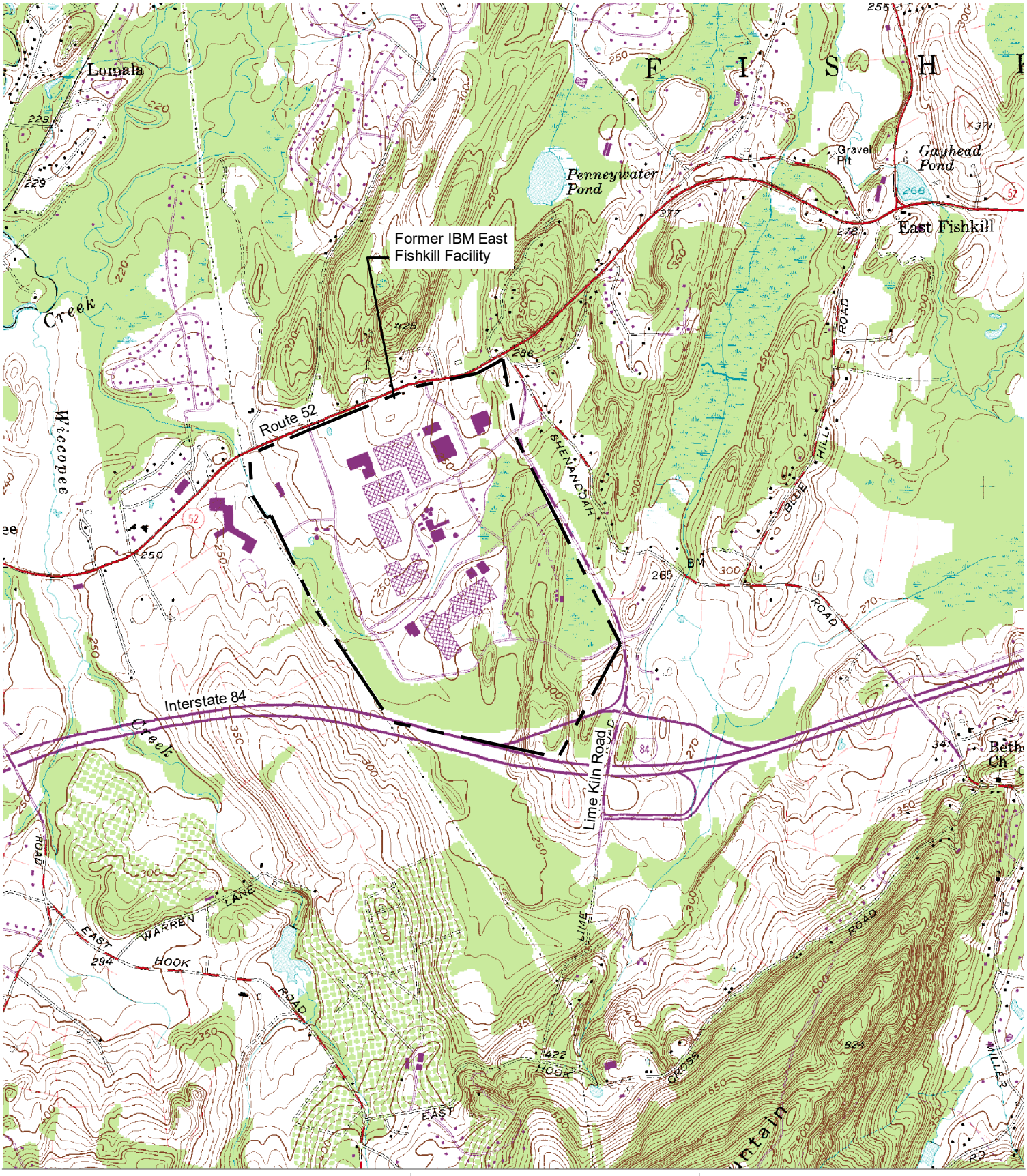
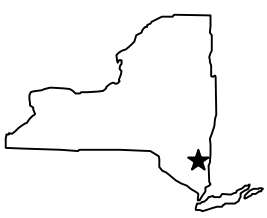
©2020 SANBORN, HEAD ENGINEERING, P.C.





Notes:
Base map taken from 7.5 minute USGS Quadrangle Maps: Hopewell Junction, New York, Dated 1957, Photorevised in 1981.

Drawn By: E. Wright
Designed By: J. Sanborn
Reviewed By: D. Shea
Project No: 2999.20
Date: May 2021

1,000' 0 2,000' Feet

SANBORN HEAD ENGINEERING

Figure 1

Site Location Plan

Performance Monitoring Plan for Vapor Intrusion Engineering Controls

Former IBM East Fishkill Facility
Hopewell Junction, New York

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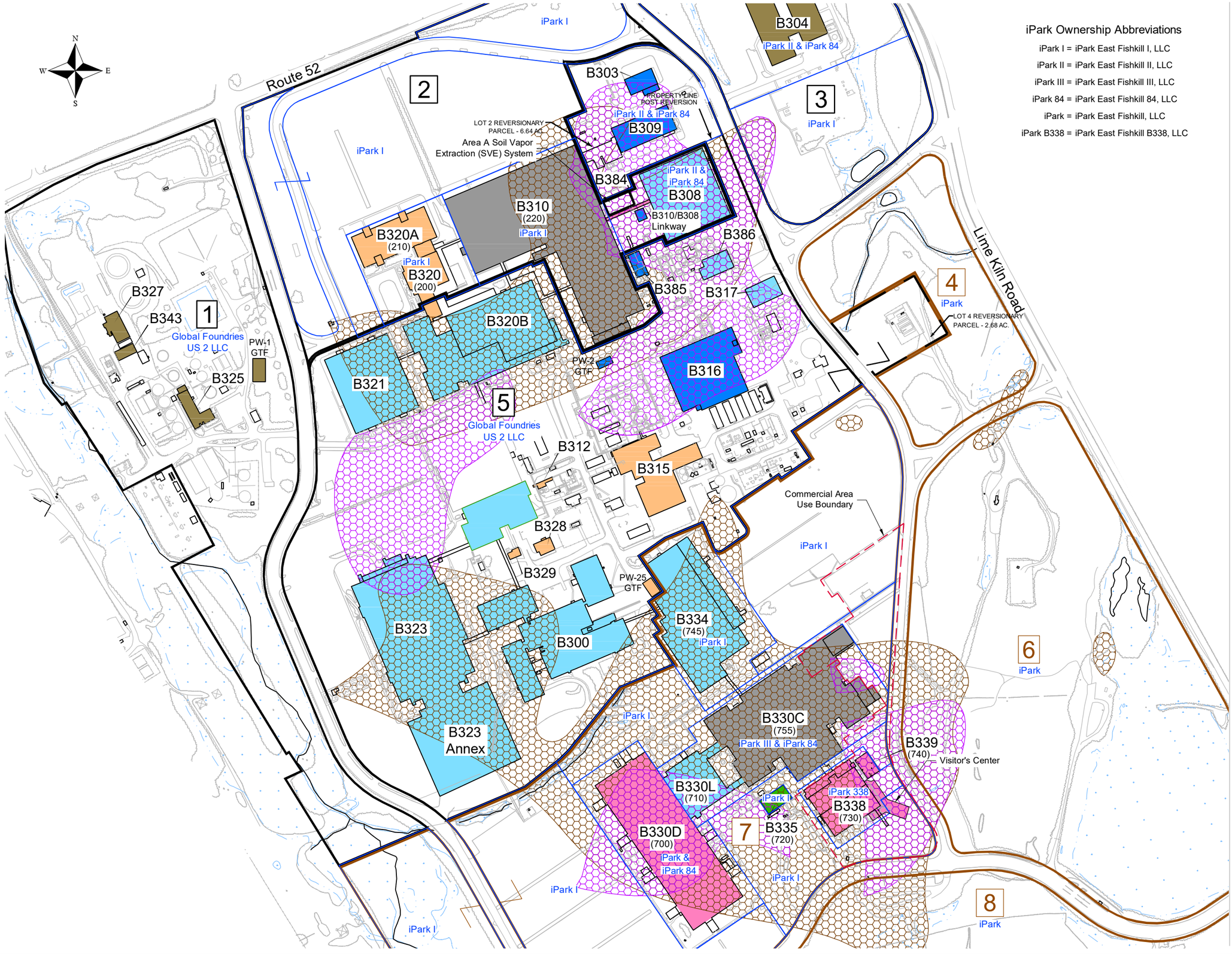

iPark Ownership Abbreviations

iPark I = iPark East Fishkill I, LLC
iPark II = iPark East Fishkill II, LLC
iPark III = iPark East Fishkill III, LLC
iPark 84 = iPark East Fishkill 84, LLC
iPark = iPark East Fishkill, LLC
iPark B338 = iPark East Fishkill B338, LLC

Figure 2

Performance Monitoring Plan Groupings

Performance Monitoring Plan for Vapor Intrusion Engineering Controls

Former IBM East Fishkill Facility
Hopewell Junction, New York

Drawn By: E. Wright
Designed By: J. Sanborn
Reviewed By: D. Shea
Project No: 2999.20
Date: May 2021

Figure Narrative

This figure shows the site buildings and their Performance Monitoring Plan groupings.

Legend

- Unlabeled features include wastewater treatment tanks, pump houses, trailers, and other structures and features not intended for human occupancy
- B310 (220) — Indicates building number; Indicates iPark building designation
- Category 1 - Subslab depressurization (SSD) system for full building footprint
- Category 2 - SSD system for partial building footprint
- Category 4 - Alteration of HVAC system was not necessary for VI mitigation purposes
- Not routinely occupied
- Potential occupational VOC presence
- No known underlying VOC presence in groundwater (located in central area of site)
- No known underlying VOC presence in groundwater (located outside central area of site)
- Inferred extent of VOCs in overburden groundwater
- Inferred extent of VOCs in bedrock groundwater
- 6 — Lot number
- GlobalFoundries Subdivision Line (Lots 1 and 5)
- iPark Subdivision Line (Lots 2, 3, 4, 6, 7, and 8)
- Hopewell Condominium I and II Unit Line
- iPark — Lot owner

SANBORN HEAD ENGINEERING

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ATTACHMENT A

HISTORICAL INFORMATION

ATTACHMENT A.1

DEPARTMENT APPROVAL LETTERS

2009-GWATER-0117

New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Hazardous Waste and Radiation Management, 9th Floor
625 Broadway, Albany, NY 12233-7258
Phone: (518) 402-8594 • **Fax:** (518) 402-9024
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

FILE COPY

July 10, 2009

David E. Speed, Ph.D.
IBM Systems and Technology Group
Hudson Valley Research Park, Bldg 325
2070 Route 52
Hopewell Junction, NY 12533-6531

Dear Dr. Speed:

Re: RFI Work Plan, VOC Source Assessment
IBM East Fishkill Facility, Hopewell Junction, New York
EPA ID No.: NYD000707901

The New York State Departments of Health (DOH) and Environmental Conservation (DEC) (collectively the Agencies) have reviewed IBM's revised *Work Plan, RCRA Facility Investigation (RFI), VOC Source Assessment* (work plan), dated June 15, for its East Fishkill facility. The revisions address the Agencies' comments on the first draft of the work plan submitted by IBM in October 2008. Conditional on the following comments, the June 15, 2009 work plan is herein approved.

1. Building 323A. The disposition of Building 323A remains in contention. In IBM's January 23 response to our comments on the first draft of the work plan, IBM proposed to sample B323A if the results from adjacent B323 so warrant. The present work plan does not reflect that commitment, but the Agencies consider IBM's January 23 letter sufficient commitment. Nonetheless, the Agencies continue to believe that a potential for indoor air contamination exists in B323A and we are preserving the option to require sampling regardless of the results from B323.

2. Figure C-13. In our comments on the first draft of the work plan, the Agencies requested that planned sampling locations R-37 and K1-36.1 be moved closer to the below-ground solvent line depicted nearest to these two points. In the revised work plan, the location of R-37 remains unchanged from the earlier draft and K1-36.1 was moved *farther* from the solvent line. Please revise Figure C-13 accordingly and forward the revised Figure to the Agencies. An electronic submission of the Figure (pdf format) is acceptable.

3. Figure C-14. In our comments on the first draft of the work plan, the Agencies requested that the Figure be revised to make the column designations more legible. The designations are still too small to read in the revised draft. Please revise Figure C-14 accordingly and forward the revised Figure to the Agencies. An electronic submission of the Figure (pdf format) is acceptable.

If you have any questions regarding this letter, please call me at 518-402-8594.

Sincerely,

Alex G. Czuhanich
Engineering Geologist
Engineering Geology Section
Bureau of Hazardous Waste & Radiation Management
Division of Solid & Hazardous Materials

cc: J. Reidy (USEPA Region 2)
N. Walz (NYSDOH, Troy)
S. Parisio (NYSDEC, Region 3)

ecc: R. Phaneuf
D. Radtke
D. Evans
H. Wilkie
J. Petiet

Hudson Valley Research Park
2070 Route 52
Hopewell Junction, NY 12533-3507
D.E. Speed Z/325

Oct. 27, 2009

Mr. Alex G. Czuhanich
New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
625 Broadway
Albany, NY 12233-7258

Re: IBM's Response to Agency Approval Letter
RFI Work Plan, VOC Source Assessment
IBM East Fishkill Facility, Hopewell Junction, New York
EPA ID No. NYD000707901

Dear Mr. Czuhanich:

Thank you for your July 10, 2009 letter approving IBM's RFI Work Plan dated June 15, 2009 and providing additional comments. Each of your comments is provided below in italics, followed by IBM's response.

1. *Building 323A. The disposition of Building 323A remains in contention. In IBM's January 23 response to our comments on the first draft of the work plan, IBM proposed to sample B323A if the results from adjacent B323 so warrant. The present work plan does not reflect that commitment, but the Agencies consider IBM's January 23 letter sufficient commitment. Nonetheless, the Agencies continue to believe that a potential for indoor air contamination exists in B323A and we are preserving the option to require sampling regardless of the results from B323.*

Response: IBM reaffirms its commitment to conduct indoor air sampling in Building 323A if anomalous VOC presence is detected in Building 323.

2. *Figure C-13. In our comments on the first draft of the work plan, the Agencies requested that planned sampling locations R-37 and KI-36.1 be moved closer to the below-ground solvent line depicted nearest to these two points. In the revised work plan, the location of R-37 remains unchanged from the earlier draft and K1-36.1 was moved* farther *from the solvent line. Please revise Figure C-13 accordingly and forward the revised Figure to the Agencies. An electronic submission of the Figure (pdf format) is acceptable.*

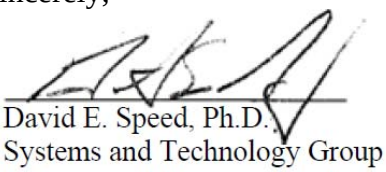
Response: A revised Figure C-13 is attached showing that the original sampling locations at R-37 and K1-36.1 have been moved closer to the indicated below-ground solvent line. Based on recent field reconnaissance, we have added a sampling location at K1-37.1, which is near a floor sump.

3. *<u>Figure C-14.</u> In our comments on the first draft of the work plan, the Agencies requested that the Figure be revised to make the column designations more legible. The designations are still too small to read in the revised draft. Please revise Figure C-14 accordingly and forward the revised Figure to the Agencies. An electronic submission of the Figure (pdf format) is acceptable.*

Response: A revised Figure C-14 is attached.

If you wish to further discuss this letter or have questions, please contact me at (845) 892-3176.

Sincerely,



David E. Speed, Ph.D.
Systems and Technology Group
International Business Machines Corporation

Attachments: Revised Figure C-13
Revised Figure C-14

cc: N. Walz (NYSDOH)
S. Hawkins (IBM)

Figure C-13

Building 330C Layout

RFI Work Plan
VOC Source Assessment

IBM East Fishkill Facility
Hopewell Junction, New York

Drawn By: E. Wright
Designed By: R. Cook
Reviewed By: B. Green
Date: June 2009

Figure Narrative

This figure shows the layout of the ground floor level of Building 330C, the locations and results of 2007 indoor air sampling, and the planned locations for confirmatory indoor air sampling. Solvent-related Solid Waste Management Unit (SWMU) locations were obtained from a plan provided by IBM entitled "Map 1 Solid Waste Management Unit Location Map", last revised May 1995, and should be considered approximate.

Legend

- 136 — Solid Waste Management Unit with ID number
- 2007 Indoor air sample location. Concentrations in ug/m3. ND indicates the compound was not detected above the laboratory reporting limit of about 0.5 ug/m3.
- Approx. Location of Above Ground Solvent Line
- Approx. Location of Below Ground Solvent Line
- Approx. Area of Below Ground Solvent Drains
- Planned Confirmatory Indoor Air Sampling Location

ZZ22.7	12/17/07
PCE	ND <0.5
TCE	ND <0.5
cDCE	ND <0.5

Z-30	12/17/07
PCE	12
TCE	ND <0.5
cDCE	ND <0.5

3121 SO
3133 IW
3132 IW
3104 IW
3107 IW
OMFDock CW L/UL
592 SO
345 SO
562 IW
173 SO
107 SO
570 SO
DI Water and 10% HCl, Photo Active Compounds
Sodium Hydroxide, DI Water, Hydrochloric Acid
L/UL 12 SO
169 SO
184 SO
185 SO
593 SO
Tank A SO
Tank B SO
3300 LS IW
3300 LS SO
267 SO
3102 SO
3109 SO
Note: All piping removed

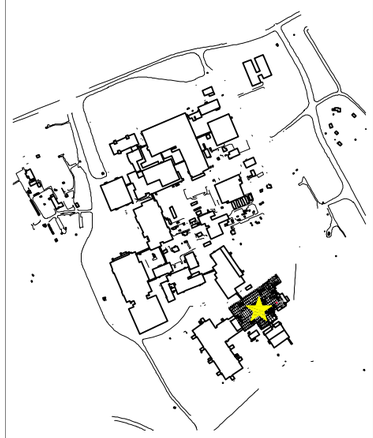


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Figure C-14

Building 330D Layout

RFI Work Plan
VOC Source Assessment

IBM East Fishkill Facility
Hopewell Junction, New York

Drawn By: E. Wright
Designed By: R. Cook
Reviewed By: B. Green
Date: June 2009

Figure Narrative

This figure shows the layout of the ground floor level of Building 330D and the locations and results of 2007 indoor air sampling. Solvent-related Solid Waste Management Unit (SWMU) locations were obtained from a plan provided by IBM entitled "Map 1 Solid Waste Management Unit Location Map", last revised May 1995, and should be considered approximate.

Legend

- 334 — Solid Waste Management Unit with ID number
- IW — Industrial Waste Unit
- SO — Solvent Waste Unit
- CW — Container Waste
- L/UL — Tank Truck Loading/Unloading Area
- LS — Lift Station
- PE — Perchloroethylene Recycle Unit
- 2007 Indoor air sample location. Concentrations in ug/m3. ND indicates the compound was not detected above the laboratory reporting limit of about 0.5 ug/m3.
- Approx. Location of Below Ground Solvent Drain Line
- Approx. Area of Below Ground Solvent Drains
- Planned Confirmatory Indoor Air Sampling Location

Feet
30' 15' 0 30' 60'

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RT05 OUTDOOR	11/26/07
PCE	1.0
TCE	ND <0.5
cDCE	ND <0.5

AIR INTAKE NORTH	11/26/07
PCE	1.7
TCE	ND <0.5
cDCE	ND <0.5

AIR INTAKE SOUTH	11/26/07
PCE	2.4
TCE	ND <0.5
cDCE	ND <0.5

CS3401	11/7/07
PCE	22
TCE	ND <0.5
cDCE	ND <0.5

CS3407	11/7/07
PCE	3.1
TCE	ND <0.5
cDCE	ND <0.5

RTO5	11/1/07
PCE	<0.5
TCE	ND <0.5
cDCE	ND <0.5

CS3406	11/26/07
PCE	11
TCE	ND <0.5
cDCE	ND <0.5

CS3403	11/1/07
PCE	7.1
TCE	ND <0.5
cDCE	ND <0.5

BF26 RETURN AIR	11/1/07
PCE	7.2
TCE	ND <0.5
cDCE	ND <0.5

AT31	9/26/07
PCE	48
TCE	ND <0.5
cDCE	ND <0.5

AY35	9/26/07
PCE	6.4
TCE	ND <0.5
cDCE	ND <0.5

BA25	11/26/07
PCE	6.3
TCE	ND <0.5
cDCE	ND <0.5

BA26	11/1/07
PCE	4.2
TCE	ND <0.5
cDCE	ND <0.5

AZ26	11/26/07
PCE	5.3
TCE	ND <0.5
cDCE	ND <0.5

BA28	9/26/07
PCE	37
TCE	ND <0.5
cDCE	ND <0.5

BC32	9/26/07
PCE	20
TCE	ND <0.5
cDCE	ND <0.5

BA39	9/26/07
PCE	5.9
TCE	ND <0.5
cDCE	ND <0.5

BA44	9/26/07
PCE	3.8
TCE	ND <0.5
cDCE	ND <0.5

BA45	9/26/07
PCE	5.2
TCE	ND <0.5
cDCE	ND <0.5

BC23	11/26/07
PCE	200.0
TCE	3.4
cDCE	2.9

BD23	11/26/07
PCE	280
TCE	3.1
cDCE	2.8

BD24	9/26/07
PCE	260
TCE	ND <0.5
cDCE	ND <0.5

BB25	11/26/07
PCE	8.9
TCE	ND <0.5
cDCE	ND <0.5

BB40	9/26/07
PCE	5.5
TCE	ND <0.5
cDCE	ND <0.5

BD24	11/1/07
PCE	170
TCE	ND <0.5
cDCE	ND <0.5

BD24	11/26/07
PCE	340
TCE	3.9
cDCE	3.5

BD25	11/1/07
PCE	7.8
TCE	ND <0.5
cDCE	ND <0.5

BF24	11/26/07
PCE	530
TCE	2.8
cDCE	2.6

BE28	9/26/07
PCE	3.6
TCE	ND <0.5
cDCE	ND <0.5

BE26	11/1/07
PCE	6.5
TCE	ND <0.5
cDCE	ND <0.5

BG36 RETURN AIR	11/1/07
PCE	6.5
TCE	ND <0.5
cDCE	ND <0.5

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ATTACHMENT A.2

TABLES 3 THROUGH 5 OF IBM'S 2009 RFI WORK PLAN

Excerpt from "RCRA Facility Investigation Work Plan; VOC Source Assessment", June 2009, prepared for IBM by Sanborn, Head Engineering PC.

Table 3 - Source Investigation Buildings
VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

Building	Subsurface VOC Source Data					2007 Indoor Air Data				Scoping Consideration					Discussion
				Vadose Zone Sourcing											
	None Known	Bedrock GW	Overburden GW	Probable	Confirmed	No AHU Sampled	No. of Air Samples	Summary Results PCE ($\mu g/m^3$)	Other Compounds Detected?	Occupied	Historical Solvent Use/Storage	VOC Presence in Overburden or Bedrock GW	Probable or Confirmed Vadose Zone Source	Anomalous Levels of PCE in Indoor Air	
310		✓	✓	✓		5	7	0.9 to 120	TCE, cDCE	✓	✓	✓	✓	✓	Anomalous levels of PCE identified in past sampling.
330D		✓	✓		✓	10	47	1.8 to 530	TCE, cDCE	✓	✓	✓	✓	✓	Anomalous levels of PCE identified in past sampling. Source assessment underway has confirmed a subsurface source of VOCs.
2	**Buildings**					**590,700 square feet, approximate gross footprint**									

Notes:

1. This table is intended to summarize the rationale for performing VOC source investigations in the above-listed buildings based upon the information and inference derived from review of available information summarized here and in Table 1. This information is further described in Table 1 and is discussed in the text of the RFI Work Plan.

2. Please refer to Table 1 for additional notes.

Excerpt from "RCRA Facility Investigation Work Plan; VOC Source Assessment", June 2009, prepared for IBM by Sanborn, Head Engineering PC.

Table 4 - Confirmatory Sampling Buildings
VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

Building	Subsurface VOC Source Data					2007 Indoor Air Data				Scoping Considerations					Discussion
	None Known	Bedrock GW	Overburden GW	Vadose Zone Sourcing: Probable	Vadose Zone Sourcing: Confirmed	No AHU Sampled	No. of Air Samples	Summary Results PCE ($\mu g/m^3$)	Other Compounds Detected?	Occupied	Historical Solvent Use/Storage	VOC Presence in Overburden or Bedrock GW	Probable or Confirmed Vadose Zone Source	Anomalous Levels of PCE in Indoor Air	
300		✓				10	9	All < 0.5	No	✓	✓	✓			Solvents were historically used in this building.
308		✓	✓			3	7	1.5 to 3.6	cDCE	✓		✓			The building overlies contaminated overburden groundwater. PCE was detected in indoor air. Further assessment of spatial variability is warranted.
309			✓			1	2	All < 0.5	No	✓	✓	✓			Solvents were historically used in this building. The building overlies contaminated groundwater.
320B		✓				4	4	0.7 to 1.1	TCE, cDCE	✓	✓	✓			Solvents were historically used in this building. PCE was detected in indoor air. Further assessment of spatial variability is warranted.
322			✓	✓		Not Sampled				✓	✓	✓	✓		Solvents were historically used in this building. The building overlies contaminated overburden groundwater and probable vadose zone contamination. No indoor air samples have been collected in this building.
323			✓			Not Sampled				✓	✓	✓			Solvents were historically used in this building. The building overlies contaminated overburden groundwater. No indoor air samples have been collected in this building.
330C		✓	✓		✓	2	2	< 0.5 to 12	No	✓	✓	✓	✓		Solvents were historically used in this building. The building overlies contaminated overburden groundwater and vadose zone contamination. PCE was detected in indoor air. Further assessment of spatial variability is warranted.
334		✓				Not Sampled				✓	✓	✓			Solvents were historically used in this building. No indoor air samples have been collected in this building.
338			✓			1	5	< 0.5 to 1.0	No	✓		✓			The building overlies contaminated overburden groundwater. PCE was detected in indoor air samples. Further assessment of spatial variability is warranted.
386			✓			1	1	< 0.5	No	✓		✓			The building overlies contaminated overburden groundwater.
10	**Buildings**					**1,447,800 square feet, approximate gross footprint**									

Notes:

1. This table is intended to summarize the rationale for performing confirmatory sampling in the above-listed buildings based upon the information and inference derived from review of available information summarized here and in Table 1. This information is further described in Table 1 and is discussed in the text of the RFI Work Plan.

2. Please refer to Table 1 for additional notes.

Excerpt from "RCRA Facility Investigation Work Plan; VOC Source Assessment", June 2009, prepared for IBM by Sanborn, Head Engineering PC.

Table 5 - No Further Assessment Buildings
VOC Source Assessment
IBM East Fishkill Facility
Hopewell Junction, New York

Building	Subsurface VOC Source Data					2007 Indoor Air Data				Scoping Considerations					Discussion
	None Known	Bedrock GW	Overburden GW	Vadose Zone Sourcing: Probable	Vadose Zone Sourcing: Confirmed	No AHU Sampled	No. of Air Samples	Summary Results PCE ($\mu g/m^3$)	Other Compounds Detected?	Occupied	Historical Solvent Use/Storage	Overburden or Bedrock GW Contamination	Probable or Confirmed Vadose Contamination	Anomalous Levels of PCE in Indoor Air	
303	✓					Not Sampled					✓				Building is a routinely unoccupied chemical bulk storage facility. No known subsurface source of contamination.
304	✓					1	2	All < 0.5	No	✓	✓				No known historical sources of subsurface contamination. No known subsurface source of contamination. PCE was not detected in indoor air samples. Building is a container chemical storage facility.
312	✓					Not Sampled									Building is a routinely unoccupied industrial waste treatment facility. No know subsurface source of contamination.
315			✓			1	1	0.7	No	✓		✓			Current building is used as the industrial utility plant and an industrial waste treatment facility. Relatively low levels of PCE were detected in indoor air samples.
316			✓			2	2	3.0 to 4.7	TCE, cDCE	✓		✓			Building houses the central groundwater treatment system where millions of gallons of VOC-containing groundwater is treated daily as normal occupational use.
317			✓			Not Sampled						✓			Building is routinely unoccupied and houses an industrial process system.
320A	✓					5	5	< 0.5 to 0.6	No	✓					No known historical solvent use and no known sources of subsurface contamination. PCE was not detected in indoor air samples.
321		✓				4	4	All < 0.5	No	✓		✓			No known historical solvent use. VOC contamination is only in deep bedrock groundwater. PCE was not detected in indoor air samples.
323A		✓				Not Sampled				✓		✓			No known historical solvent use. VOC contamination is only in deep bedrock groundwater.
325	✓					Not Sampled				✓					No known historical solvent use and no known sources of subsurface contamination.
327	✓					Not Sampled									Building is routinely unoccupied. No known historical solvent use and no known sources of subsurface contamination.
328	✓					Not Sampled									Building is routinely unoccupied. No known historical solvent use and no known sources of subsurface contamination.
329	✓					Not Sampled									Building is routinely unoccupied. No known historical solvent use and no known sources of subsurface contamination.
335		✓	✓	✓		Not Sampled					✓	✓	✓		Building is routinely unoccupied.
343	✓					Not Sampled									Building is routinely unoccupied. No known historical solvent use and no known sources of subsurface contamination.
384		✓	✓		✓	Not Sampled					✓	✓	✓		Building is unoccupied and currently used for treatment of chlorinated ethene-contaminated groundwater as normal occupational use.
385			✓			Not Sampled						✓			Building is routinely unoccupied and used as a chemical storage, recycling, decontamination, and waste water treatment facility as part of normal occupational use.
17	**Buildings**					**671,000 square feet, approximate gross footprint**									

Notes:

1. This table is intended to summarize the rationale for not performing further source investigations or confirmatory sampling in the above-listed buildings based upon the information and inference derived from review of available information summarized here and in Table 1. This information is further described in Table 1 and is discussed in the text of the RFI Work Plan.

2. Please refer to Table 1 for additional notes.

ATTACHMENT A.3

REFERENCES

ATTACHMENT A.3
REFERENCES (IBM DOCUMENTS)

VI RFI Work Plan

Sanborn, Head Engineering P.C., June 2009, *Work Plan, RCRA Facility Investigation, VOC Source Assessment, IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

Building 300

Sanborn, Head Engineering P.C., October 2009, *Laboratory Data Confirmatory Sampling Results, Buildings 300 and 323, VOC Source Assessment, IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

Building 308

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Sanborn, Head Engineering P.C., May 2014, *Report of Remedial Measures and Confirmatory Sampling Results, Building 308 and Linkway to Building 310*, *Former IBM East Fishkill Facility, Hopewell Junction, New York,* prepared for IBM Corporation.

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Building 309

Sanborn, Head Engineering P.C., September 2009, *Laboratory Data Confirmatory Sampling Results, Buildings 309, 316, and 386, VOC Source Assessment, IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

Building 310

Sanborn, Head Engineering P.C., April 2010, *Report of Findings, Building 310 VOC Source Investigation and Implemented Measures, IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

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Sanborn, Head Engineering P.C., November 2019, *B310 Subslab Depressurization Conceptual Design Report*, *Former IBM East Fishkill Facility, Hopewell Junction, New York,* prepared for IBM Corporation.

Sanborn, Head Engineering P.C., December 2019, *Work Plan for Subslab Depressurization Pilot Testing, Building 310 – Northwest Area, Former IBM East Fishkill Facility, Hopewell Junction, New York*, prepared for IBM Corporation.

Sanborn, Head Engineering P.C., March 2020, *Subslab Depressurization Pilot Testing Summary Report – Northwest Area of B310*, *Former IBM East Fishkill Facility, Hopewell Junction, New York,* prepared for IBM Corporation.

Sanborn, Head Engineering P.C., October 2020, *Subslab Depressurization System Completion and Startup Report - B310*, *Former IBM East Fishkill Facility, Hopewell Junction, New York,* prepared for IBM Corporation.

Sanborn, Head Engineering P.C., April 2021, *Request for Subslab Depressurization System Reconfiguration, Systems VE-2 and VE-9 – Building 310*, *Former IBM East Fishkill Facility, Hopewell Junction, New York,* prepared for IBM Corporation.

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Building 310/B308 Linkway

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APPENDIX A.3

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ATTACHMENT B

LOG SHEETS FOR VI EC MONITORING

ATTACHMENT B.1

BUILDING USE, OCCUPANCY, AND INFRASTRUCTURE LOG SHEETS

Building Occupancy and Use Logsheet: Global Foundries - Owned Buildings
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Respondent Name and Title:	
Date:	
Form completed for the following buildings: B300, B312, B315, B316, B317, B320B, B321, B322, B323, B323A, B328, B329, B385, B385, B386	
In the past year, have there been:	**If yes, list buildings and describe changes**
1. Changes in building use? Yes No	
2. Formerly vacant areas now occupied? Yes No	
3. Formerly occupied areas now vacant? Yes No	
4. New tenants? Yes No	
5. Departed tenants? Yes No	
6. Major infrastructure projects conducted (HVAC or other)? Yes No	
7. Changes to HVAC operating conditions? Yes No	

Building Occupancy and Use Logsheet: iPark - Owned Buildings
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Respondent Name and Title:	
Date:	
Form completed for the following buildings: B303, B308, B309, B310, B320, B320A, B330C, B330D, B330L, B334, B335, B338, B339, B384	
In the past year, have there been:	**If yes, list buildings and describe changes**
1. Changes in building use? Yes No	
2. Formerly vacant areas now occupied? Yes No	
3. Formerly occupied areas now vacant? Yes No	
4. New tenants? Yes No	
5. Departed tenants? Yes No	
6. Major infrastructure projects conducted (HVAC or other)? Yes No	
7. Changes to HVAC operating conditions? Yes No	

ATTACHMENT B.2

SSD SYSTEM OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS

ATTACHMENT B.2

SSD SYSTEM OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS BUILDING 330D (VE-1 AND VE-10)

SSD System Operation and Maintenance Logsheet

System:_____

Date	Time	Blower Conditions				Influent					Samples
		Runtime (hrs)	Speed (Hz)[1]	Elec. Usage (kW)	Elec. Usage (kW-hr)	VI-101 Vac. (in. wc)	VT-101 Vac. (in. wc)[1]	VI-102 Vac. (in. wc)	TI-101 Temp. (°F)	DPIT-101 Flow DP (in. wc)[1]	Collected? (Y/N)

Granular Activated Carbon Vessel Conditions			Effluent						Condensate		Initials
VI-103 Lead Influent Vac. (in. wc)	VI-104 Lag Influent Vac. (in. wc)	VI-105 Lag Effluent Vac. (in. wc)	VI-106 Vac. (in. wc)	DPI-101 Filter DP (in. wc)	VI-107 Vac. (in. wc)	TI-102 Pre-Blower Temp (°F)	TI-103 Post-Blower Temp (°F)	PI-101 Pressure (in. wc)	Drained? (Y/N)	FIQ-101/201 Display Transmitter (gallons)[1]	

Notes:
1. Reading from HMI Process Overview Screen.
2. System VE-7 uses nomenclature starting with "2" (e.g., VI-201, VI-202 as opposed to VE-101, VI-102).

Comments:

Building and System Key
B330D - VE-1 and VE-10
B330C - VE-7 and VE-8
B310 - VE-9
B310/B308 Linkway - VE-11
Area A SVE (east of B310) - VE-3

B330D SSD System Monitoring Form

Date:

Subslab Vapor Monitoring Port	Differential Pressure (in. wc)	Subslab Vapor Monitoring Port	Differential Pressure (in. wc)	Soil Vapor Monitoring Port	Differential Pressure (in. wc)
SS-05		SS4016		SS4045	
SS-10		SS4017		SS4046	
SS-11		SS4018		SS4047	
SS-12		SS4019		SS4048	
SS-16		SS4020		SS4049	
SS-19		SS4021		SS4050	
SS-20		SS4022		SS4051	
SS-28		SS4024		SS4052	
SS-29		SS4025		SS4053	
SS-31		SS4026		SS4054	
SS-32		SS4027		SS4055	
SS-33		SS4028		SS4056	
SS-34		SS4029		SS4057	
SS-35		SS4031		SS4058	
SS-36		SS4033		SS4060	
SS-37		SS4034		SS4061	
SS-38		SS4035		SS4063	
SS4009		SS4036		SS4064	
SS4010		SS4037		SS4065	
SS4011		SS4038		SS4066	
SS4012		SS4039		SS4076	
SS4013		SS4040		SS4077	
SS4014		SS4042		SS4078	
SS4015		SS4044		SS4079	

Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)	Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)
EP4001			EP4015		
EP4002			EP4017		
EP4003			EP4023		
EP4004			EP4024		
EP4005			EP4025		
EP4006			SP4001		
EP4010			SP4003		
EP4013					

Notes:

ATTACHMENT B.2

SSD OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS

BUILDING 338 (VE-30)

WALDEN ENVIRONMENTAL ENGINEERING PLLC

O&M CHECKLIST - B338/B730 SYSTEM VE-30

Project #: iPARK0118.47 Date:

Inspector(s): Time:

VACUUM EXTRACTION PORTS

	GAUGE READING (in H2O)	GAUGE FUNCTIONING?	PIPING DAMAGED?	FAN ON?	ALARM FUNCTIONING?
VE-30A					
VE-30B					
VE-30C					

Notes:

MONITORING POINTS

	PRESSURE READING (in H2O)	POINT DAMAGED?
MP-1		
MP-2		
MP-3		
MP-4		
MP-5		
MP-6		
MP-7		
MP-8		
MP-9		
MP-10		
MP-11		
MP-12		

Notes:

ATTACHMENT B.2

SSD OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS

BUILDING 339 (VE-31)

WALDEN ENVIRONMENTAL ENGINEERING PLLC

O&M CHECKLIST - B339/B740 - SYSTEM VE-31

Project #: iPARK0118.34 Date:

Inspector(s): Time:

VACUUM EXTRACTION PORTS

	GAUGE READING (in WC)	GAUGE FUNCTIONING?	PIPING DAMAGED?	FAN ON?	ALARM FUNCTIONING?
SVEP-1					
SVEP-2					
SVEP-3					
SVEP-4					
SVEP-5					

Notes:

MONITORING POINTS

	PRESSURE READING (in WC)	POINT DAMAGED?
MP-1		
MP-2		
MP-3		
MP-4		
MP-5		
MP-6		
MP-7		
MP-8		
MP-9		
MP-10		

Notes:

ATTACHMENT B.2

SSD OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS

B310/B308 LINKWAY (VE-11)

SSD System Operation and Maintenance Logsheet

System: VE-11 (B310/B308 Linkway)

Date	Time	Fan #1/EP-211		Fan #2/EP-214		Fan #3/EP-213		Electrical Usage	
		Fan Runtime (hrs)	Vacuum (in. wc)	Fan Runtime (hrs)	Vacuum (in. wc)	Fan Runtime (hrs)	Vacuum (in. wc)	Elec. Usage (kW)	Elec. Usage (kW-hr)

Notes:
1. Fan Runtime Hours taken from runtime meter at each individual fan.
2. Electric Usage taken from E-Mon D-Mon Meter at panel PP-1.
3. Vacuums taken from extraction ports inside Linkway.

Comments:

Building and System Key
B330D - VE-1 and VE-10
B330C - VE-7 and VE-8
B310 - VE-9
B310/B308 Linkway - VE-11
Area A SVE (east of B310) - VE-3

B310/B308 Linkway SSD System Monitoring Form

Date:

Subslab Vapor Monitoring Port	Differential Pressure (in. wc)
SS300	
SS301	
SS302	
SS303	
SS304	
SS305	

Notes:

ATTACHMENT B.2

SSD OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS

BUILDING 310 (VE-9)

SSD System Operation and Maintenance Logsheet

System:_____

Date	Time	Blower Conditions				Influent					Samples
		Runtime (hrs)	Speed (Hz)[1]	Elec. Usage (kW)	Elec. Usage (kW-hr)	VI-101 Vac. (in. wc)	VT-101 Vac. (in. wc)[1]	VI-102 Vac. (in. wc)	TI-101 Temp. (°F)	DPIT-101 Flow DP (in. wc)[1]	Collected? (Y/N)

Granular Activated Carbon Vessel Conditions			Effluent						Condensate		Initials
VI-103 Lead Influent Vac. (in. wc)	VI-104 Lag Influent Vac. (in. wc)	VI-105 Lag Effluent Vac. (in. wc)	VI-106 Vac. (in. wc)	DPI-101 Filter DP (in. wc)	VI-107 Vac. (in. wc)	TI-102 Pre-Blower Temp (°F)	TI-103 Post-Blower Temp (°F)	PI-101 Pressure (in. wc)	Drained? (Y/N)	FIQ-101/201 Display Transmitter (gallons)[1]	

Notes:
1. Reading from HMI Process Overview Screen.
2. System VE-7 uses nomenclature starting with "2" (e.g., VI-201, VI-202 as opposed to VE-101, VI-102).

Comments:

Building and System Key
B330D - VE-1 and VE-10
B330C - VE-7 and VE-8
B310 - VE-9
B310/B308 Linkway - VE-11
Area A SVE (east of B310) - VE-3

B310 SSD System Monitoring Form

Date:

Subslab Vapor Monitoring Port	Differential Pressure (in. wc)	Subslab Vapor Monitoring Port	Differential Pressure (in. wc)	Soil Vapor Monitoring Port	Differential Pressure (in. wc)
SS-07		SS-148		SS-181	
SS-11		SS-152		SS-182	
SS-12		SS-155		SS-183	
SS-13		SS-156		SS-184	
SS-14		SS-157		SS-185	
SS-21		SS-158		SS-186	
SS-22		SS-159		SS-187	
SS-104		SS-160			
SS-105		SS-161			
SS-106		SS-162			
SS-107		SS-163			
SS-111		SS-164			
SS-117		SS-165			
SS-119		SS-166			
SS-120		SS-167			
SS-123		SS-168			
SS-124		SS-169			
SS-129		SS-170			
SS-130		SS-171			
SS-136		SS-172			
SS-137		SS-173			
SS-138		SS-175			
SS-139		SS-177			
SS-141		SS-179			
SS-142		SS-180			

Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)	Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)
EP-203			EP-215		
EP-204			EP-216		
EP-207			EP-218		
EP-209			EP-220		
EP-210			EP-222		
EP-212					

Notes:

ATTACHMENT B.2

SSD OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS

BUILDING 330C (VE-7 AND VE-8)

SSD System Operation and Maintenance Logsheet

System:_____

Date	Time	Blower Conditions				Influent					Samples
		Runtime (hrs)	Speed (Hz)[1]	Elec. Usage (kW)	Elec. Usage (kW-hr)	VI-101 Vac. (in. wc)	VT-101 Vac. (in. wc)[1]	VI-102 Vac. (in. wc)	TI-101 Temp. (°F)	DPIT-101 Flow DP (in. wc)[1]	Collected? (Y/N)

Granular Activated Carbon Vessel Conditions			Effluent						Condensate		Initials
VI-103 Lead Influent Vac. (in. wc)	VI-104 Lag Influent Vac. (in. wc)	VI-105 Lag Effluent Vac. (in. wc)	VI-106 Vac. (in. wc)	DPI-101 Filter DP (in. wc)	VI-107 Vac. (in. wc)	TI-102 Pre-Blower Temp (°F)	TI-103 Post-Blower Temp (°F)	PI-101 Pressure (in. wc)	Drained? (Y/N)	FIQ-101/201 Display Transmitter (gallons)[1]	

Notes:
1. Reading from HMI Process Overview Screen.
2. System VE-7 uses nomenclature starting with "2" (e.g., VI-201, VI-202 as opposed to VE-101, VI-102).

Comments:

Building and System Key
B330D - VE-1 and VE-10
B330C - VE-7 and VE-8
B310 - VE-9
B310/B308 Linkway - VE-11
Area A SVE (east of B310) - VE-3

B330C SSD System Monitoring Form

Date:

Subslab Vapor Monitoring Port	Differential Pressure (in. wc)	Subslab Vapor Monitoring Port	Differential Pressure (in. wc)
SS3001		SS3036	
SS3002		SS3037	
SS3003		SS3038	
SS3004		SS3039	
SS3005		SS3040	
SS3006		SS3041	
SS3007		SS3042	
SS3008		SS3043	
SS3010		SS3044	
SS3011		SS3045	
SS3013		SS3046	
SS3014		SS3050	
SS3015		SS3051	
SS3016		SS3052	
SS3017		SS3053	
SS3018		SS3054	
SS3019		SS3059	
SS3020		SS3060	
SS3022		SS3061	
SS3023			
SS3029			
SS3030			
SS3031			
SS3032			
SS3033			

Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)	Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)
EP3006			EP3018		
EP3007			EP3019		
EP3015			EP3020		
EP3016			EP-3021		

Notes:

ATTACHMENT B.2

SSD OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENT LOG SHEETS

BUILDING 320B (VE-20)

SSD System Operation and Maintenance Logsheet

System: VE-20 (B320B Passive SSD System)

Date	Time	System Piping in Good Condition?		
		Yes	No	Notes

ATTACHMENT B.3

HVAC OPERATIONS LOG SHEETS

Building 300
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
AC-B4	24/7		☐ On ☐ Off	
AC-B6	24/7		☐ On ☐ Off	
AC-B100A	Off		☐ On ☐ Off	
AC-D6	24/7		☐ On ☐ Off	

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 308
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
AC-10	24/7		☐ On ☐ Off	

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 310
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

DRAFT (4/19/2021)

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Location	Operating Schedule	Operating Schedule Check	Economizer Status	Economizer Status Check	Previous OA Damper (% open)	OA Damper Check (% open)	OA Damper Notes	Notes
AC-4		Off							
AC-7		Off							
AC-11		Off							
AC-13		Off							
AC-15		Off							
AC-24		Off							
AC-25		Off							
AC-27		Off							
AC-33	Roof top	24/7		NA		100% open			
AC-34	Roof top	24/7		NA		100% open			
AC-40									
RTU-1		24/7		NA					New rooftop unit - serves northeast section of building
RTU-2		24/7		NA					New rooftop unit - serves northwest section of building
RTU-3		24/7		NA					New rooftop unit - serves southern section of buildling (north of Model Shop partitioning wall)

Notes:
"OA" = outside air
"NA" = Not applicable
Building Category 2
The pre-populated HVAC settings/positions in this table reflect conditions that have been shown effective for vapor intrusion engineering control as determined by previous acceptable indoor air quality sampling results. If differences are noted during checks, further assessment or actions may be appropriate.
Only the AHUs that cover building areas outside the influence of subslab depressurization systems are shown.

Building 320B
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
HVAC-304	24/7		☐ On ☐ Off	
HVAC-1	24/7		☐ On ☐ Off	
HVAC-2	OFF		☐ On ☐ Off	April 2021 - Unit to be replaced following completion of interior construction
MAU-3	24/7		☐ On ☐ Off	
MAU-4	24/7		☐ On ☐ Off	
MAU-5	24/7		☐ On ☐ Off	
MAU-6	24/7		☐ On ☐ Off	
MAU-7	24/7		☐ On ☐ Off	
RCU-101	24/7		☐ On ☐ Off	
RCU-102	OFF		☐ On ☐ Off	April 2021 - Unit in need of repair
RCU-103	24/7		☐ On ☐ Off	
RCU-104	24/7		☐ On ☐ Off	
RCU-107	24/7		☐ On ☐ Off	
RCU-111	24/7		☐ On ☐ Off	
RCU-113	OFF		☐ On ☐ Off	
RCU-117	24/7		☐ On ☐ Off	
RCU-119	24/7		☐ On ☐ Off	
RCU-124	24/7		☐ On ☐ Off	

Continued on next page

Building 320B
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
RCU-201	24/7		☐ On ☐ Off	
RCU-202	24/7		☐ On ☐ Off	
RCU-204	24/7		☐ On ☐ Off	
RCU-205	OFF		☐ On ☐ Off	
RCU-208	24/7		☐ On ☐ Off	
RCU-209	24/7		☐ On ☐ Off	

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 321
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
AHU-01	24/7		☐ On ☐ Off	
AHU-02	24/7		☐ On ☐ Off	

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 322
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
AC-4	24/7		☐ On ☐ Off	
AC-8	24/7		☐ On ☐ Off	

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 323
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
AHU-1	24/7		☐ On ☐ Off	
AHU-2	24/7		☐ On ☐ Off	
AHU-4	24/7		☐ On ☐ Off	
AHU-5	24/7		☐ On ☐ Off	
AHU-7	24/7 See Note		☐ On ☐ Off	Switches on and off with AHU-8 (covers same area)
AHU-8	24/7 See Note		☐ On ☐ Off	Switches on and off with AHU-7 (covers same area)
AHU-9	24/7 See Note		☐ On ☐ Off	Switches on and off with AHU-10 (covers same area)
AHU-10	24/7 See Note		☐ On ☐ Off	Switches on and off with AHU-9 (covers same area)
MAU-8	24/7		☐ On ☐ Off	
MAU-9	24/7		☐ On ☐ Off	
MAU-10	24/7		☐ On ☐ Off	
MAU-11	24/7		☐ On ☐ Off	
MAU-12	24/7		☐ On ☐ Off	
MAU-13	24/7		☐ On ☐ Off	

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 323A
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
AHU-105	24/7		☐ On ☐ Off	
AHU-106	24/7		☐ On ☐ Off	
AHU-107	24/7		☐ On ☐ Off	
AHU-111	24/7		☐ On ☐ Off	Cooling unit only
AHU-120	OFF		☐ On ☐ Off	
MAU-104	24/7		☐ On ☐ Off	
MAU-105	24/7		☐ On ☐ Off	
MAU-106	24/7		☐ On ☐ Off	
MAU-107	24/7		☐ On ☐ Off	
MAU-108	24/7		☐ On ☐ Off	
MAU-109	24/7		☐ On ☐ Off	
MAU-110	24/7		☐ On ☐ Off	
MAU-111	24/7		☐ On ☐ Off	
MAU-112	24/7		☐ On ☐ Off	

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 330C
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Location	Operating Schedule	Operating Schedule Check	Economizer Status	Economizer Status Check	Previous OA Damper (% open)	OA Damper Check (% open)	OA Damper Notes	Notes
AC-1	Rooftop	24/7		Auto		10%			
AC-4	Rooftop	OFF							April 2021 - vacant. Update logsheet when re-occupied.
AB-7(B)	Rooftop	OFF							April 2021 - vacant. Update logsheet when re-occupied.
AC-10(A)	Rooftop	OFF							April 2021 - vacant. Update logsheet when re-occupied.
AC-11	Rooftop	24/7		Fixed		Fed from AC-13			
AC-13	Rooftop	24/7		Auto		75%			
AC-40	Rooftop	OFF							April 2021 - vacant. Update logsheet when re-occupied.
AC-41	Rooftop	24/7		Auto		5%			
AC-51	Sloop Loading Dock	24/7		Fixed		0%			
AC-90	Rooftop	24/7		Auto		15%			
AC-91	Rooftop	24/7		Auto		15%			

Notes:
"OA" = outside air
"NA" = Not applicable
Building Category 2
The pre-populated HVAC settings/positions in this table reflect conditions that have been shown effective for vapor intrusion engineering control as determined by previous acceptable indoor air quality sampling results. If differences are noted during checks, further assessment or actions may be appropriate.
Only the AHUs that cover building areas outside the influence of subslab depressurization systems are shown.

Building 330L
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
AC-25	24/7		☐ On ☐ Off	
AC-60	24/7		☐ On ☐ Off	Also covers AC-61 area

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

Building 334
HVAC Monitoring Logsheet
Vapor Intrusion Engineering Controls Performance Monitoring Plan
Former IBM East Fishkill Facility

Date: _____
Person Performing Check:_____

Air Handling Unit (AHU #)	Operating Schedule	Operating Schedule Check	AHU On/Off	Notes
HVAC-1	24/7		☐ On ☐ Off	
HVAC-2	OFF		☐ On ☐ Off	April 2021 - vacant
HVAC-4	OFF		☐ On ☐ Off	April 2021 - vacant
HVAC-7	24/7		☐ On ☐ Off	
HVAC-9	OFF		☐ On ☐ Off	April 2021 - vacant
HVAC-12	OFF		☐ On ☐ Off	April 2021 - vacant

Notes:
"OA" = outside air
"NA" = Not applicable
Building category = 4

ATTACHMENT B.4

AREA A SVE SYSTEM OPERATIONS AND DIFFERENTIAL PRESSURE MEASUREMENTS LOG SHEETS

SVE System Operation and Maintenance Logsheet

System: VE-3 (Area A SVE)

Date	Time	Blower Conditions				Influent			Samples
		Runtime (hrs)	Speed (Hz)[1]	Elec. Usage (kW)	Elec. Usage (kW-hr)	VI-101 Vac. (in. wc)	VT-101 Vac. (in. wc)[1]	VI-102 Vac. (in. wc)	Collected? (Y/N)

Granular Activated Carbon Vessel Conditions			Effluent						Condensate		Initials
VI-103 Lead Influent Vac. (in. wc)	VI-104 Lag Influent Vac. (in. wc)	VI-105 Lag Effluent Vac. (in. wc)	VI-106 Vac. (in. wc)	DPI-101 Filter DP (in. wc)	TI-101 Pre-Blower Temp (°F)	TI-102 Post-Blower Temp (°F)	PI-102 Pressure (in. wc)	FI-101 Pressure (in. wc)	Drained? (Y/N)	FIT-201/P-101 Display Transmitter (gallons)[1]	

Notes:
1. Reading from HMI Process Overview Screen.

Comments:

Area A SVE System Monitoring Form

Date:

Vapor Monitoring Port	Differential Pressure (in. wc)	Vapor Monitoring Port	Differential Pressure (in. wc)
VMP-1 (shallow)		SDV-1	
VMP-1 (deep)		SDV-2	
VMP-2 (shallow)		SDV-3	
VMP-2 (deep)		SDV-4	
VMP-3 (shallow)		SDV-5	
VMP-3 (deep)		SDV-6	
VMP-4 (shallow)		SDV-7	
VMP-4 (deep)		SDV-8	
VMP-5 (shallow)			
VMP-5 (deep)			
VMP-6 (shallow)			
VMP-6 (deep)			
VMP-7 (shallow)			
VMP-7 (deep)			
VMP-8 (shallow)			
VMP-8 (deep)			

Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)	Extraction Well	Applied Vacuum (in. wc)	Flowrate (cfm)
SDV-1			SDV-5		
SDV-2			SDV-6		
SDV-3			SDV-7		
SDV-4			SDV-8		

Notes:

ATTACHMENT K-2
iPark HVAC Compliance Plan

ATTACHMENT L

Other Hazardous Waste Management Unit Closures (e.g., Discontinued Use Areas)

ATTACHMENT M

Security Plan (Attachment V of the Renewal Application)

FORMER IBM EAST FISHKILL REMEDIATION
DUTCHESS COUNTY
TOWN OF EAST FISHKILL, NEW YORK

2070 ROUTE 52
HOPEWELL JUNCTION, NEW YORK 12533

ATTACHMENT V
SECURITY PLAN

Submitted MAY 2021
Updated AUGUST 2024

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1.0 INTRODUCTION

This Security Plan describes the various measures and infrastructure implemented at the Former IBM East Fishkill Facility (Site) to protect the Corrective Action engineering controls from intentional or inadvertent actions by others that may tamper, damage or otherwise impair the operation and effectiveness of the engineering controls. The Security Plan also includes measures in place to protect unauthorized personnel from exposure to chemicals and wastes associated with the engineering controls.

The engineering controls include groundwater extraction and treatment systems and soil vapor intrusion mitigation systems. For groundwater, there are three (3) bedrock extraction wells, one (1) subsurface groundwater recovery sump, and four (4) groundwater treatment facilities (GTF) to extract and treat groundwater. A groundwater monitoring well network is also in place to assess the effectiveness of the groundwater engineering controls. For soil vapor, including subslab soil vapor, there are nine (9) active subslab depressurization (SSD) systems to mitigate vapor intrusion in six (6) different buildings, and one (1) seasonal exterior soil vapor extraction (SVE) system to remove VOC mass from the vadose zone. See **Plate V-1** for the Site layout and the locations of the engineering controls.

In general, the security measures include physical controls, operation practices, monitoring and alarm systems, and routine inspections of the engineering controls. These measures are described in detail in the sections below.

2.0 SITE ACCESS

The Site consists of properties owned by Semiconductor Components Industries, LLC (dba onsemi), various iPark entities and Rolling Frito-Lay Sales, LP. Onsemi shares an open-style campus with iPark. The open campus can be accessed by public roadways from entrances off *Route 52* to the north, *iPark Boulevard* to the east and *South Drive* to the south. The eastern section of the iPark site is protected by a 4-foot chain link fence, affixed along an iPark-owned roadway known as *East Drive*. Although Gate 1, located along Route 52, the north side of the site, has a guard shack, it is not staffed, nor does it have a functional arm gate.

onsemi owns Lot 5 and has implemented a perimeter control system to limit vehicular access to Lot 5. The perimeter control system includes buildings, fences, guardrails, and concrete barriers to ensure that vehicles enter Lot 5 only through authorized entrances.

All onsemi-owned buildings are concrete structures. Exterior doors are protected by Card-access only, dual verification SEOS readers equipped with a sounder (alarm) at every trusted point. Further security is provided with a policy-mandated 5-minute response to all sensitive areas. Roll-up doors can only be opened from inside the buildings via SEOS card access. Specific interior spaces are restricted to Need-to-Know, select personnel through dual access pin/badge readers.

The iPark open campus houses numerous subcontractors within various onsemi/iPark buildings. The round-the-clock CCTV and alarm system (*Lenel*) is owned and maintained by onsemi and monitored at the Security Control Center located in Building 320 (iPark Bldg. 200).

Frito Lay owns Lot 9 and has implemented a perimeter control system to limit vehicle access to include fencing and buildings.

Onsemi Security is subcontracted to Allied Universal Services (AUS). The site's Emergency Response Team (ERT), along with AUS, provide 24/7/365 coverage for the entire onsemi/iPark campus and are the primary interface with local police, fire, and rescue. ERT members are onsemi employees who provide round-the-clock support.

3.0 GROUNDWATER TREATMENT FACILITY SECURITY

The four groundwater treatment facilities are dedicated, stand-alone buildings with access limited to operations personnel and other authorized personnel. The GTFs are generally unoccupied but inspected at least weekly. In addition, the GTFs have control systems that continually monitor operations with the capability to send alarm notifications to operations personnel in the event of an operations issue or system shutdown.

3.1 PW-1 GTF

The PW-1 GTF is located on Lot 1 east of Building 325 and is within an area enclosed by a chain-link fence and gate. The fence gate is open during first shift and normally closed and locked during second and third shifts and on weekends. The GTF includes two personnel doors with keyed / keypad locks and one roll-up door that can only be opened from inside the building. The building is secured and locked when not occupied.

Spent carbon from the carbon adsorbers in the GTF is periodically removed by pumping the spent carbon to a truck. The carbon removal process is totally enclosed from the adsorbers to the truck via hose connections. Operations personnel are always present during the carbon exchange process and restrict the area to allow authorized personnel only.

3.2 PW-2 GTF

The PW-2 GTF is located on Lot 5 in the parking lot south of Building 310. The building has three personnel doors with keyed / keypad locks and one roll-up door that can only be opened from inside the building. The building is secured and locked when not occupied.

Spent carbon from the carbon adsorbers in the GTF is periodically removed by pumping the spent carbon to a truck. The carbon removal process is totally enclosed from the adsorbers to the truck via hose connections. Operations personnel are always present during the carbon exchange process and restrict the area to allow authorized personnel only.

The PW-2 GTF contains a 3,000-gallon hydrogen peroxide storage tank. The exterior fill port is secured and locked except when the tank is filled. Operations personnel are always present when the tank is filled and restrict the area to allow authorized personnel only.

3.3 PW-25 GTF

The PW-25 GTF is located on Lot 5 in a parking lot east of Building B300. The building has one personnel door with a keyed / keypad lock and one roll-up door that can only be accessed from inside the building. The building is secured and locked when not occupied.

Spent carbon from the carbon adsorbers in the GTF is periodically removed by pumping the spent carbon to a truck. The carbon removal process is totally enclosed from the adsorbers to the truck via hose connections. Operations personnel are always present during the carbon exchange process and restrict the area to allow authorized personnel only.

3.4 B384 GTF

The B384 GTF is located on Lot 2A in a paved area west of Building 308. The building has three personnel doors with keyed locks and one roll-up door that can only be accessed from inside the building. The building is secured and locked when not occupied.

Spent carbon from the aqueous and vapor phase carbon adsorbers in the GTF is periodically removed by pumping the spent carbon to a truck. The carbon removal process is totally enclosed from the adsorbers to the truck via hose connections. Operations personnel are always present during the carbon exchange process and restrict the area to allow authorized personnel only.

4.0 EXTRACTION WELLS AND PUMP HOUSES

Bedrock extraction well PW-1 is located inside Pump House 1 (PH-1). Bedrock extraction wells PW-2R and PW-25 are located inside HotBox® enclosures proximate to Pump House 2 (PH-2) and Pump House (PH-25) respectively. The PHs contain electric equipment, meters, valves, instruments, and controls. Each PH has two personnel doors with keyed locks and the HotBox® enclosures are secured with padlocks. The PHs and HotBox® enclosures are secured and locked when unoccupied.

5.0 SUBSLAB DEPRESSURIZATION SYSTEMS

5.1 SSD Systems VE-1, VE-7, VE-8, VE-9 and VE-10

The SSD systems (designated as VE-xx) for B310 (**VE-9**), B330C (**VE-7**, **VE-8**), and B330D (**VE-1**, **VE-10**) include subslab vapor extraction ports, vertical pipe risers and overhead horizontal pipe runs that manifold the vertical pipe risers back to the blower. The horizontal pipe sections run near or above the ceilings. A typical vertical pipe riser includes a vacuum gauge, sample port and locked isolation/flow adjustment valve located just beneath the ceiling. Valve locks are also installed on the vertical and horizontal main pipe sections where feasible.

The SSD systems are inspected at least weekly. In addition, the SSD systems are equipped with alarms to indicate that the system is not operating properly or has been shut down. In the event that an alarm is activated, the system will automatically notify responsible personnel.

The SSD system process equipment and vapor phase carbon adsorbers are housed in shipping container enclosures located adjacent to the respective buildings. The personnel and cargo doors to the enclosures are secured with keyed locks and padlocks, respectively. The enclosures are secured and locked when unattended.

Spent carbon from the carbon adsorbers is periodically removed by vacuuming the spent carbon to a truck. The carbon removal process is totally enclosed from the adsorbers to the truck via hose connections. Operations personnel are present at all times during the carbon exchange process and restrict the area to allow authorized personnel only.

5.2 SSD Systems VE-11, VE-30, VE-31 and VE-32

The SSD systems for the B310/B308 Linkway (**VE-11**) and B338 (**VE-30**) include subslab vapor extraction ports connected to vertical pipe risers with in-line fans that discharge above the roof. The SSD systems for B339 (**VE-31**) and the northeast portion of B330C (**VE-32**) include subslab vapor extraction ports, vertical pipe risers and overhead horizontal pipe runs that manifold the vertical pipe risers back to the blower(s). There are no carbon adsorbers with these systems.

The **VE-11** electric disconnect boxes are located on the exterior of the B310/B308 linkway in a secluded area with limited pedestrian traffic. The SSD system is inspected at least weekly and is equipped with alarms to indicate that the system is not operating properly or has been shut down. In the event that an alarm is activated, the system will automatically notify operations personnel.

The **VE-30** SSD system includes subslab vapor extraction ports, vertical pipe risers and dedicated fans on each riser. The **VE-30** valves and gauges are installed on the extraction port riser pipe inside the building ranging from about 5 to 14 feet above the floor. The SSD system is inspected at least weekly. In the event that the SSD system is off, it will enter alarm status that can be visually and audibly recognized at the location of the extraction port.

The **VE-31** SSD system includes subslab vapor extraction ports, vertical pipe risers and overhead horizontal pipe runs that manifold the vertical pipe risers back to the blower located on the exterior of B339. The horizontal pipe sections run outside against the exterior wall of B339 where the blower is located. A typical vertical pipe riser includes a vacuum gauge, and flow adjustment valve located about 5 to 9 feet above the floor penetration.

In the event that the SSD system is off, it will enter alarm status that can be seen visually in the mounted outdoor electrical box as well as audibly from the electrical room in B339 to alert building occupants. In addition, the SSD system is inspected at least weekly.

The **VE-32** SSD system includes subslab vapor extraction ports, vertical pipe risers and overhead horizontal pipe runs that manifold the vertical pipe risers to four separate vacuum blowers mounted on the B330C roof. The **VE-32** valves and gauges are installed on the extraction port riser pipe inside the building just beneath the ceiling.

Each header line is equipped with an audible and visual vacuum alarm.. The alarms are located in the hallway of the south packaging room, in the loading dock common space, in the tasting room, and in the hallway north of the packaging room. The alarms notify occupants via an audible indicator and a red light if there is a loss of system vacuum. In addition, the SSD system will be inspected at least weekly.

6.0 SOIL VAPOR EXTRACTION SYSTEM

The SVE system (**VE-3**) consists of eight (8) exterior soil vapor extraction wells, eight (8) exterior vapor monitoring points and an interior blower and vapor phase carbon adsorbers that are housed in a shipping container located adjacent to B310. The personnel and cargo doors to the enclosure are secured with a keyed lock and padlock, respectively. The equipment enclosure is located within a locked, fenced-in area.

Soil vapor is withdrawn from a subset of the vapor extraction wells and conveyed to the extraction and carbon treatment equipment through PVC hose connected to a common PVC pipe manifold. The SVE system has an alarm to indicate that the system is not operating properly. In the event that an alarm is activated, the system will automatically notify responsible personnel. In addition, the SVE system is inspected at least weekly.

Spent carbon from the carbon adsorbers is periodically removed by vacuuming the spent carbon to a truck. The carbon removal process is totally enclosed from the adsorbers to the truck via hose connections. Operations personnel are present at all times during the carbon exchange process and restrict the area to allow authorized personnel only.

7.0 GROUNDWATER MONITORING

Groundwater monitoring wells are located across the Site including six wells located in buildings. Most of the wells are standpipe wells and are painted safety yellow and are capped and secured with a keyed padlock. Wells located in or adjacent to parking lots, roads, and loading areas are protected by pipe bollards.

Some exterior wells are flush mount wells (i.e., top of protective cover is flush with the ground or paved surface) with a locked well plug set inside traffic-rated manholes with covers secured using hex-head bolts. All interior wells are flush mount wells with locked well plugs set inside manholes with covers secured using hex-head bolts.

All groundwater monitoring wells are visually inspected quarterly during groundwater level measurement, groundwater sampling or annual well inventory events.

PLATE V-1: ELEMENTS OF SITE ENGINEERING CONTROLS

LEGEND

- Wetlands Boundary
- Former IBM East Fishkill Facility Property Line
- 8-Lot Subdivision
- Rolling Frito-Lay Sales, LP
- Hopewell Condominium I
- Hopewell Condominium II

OU - Operable Unit

Groundwater Remedial Components

- Groundwater Treatment Facility (GTF)
- Bedrock Extraction Well
- Shallow Extraction Well

Vapor Intrusion Mitigation

- Approximate extent of substab depressurization (SSD) System (IBM)
- Approximate extent of SSD system (IPark)
- Approximate extent of passive SSD system (OnSemi/ Rolling Frito-Lay Sales, LP)
- HVAC as VI EC
- HVAC as presumptive VI EC
- Soil Vapor Extraction Treatment System Location

Notes:

Site Basemap: *Chazen Engineering, Land Surveying & Landscape Architecture Co., D.P.C., Poughkeepsie, NY (XBASE-SVY_51421-00.dwg, 8/10/15); Parcels: XSUBD_51539-00.dwg*

Offsite Basemap: *"Groundwater Monitoring Basemap", IBM East Fishkill Facility (9718new.dwg, original date 12/21/98)*

Well Survey Control by: *Hayward and Pakan Associates, Poughkeepsie NY*

8-Lot Subdivision: *Chazen Engineering, Land Surveying & Landscape Architecture Co, DPC "Final Subdivision Plat, Existing Conditions, GlobalFoundries US 2 LLC. Filed with the Dutchess County Clerk on August 3, 2017 (Filed Map #12578)*

Hopewell Condominium I & Rolling Frito-Lay Sales, LP: *Chazen Engineering, Land Surveying, Landscape Architecture & Geology, Co, DPC "Site Layout Map, Lots, Condominium Units, Rights of Way & Fee Roads" April 22, 2022.*

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All or portions of Lot 4, Lot 6, the roadway between Lots 4 and 6, Lot 8, Lot 9, and South Drive are anticipated to be removed from the Site when environmental easements for Site properties are duly recorded and indexed by Dutchess County.

Scale 0 150' 300'

Plate V-1

Former IBM East Fishkill Facility

Elements of Site Engineering Controls

DRAWN BY: KA	DATE: 7/30/24	DRAWING NO.
CHECKED & APPROVED BY: DAB		5007-060_MASTER_rev2-O2

GROUNDWATER SCIENCES CORPORATION

ATTACHMENT N

On-site Soil/Debris Management and Reuse Plan

(to be provided and approved document during the Permit period)

ATTACHMENT O

Documents Incorporated by Reference

8.0 REFERENCES - Aside from the strikeout of NYSDEC References, these References are hereby Documents Incorporated by Reference into the Part 373 Renewal Permit, Attachment O.

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Building 338

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Building 339

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Lot 6

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