



Department of  
Environmental  
Conservation

# State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code: <b>4959</b>	NAICS Code: <b>562910</b>	SPDES Number:	<b>NY0281646</b>
Discharge Class (CL):	<b>01</b>	DEC Number:	<b>3-1328-00535/00001</b>
Toxic Class (TX):	<b>T</b>	Effective Date (EDP):	<b>TBD</b>
Major-Sub Drainage Basin:	<b>13 - 04</b>	Expiration Date (ExDP):	<b>TBD</b>
Water Index Number:	<b>H-95-9A</b>	Item No.: <b>862 - 278</b>	Modification Dates (EDPM):
Compact Area:	-		

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. '1251 et.seq.)

PERMITTEE NAME AND ADDRESS			
Name:	<b>International Business Machines Corp.</b>	Attention:	<b>Linda Daubert</b>
Street:	<b>1 New Orchard Rd</b>	State:	<b>NY</b> Zip Code: <b>10504</b>
City:	<b>Armonk</b>	Phone:	<b>720-397-5670</b>
Email:	<a href="mailto:LNDaubert@us.ibm.com">LNDaubert@us.ibm.com</a>		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL											
Name:	<b>Former IBM East Fishkill Remediation</b>										
Address / Location:	<b>2070 State Rte. 52</b>						County:	<b>Dutchess</b>			
City:	<b>Hopewell Junction</b>				State:	<b>NY</b>		Zip Code:	<b>12533</b>		
Facility Location:	Latitude:	<b>41</b> °	<b>32</b> '	<b>36</b> " N	& Longitude:	<b>73</b> °	<b>49</b> '	<b>22</b> " W			
Primary Outfall No.:	<b>28A</b>	Latitude:	<b>41</b> °	<b>32</b> '	<b>20</b> " N	& Longitude:	<b>73</b> °	<b>49</b> '	<b>16</b> " W		
Wastewater Description:	<b>Treated Remediation Groundwater</b>	Receiving Water:	<b>Trib. to Gildersleeve Brook via Onsemi NY0005096 Outfall 028</b>			NAICS:	<b>562910</b>	Class:	<b>C</b>	Standard:	<b>-</b>

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR Part 750-1 and 750-2.

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

Permit Administrator:	<b>Rebecca S. Crist</b>		
Address:	<b>21 South Putt Corners Road New Paltz NY, 12477</b>		
Signature:		Date:	:

## SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
<b>04A</b>	<b>Treated Groundwater</b>	-	<b>41 ° 32 ' 30 " N</b>	<b>73 ° 49 ' 20 " W</b>
Receiving Water:	<b>Trib. to Gildersleeve Brook, via Onsemi (NY0005096) Outfall 004</b>			Class: <b>C</b>
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
<b>04B</b>	<b>Treated Groundwater</b>	-	<b>41 ° 32 ' 35 " N</b>	<b>73 ° 49 ' 19 " W</b>
Receiving Water:	<b>Trib. to Gildersleeve Brook, via Onsemi (NY0005096) Outfall 004</b>			Class: <b>C</b>
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
<b>43A</b>	<b>Treated Groundwater</b>	-	<b>41 ° 32 ' 28 " N</b>	<b>73 ° 49 ' 42 " W</b>
Receiving Water:	<b>Gildersleeve Brook, via Onsemi (NY0005096) Outfall 043</b>			Class: <b>C(T)</b>

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## DEFINITIONS

TERM	DEFINITION
7-Day Geo Mean	The highest allowable geometric mean of daily discharges over a calendar week.
7-Day Average	The average of all daily discharges for each 7-days in the monitoring period. The sample measurement is the highest of the 7-day averages calculated for the monitoring period.
12-Month Rolling Average (12 MRA)	The current monthly value of a parameter, plus the sum of the monthly values over the previous 11 months for that parameter, divided by the number of months for which samples were collected in the 12-month period.
30-Day Geometric Mean	The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
Action Level	Action level means a monitoring requirement characterized by a numerical value that, when exceeded, triggers additional permittee actions and department review to determine if numerical effluent limitations should be imposed.
Compliance Level / Minimum Level	A compliance level is an effluent limitation. A compliance level is given when the water quality evaluation specifies a Water Quality Based Effluent Limit (WQBEL) below the Minimum Level. The compliance level shall be set at the Minimum Level (ML) for the most sensitive analytical method as given in 40 CFR Part 136, or otherwise accepted by the Department.
Daily Discharge	The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.
Daily Maximum	The highest allowable Daily Discharge.
Daily Minimum	The lowest allowable Daily Discharge.
Effective Date of Permit (EDP or EDPM)	The date this permit is in effect.
Effluent Limitations	Effluent limitation means any restriction on quantities, quality, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into waters of the state.
Expiration Date of Permit (ExDP)	The date this permit is no longer in effect.
Instantaneous Maximum	The maximum level that may not be exceeded at any instant in time.
Instantaneous Minimum	The minimum level that must be maintained at all instants in time.
Monthly Average	The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
Outfall	The terminus of a sewer system, or the point of emergence of any waterborne sewage, industrial waste or other wastes or the effluent therefrom, into the waters of the State.
Range	The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.
Receiving Water	The classified waters of the state to which the listed outfall discharges.
Sample Frequency / Sample Type / Units	See NYSDEC's "DMR Manual for Completing the Discharge Monitoring Report for the SPDES" for information on sample frequency, type and units.

## PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
<b>04A</b>	Treated Groundwater	Internal Outfall to Onsemi (NY0005096) Outfall 004 (to Trib. to Gildersleeve Brook)	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS			FN	
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.		Eff.
Flow	Monthly Average	Monitor	MGD	-	-	Continuous	Recorder		X	
	Daily Maximum	Monitor	MGD	-	-				X	
pH	Daily Minimum	6.5	SU	-	-	Weekly	Grab		X	
	Daily Maximum	8.5	SU	-	-				X	
Solids, Total Suspended	Daily Maximum	10	mg/L	-	-	1/month	Grab		X	
cis-1,2-dichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Tetrachloroethylene	Monthly Average	1.0	µg/L	-	-	1/month	Grab		X	1
	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Trichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Vinyl Chloride	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
<b>04B</b>	Treated Groundwater	Internal Outfall to Onsemi (NY0005096) Outfall 004 (to Trib. to Gildersleeve Brook)	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS			FN	
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.		Eff.
Flow	Monthly Average	Monitor	MGD	-	-	Continuous	Recorder		X	
	Daily Maximum	Monitor	MGD	-	-				X	
pH	Daily Minimum	6.5	SU	-	-	Weekly	Grab		X	
	Daily Maximum	8.5	SU	-	-				X	
Solids, Total Suspended	Daily Maximum	10	mg/L	-	-	1/month	Grab		X	
cis-1,2-dichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Tetrachloroethylene	Monthly Average	1.0	µg/L	-	-	1/month	Grab		X	1
	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Trichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
<b>28A</b>	Treated Groundwater	Internal Outfall to Onsemi (NY0005096) Outfall 028 (to Trib. to Gildersleeve Brook)	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	Monitor	MGD	-	-	Continuous	Recorder		X	
	Daily Maximum	Monitor	MGD	-	-				X	
pH	Daily Minimum	6.5	SU	-	-	Weekly	Grab		X	
	Daily Maximum	8.5	SU	-	-					
Solids, Total Suspended	Daily Maximum	10	mg/L	-	-	1/month	Grab		X	
cis-1,2-dichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Tetrachloroethylene	Monthly Average	1.0	µg/L	-	-	1/month	Grab		X	1
	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Trichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Vinyl Chloride	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
<b>43A</b>	Treated Groundwater	Internal Outfall to Onsemi (NY0005096) Outfall 043 (Gildersleeve Brook)	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	Monitor	MGD	-	-	Continuous	Recorder		X	
	Daily Maximum	Monitor	MGD	-	-				X	
pH	Daily Minimum	6.5	SU	-	-	Weekly	Grab		X	
	Daily Maximum	8.5	SU	-	-					
Solids, Total Suspended	Daily Maximum	20	mg/L	-	-	1/month	Grab		X	
cis-1,2-dichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Tetrachloroethylene	Monthly Average	1.0	µg/L	-	-	1/month	Grab		X	1
	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	
Trichloroethylene	Daily Maximum	10	µg/L	-	-	1/month	Grab		X	

All limits and action levels apply to the discharge of treated groundwater from IBM East Fishkill prior to admixture of stormwater from Onsemi NY0005094 Outfall 004.

**FOOTNOTES:**

1. This is a final effluent limitation. See Schedule of Compliance for interim effluent limitation.

## BEST MANAGEMENT PRACTICES (BMPs) FOR INDUSTRIAL FACILITIES

Note that for some facilities, especially those with few employees or limited industrial activities, some of the below BMPs may not be applicable. It is acceptable in these cases to indicate "Not Applicable" for the portion(s) of the BMP Plan that do not apply to your facility, along with an explanation.

- General** - The permittee shall develop, maintain, and implement a Best Management Practices (BMP) plan to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and stormwater discharges including, but not limited to, drainage from raw material storage. The BMP plan shall be documented in narrative form and shall include the 13 minimum BMPs and any necessary plot plans, drawings, or maps. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the plan and may be incorporated by reference. A copy of the current BMP plan shall be submitted to the Department as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.
- Compliance Deadlines** – The initial BMP plan shall be submitted in accordance with the Schedule of Submittals to the Regional Water Engineer. The BMP plan shall be implemented within 6 months of submission unless a different time frame is approved by the Department. The BMP plan shall be reviewed annually and shall be modified whenever (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the plan is inadequate, or (c) a letter from the DEC identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.
- Facility Review** - The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases. The review shall address all substances present at the facility that are identified in the SPDES application Form NY-2C (available at [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/form2c.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2c.pdf)) or that are required to be monitored for by the SPDES permit.
- 13 Minimum BMPs:** Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify BMPs that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of stormwater elements of the BMP is available in *Developing Your Stormwater Pollution Prevention Plan A Guide for Industrial Operators*, February 2009, EPA 833-B-09-002. As a minimum, the plan shall include the following BMPs:

- |                                     |   |                                 |
|-------------------------------------|---|---------------------------------|
| 1. BMP Pollution Prevention Team    | 6. Security   | 10. Spill Prevention & Response |
| 2. Reporting of BMP Incidents       | 7. Preventive Maintenance                             | 11. Erosion & Sediment Control  |
| 3. Risk Identification & Assessment | 8. Good Housekeeping                                  | 12. Management of Runoff        |
| 4. Employee Training                | 9. Materials/Waste Handling, Storage, & Compatibility | 13. Street Sweeping             |
| 5. Inspections and Records          |   |                                 |

## BMPs FOR INDUSTRIAL FACILITIES (continued)

5. **Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater from Construction Activity to Surface Waters** - A SWPPP shall be developed prior to commencing any construction activity that will result in soil disturbance of one or more acres of uncontaminated area<sup>1</sup>. (Note: the disturbance threshold is 5000 SF in the New York City East of Hudson Watershed). The SWPPP shall conform to the current version of the SPDES General Permit for Stormwater Discharges from Construction Activity (CGP), including the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual*. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity **at least 30 days prior to soil disturbance**. The SWPPP shall be maintained on-site and submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent* (NOI) form shall be submitted (available at [www.dec.ny.gov/chemical/43133.html](http://www.dec.ny.gov/chemical/43133.html)) prior to soil disturbance. Note that submission of the NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges. SWPPPs must be developed for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.
6. **Required Sampling For "Hot Spot" Identification** - Development of the BMP plan shall include sampling of waste stream segments for the purpose of pollutant "hot spot" identification. The economic achievability of effluent limits will not be considered until plant site "hot spot" sources have been identified, contained, removed or minimized through the imposition of site specific BMPs or application of internal facility treatment technology. For the purposes of this permit condition a "hot spot" is a segment of an industrial facility (including but not limited to soil, equipment, material storage areas, sewer lines etc.) which contributes elevated levels of problem pollutants to the wastewater and/or stormwater collection system of that facility. For the purposes of this definition, problem pollutants are substances for which treatment to meet a water quality or technology requirement may, considering the results of waste stream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is sufficiently higher than the concentration of that same pollutant at the compliance monitoring location so as to allow for an economically justifiable removal and/or isolation of the segment and/or B.A.T. treatment of wastewaters emanating from the segment.
7. **Facilities with Petroleum and/or Chemical Bulk Storage (PBS and CBS) Areas** - Compliance must be maintained with all applicable regulations including those involving releases, registration, handling and storage (6 NYCRR 595-599 and 612-614). Stormwater discharges from handling and storage areas should be eliminated where practical.
- A. **Spill Cleanup** - All spilled or leaked substances must be removed from secondary containment systems as soon as practical and for CBS storage areas within 24 hours, unless written authorization is received from the Department. The containment system must be thoroughly cleaned to remove any residual contamination which could cause contamination of stormwater and the resulting discharge of pollutants to waters of the State. Following spill cleanup the affected area must be completely flushed with clean water three times and the water removed after each flushing for proper disposal in an on-site or off-site wastewater treatment plant designed to treat such water and permitted to discharge such wastewater. Alternately, the permittee may test the first batch of stormwater following the spill cleanup to determine discharge acceptability. If the water contains no pollutants at concentrations above the applicable effluent limits or Action Levels it may be discharged. Otherwise it must be disposed of as noted above. See *Discharge Monitoring* below for the list of parameters to be sampled for.
- B. **Discharge Operation** - Stormwater must be removed before it compromises the required containment system capacity. Each discharge may only proceed with the prior approval of the permittee staff person responsible for ensuring SPDES permit compliance. Bulk storage secondary containment drainage systems must be locked in a closed position except when the operator is in the process of draining accumulated stormwater. Transfer area secondary containment drainage systems must be locked in a closed position during all transfers to or from these systems and must not be reopened unless the transfer area is clean of contaminants. Stormwater discharges from secondary containment systems should be avoided during periods of precipitation. A logbook shall be maintained on site noting the date, time and personnel supervising each discharge.

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<sup>1</sup> Uncontaminated area means soils which are free of contamination by any toxic or non-conventional pollutants identified in the tables of SPDES Application Form NY-2C. Disturbance of any size contaminated area(s) and the resulting discharge of contaminated stormwater is not authorized by this permit unless the discharge is under State or Federal oversight as part of a remedial program or after review by the Regional Water Engineer; nor is such discharge authorized by any SPDES general permit for stormwater discharges.

## BMPs FOR INDUSTRIAL FACILITIES (continued)

C. Discharge Screening - Prior to each discharge from a secondary containment system the stormwater must be screened for contamination\*. All stormwater must be inspected for visible evidence of contamination. Additional screening methods shall be developed by the permittee as part of the overall BMP Plan, e.g. the use of volatile gas meters to detect the presence of gross levels of gasoline or volatile organic compounds. If the screening indicates contamination, the permittee must collect and analyze a representative sample\*\* of the stormwater. If the water contains no pollutants at concentrations above the applicable effluent limits or Action Levels it may be discharged. Otherwise it must either be disposed of in an onsite or off site wastewater treatment plant designed to treat and permitted to discharge such wastewater or the Regional Water Engineer can be contacted to determine if it may be discharged without treatment.

D. Discharge Monitoring - Unless the discharge from any bulk storage containment system outlet is identified in the SPDES permit as an outfall with explicit effluent and monitoring requirements, the permittee shall monitor the outlet as follows:

(i) *Bulk Storage Secondary Containment Systems:*

(a) The volume of each discharge from each outlet must be monitored. Discharge volume may be calculated by measuring the depth of water within the containment area times the wetted area converted to gallons or by other suitable methods. A representative sample shall be collected of the first discharge\* following any cleaned up spill or leak. The sample must be analyzed for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present\*\*.

(b) Every fourth discharge\* from each outlet must be sampled for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present\*\*.

(ii) *Transfer Area Secondary Containment Systems:*

The first discharge\* following any spill or leak must be sampled for flow, pH, the substance(s) transferred in that area and any other pollutants the permittee knows or has reason to believe are present\*\*.

E. Discharge Reporting - Any results of monitoring required above, excluding screening data, must be submitted to the Department by appending them to the corresponding DMR. Failure to perform the required discharge monitoring and reporting shall constitute a violation of the terms of the SPDES permit.

F. Prohibited Discharges - **In all cases, any discharge which contains a visible sheen, foam, or odor, or may cause or contribute to a violation of water quality is prohibited.** The following discharges are prohibited unless specifically authorized elsewhere in this SPDES permit: spills or leaks, tank bottoms, maintenance wastewaters, wash waters where detergents or other chemicals have been used, tank hydrotest and ballast waters, contained firefighting runoff, fire training water contaminated by contact with pollutants or containing foam or fire retardant additives, and unnecessary discharges of water or wastewater into secondary containment systems.

\* Discharge includes stormwater discharges and snow and ice removal. If applicable, a representative sample of snow and/or ice should be collected and allowed to melt prior to assessment.

\*\* If the stored substance is gasoline or aviation fuel then sample for oil & grease, benzene, ethylbenzene, naphthalene, toluene and total xylenes. If the stored substance is kerosene, diesel fuel, fuel oil, or lubricating oil then sample for oil & grease and polynuclear aromatic hydrocarbons (PAHs). The analytical methods selected for monitoring the stored substances are to be the most sensitive in detecting and quantifying the target analytes as approved under 40 CFR Part 136 and in compliance with NYSDOH ELAP certified methods or as directed by the Department. If the substance(s) are listed in the tables of SPDES Application Form NY-2C then sampling is required. Contact the facility inspector for further guidance. In all cases flow and pH monitoring is required.

## MERCURY MINIMIZATION PROGRAM (MMP) - Type IV

On April 19, 2024, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.E. of DOW 1.3.10.

1. General - To reduce mercury effluent levels with the goal of achieving the water quality standard of 0.7 ng/L, the permittee must develop, implement, and maintain a written MMP plan, which includes the elements set forth below.
2. Conditional Exclusion Certification – A certification (Appendix C of DOW 1.3.10), signed in accordance with 6 NYCRR 750-1.8, must be submitted once every 5 years for Outfall(s) 04A, 04B, 28A and 43A to the Regional Water Engineer and to the Bureau of Water Permits, certifying that the facility is neither a mercury source nor receives flows from a mercury source. Criteria to determine if a facility has a mercury source are as follows:
  - The facility is, or receives flow from, a Combined Sewer System (CSS) or sanitary sewer system with Type II Sanitary Sewer Overflows (SSO<sup>2</sup>);
  - One or more effluent samples exceed 12 ng/L, including samples taken as a result of the SPDES application process;
  - Internal or tributary waste stream samples exceed the GLCA effluent limitation and the final effluent samples are less than the GLCA due primarily to dilution by uncontaminated or less contaminated waste streams. Both components of this criterion may include samples taken as a result of the SPDES application process;
  - A SPDES permit application, or other information, indicates that mercury is handled on-site and could be discharged through outfalls;
  - Existence of outfalls that contain legacy mercury contamination;
  - The facility's collection system receives discharges from a dental and/or Categorical Industrial User (CIU<sup>3</sup>) that may discharge mercury;
  - The facility accepts hauled wastes; OR,
  - The facility is defined as a categorical industry that may discharge mercury. This may also include dentists, universities, hospitals, or laboratories, which have their own individual SPDES permit.
3. Control Strategy – develop and implement with the following minimum elements:
  - a. Equipment and Materials – Equipment and materials (e.g., thermometers, thermostats) used by the permittee, which may contain mercury, must be evaluated by the permittee. As equipment and materials containing mercury are updated/replaced, the permittee must use mercury-free alternatives, if possible.
  - b. Bulk Chemical Evaluation – for chemicals used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain:
    - i. A manufacturer's certificate of analysis;
    - ii. A chemical analysis performed by a certified laboratory; OR,
    - iii. A notarized affidavit that describes the substances' mercury concentration and the detection limit achieved.

Where practicable, the permittee must only use bulk chemicals in the wastewater treatment process which contain <10 parts per billion (ppb) of mercury.

<sup>2</sup> These are Overflow Retention Facilities (ORFs) and are included under the 05 and 07 permit classifications.

<sup>3</sup> CIUs include those listed under Federal Regulation in 40 CFR Parts 405–471.

## MERCURY MINIMIZATION PROGRAM (MMP) – Type IV (Continued)

4. Status Report – An **annual** status report must be developed, in accordance with the [Schedule of Additional Submittals](#), summarizing:
- Review of criteria to determine if the facility has a potential mercury source;
  - All actions undertaken, pursuant to the control strategy, during the previous year; and
  - Actions planned, pursuant to the control strategy, for the upcoming year.

The first status report is due in accordance with the Schedule of Additional Submittals. The permittee must maintain a file on-site with all MMP documentation.

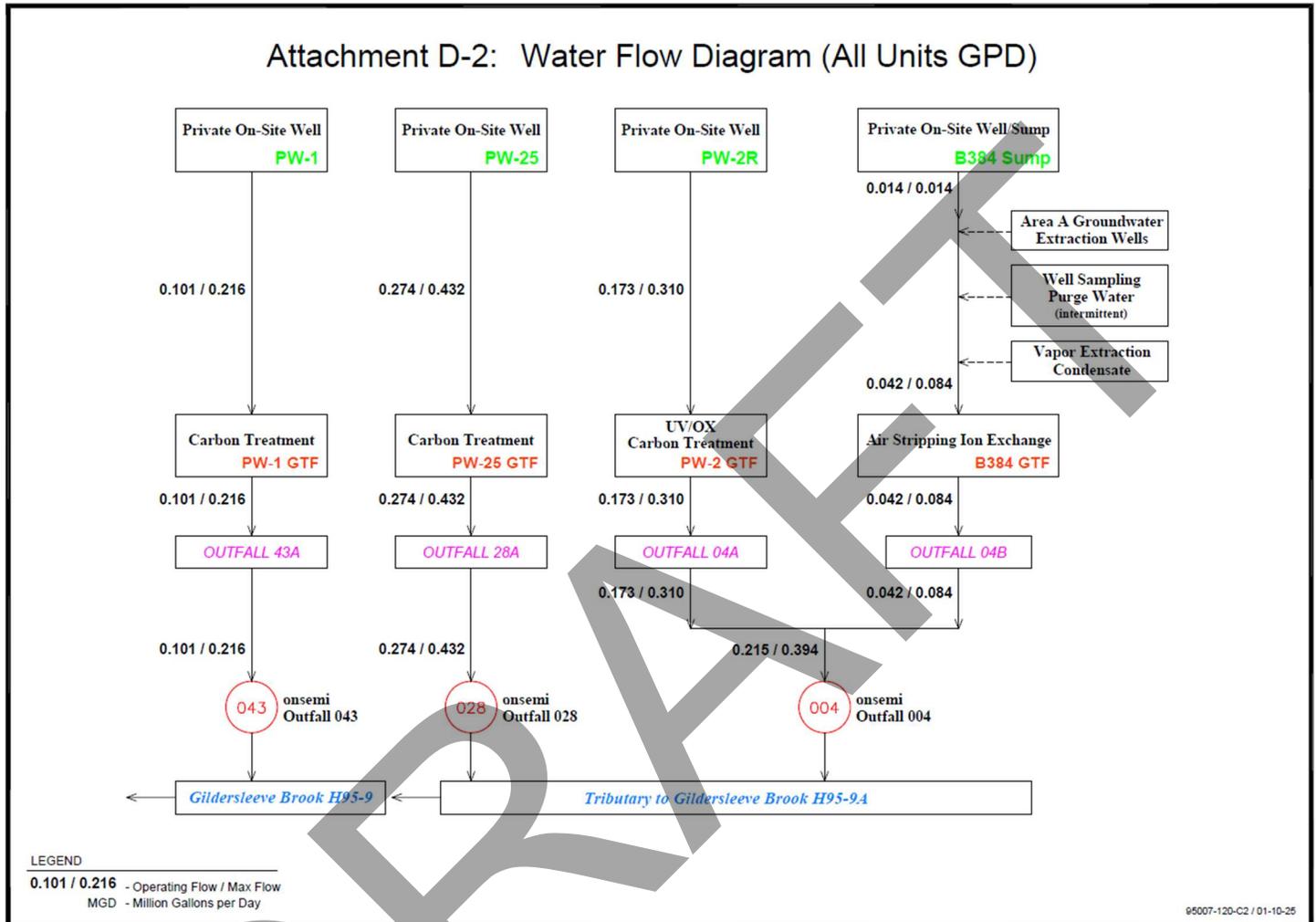
5. MMP Modification – the permittee must submit a permittee-initiated modification request to DEC whenever:
- Changes at the facility, or within the collection system, increase the potential for mercury discharges; OR,
  - A letter from DEC identifies inadequacies in the MMP.

The permittee may use information in the status reports, as applicable in accordance with item 3 of this MMP, as a basis for the permittee-initiated modification.

### DEFINITIONS:

Potential mercury source – a source identified by the permittee that may reasonably be expected to have total mercury contained in the discharge. Some potential mercury sources include switches, fluorescent lightbulbs, cleaners, degreasers, thermometers, batteries, hauled wastes, universities, hospitals, laboratories, landfills, Brownfield sites, or raw material storage.

## PROCESS FLOW DIAGRAM



## DISCHARGE NOTIFICATION REQUIREMENTS

- (a) Upon request, the permittee shall make available electronic or hard copies of the sampling data to the public. In accordance with the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS page of your permit, each DMR shall be maintained (either electronically or as a hard copy) on record for a period of five years.

## SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Compliance Date <sup>4</sup>
04A, 04B 28A, 43A	INTERIM PROGRESS REPORT <sup>5</sup> The permittee shall provide a status update on the Tetrachloroethylene Engineering Report/Study.	EDP + 9 Months EDP + 18 Months
04A, 04B 28A, 43A	TETRACHLOROETHYLENE ENGINEERING REPORT/STUDY The permittee shall submit an approvable <sup>6</sup> Engineering Report. The report shall include the following at a minimum: <ul style="list-style-type: none"> <li>A tabulation of all available tetrachloroethylene data for the facility;</li> <li>A summary of the identified potential tetrachloroethylene sources and options available to reduce those sources;</li> <li>A study and evaluation of treatment alternatives that may be used to meet the final effluent limitation of 1.0 µg/L Monthly Average for tetrachloroethylene;</li> </ul> The selected alternative to achieve compliance and proposed timeline, including any major milestones such as submittal of any needed design documents, construction start and end, and commence operation.	EDP + 24 Months
04A, 04B 28A, 43A	INTERIM PROGRESS REPORT The permittee shall provide a status update for meeting the final tetrachloroethylene effluent limit.	EDP + 33 Months
04A, 04B 28A, 43A	COMPLIANCE WITH FINAL TETRACHLOROETHYLENE EFFLUENT LIMIT The permittee shall comply with the final effluent limitation(s) described in this permit for tetrachloroethylene.	EDP + 42 months

OUTFALL	PARAMETER	INTERIM EFFLUENT LIMIT					MONITORING REQUIREMENTS				Notes
		Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
									Inf.	Eff.	
04A, 04B 28A, 43A	Tetrachloroethylene	Monthly Average	Monitor	µg/L	-	-	1x/Month	Grab	-	X	1
Notes:	1. Interim limits expire EDP + 42 months.										

b) The permittee shall submit a [Report of Non-compliance Event](#) form with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All notifications shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:

1. A short description of the non-compliance;
2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule

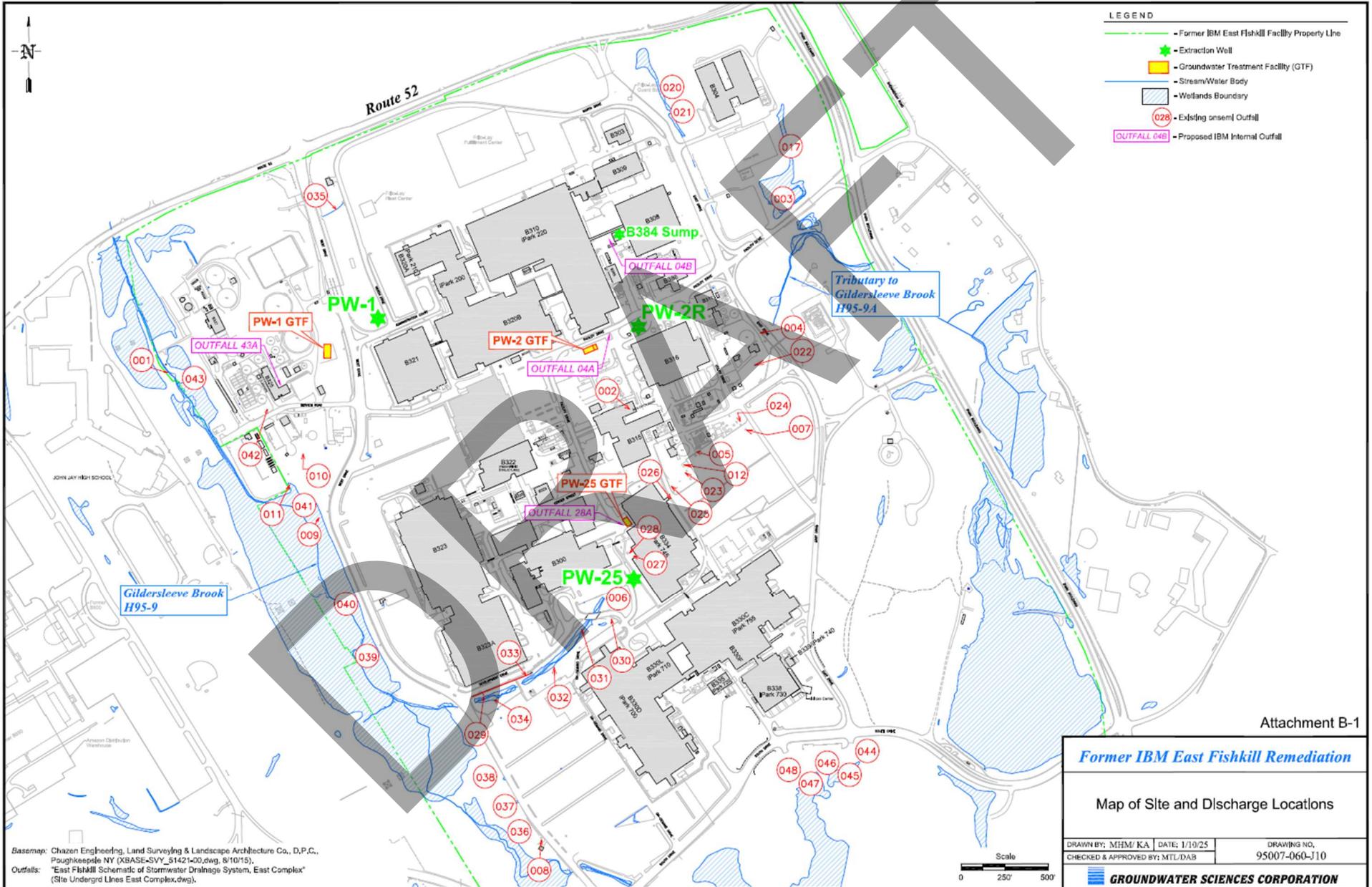
<sup>4</sup> 6 NYCRR 750-1.14 (a)

<sup>5</sup> 6 NYCRR 750-1.14 (b)

<sup>6</sup> 6 NYCRR 750 1.2 (a)(8)

# MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the locations(s) specified below:



Attachment B-1

## GENERAL REQUIREMENTS

- A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through H as follows:
- B. General Conditions
- |  |   |
|--|---|
| 1. Duty to comply                                | 6 NYCRR 750-2.1(e) & 2.4                |
| 2. Duty to reapply                               | 6 NYCRR 750-1.16(a)                     |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR 750-2.1(g)                      |
| 4. Duty to mitigate                              | 6 NYCRR 750-2.7(f)                      |
| 5. Permit actions                                | 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights                               | 6 NYCRR 750-2.2(b)                      |
| 7. Duty to provide information                   | 6 NYCRR 750-2.1(i)                      |
| 8. Inspection and entry                          | 6 NYCRR 750-2.1(a) & 2.3                |
- C. Operation and Maintenance
- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| 1. Proper Operation & Maintenance | 6 NYCRR 750-2.8                      |
| 2. Bypass                         | 6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset                          | 6 NYCRR 750-1.2(a)(94) & 2.8(c)      |
- D. Monitoring and Records
- |                           |  |
|---------------------------|--|
| 1. Monitoring and records | 6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d) |
| 2. Signatory requirements | 6 NYCRR 750-1.8 & 2.5(b)   |
- E. Reporting Requirements
- |   |                                   |
|---|-----------------------------------|
| 1. Reporting requirements for non-POTWs | 6 NYCRR 750-2.5, 2.6, 2.7, & 1.17 |
| 2. Anticipated noncompliance            | 6 NYCRR 750-2.7(a)                |
| 3. Transfers                            | 6 NYCRR 750-1.17                  |
| 4. Monitoring reports                   | 6 NYCRR 750-2.5(e)                |
| 5. Compliance schedules                 | 6 NYCRR 750-1.14(d)               |
| 6. 24-hour reporting                    | 6 NYCRR 750-2.7(c) & (d)          |
| 7. Other noncompliance                  | 6 NYCRR 750-2.7(e)                |
| 8. Other information                    | 6 NYCRR 750-2.1(f)                |
- F. Sludge Management  
The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.
- G. SPDES Permit Program Fee  
The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.
- H. Water Treatment Chemicals (WTCs)  
New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.
1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized by the Department.
  2. The permittee shall maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure excessive levels of WTCs are not used.
  3. The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form and WTC Annual Report Form* are available from the Department's website at: <http://www.dec.ny.gov/permits/93245.html>

# RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

A. The monitoring information required by this permit shall be retained for a period of at least five years from the date of the sampling for subsequent inspection by the Department or its designated agent.

B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted for each 1 month reporting period in accordance with the DMR Manual available on Department's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by NYSDEC. Instructions on the use of NetDMR can be found at <https://www.dec.ny.gov/chemical/8461.html>. **Hardcopy paper DMRs will only be received at the address listed below, directed to the Bureau of Water Compliance, if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

The first monitoring period begins on the effective date of this permit, and, unless otherwise required, the reports are due no later than the 28th day of the month following the end of each monitoring period.

C. Additional information required to be submitted by this permit shall be summarized and **electronically reported** to the RWE and Bureau of Water Permits at the following addresses:

Department of Environmental Conservation  
 Division of Water, Bureau of Water Permits  
 625 Broadway, Albany, New York 12233-3505 Phone: (518) 402-8111  
[SPDESApp@dec.ny.gov](mailto:SPDESApp@dec.ny.gov)

Department of Environmental Conservation  
 Regional Water Engineer, Region 3  
 220 White Plains Road, Suite 110, Tarrytown, NY 10591 Phone: (914) 803-8157  
[DOW.r3@dec.ny.gov](mailto:DOW.r3@dec.ny.gov)

D. Schedule of Additional Submittals:

The permittee shall submit the following information to the Regional Water Engineer and to the Bureau of Water Permits, unless otherwise instructed:

Outfall(s)	SCHEDULE OF ADDITIONAL SUBMITTALS - Required Action	Due Date
04A, 04B 28A, 43A	<u>BMP PLAN</u> The permittee shall submit and annually review the completed BMP plan. The BMP plan shall be modified whenever: (a) changes at the facility materially increase the potential for releases of pollutants, (b) actual releases indicate the plan is inadequate, or (c) a letter from the Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions must be submitted to the Regional Water Engineer within 30 days.	EDP + 6 Months, Annually thereafter submitted with the December DMR
04A, 04B 28A, 43A	<u>MERCURY MINIMIZATION PLAN</u> The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	<b>Maintained Onsite</b> EDP + 12 months, annually thereafter
04A, 04B 28A, 43A	<u>MERCURY - CONDITIONAL EXCLUSION CERTIFICATION</u> Permittee must submit a mercury conditional exclusion certification every five years in order to maintain MMP Type IV status.	4/19/2029 and every 5 years thereafter

Outfall(s)	SCHEDULE OF ADDITIONAL SUBMITTALS - Required Action	Due Date
04A & 04B	<p><u>ORGANICS SHORT TERM MONITORING PROGRAM:</u></p> <p>The permittee shall collect weekly samples representative of the discharge for 10 weeks for the following parameters:</p> <ul style="list-style-type: none"> <li>• Methyl tert-butyl ether</li> <li>• Dichlorodifluoromethane</li> <li>• Acetone</li> <li>• Bromobenzene</li> <li>• Ethylbenzene</li> <li>• Methylene chloride</li> <li>• Toluene</li> <li>• Trichlorofluoromethane</li> <li>• 1,1,2,2-tetrachloroethane</li> <li>• Xylenes, Total</li> </ul> <p>The permittee shall use the approved EPA analytical method with the lowest possible detection limit as promulgated under 40 CFR Part 136</p> <p>A summary of the results shall be submitted to the Bureau of Water Permits and the Regional Water Engineer.</p>	EDP + 6 months
04A, 04B, 28A, 43A	<p><u>EMERGING CONTAMINANT SHORT-TERM MONITORING</u></p> <p>The permittee shall collect grab samples of both the influent and effluent from the facility's treatment system(s) associated with the identified outfall for 1,4-Dioxane (1,4-D) utilizing EPA Method 8270D SIM or 8270E SIM. The samples must represent normal discharge conditions and treatment operations and shall be obtained on a monthly basis for at least 3 consecutive months.</p> <p>The results shall be reported through the "Emerging Contaminants Survey for Industrial Facilities" found at: <a href="https://www.dec.ny.gov/chemical/127939.html">https://www.dec.ny.gov/chemical/127939.html</a>.</p> <p>The permittee shall initiate track down of potential sources by completing the "Emerging Contaminants Investigation Checklist for Industrial Facilities" available at the above link.</p> <p>The Department may periodically request updates and/or additional monitoring to check progress on track down investigations. Elements of the checklist may be used as permit conditions in future permit modifications.</p>	EDP + 6 months  Within 90 days of DEC written notification
	<p><u>WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM</u></p> <p>The permittee shall submit a completed WTC Annual Report Form each year that Water Treatment Chemicals are used. The form shall be attached to the December DMR.</p>	With the January DMR
04A, 04B, 28A, 43A	<p><u>SHORT-TERM HIGH-INTENSITY MONITORING PROGRAM – TOTAL DISSOLVED SOLIDS</u></p> <p>The permittee shall collect 10 samples representative of normal discharge conditions and treatment operations over a 10-week period for the identified parameters. The permittee shall use approved EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameters listed. The permittee shall submit a summary of the results.</p>	EDP + 6 months

**Unless noted otherwise, the above actions are one-time requirements.**

- E. Monitoring and analysis shall be conducted using sufficiently sensitive test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- F. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.
- G. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- H. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- I. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

DRAFT

**SPDES Permit Fact Sheet**  
**International Business Machines**  
**Corp.**  
**Former IBM East Fishkill**  
**Remediation**  
**NY0281646**



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## Summary of Permit Changes

A new State Pollutant Discharge Elimination System (SPDES) permit has been drafted for the Former IBM East Fishkill Remediation.

**This fact sheet summarizes the information used to determine the effluent limitations (limits) and other conditions contained in the permit. General background information including the regulatory basis for the effluent limitations and other conditions are in the [Appendix](#) linked throughout this fact sheet.**

## Administrative History

6/18/2018 The International Business Machines Corp. submitted a NY-2C permit application for a new SPDES permit.

The Notice of Complete Application, published in the [Environmental Notice Bulletin](#) and newspapers, contains information on the public notice process.

## Facility Information

This is an industrial facility (SIC code 4959) that remediates contaminated groundwater under Resource Conservation and Recovery Act (RCRA) Permit 3-1328-00535/00002. Effluent consists of treated groundwater. The original treatment system was constructed in the early 1960s to remove volatile organic compounds (VOCs) through carbon treatment.

Investigations began in 1979 and identified seven areas of groundwater and soil contamination, four of which remain contaminated today. Residual contamination in groundwater is managed under the facility's 6 NYCRR Part 373 RCRA permit, as well as operation, maintenance and monitoring plans for the various remedial systems.

The permittee constructed three separate buildings in 2019 to house replacement groundwater treatment equipment for the ongoing groundwater remediation under the site's RCRA Permit. The buildings contain the treatment processes for groundwater remediation wells PW-1, PW-2, PW-2R and PW-25. IBM maintains responsibility for the ongoing groundwater remediation program under the site's RCRA permit 3-1328-00535/00002. This draft SPDES permit is for the discharge of IBM's remediated groundwater, to the receiving waters, when the remediated groundwater is not used by Onsemi, pursuant to an agreement between IBM and Onsemi. Discharge of the treated groundwater, subject to IBM's SPDES Permit Application, is currently permitted under Onsemi's SPDES Permit NY0005096 at Outfalls 001 and 004.

There is no discharge of stormwater from this facility.

## Outfall Locations

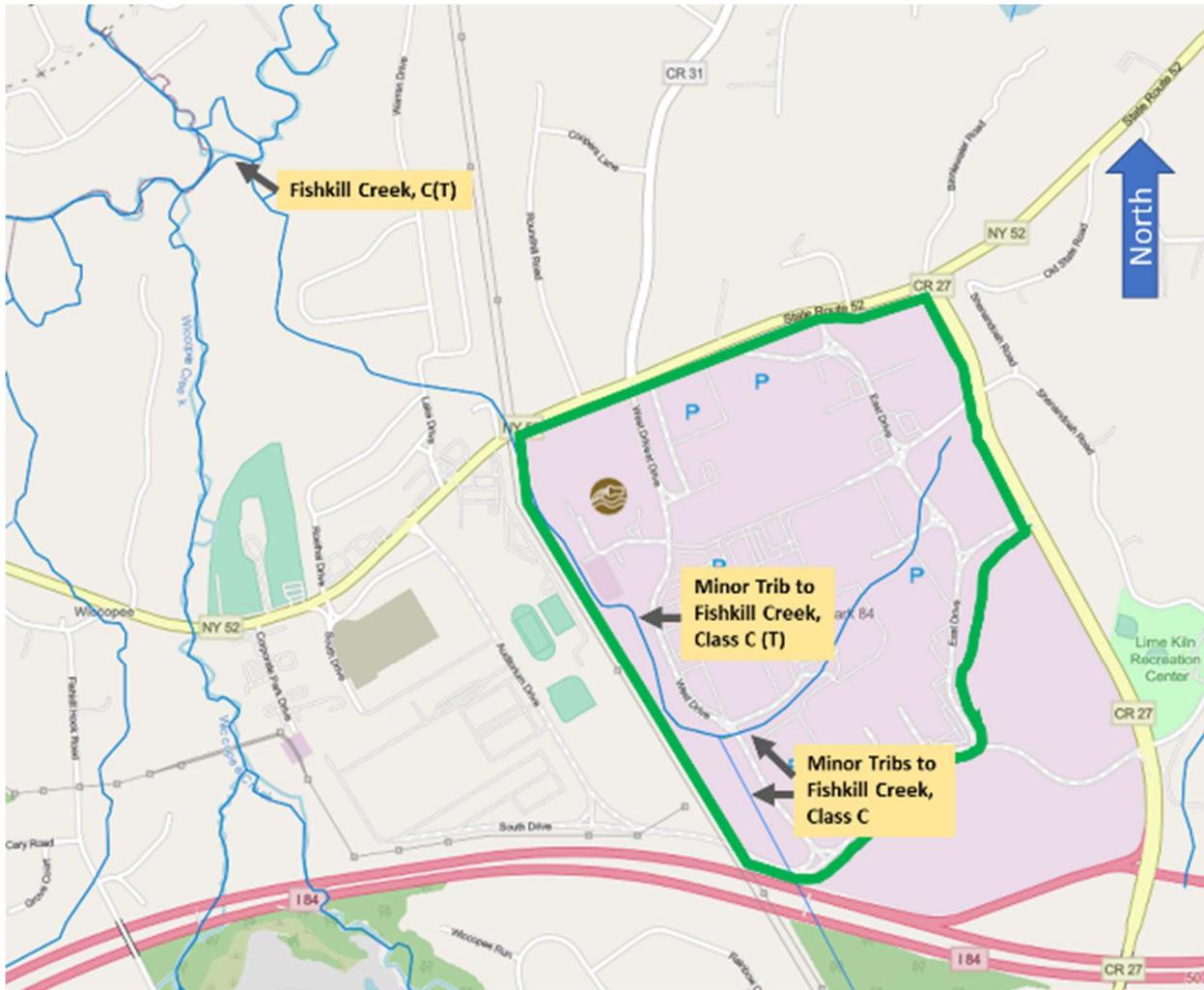
The facility proposes to discharge the treated groundwater to waters of the state via the following outfalls:

- 04A: Treats contaminated groundwater from groundwater remediation wells PW-2 and PW-2R and discharges to a tributary of the Gildersleeve Brook through Onsemi Outfall 004 (NY0005096). Treatment consists of oxidation (UV) and carbon adsorption.
- 04B: Treats contaminated waste from B384 Sump – Area A groundwater extraction wells, vapor extraction condensate and well sampling purge water – and discharges to a tributary

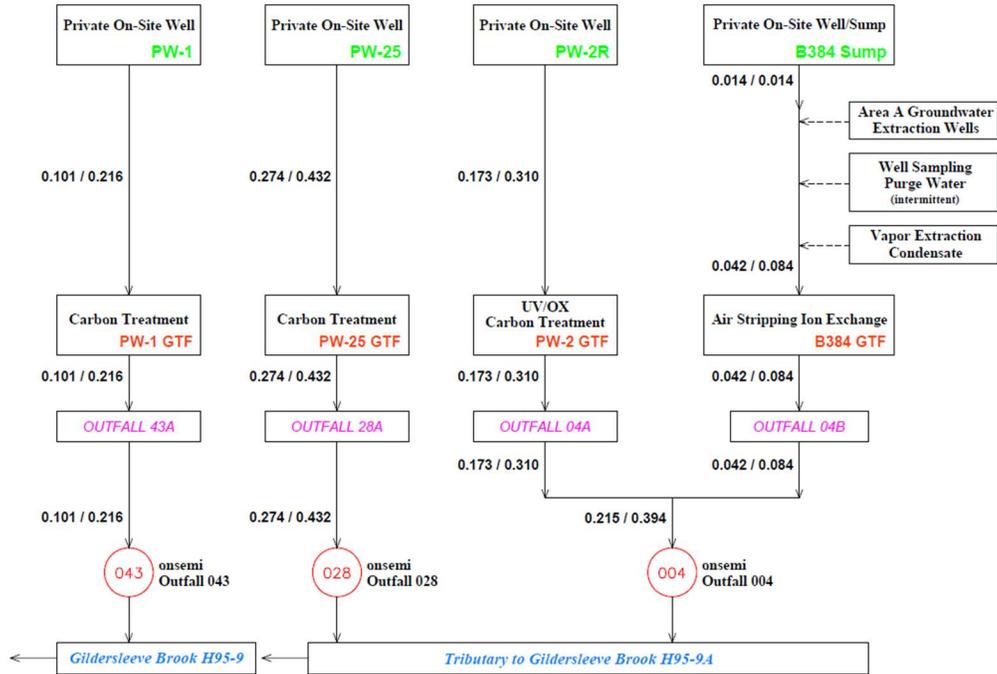
of the Gildersleeve Brook through Onsemi Outfall 004 (NY0005096). Treatment consists of air stripping and carbon adsorption.

- 28A: Treats contaminated groundwater from groundwater remediation well PW-25 and discharges to a tributary of the Gildersleeve Brook through Onsemi Outfall 028 (NY0005096). Treatment consists of carbon adsorption.
- 43A: Treats contaminated groundwater from groundwater remediation well PW-1 and discharges to Gildersleeve Brook through Onsemi Outfall 043 (NY0005096). Treatment consists of carbon adsorption.

### Site Overview



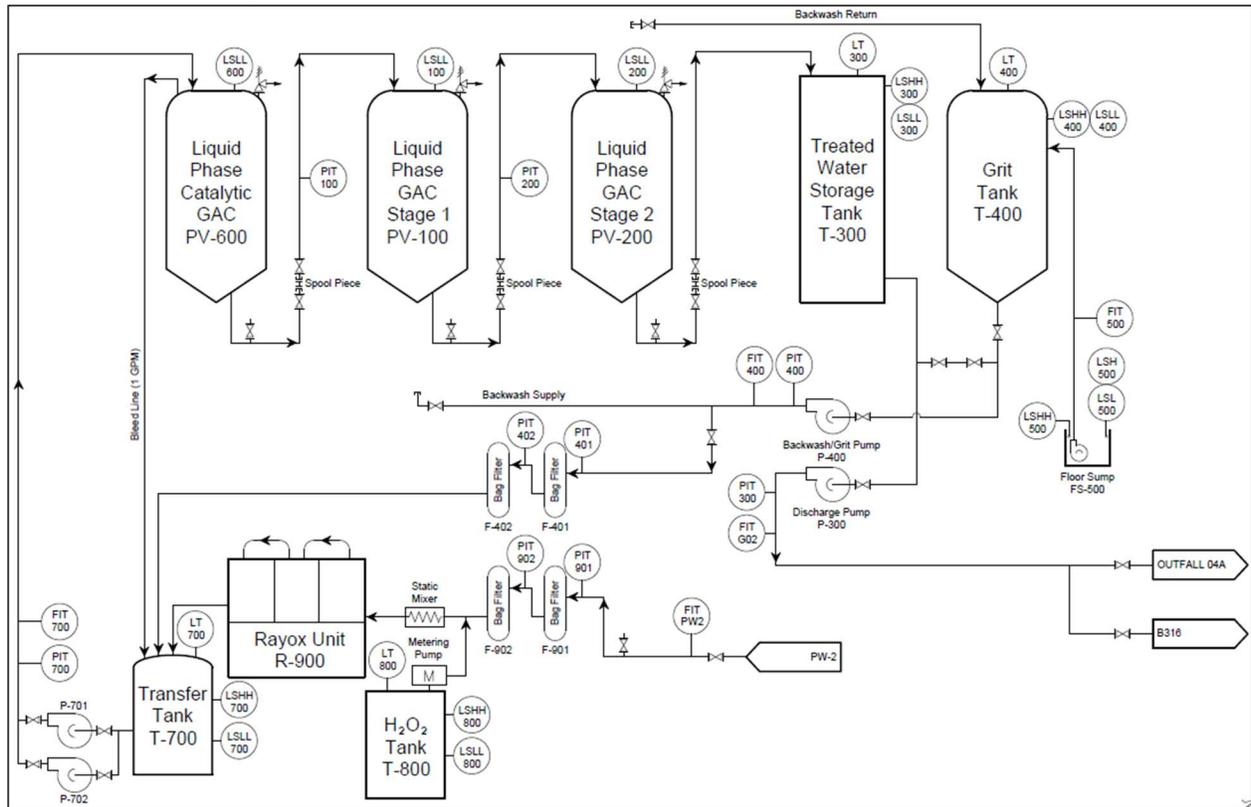
### Attachment D-2: Water Flow Diagram (All Units GPD)



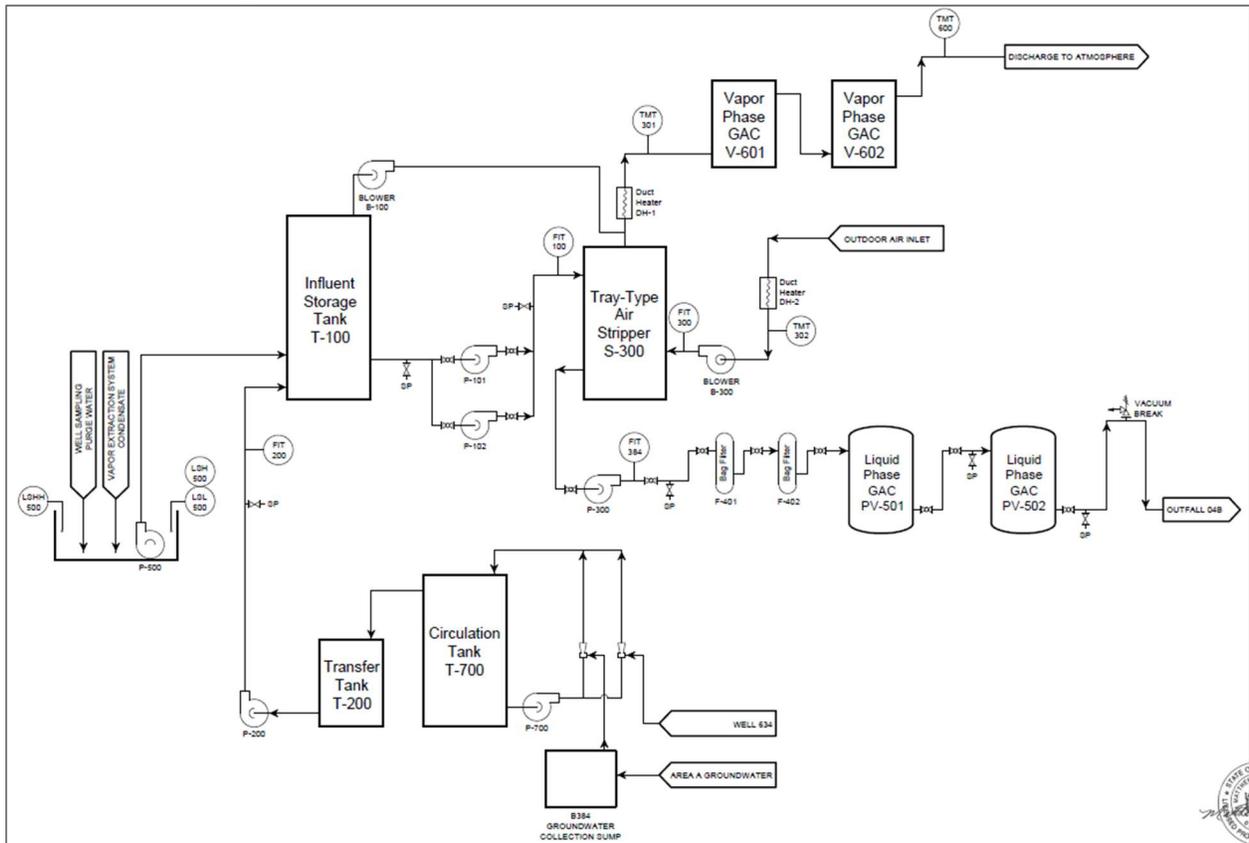
**LEGEND**  
 0.101 / 0.216 - Operating Flow / Max Flow  
 MGD - Million Gallons per Day

95007-120-C2 / 01-10-25

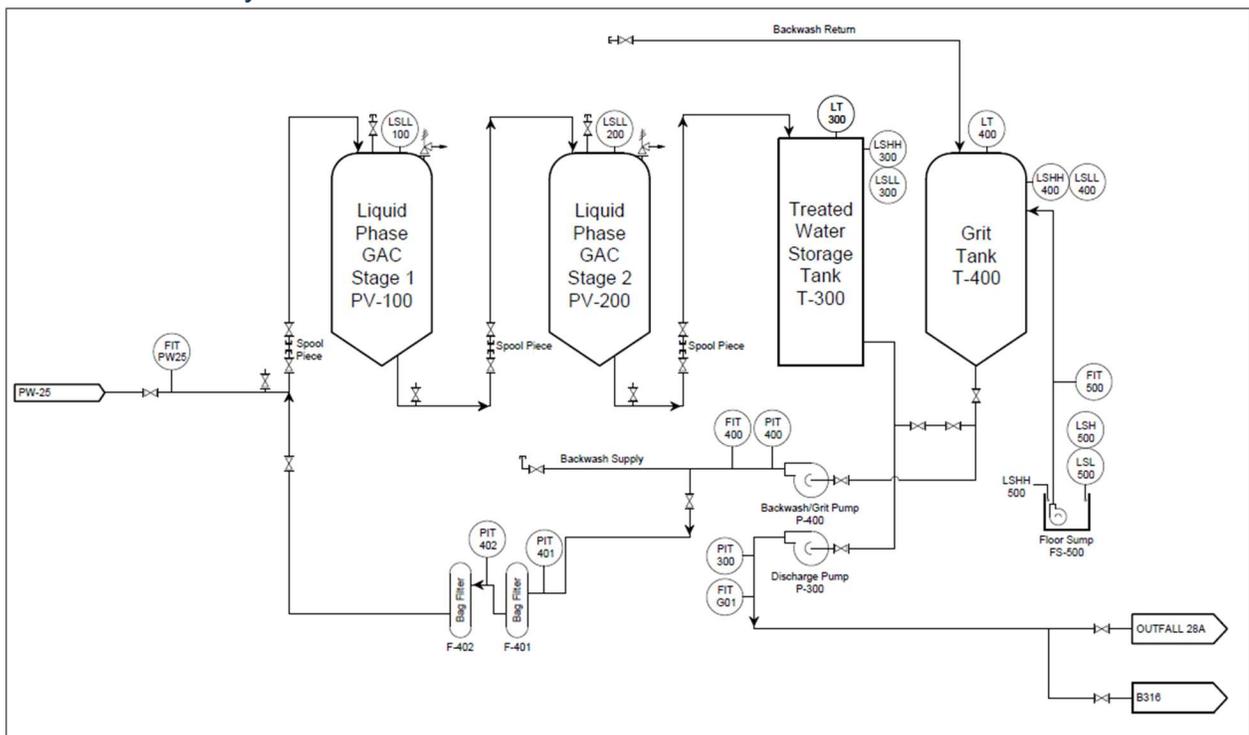
### 04A Treatment System



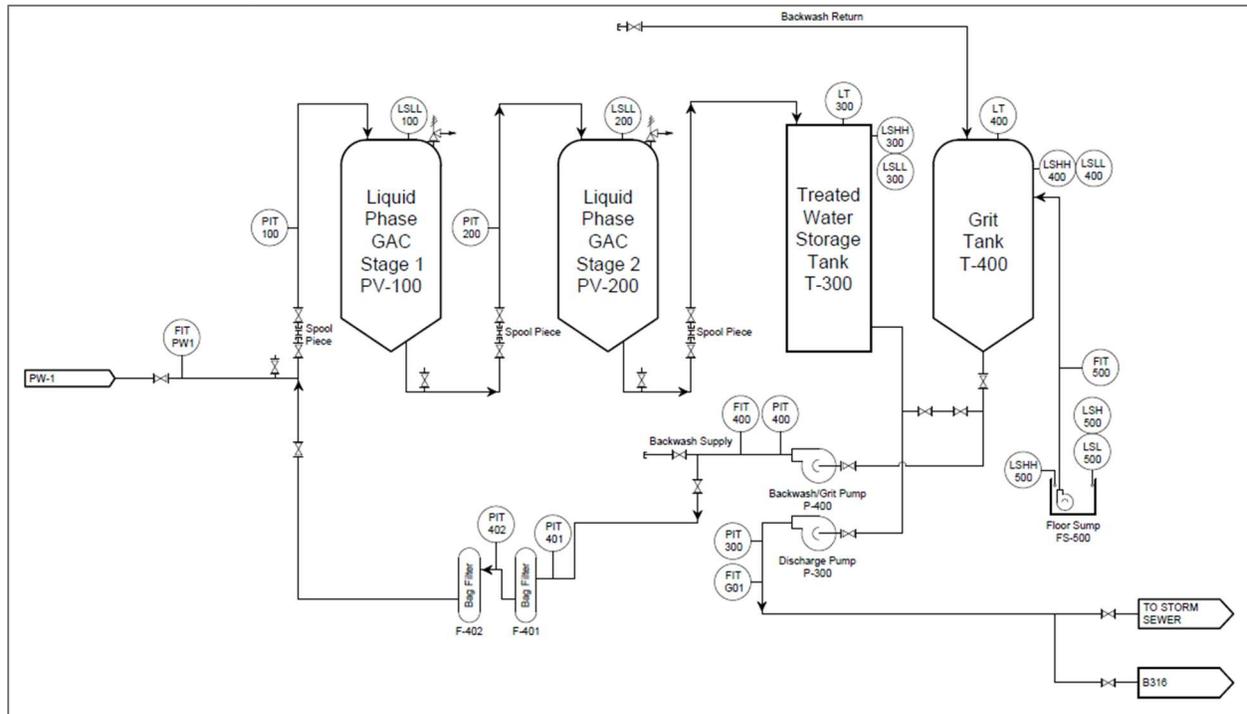
### 04B Treatment System



### 28A Treatment System



### 43A Treatment System



### Enforcement History

This is a new SPDES permit. There is no enforcement history or data reported for these outfalls. Discharge of the treated groundwater, subject to IBM’s SPDES Permit Application, is currently permitted under Onsemi’s SPDES Permit NY0005096 at Outfalls 001 and 004 and all monitoring was performed on the combined effluents. There are no reported violations in from the Onsemi data submitted during the period of August 2017 – July 2022 for the outfalls of concern to this permit.

### Existing Effluent Quality

The [Pollutant Summary Table](#) presents the existing effluent quality and effluent limitations. The Department calculated the existing effluent quality from a combination of data for each Groundwater Treatment Facility (GTF) in the application submitted by the permittee and discharge monitoring report data from Onsemi Outfall 004 for the period 11/1/2018 to 10/31/2023. [Appendix Link](#)

### Receiving Water Information

The facility proposes to discharge via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
04A	4959	Treated contaminated groundwater	Trib. To Gildersleeve Brook, Class C through NY0005096 Outfall 004

Outfall No.	SIC Code	Wastewater Type	Receiving Water
04B	4959	Treated contaminated waste: vapor extraction condensate, well sample purge water, Area groundwater extraction well sump waste	Trib. To Gildersleeve Brook, Class C through NY0005096 Outfall 004
28A	4959	Treated contaminated groundwater	Trib. To Gildersleeve Brook, Class C through NY0005096 Outfall 028
43A	4959	Treated contaminated groundwater	Gildersleeve Brook, Class C(T) though NY0005096 Outfall 043
<i>All outfalls are internal to Onsemi NY0005096 outfalls. See <a href="#">Facility Information</a> for more details.</i>			

**Reach Description:** The Gildersleeve Brook, and its tributary (H-95-9 and tributary a), are tributary to the Fishkill Creek (approximately 0.9 miles downstream) and part of the Lower Hudson watershed. The Gildersleeve Brook (6 NYCRR 862-277) is Class C(T), and the tributaries to the Gildersleeve Brook (6 NYCRR 862-278) are Class C at the point of discharge. The two tributaries to the Gildersleeve that are receiving waters for this facility are approximately 0.5 miles long and are the sole headwaters to this segment of the Gildersleeve Brook.

See the [Outfall and Receiving Water Summary Table](#) and [Appendix](#) for additional information.

#### Impaired Waterbody Information

The Fishkill Creek, Middle, and minor tributaries segment (PWL No. 1304-0010) is not listed on the 2020/2022 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters, and therefore, there are no applicable wasteload allocations (WLAs) for this discharge.

#### Critical Receiving Water Data & Mixing Zone

Given the very limited historical flow data for Gildersleeve Brook, the Department applied the 7Q10 flow of 0.17 cfs (0.11 MGD) used for Onsemi East Fishkill Outfall 043, in the 2008 permit, to the IBM East Fishkill Outfall 43A. The Department also applied this value for the 1Q10 or acute critical low flow. A 30Q10 or Human, Aesthetic, and Wildlife (HEW) critical low flow value of 0.30 cfs (0.19 MGD) was also carried over from the Onsemi 2008 permit to the new permit.

The Department used zero background flow for the upstream tributaries of Gildersleeve Brook. The Department did not perform a mixing zone modeling on any outfall of the permit.

$$\text{Dilution Ratio} = (\text{Facility Flow} + \text{Low Flow}) / \text{Facility Flow}$$

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
04A, 04B & 28A	1 : 1	1 : 1	1 : 1	TOGS 1.3.1 ISEL Limits
43A	1.1 : 1	1.2 : 1	1.2 : 1	TOGS 1.3.1

Critical receiving water data are listed in the [Pollutant Summary Table](#) at the end of this fact sheet. [Appendix Link](#)

## Permit Requirements

The technology based effluent limitations ([TBELs](#)), water quality-based effluent limitations ([WQBELs](#)), [Existing Effluent Quality](#) and a discussion of the selected effluent limitation for each pollutant present in the discharge are provided in the [Pollutant Summary Table](#).

### Anti-backsliding

This is a new permit with no established effluent limitations; therefore, backsliding is not an issue.

### [Appendix Link](#)

### Antidegradation

The permit contains effluent limitations which ensure that the best usages of the receiving waters will be maintained. The Notice of Complete Application published in the Environmental Notice Bulletin contains information on the State Environmental Quality Review (SEQR)<sup>1</sup> determination.

### [Appendix Link](#)

### Discharge Notification Act Requirements

In accordance with the Discharge Notification Act (ECL 17-0815-a), the permittee is required to post a sign at each point of wastewater discharge to surface waters, unless a waiver is obtained. This requirement is new.

Additionally, the permit contains a requirement to make the DMR sampling data available to the public upon request. This requirement is new.

### Best Management Practices (BMPs) for Industrial Facilities

In accordance with 6 NYCRR 750-1.14(f) and 40 CFR 122.44(k), the permittee is required to develop and implement a BMP plan that prevents, or minimizes the potential for, the release of toxic or hazardous pollutants to state waters. The BMP plan requires annual review by the permittee.

### Mercury<sup>2</sup>

The multiple discharge variance (MDV) for mercury provides the framework for NYSDEC to require mercury monitoring and mercury minimization programs (MMPs), through SPDES permitting. [Appendix Link](#)

The facility is not in the Great Lakes Basin and does not have a mercury source. On April 19, 2024, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.A.3. of DOW 1.3.10 and the effluent measured <12 ng/L. Therefore, consistent with DOW 1.3.10, the permit includes requirements for the implementation of MMP Type IV and does not include mercury effluent limitations. The [Schedule of Additional Submittals](#) includes a mercury minimization plan annual status report (maintained onsite), and re-certification of the exclusion every five years. As part of the re-certification, the permittee must sample the effluent and continue to measure <12 ng/L. This requirement is new.

---

<sup>1</sup> As prescribed by 6 NYCRR Part 617

<sup>2</sup> In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

### Emerging Contaminant Monitoring

Pursuant to 6 NYCRR 750-1.13(b), the permit includes a short-term monitoring program listed in the Schedule of Additional Submittals to evaluate the influent and effluent discharge levels of Per- and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane. This monitoring program is consistent with guidance released in EPA guidance memos dated April 28, 2022, and December 5, 2022.

The DEC will review the monitoring results and pursuant to 6 NYCRR 750-2.1(i) may notify the permittee of the need for further monitoring to identify potential sources as specified in the Emerging Contaminants Investigation Checklist for Industrial Facilities to determine whether cause exists to modify the permit to incorporate a pollutant minimization program per 6 NYCRR 750-1.14(f).

The DEC will consider this information and progress made to track down and reduce or eliminate the source of the identified pollutants in determining if a permit modification is needed.

### Schedule of Additional Submittals

A schedule of additional submittals has been included for the following ([Appendix Link](#)):

- Mercury Minimization Program Annual Status Report (maintained onsite)
- Best Management Practices (BMP) plan
- Organics short-term monitoring program
- Emerging contaminant short-term monitoring program ([See above](#))
- Water Treatment Chemical Annual Report – An annual usage report is required in the SPDES permit
- Short-term high-intensity monitoring program – Total Dissolved Solids ([See Pollutant Summary Table below](#))

## OUTFALL AND RECEIVING WATER SUMMARY TABLE

All outfalls in the permit are internal to outfalls owned by Onsemi (NY0005096).

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l) <sup>3</sup>	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
04A	41° 32' 33" N	73° 49' 8" W	Internal to Onsemi Outfall 004, to Trib. to Gildersleeve Brook	C	H-95-9-A PWL: 1304-0010	13/04	309	-	-	-	0.173	1:1	1:1	1:1
04B	41° 32' 33" N	73° 49' 8" W	Internal to Onsemi Outfall 004, to Trib. to Gildersleeve Brook	C	H-95-9-A PWL: 1304-0010	13/04	309	-	-	-	0.042	1:1	1:1	1:1
28A	41° 32' 13" N	73° 49' 21" W	Internal to Onsemi Outfall 028, to Trib. to Gildersleeve Brook	C	H-95-9-A PWL: 1304-0010	13/04	309	-	-	-	0.274	1:1	1:1	1:1
43A	43° 32' 23" N	73° 49' 47" W	Internal to Onsemi Outfall 043, to Gildersleeve Brook	C(T)	H-95-9 PWL: 1304-0010	13/04	309	-	-	-	0.101	1.1 : 1	1.2 : 1	1.2 : 1

<sup>3</sup> The flow from Onsemi (NY0005096) dominates the natural flow of the receiving water, therefore, the hardness from the Onsemi discharge was used.

## POLLUTANT SUMMARY TABLE

### Outfall 04A

Outfall #	Description of Wastewater: Treated contaminated groundwater															
	Type of Treatment: UV Oxidation and carbon adsorption															
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality <sup>4</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
<b>General Notes:</b> Existing discharge data was obtained from the application provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent water quality standard.																
Sample data was provided in the application for the list of conventional pollutants. Estimates were provided in the IBM SPDES NY-2C application for priority pollutants, toxic pollutants and hazardous substances.																
Flow Rate	MGD	Monthly Avg	-	0.173 Average	-	0.31	Design Flow	Narrative: No alterations that will impair the waters for their best usages.				703.2	-	<b>Monitor</b>		
	MGD	Daily Max	-	-	-	-	-					-	<b>Monitor</b>			
Flow will be monitored for informational purposes and to calculate pollutant loadings in accordance with 6NYCRR 750-1.13(b).																
pH	SU	Minimum	-	6.0	36	6.0	TOGS 1.2.1	-	-	6.5 – 8.5	Range	<b>6.5 - 8.5</b>	703.3	-	WQBEL	
		Maximum	-	8.0		9.0										
Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Given that adequate dilution is not available, an effluent limitation equal to the WQS is appropriate.																
Total Suspended Solids (TSS)	mg/L	Monthly Avg	-	ND	1	<b>20</b>	TOGS 1.2.1	X	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				703.2	-	TBEL	
									DEC has not established a numeric interpretation of the narrative WQS. TOGS 1.2.1 Attachment C provides a TBEL of 20 mg/L where filtration is used.							
Total Dissolved Solids (TDS)	mg/L	Daily Max	-	850	1	-	-	X	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/L.				500	703.3	-	<b>STHIM</b>
									Consistent with TOGS 1.2.1 Section I.E.1.b, short-term high intensity monitoring has been added to the permit and schedule of submittals to obtain sufficient data to determine if any additional action is required for this parameter.							
Total Mercury	ng/L	Daily Max	-	< 0.5	1	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10	
																See <a href="#">Mercury section of this factsheet</a> .

<sup>4</sup> Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Outfall #	Description of Wastewater: Treated contaminated groundwater														
	Type of Treatment: UV Oxidation and carbon adsorption														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>4</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
1,1,2-trichloro-1,2,2-trifluoroethane (Freon TF)	µg/L	Monthly Average	-	< 10	Estimate	-	-	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	No Limitation
	1,1,2-trichloro-1,2,2-trifluoroethane was included in the SPDES NY-2C application with estimated concentration information. DEC has not established a numeric interpretation of the narrative WQS and no TBEL exists for discharge of 1,1,2-trichloro-1,2,2-trifluoroethane to Class C receiving waters, therefore no limit will be applied.														
1,2-dichloro-1,1,2-trifluoroethane (Freon 123a)	µg/L	Monthly Average	-	< 10	Estimate	-	-	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	No Limitation
	1,2-dichloro-1,1,2-trifluoroethane was included in the SPDES NY-2C application with estimated concentration information. DEC has not established a numeric interpretation of the narrative WQS and no TBEL exists for discharge of 1,2-dichloro-1,1,2-trifluoroethane to Class C receiving waters, therefore no limit will be applied.														
Cis-1,2-dichloroethylene	µg	Daily Max	10	< 10	Estimate	10	TOGS 1.2.1	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL
	Cis-1,2-dichloroethylene is currently a permitted pollutant in Onsemi Outfall 004 and identified in the SPDES NY-2C application as a potential pollutant, with an estimated concentration of < 10 µg/L. DEC has not established a numeric interpretation of the narrative WQS. A TBEL equal to the existing permit limit in the Onsemi permit for Outfall 004 exists, therefore, the existing limit is continued in this permit.														
Tetrachloroethylene	µg/L	Daily Max	10	< 10	Estimate	10	TOGS 1.2.1	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL
	µg/L	Monthly Average	-	-	-	-	-	-	-	1.0 GV	H(FC)	1.0	TOGS 1.1.1	-	WQBEL
Tetrachloroethylene is identified as a potential pollutant in the SPDES NY-2C application. The permit includes a daily maximum TBEL consistent with TOGS 1.2.1 Attachment C, which is also equal to the limit in the existing Onsemi permit for outfall 004. DEC has not established a numeric interpretation of the narrative WQS; however, the permit includes the guidance value as the monthly average.															
Trichloroethylene	µg/L	Daily Max	10	< 10	Estimate	10	TOGS 1.2.1	-	-	40	H(FC)	40	703.5	-	TBEL
	Trichloroethylene is currently a permitted pollutant in Onsemi Outfall 004 and identified as a potential pollutant in the SPDES NY-2C application. The TBEL equal to the existing permit limit in the Onsemi permit for Outfall 004 and is more protective than the WQBEL; therefore, the TBEL is applied as the limit in this permit.														

Outfall #	Description of Wastewater: Treated contaminated groundwater														
	Type of Treatment: UV Oxidation and carbon adsorption														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>4</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Vinyl chloride	µg/L	Daily Max	10	< 10	Estimate	<b>10</b>	TOGS 1.2.1	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL
Vinyl chloride is currently a permitted pollutant in Onsemi Outfall 004, and the source of this pollutant is from the GTF for outfall 04A of this permit. DEC has not established a numeric interpretation of the narrative WQS. There is a TBEL in TOGS 1.2.1 Attachment C, which is equal to the existing permit limit in the Onsemi permit for Outfall 004. The TBEL is continued as the limit in this permit.															

**Outfall 04B**

Outfall #	Description of Wastewater: Treated contaminated groundwater														
	Type of Treatment: Air stripping and carbon adsorption														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
<b>Notes:</b> Existing discharge data was obtained from the application provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent water quality standard.															
Sample data was provided in the application for the list of conventional pollutants. Estimates were provided in the IBM SPDES NY-2C application for priority pollutants, toxic pollutants and hazardous substances.															
Flow Rate	MGD	Monthly Avg	-	0.042 Average	-	0.094	Design Flow	Narrative: No alterations that will impair the waters for their best usages.				703.2	-	<b>Monitor</b>	
	MGD	Daily Max	-	-	-	-	-					-	<b>Monitor</b>		
Flow will continue to be monitored for informational purposes and to calculate pollutant loadings in accordance with 6NYCRR 750-1.13(b).															
pH	SU	Minimum	-	7.2	34	6.0	TOGS 1.2.1	-	-	6.5 – 8.5	Range	<b>6.5 - 8.5</b>	703.3	-	ISEL
		Maximum	-	7.9		9.0									
Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Given that adequate dilution is not available, an effluent limitation equal to the WQS is appropriate.															

<sup>5</sup> Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Outfall #	Description of Wastewater: Treated contaminated groundwater														
	Type of Treatment: Air stripping and carbon adsorption														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Total Suspended Solids (TSS)	mg/L	Monthly Avg	-	1.6	1	20	TOGS 1.2.1	X	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL
	DEC has not established a numeric interpretation of the narrative WQS. TOGS 1.2.1 Attachment C provides a TBEL of 20 mg/L where filtration is used.														
Total Dissolved Solids (TDS)	mg/L	Monthly Avg	-	820	1	-	-	X	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/L.		500	703.3	-	STHIM	
	In accordance with TOGS 1.2.1 Section I.E.1.b, short-term high intensity monitoring has been added to the permit and schedule of submittals to obtain sufficient data to determine if any additional action is required for this parameter.														
Total Mercury	ng/L	Daily Max	-	< 0.5	1	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10
	See <a href="#">Mercury section of this factsheet</a> .														
1,1,2-trichloro-1,2,2-trifluoroethane (Freon TF)	µg/L	Monthly Average	-	< 10	Estimate	-	-	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	No Limitation
	1,1,2-trichloro-1,2,2-trifluoroethane was included in the SPDES NY-2C application with estimated concentration information. DEC has not established a numeric interpretation of the narrative WQS and no TBEL exists for discharge of 1,1,2-trichloro-1,2,2-trifluoroethane to Class C receiving waters, therefore no limit will be applied.														
Cis-1,2-dichloroethylene	µg/L	Daily Max	10	< 10	Estimate	10	TOGS 1.2.1	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL
	Cis-1,2-dichloroethylene is currently a permitted pollutant in Onsemi Outfall 004 and identified in the SPDES NY-2C application as a potential pollutant, with an estimated concentration of < 10 µg/L. DEC has not established a numeric interpretation of the narrative WQS; however, there is a TBEL equal to the existing permit limit in the Onsemi permit for Outfall 004. The existing limit is continued in this permit.														
Tetrachloroethylene	µg/L	Daily Max	10	< 10	Estimate	10	TOGS 1.2.1	-	-	-	-	-	-	-	TBEL
	µg/L	Monthly Average	-	-	-	-	-	-	-	1.0 GV	H(FC)	1.0	TOGS 1.1.1	-	WQBEL
Tetrachloroethylene is identified as a potential pollutant in the SPDES NY-2C application. The permit includes a daily maximum TBEL consistent with TOGS 1.2.1 Attachment C, which is also equal to the limit in the existing Onsemi permit for outfall 004. There is no daily maximum WQS for this parameter; however the permit includes the guidance value as the monthly average.															

Outfall #	04B	Description of Wastewater: Treated contaminated groundwater													
		Type of Treatment: Air stripping and carbon adsorption													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Trichloroethylene	µg/L	Daily Max	10	< 10	Estimate	<b>10</b>	TOGS 1.2.1	-	-	40	H(FC)	-	703.5	-	TBEL
Trichloroethylene is currently a permitted pollutant in Onsemi Outfall 004 and identified as a potential pollutant in the SPDES NY-2C application. The TBEL equal to the existing permit limit in the Onsemi permit for Outfall 004 and is more protective than the WQBEL; therefore, the TBEL is applied as the limit in this permit.															

### Outfall 28A

Outfall #	28A	Description of Wastewater: Treated contaminated groundwater														
		Type of Treatment: UV Oxidation and carbon adsorption														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
<p><b>Notes:</b> Existing discharge data was obtained from the application provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent water quality standard.</p> <p>Sample data was provided in the application for the list of conventional pollutants. Estimates were provided in the IBM SPDES NY-2C application for priority pollutants, toxic pollutants and hazardous substances.</p>																
Flow Rate	MGD	Monthly Avg	-	0.274 Average	-	1.022	Design Flow	Narrative: No alterations that will impair the waters for their best usages.						703.2	-	<b>Monitor</b>
	MGD	Daily Max	-	-	-	-	-							-	-	<b>Monitor</b>
Flow will continue to be monitored for informational purposes and to calculate pollutant loadings in accordance with 6NYCRR 750-1.13(b).																
pH	SU	Minimum	-	6.6	36	6.0	TOGS 1.2.1	-	-	6.5 – 8.5	Range	<b>6.5 - 8.5</b>	703.3	-	ISEL	
		Maximum	-	8.0		9.0										
Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Given that adequate dilution is not available, an effluent limitation equal to the WQS is appropriate.																

<sup>6</sup> Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Outfall #	28A	Description of Wastewater: Treated contaminated groundwater													
		Type of Treatment: UV Oxidation and carbon adsorption													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Total Suspended Solids (TSS)	mg/L	Monthly Avg	-	13	1	20	TOGS 1.2.1	X	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL	
	DEC has not established a numeric interpretation of the narrative WQS. TOGS 1.2.1 Attachment C provides a TBEL of 20 mg/L where filtration is used.														
Total Dissolved Solids (TDS)	mg/L	Monthly Avg	-	670	1	-	-	X	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/L.		500	703.3	-	STHIM	
	In accordance with TOGS 1.2.1 Section I.E.1.b, short-term high intensity monitoring has been added to the permit and schedule of submittals to obtain sufficient data to determine if any additional action is required for this parameter.														
Total Mercury	ng/L	Daily Max	-	< 0.5	1	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10
	See <a href="#">Mercury section of this factsheet</a> .														
1,1,2-trichloro-1,2,2-trifluoroethane (Freon TF)	µg/L	Monthly Average	-	< 10	Estimate	-	-	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)			-	No Limitation	
	1,1,2-trichloro-1,2,2-trifluoroethane was included in the SPDES NY-2C application with estimated concentration information. DEC has not established a numeric interpretation of the narrative WQS and no TBEL exists for discharge of 1,1,2-trichloro-1,2,2-trifluoroethane to Class C receiving waters, therefore no limit will be applied.														
1,2-dichloro-1,1,2-trifluoroethane (Freon 123a)	µg/L	Monthly Average	-	< 10	Estimate	-	-	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)			-	No Limitation	
	1,2-dichloro-1,1,2-trifluoroethane was included in the SPDES NY-2C application with estimated concentration information. DEC has not established a numeric interpretation of the narrative WQS and no TBEL exists for discharge of 1,2-dichloro-1,1,2-trifluoroethane to Class C receiving waters, therefore no limit will be applied.														
Cis-1,2-dichloroethylene	µg/L	Daily Max	-	< 10	Estimate	10	TOGS 1.2.1	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)			-	TBEL	
	Cis-1,2-dichloroethylene is currently a permitted pollutant in Onsemi Outfall 004 and identified in the SPDES NY-2C application as a potential pollutant, with an estimated concentration of < 10 µg/L. DEC has not established a numeric interpretation of the narrative WQS; however, there is a TBEL equal to the existing permit limit in the Onsemi permit for Outfall 004. The existing limit is continued in this permit.														

Permittee: International Business Machines Corp.  
 Facility: Former IBM East Fishkill Remediation  
 SPDES Number: NY0281646  
 USEPA Non-Major/Class 01 Industrial

Date: March 3, 2026  
 Permit Writer: Erik Posner  
 Water Quality Reviewer: Erik Posner  
 Full Technical Review

Outfall #	Description of Wastewater: Treated contaminated groundwater														
	Type of Treatment: UV Oxidation and carbon adsorption														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Tetrachloroethylene	µg/L	Daily Max	-	< 10	Estimate	<b>10</b>	TOGS 1.2.1	-	-	-	-	-	-	-	TBEL
	µg/L	Monthly Average	-	-	-	-	-	-	-	1.0 GV	H(FC)	<b>1.0</b>	TOGS 1.1.1	-	WQBEL
Tetrachloroethylene is identified as a potential pollutant in the SPDES NY-2C application. The permit includes a daily maximum TBEL consistent with TOGS 1.2.1 Attachment C, which is also equal to the limit in the existing Onsemi permit for outfall 004. There is no daily maximum WQS for this parameter; however the permit includes the guidance value as the monthly average.															
Trichloroethylene	µg/L	Daily Max	10	< 10	Estimate	<b>10</b>	TOGS 1.2.1	-	-	40	H(FC)		703.5	-	TBEL
	Trichloroethylene is currently a permitted pollutant in Onsemi Outfall 004 and identified as a potential pollutant in the SPDES NY-2C application. The TBEL equal to the existing permit limit in the Onsemi permit for Outfall 004 and is more protective than the WQBEL; therefore, the TBEL is applied as the limit in this permit.														
Vinyl chloride	µg/L	Daily Max	10	< 10	Estimate	<b>10</b>	TOGS 1.2.1	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL
	Vinyl chloride is currently a permitted pollutant in Onsemi Outfall 004, and the source of this pollutant is from the GTF for outfall 04A of this permit. DEC has not established a numeric interpretation of the narrative WQS. There is a TBEL in TOGS 1.2.1 Attachment C, which is equal to the existing permit limit in the Onsemi permit for Outfall 004. The TBEL is continued as the limit in this permit.														

Outfall 43A

Outfall #	43A	Description of Wastewater: Treated contaminated groundwater													
		Type of Treatment: Carbon adsorption													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>7</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
<p><b>Notes:</b> Existing discharge data was obtained from the application provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent water quality standard.</p> <p>Sample data was provided in the application for the list of conventional pollutants. Estimates were provided in the IBM SPDES NY-2C application for priority pollutants, toxic pollutants and hazardous substances.</p>															
Flow Rate	MGD	Monthly Avg	-	0.101 Average	-	0.72	Design Flow	Narrative: No alterations that will impair the waters for their best usages.				703.2	-	Monitor	
	MGD	Daily Max	-	-	-	-	-					-	Monitor		
Flow will continue to be monitored for informational purposes and to calculate pollutant loadings in accordance with 6NYCRR 750-1.13(b).															
pH	SU	Minimum	-	6.8	36	6.0	TOGS 1.2.1	-	-	6.5 – 8.5	Range	6.5 - 8.5	703.3	-	WQBEL
		Maximum	-	7.9		9.0									
Consistent with 6 NYCRR 703.3 and given the available dilution, the effluent limitation equal to the WQS will continue to be applied.															
Total Suspended Solids (TSS)	mg/L	Daily Max	-	-	-	20	TOGS 1.2.1	X	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)			-	TBEL	
										DEC has not established a numeric interpretation of the narrative WQS. TOGS 1.2.1 Attachment C provides a TBEL of 20 mg/L where filtration is used.					
Total Dissolved Solids (TDS)	mg/L	Daily Max	-	670	1	-	-	X	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/L.			576	703.3	-	No Limitation
									Short-term high intensity monitoring has been added to the permit and schedule of submittals to obtain sufficient data to determine is any additional action is required for this parameter.						
Total Mercury	ng/L	Daily Max	-	< 0.5	1	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10

<sup>7</sup> Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Outfall #	Description of Wastewater: Treated contaminated groundwater														
	Type of Treatment: Carbon adsorption														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>7</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
1,1,2-trichloro-1,2,2-trifluoroethane (Freon TF)	µg/L	Monthly Average	-	< 10	Estimate	-	-	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	<b>No Limitation</b>
	1,1,2-trichloro-1,2,2-trifluoroethane was included in the SPDES NY-2C application with estimated concentration information. DEC has not established a numeric interpretation of the narrative WQS and no TBEL exists for discharge of 1,1,2-trichloro-1,2,2-trifluoroethane to Class C receiving waters, therefore no limit will be applied.														
Cis-1,2-dichloroethylene	µg/L	Daily Max	-	< 10	0	<b>10</b>	TOGS 1.2.1	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)				-	TBEL
	Cis-1,2-dichloroethylene is identified as a potential pollutant from outfall 43A in the SPDES application with an estimated concentration of < 10 µg/L. DEC has not established a numeric interpretation of the narrative WQS; however, a TBEL exists and will be applied in the draft permit.														
Tetrachloroethylene	µg/L	Daily Max	10	< 10	Estimate	<b>10</b>	TOGS 1.2.1	-	-	-	-	-	-	-	TBEL
	µg/L	Monthly Average	-	-	-	-	-	-	-	1.0 GV	H(FC)	<b>1.0</b>	TOGS 1.1.1	-	WQBEL
Tetrachloroethylene is identified as a potential pollutant in the SPDES NY-2C application. The permit includes a daily maximum TBEL consistent with TOGS 1.2.1 Attachment C, which is also equal to the limit in the existing Onsemi permit for outfall 004. There is no daily maximum WQS for this parameter; however, the permit includes the guidance value as the monthly average.															
Trichloroethylene	µg/L	Daily Max	-	< 10	0	<b>10</b>	TOGS 1.2.1	-	-	40 GV	H(FC)	46	TOGS 1.1.1	-	TBEL
	Trichloroethylene is identified as a potential pollutant from outfall 43A in the SPDES application with an estimated concentration of < 10 µg/L. The TBEL is lower than the WQBEL; therefore, the TBEL will be applied as the limit in this permit.														

## Appendix: Regulatory and Technical Basis of Permit Authorizations

The Appendix is meant to supplement the fact sheet for multiple types of SPDES permits. Portions of this Appendix may not be applicable to this specific permit.

### Regulatory References

The provisions of the permit are based largely upon 40 CFR 122 subpart C and 6 NYCRR Part 750 and include monitoring, recording, reporting, and compliance requirements, as well as general conditions applicable to all SPDES permits. Below are the most common citations for the requirements included in SPDES permits:

- Clean Water Act (CWA) 33 section USC 1251 to 1387
- Environmental Conservation Law (ECL) Articles 17 and 70
- Federal Regulations
  - 40 CFR, Chapter I, subchapters D, N, and O
- State environmental regulations
  - 6 NYCRR Part 621
  - 6 NYCRR Part 750
  - 6 NYCRR Parts 700 - 704 – Best use and other requirements applicable to water classes
  - 6 NYCRR Parts 800 – 941 - Classification of individual surface waters
- NYSDEC water program policy, referred to as Technical and Operational Guidance Series (TOGS)
- USEPA Office of Water Technical Support Document for Water Quality-based Toxics Control, March 1991, Appendix E

The following is a quick guide to the references used within the fact sheet:

SPDES Permit Requirements	Regulatory Reference
Anti-backsliding	6 NYCRR 750-1.10(c)
Best Management Practices (BMPS) for CSOs	6 NYCRR 750-2.8(a)(2)
Environmental Benefits Permit Strategy (EBPS)	6 NYCRR 750-1.18, NYS ECL 17-0817(4), TOGS 1.2.2 (revised January 25,2012)
Exceptions for Type I SSO Outfalls (bypass)	6 NYCRR 750-2.8(b)(2), 40 CFR 122.41
Mercury Multiple Discharge Variance	Division of Water Program Policy 1.3.10 (DOW 1.3.10)
Mixing Zone and Critical Water Information	TOGS 1.3.1 & Amendments
PCB Minimization Program	40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1
Pollutant Minimization Program (PMP)	6 NYCRR 750-1.13(a), 750-1.14(f), TOGS 1.2.1
Schedules of Compliance	6 NYCRR 750-1.14
Sewage Pollution Right to Know (SPRTK)	NYS ECL 17-0826-a, 6 NYCRR 750-2.7
State Administrative Procedure Act (SAPA)	State Administrative Procedure Act Section 401(2), 6 NYCRR 621.11(l)
State Environmental Quality Review (SEQR)	6 NYCRR Part 617
USEPA Effluent Limitation Guidelines (ELGs)	40 CFR Parts 405-471
USEPA National CSO Policy	33 USC Section 1342(q)
Whole Effluent Toxicity (WET) Testing	TOGS 1.3.2
General Provisions of a SPDES Permit Department Request for Additional Information	NYCRR 750-2.1(i)

### Outfall and Receiving Water Information

#### Impaired Waters

The [NYS 303\(d\) List of Impaired/TMDL Waters](#) identifies waters where specific best usages are not fully supported. The state must consider the development of a Total Maximum Daily Load (TMDL) or other strategy to reduce the input of the specific pollutant(s) that restrict waterbody uses, in order to restore and protect such uses. SPDES permits must include effluent limitations necessary to implement a waste load allocation (WLA) of an EPA-approved TMDL (6 NYCRR 750-1.11(a)(5)(ii)), if applicable. In accordance with 6 NYCRR 750-1.13(a), permittees discharging to waters which are on the list but do not yet have a TMDL developed may be required to perform additional monitoring for the parameters causing the impairment. Accurate monitoring data is needed to determine the existing capabilities of the wastewater treatment plants and to assure that WLAs are allocated equitably.

## Interstate Water Pollution Control Agencies

Some POTWs may be subject to regulations of interstate basin/compact agencies including: Interstate Sanitation Commission (ISC), International Joint Commission (IJC), Delaware River Basin Commission (DRBC), Ohio River Valley Water Sanitation Commission (ORSANCO), and the Susquehanna River Basin Commission (SRBC). Generally, basin commission requirements focus principally on water quality and not treatment technology. However, interstate/compact agency regulations for the ISC, IJC, DRBC and NYC Watershed contain explicit effluent limits which must be addressed during permit drafting. 6 NYCRR 750-2.1(d) requires SPDES permits for discharges that originate within the jurisdiction of an interstate water pollution control agency, to include any applicable effluent standards or water quality standards (WQS) promulgated by that interstate agency.

## Existing Effluent Quality

The existing effluent quality is determined from a statistical evaluation of effluent data in accordance with TOGS 1.2.1 and the USEPA Office of Water, Technical Support Document for Water Quality-based Toxics Control, March 1991, Appendix E (TSD). The existing effluent quality is equal to the 95<sup>th</sup> (monthly average) and 99<sup>th</sup> (daily maximum) percentiles of the lognormal distribution of existing effluent data. When there are greater than three non-detects, a delta-lognormal distribution is assumed, and delta-lognormal calculations are used to determine the monthly average and daily maximum pollutant concentrations. Statistical calculations are not performed for parameters where there are less than ten data points. If additional data is needed, a monitoring requirement may be specified either through routine monitoring or a short-term high intensity monitoring program. The [Pollutant Summary Table](#) identifies the number of sample data points available.

## Permit Requirements

### Basis for Effluent Limitations

Sections 101, 301, 304, 308, 401, 402, and 405 of the CWA and Titles 5, 7, and 8 of Article 17 ECL, as well as their implementing federal and state regulations, and related guidance, provide the basis for the effluent limitations and other conditions in the permit.

When conducting a full technical review of an existing permit, the previous effluent limitations form the basis for the next permit. Existing effluent quality is evaluated against the existing effluent limitations to determine if these should be continued, revised, or deleted. Generally, existing limitations are continued unless there are changed conditions at the facility, the facility demonstrates an ability to meet more stringent limitations, and/or in response to updated regulatory requirements. Pollutant monitoring data is also reviewed to determine the presence of additional contaminants that should be included in the permit based on a reasonable potential analysis to cause or contribute to a water quality standards violation.

### Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(*l*) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this fact sheet. Consistent with current case law<sup>8</sup> and USEPA interpretation<sup>9</sup> anti-backsliding requirements do not apply should a revision to the final effluent limitation take effect before the scheduled date of compliance for that final effluent limitation.

### Antidegradation Policy

New York State implements the antidegradation portion of the CWA based upon two documents: (1) Organization and Delegation Memorandum #85-40, "Water Quality Antidegradation Policy" (September 9, 1985); and, (2) TOGS 1.3.9, "Implementation of the NYSDEC Antidegradation Policy – Great Lakes Basin (Supplement to Antidegradation Policy dated September 9, 1985) (undated)." The permit for the facility contains effluent limitations which ensure that the existing best usage of the receiving waters will be maintained. To further support

<sup>8</sup> American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

<sup>9</sup> U.S. EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; 65 Fed. Reg. 31682, 31704 (May 18, 2000); Proposed Water Quality Guidance for the Great Lakes System, 58 Fed. Reg. 20802, 20837 & 20981 (April 16, 1993)

the antidegradation policy, SPDES applications have been reviewed in accordance with the State Environmental Quality Review Act (SEQR) as prescribed by 6 NYCRR Part 617.

## Effluent Limitations

In developing a permit, the Department determines the technology-based effluent limitations (TBELs) and then evaluates the water quality expected to result from technology controls to determine if any exceedances of water quality criteria in the receiving water might result. If there is a reasonable potential for exceedances of water quality criteria to occur, water quality-based effluent limitations (WQBELs) are developed. A WQBEL is designed to ensure that the water quality standards of receiving waters are met. In general, the CWA requires that the effluent limitations for a particular pollutant are the more stringent of either the TBEL or WQBEL.

### *Technology-based Effluent Limitations (TBELs) for Industrial Facilities*

A TBEL requires a minimum level of treatment for industrial point sources based on currently available treatment technologies and/or Best Management Practices (BMPs). CWA sections 301(b) and 402, ECL sections 17-0509, 17-0809 and 17-0811, and 6 NYCRR 750-1.11 require technology-based controls on effluents. TBELs are set based upon an evaluation of New Source Performance Standards (NSPS), Best Available Technology Economically Achievable (BAT), Best Conventional Pollutant Control Technology (BCT), Best Practicable Technology Currently Available (BPT), and/or Best Professional Judgment (BPJ).

### *USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility*

In many cases, BPT, BCT, BAT and NSPS limitations are based on effluent guidelines developed by USEPA for specific industries, as promulgated under 40 CFR Parts 405-471. Applicable guidelines, pollutants regulated by these guidelines, and the effluent limitation derivation for facilities subject to these guidelines is in the [USEPA Effluent Limitation Guideline Calculations Table](#).

### *Best Professional Judgement (BPJ)*

For substances that are not explicitly limited by regulations, the permit writer is authorized to use BPJ in developing TBELs. Consistent with section 402(a)(1) of the CWA, and NYS ECL section 17-0811, the Department is authorized to issue a permit containing "any further limitations necessary to ensure compliance with water quality standards adopted pursuant to state law". BPJ limitations may be set on a case-by-case basis using any reasonable method that takes into consideration the criteria set forth in 40 CFR 125.3. Applicable state regulations include 6 NYCRR 750-1.11. The BPJ limitation considers the existing technology present at the facility, the statistically calculated existing effluent quality for that parameter, and any unique or site-specific factors relating to the facility. Technology limitations generally achievable for various treatment technologies are included in TOGS 1.2.1, Attachment C. These limitations may be used for the listed parameters when the technology employed at the facility is listed.

### *Water Quality-Based Effluent Limitations (WQBELs)*

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Additionally, 6 NYCRR Part 701.1 prohibits the discharge of pollutants that will cause impairment of the best usages of the receiving water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met at the point of discharge and in downstream waters and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6. The Department considers a mixing zone analysis, critical flows, and reasonable potential analysis when developing a WQBEL.

### Mixing Zone Analyses

In accordance with TOGS 1.3.1., the Department may perform additional analysis of the mixing condition between the effluent and the receiving waterbody. Mixing zone analyses using plume dispersion modeling are conducted in accordance with the following:

“EPA Technical Support Document for Water Quality-Based Toxics Control” (March 1991); EPA Region VIII’s “Mixing Zones and Dilution Policy” (December 1994); NYSDEC TOGS 1.3.1, “Total Maximum Daily Loads and Water Quality-Based Effluent Limitations” (July 1996); “CORMIX v11.0” (2019).

### Critical Flows

In accordance with TOGS 1.2.1 and 1.3.1, WQBELs are developed using dilution ratios that relate the critical low flow condition of the receiving waterbody to the critical effluent flow. The critical low flow condition used in the dilution ratio will be different depending on whether the limitations are for aquatic or human health protection. For chronic aquatic protection, the critical low flow condition of the waterbody is typically represented by the 7Q10 flow and is calculated as the lowest average flow over a 7-day consecutive period within 10 years. For acute aquatic protection, the critical low flow condition is typically represented by the 1Q10 and is calculated as the lowest 1-day flow within 10 years. However, NYSDEC considers using 50% of the 7Q10 to be equivalent to the 1Q10 flow. For the protection of human health, the critical low flow condition is typically represented by the 30Q10 flow and is calculated as the lowest average flow over a 30-day consecutive period within 10 years. However, NYSDEC considers using 1.2 x 7Q10 to be equivalent to the 30Q10. The 7Q10 or 30Q10 flow is used with the critical effluent flow to calculate the dilution ratio. The critical effluent flow can be the maximum daily flow reported on the permit application, the maximum of the monthly average flows from discharge monitoring reports for the past three years, or the facility design flow. When more than one applicable standard exists for aquatic or human health protection for a specific pollutant, a reasonable potential analysis is conducted for each applicable standard and corresponding critical flow to ensure effluent limitations are sufficiently stringent to ensure all applicable water quality standards are met as required by 40 CFR 122.44(d)(1)(i). For brevity, the pollutant summary table reports the results of the most conservative scenario.

### Reasonable Potential Analysis (RPA)

The Reasonable Potential Analysis (RPA) is a statistical estimation process, outlined in the 1991 USEPA Technical Support Document for Water Quality-based Toxics Control (TSD), Appendix E. This process uses existing effluent quality data and statistical variation methodology to project the maximum amounts of pollutants that could be discharged by the facility. This projected instream concentration (PIC) is calculated using the appropriate ratio and compared to the water quality standard (WQS). When the RPA process determines the WQS may be exceeded, a WQBEL is required. The procedure for developing WQBELs includes the following steps:

- 1) identify the pollutants present in the discharge(s) based upon existing data, sampling data collected by the permittee as part of the permit application or a short-term high intensity monitoring program, or data gathered by the Department;
- 2) identify water quality criteria applicable to these pollutants;
- 3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA’s Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,
- 4) calculate WQBELs (if necessary). Factors considered in calculating WQBELs include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources.

The Department uses modeling tools to estimate the expected concentrations of the pollutant in the receiving water and develop WQBELs. These tools were developed in part using the methodology referenced above. If the estimated concentration of the pollutant in the receiving

water is expected to exceed the ambient water quality standard or guidance value (i.e. numeric interpretation of a narrative water quality standard), then there is a reasonable potential that the discharge may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. If a TMDL is in place, the facility's WLA for that pollutant is applied as the WQBEL.

For carbonaceous and nitrogenous oxygen demanding pollutants, the Department uses a model which incorporates the Streeter-Phelps equation. The equation relates the decomposition of inorganic and organic materials along with oxygen reaeration rates to compute the downstream dissolved oxygen concentration for comparison to water quality standards.

The Division of Water has been using the TMDL approach in permit limit development for the control of toxic substances. Since the early 1980's, the loading capacity for specific pollutants has been determined for each drainage basin. Water quality-limiting segments and pollutants have been identified, TMDLs, wasteload allocations and load allocations have been developed, and permits with water quality-based effluent limits have been issued. In accordance with TOGS 1.3.1, the Division of Water implements a Toxics Reduction Strategy which is committed to the application of the TMDL process using numeric, pollutant-specific water quality standards through the Watershed Approach. The Watershed Approach accounts for the cumulative effect of multiple discharges of conservative toxic pollutants to ensure water quality standards are met in downstream segments.

#### *Whole Effluent Toxicity (WET) Testing:*

WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. TOGS 1.3.1 includes guidance for determining when aquatic toxicity testing should be included in SPDES permits. The authority to require toxicity testing is in 6NYCRR 702.9. TOGS 1.3.2 describes the procedures which should be followed when determining whether to include toxicity testing in a SPDES permit and how to implement a toxicity testing program. Per TOGS 1.3.2, WET testing may be required when any one of the following seven criteria are applicable:

1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
2. There are uncertainties in the development of TMDLs, WLAs, and WQBELs, caused by inadequate ambient and/or discharge data, high natural background concentrations of pollutants, available treatment technology, and other such factors.
3. There is the presence of substances for which WQBELs are below analytical detectability.
4. There is the possibility of complex synergistic or additive effects of chemicals, typically when the number of metals or organic compounds discharged by the permittee equals or exceeds five.
5. There are observed detrimental effects on the receiving water biota.
6. Previous WET testing indicated a problem.
7. POTWs which exceed a discharge of 1 MGD. Facilities of less than 1 MGD may be required to test, e.g., POTWs <1 MGD which are managing industrial pretreatment programs.

#### *Minimum Level of Detection*

Pursuant to 40 CFR 122.44(i)(1)(iv) and 6 NYCRR 750-2.5(d), SPDES permits must contain monitoring requirements using sufficiently sensitive test procedures approved under 40 CFR Part 136. A method is "sufficiently sensitive" when the method's minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant parameter; or the lowest ML of the analytical methods approved under 40 CFR Part 136. The ML represents the lowest level that can be measured within specified limitations of precision and accuracy during routine laboratory operations on most effluent matrices. When establishing effluent limitations for a specific parameter (based on technology or water quality requirements), it is possible that the calculated limitation will fall below the ML established by the approved analytical method(s). In these instances, the calculated limitation is included in the permit with a compliance level set equal to the ML of the most sensitive method.

## Monitoring Requirements

CWA section 308, 40 CFR 122.44(i), 6 NYCRR 750-1.13, and 750-2.5 require that monitoring be included in permits to determine compliance with effluent limitations. Additional effluent monitoring may also be required to gather data to determine if effluent limitations may be required. The permittee is responsible for conducting the monitoring and reporting results on Discharge Monitoring Reports (DMRs). The permit contains the monitoring requirements for the facility. Monitoring frequency is based on the minimum sampling necessary to adequately monitor the facility's performance and characterize the nature of the discharge of the monitored flow or pollutant. Variable effluent flows and pollutant levels may be required to be monitored at more frequent intervals than relatively constant effluent flow and pollutant levels (6 NYCRR 750-1.13). For industrial facilities, sampling frequency is based on guidance provided in TOGS 1.2.1. For municipal facilities, sampling frequency is based on guidance provided in TOGS 1.3.3.

## Other Conditions

### Mercury

The multiple discharge variance (MDV) for mercury was developed in accordance with 6 NYCRR 702.17(h) "to address widespread standard or guidance value attainment issues including the presence of a ubiquitous pollutant or naturally high levels of a pollutant in a watershed." The first MDV was issued in October 2010, and subsequently revised and reissued in 2015; each subsequent iteration of the MDV is designed to build off the previous version, to make reasonable progress towards the water quality standard (WQS) of 0.7 ng/L dissolved mercury. The MDV is necessary because human-caused conditions or sources of mercury prevent attainment of the WQS and cannot be remedied (i.e., mercury is ubiquitous in New York waters at levels above the WQS and compliance with a water quality-based effluent limitation (WQBEL) for mercury cannot be achieved with demonstrated effluent treatment technologies). The Department has determined that the MDV is consistent with the protection of public health, safety, and welfare. During the effective period of this MDV, any increased risks to human health are mitigated by fish consumption advisories issued periodically by the NYSDOH.

All surface water SPDES permittees are eligible for authorization by the MDV provided they meet the requirements specified in DOW 1.3.10.

### Schedules of Compliance

Schedules of compliance are included in accordance with 40 CFR Part 132 Attachment F, Procedure 9, 40 CFR 122.47 and 6 NYCRR 750-1.14. Schedules of compliance are intended to, in the shortest reasonable time, achieve compliance with applicable effluent standards and limitations, water quality standards, and other applicable requirements. Where the time for compliance is more than nine months, the schedule of compliance must include interim requirements and dates for their achievement. If the time necessary to complete the interim milestones is more than nine months, and not readily divisible into stages for completion, progress reports must be required.

### Schedule(s) of Additional Submittals

Schedules of Additional Submittals are used to summarize the deliverables required by the permit not identified in a separate Schedule of Compliance.

### Best Management Practices (BMP) for Industrial Facilities

BMP plans are authorized for inclusion in NPDES permits pursuant to Sections 304(e) and 402 (a)(1) of the Clean Water Act, and 6 NYCRR 750-1.14(f). The regulations pertaining to BMPs are promulgated under 40 CFR Part 125, Subpart K. These regulations specifically address surface water discharges.