State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	**4953**	NAICS Code:	**562212**	SPDES Number:	**NY020 2711**
Discharge Class (CL):	**01**			DEC Number:	**9-0658-00021**
Toxic Class (TX):	**T**			Effective Date (EDP):	**EDP**
Major-Sub Drainage Basin:	**01 - 05**			Expiration Date (ExDP):	**ExDP**
Water Index Number:	**E-41**	Item No.:	**839-28**	Modification Dates (EDPM):	**EDPM**
Compact Area:	**IJC**				

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:	**Dunkirk Landfill LLC**	Attention:	**George Streit**		
Street:	**106 Point Drive N**				
City:	**Dunkirk**	State:	**NY**	Zip Code:	**14048**
Email:	**George.Streit@nrg.com**	Phone:	**716-673-6347**		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL																
Name:	**Dunkirk Fly Ash Landfill**															
Address / Location:	**5141 Van Buren Road**											County:	**Chautauqua**			
City:	**Pomfret**						State:	**NY**				Zip Code:	**14048**			
Facility Location:		Latitude:	**42**	°	**26**	’	**34.9**	” N	& Longitude:	**79**	°	**23**	’	**46.8**	” W	
Primary Outfall No.:	**002**	Latitude:	**42**	°	**26**	’	**24.3**	” N	& Longitude:	**79**	°	**23**	’	**53.1**	” W	
Wastewater Description:	**Landfill Leachate**	Receiving Water:	**Van Buren Bay Creek**				NAICS:	**562212**	Class:	**C**		Standard:	**C**			

and the additional outfalls listed in this permit, 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:
BWP Permit Coordinator (permit.coordinator@dec.ny.gov)
BWP Permit Writer
RWE
RPA
EPA Region II (Region2_NPDES@epa.gov)

Permit Administrator:	
Address:	700 Delaware Avenue Buffalo, NY 14209
Signature	Date

SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
001	**Stormwater from future cells and soil stockpiles**	**221112**	**42** ° **26** ' **39** " N	**79** ° **24** ' **2.1** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
004	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **23** " N	**79** ° **23** ' **45** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
005	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **26** " N	**79** ° **23** ' **53** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
006	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **39** " N	**79** ° **24** ' **1.9** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
007	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **42** " N	**79** ° **23** ' **24** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
008	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **47** " N	**79** ° **23** ' **46** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
009	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **46** " N	**79** ° **23** ' **52** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
010	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **46** " N	**79** ° **24** ' **0.96** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
011	**Uncontaminated Stormwater**	**221112**	**42** ° **26** ' **46** " N	**79** ° **24** ' **1.9** " W
Receiving Water:	**Van Buren Bay Creek**		Class:	**C**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
012	**Treated Sanitary**	**221112**	**42** ° **26** ' **41** " N	**79** ° **24** ' **2.4** " W
Receiving Water:	**Groundwater**		Class:	**GA**

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 DEC.
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 DEC'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
001	Stormwater from future cell C and soil stockpiles	Van Buren Bay Creek	EDPM	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
								Location		
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	Monitor	GPD			Each Discharge	Estimate		X	
Flow	Daily Maximum	Monitor	GPD			Each Discharge	Estimate		X	
pH	Daily Minimum	6.5	SU			Monthly	Grab		X	3
	Daily Maximum	8.5	SU							3
Total Ammonia (as N) (June 1 – October 31)	Monthly Average	1.2	mg/L			Monthly	Grab		X	3
Total Ammonia (as N) (November 1 – May 31)	Monthly Average	1.8	mg/L			Monthly	Grab		X	3
Total Suspended Solids (TSS)	Daily Maximum	10.0	mg/L			Monthly	Grab		X	3
Total Aluminum	Daily Maximum	Monitor	mg/L			Monthly	Grab		X	3
Total Iron	Daily Maximum	0.3	mg/L			Monthly	Grab		X	3
Total Mercury	Daily Maximum	50	ng/L			Monthly	Grab		X	1

ACTION LEVEL PARAMETERS	Type	Action Level	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Total Nitrogen	Daily Maximum	6.0	mg/L			Quarterly	Grab		X	3, 4
Total Phosphorus	Daily Maximum	2.0	mg/L			Quarterly	Grab		X	3, 4

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
002	Landfill Leachate	Van Buren Bay Creek	EDPM	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
								Location		
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	Monitor	GPD			Each Discharge	Calculated		X	2
Flow	Daily Maximum	Monitor	GPD			Each Discharge	Calculated		X	2
pH	Daily Minimum	6.5	SU			Each Discharge	Grab		X	
	Daily Maximum	8.5	SU							
Temperature	Daily Maximum	Monitor	ºF			Each Discharge	Grab		X	
Total Suspended Solids (TSS)	Daily Maximum	10.0	mg/L			Each Discharge	24-hr. Comp.		X	
Oil & Grease	Daily Maximum	20	mg/L			Each Discharge	Grab		X	
Total Aluminum	Daily Maximum	1.0	mg/L			Each Discharge	24-hr. Comp.		X	
Total Arsenic	Daily Maximum	0.1	mg/L			Each Discharge	24-hr. Comp.		X	
Total Barium	Daily Maximum	10.0	mg/L			Each Discharge	24-hr. Comp.		X	
Total Chromium	Daily Maximum	0.13	mg/L			Each Discharge	24-hr. Comp.		X	
Total Iron (Net)	Daily Maximum	0.3	mg/L			Each Discharge	24-hr. Comp.		X	5
Total Manganese	Daily Maximum	3.0	mg/L			Each Discharge	24-hr. Comp.		X	
Total Mercury	Daily Maximum	50	ng/L			Each Discharge	Grab		X	1
Total Selenium	Daily Maximum	0.005	mg/L			Each Discharge	24-hr. Comp.		X	

WHOLE EFFLUENT TOXICITY (WET) TESTING		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
WET - Acute Invertebrate	See footnote			0.3	TUa	Quarterly	See footnote		X	6
WET - Acute Vertebrate	See footnote			0.3	TUa	Quarterly	See footnote		X	6
WET - Chronic Invertebrate	See footnote			1.0	TUc	Quarterly	See footnote		X	6
WET - Chronic Vertebrate	See footnote			1.0	TUc	Quarterly	See footnote		X	6

FOOTNOTES:

1. EPA Method 1631 is required for Total Mercury sampling.

2. Leachate flow shall be calculated using the rating curve developed for the discharge.

3. Stormwater Sampling
All stormwater sampling shall be in accordance with the New York State Department of Environmental Conservation SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity Permit Number GP-0-23-001, which states:

   A minimum of one grab sample must be taken from the *stormwater discharge associated with industrial activity* resulting from a storm event with at least 0.1 inch of precipitation (defined as a "measurable" event), providing the interval from the preceding measurable storm is at least 72 hours. The 72-hour storm interval is waived if the preceding measurable storm did not result in a stormwater *discharge* (e.g., a storm event in excess of 0.1 inches may not result in a stormwater *discharge* at some facilities), or if the *owner or operator* is able to document that less than a 72-hour interval is representative for local storm events during the sampling period. In the case of snowmelt, samples must be taken during the first 30 minutes (or as soon as practical, but not exceeding one hour) of the discharge at the outfall.

   The grab sample must be taken during the first 30 minutes (or as soon thereafter as practical, but not to exceed one [1] hour) of the *discharge*. If the sampled *discharge* commingles with non-stormwater water, the *owner or operator* must attempt to sample the stormwater *discharge* before it mixes.

4. Action Levels: If the action level is exceeded, the permittee must 1) inspect the facility for potential sources of stormwater contamination; 2) implement additional non-structural and/or structural BMPs to address any sources of contamination that are identified to prevent recurrence within the following timeframes: a. The implementation must be completed before the next anticipated storm event, if practicable, but not more than 12 weeks after discovery. b. If implementation will take longer than 12 weeks, the owner or operator must submit a proposed schedule for completion of the project and obtain a written approval from the Regional Water Manager; 3) revise the facility's SWPPP in accordance with Item 5. of Best Management Practices for Industrial Facilities; and 4) continue efforts to implement additional BMPs at the facility if corrective actions do not result in achieving satisfactory results of the action levels.

   The permit may also be reopened by the DEC for consideration of revised action levels or effluent limits. Action level monitoring results and the effectiveness of the actions taken shall be summarized and submitted with the monthly operating report [or DMR] data.

5. Single Intake Source Net Limits
The footnoted parameter is subject to net limits. Each time the outfall is monitored for Total Iron, the intake source water must also be monitored by collecting a grab sample for Total Iron at the discharge of the hydraulic basin. For Total Iron, the value reported on the corresponding Discharge Monitoring Report shall be the concentration in the outfall minus the intake concentration. If the source water is not monitored, the intake concentration shall be assumed to be zero. If the intake concentration is greater than the outfall concentration (resulting in a negative net value), the value reported on the Discharge Monitoring Report shall be zero.

6. **Whole Effluent Toxicity (WET) Testing:**
Testing Requirements – Chronic WET testing is required, but report both the acute and chronic results. Testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the DEC. The test species shall be Ceriodaphnia dubia (water flea - invertebrate) and Pimephales promelas (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24-hr composite samples with one renewal for Acute tests and three 24-hr composite samples with two renewals for Chronic tests). The appropriate dilution series should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test may be required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e., dilution ratio) is 1:1 for acute, and 1:1 for chronic.

   Monitoring Period - WET testing shall be performed quarterly (calendar quarters) during calendar years ending in **1** and **6**.

Reporting - Toxicity Units shall be calculated and reported on the DMR as follows: TUa = (100)/(48-hr LC50) [note that Acute data is generated by both Acute and Chronic testing] and TUc = (100)/(7-day NOEC) or (100)/(7-day IC25) when Chronic testing has been performed or TUc = (TUa) x (10) when only Acute testing has been performed and is used to predict Chronic test results, where the 48-hr LC50, 7-day NOEC and/or IC25 are all expressed in % effluent. This must be done, including the Chronic prediction from the Acute data, for both species unless otherwise directed. For Chronic results, report the most sensitive endpoint (i.e. survival, growth and/or reproduction) corresponding to the lowest 7-day NOEC or IC25 and resulting highest TUc. For Acute results, report a TUa of 0.3 if there is no statistically significant mortality in 100% effluent as compared to the control. Report a TUa of 1.0 if there is statistically significant mortality in 100% effluent as compared to the control, but insufficient mortality to generate a 48-hr LC50. Also, in the absence of a 48-hr LC50, use 1.0 TUa for the Chronic prediction from the Acute data, and report a TUc of 10.0.

The complete test report including all bench sheets, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period with your WET DMR and to the WET@dec.ny.gov email address. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48-hr LC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

WET Testing Action Level Exceedances - If an action level is exceeded then the DEC may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Identification/Reduction Evaluation (TI/RE) in accordance with DEC guidance. Enforceable WET limits may also apply. The permittee shall be notified in writing by their Regional DEC office of additional requirements. The written notification shall include the reason(s) why such testing, TI/RE and/or limits are required.

SPECIAL CONDITIONS

1. The Dunkirk Fly Ash Landfill is for disposal of solid waste material from the Dunkirk Power facility and other facilities approved by the NYSDEC. Approval shall be obtained from NYSDEC Division of Materials Management, in accordance with its Part 360 permit, prior to disposal of solid waste from other sources not previously approved. Region 9 Division of Water shall be copied on any such requests and approvals.
2. The permittee shall operate the disposal facility in accordance with the Part 360 Series, the Final Environmental Impact Statement, and the plans, specifications, and engineering report approved for this facility by the Division of Materials Management.
3. If the contents of the sedimentation pond are not within the specified effluent limits for discharge at Outfall 002, effluent must be collected and transferred to Dunkirk Power waste treatment facility (NY0002321).
4. A minimum of 24-hour detention shall be provided for all stormwater runoff less than or equal to the 10-year 24-hour storm.

STORMWATER POLLUTION PREVENTION REQUIREMENTS

Stormwater discharges at this facility cannot obtain coverage under the current Multi-Sector General Permit (MSGP) (GP-0-23-001). However, the permit includes select requirements consistent with the MSGP.

TOTAL AMMONIA MINIMIZATION PROGRAM for Industrial Facilities

1. General —The permittee shall develop, maintain, and implement a Total Ammonia Minimization Program (TAMP) for Outfall 001. A TAMP is required due to the presence of elevated Total Ammonia levels in this stormwater discharge. The elevated Ammonia levels can cause a contravention of water quality standards. The goal of the TAMP is to protect the downstream receiving waterbody by identifying sources of Total Ammonia and assessing the potential to reduce amounts discharged to the receiving water.

2. TAMP Elements — The TAMP plan shall be documented in narrative form and shall include any necessary plans, drawings, or maps. Other documents already prepared for the facility, such as a Best Management Practices Plan, may be used as part of the plan and may be incorporated by reference. At a minimum, the TAMP plan shall identify:

   a. Potential Sources of Total Ammonia within the Landfill Site – The permittee shall track down potential Total Ammonia sources within the drainage area of Outfall 001.

   b. Best Management Practices (BMPs) – The permittee shall identify and assess the feasibility of implementing actions that can reduce Total Ammonia in the discharge. These BMPs may include, but are not limited to, the following: implementing new housekeeping practices, etc. The permittee should also identify current BMPs.

   The initial TAMP plan shall be submitted to the Regional Water Engineer by **EDPM + 6 months.**

3. TAMP Modification — The TAMP plan shall be modified whenever: changes at the facility increase the potential for discharge of the pollutant or the Department identifies inadequacies in the TAMP plan.

4. Approvable Annual Report – The permittee shall submit an approvable annual report to the Regional Water Engineer by **January 28** of each year. This report shall summarize all pollutant monitoring data; for treatment systems, include a mass balance comparison of influent and effluent; a list of known or potential pollutant sources; all control measures implemented during the previous calendar year; monitoring, investigations, and control measures to be completed during the current calendar year.

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.

1. **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 DEC as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized DEC representatives upon request.

2. **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.

3. **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://dec.ny.gov/sites/default/files/2024-03/ny2cfillable.pdf) or that are required to be monitored for by the SPDES permit.

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

BMPs FOR INDUSTRIAL FACILITIES (continued)

5. **Stormwater Runoff from Areas Adjacent to Disposal Ponds or Landfills –** The permittee shall describe and implement measures that prevent or minimize contamination of stormwater runoff from areas adjacent to disposal ponds or landfills. The permittee must develop procedures to:
   a. Reduce ash residue which may be tracked on to access roads traveled by residue trucks or residue handling vehicles; and
   b. Reduce ash residue on exit roads leading into and out of residue handling areas. Procedures shall be provided to the NYSDEC upon request.

6. **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[1]. (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) 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.

7. **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 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, isolation, or B.A.T. treatment of wastewaters emanating from the segment.

[1] 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.

MERCURY MINIMIZATION PROGRAM (MMP) - Type III

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below, to reduce mercury effluent levels with the goal of achieving the WQBEL of 0.7 ng/L.

2. MMP Elements - The MMP must be a written document and must include any necessary drawings or maps of the facility and/or collection system. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP must include the following elements as described in detail below:

   a. Monitoring - Monitoring at the outfalls, influent, and other locations tributary to compliance points shall be performed using either USEPA Method 1631 or another sufficiently sensitive method, as approved under 40CFR Part 136[2]. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate. Monitoring must be coordinated so that the results can be effectively compared between locations.

      Minimum required monitoring is as follows:

      i. Plant Influent and Effluent – The permittee must collect samples at the location(s) and frequency as specified in the SPDES permit limitations table.

      ii. *Key Locations* and *Potential Mercury Sources* – The permittee must sample *key locations*, chosen to identify *potential mercury sources*, at least annually.

      iii. Decreased Monitoring Requirements - Facilities with EEQ at or below 12 ng/L are eligible for the following:

         1) Reduced requirements, through a permittee-initiated permit modification
            a) Conduct influent monitoring, sampling semi-annually, in lieu of monitoring within the collection system, such as at *key locations*; and
            b) Conduct effluent compliance sampling semi-annually.
         2) If a facility with reduced requirements reports discharges above 12 ng/L for two of four consecutive effluent samples, the DEC may undertake a Department-initiated modification to remove the allowance of reduced requirements.
         3) Under the decreased permit requirements, the facility must continue to conduct an annual status report, as applicable in accordance with 2.c of this MMP, to determine if any waste streams have changed.

      iv. Additional monitoring must be completed as required elsewhere in this permit (e.g., locations tributary to compliance points).

[2] Outfall monitoring must be conducted using the methods specified in Table 8 of *DOW 1.3.10.*

MERCURY MINIMIZATION PROGRAM (MMP) – Type III (Continued)

b. Control Strategy - The control strategy must contain the following minimum elements:
   i. Monitoring and Inventory/Inspections -
      1) Monitoring shall be performed as described in 2.a above. As mercury sources are found, the permittee must track down and minimize these sources.
      2) The permittee must inventory and/or inspect users of its system as necessary to support the MMP.
         a) *Potential mercury sources*
            1. The permittee must maintain an inventory of *potential mercury sources.*
            2. The permittee must inspect *potential mercury sources* once every five years. Alternatively, the permittee may develop and implement an outreach program[3] which informs users of their responsibilities as *potential mercury sources.* The permittee must conduct the outreach program at least once every five years. The outreach program should be supported by a subset of site inspections.
            3. A file shall be maintained containing documentation demonstrating compliance with 2.b.i.2)a) above. This file shall be available for review by DEC representatives and copies shall be provided upon request.
   ii. 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.
   iii. Bulk Chemical Evaluation – For chemicals, used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain a manufacturer's certificate of analysis, a chemical analysis performed by a certified laboratory, and/or a notarized affidavit which describes the substances' mercury concentration and the detection limit achieved. If possible, the permittee must only use bulk chemicals utilized in the wastewater treatment process which contain <10 ppb mercury.

c. Status Report - An annual status report must be developed and maintained on site, in accordance with the Schedule of Additional Submittals, summarizing:
   i. All MMP monitoring results for the previous reporting period;
   ii. A list of known and *potential mercury sources*
      1) If the permittee meets the criteria for MMP Type IV, the permittee must notify the DEC for a permittee-initiated modification;
   iii. All actions undertaken, pursuant to the control strategy, during the previous reporting period;
   iv. Actions planned, pursuant to the control strategy, for the upcoming reporting period; and
   v. Progress towards achieving a dissolved mercury concentration of 0.70 ng/L in the effluent (e.g., summarizing reductions in effluent concentrations as a result of the control strategy implementation and/or installation/modification of a treatment system).

   The permittee must maintain a file with all MMP documentation. The file must be available for review by DEC representatives and copies must be provided upon request in accordance with 6 NYCRR 750-2.1(i) and 750-2.5(c)(4).

3. MMP Modification - The MMP must be modified whenever:
   a. Changes at the facility increase the potential for mercury discharges;
   b. Effluent discharges exceed the current permit limitation(s); or
   c. A letter from the DEC identifies inadequacies in the MMP.

   The DEC may use information in the status reports, as applicable in accordance with 2.c of this MMP, to determine if the permit limitations and MMP Type is appropriate for the facility.

[3] For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.

MERCURY MINIMIZATION PROGRAM (MMP) – Type III (Continued)

DEFINITIONS:

Key location – a location within the collection/wastewater system (e.g. including but not limited to a specific manhole/access point, tributary sewer/wastewater connection, or user discharge point) identified by the permittee as a potential mercury source. The permittee may adjust key locations based upon sampling and/or best professional judgement.

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.

DISCHARGE NOTIFICATION REQUIREMENTS

(a) The permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit, unless the Permittee has obtained a waiver in accordance with the Discharge Notification Act (DNA). Such signs shall be installed before initiation of any new discharge location.

(b) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (a) above, unless a new deadline is set explicitly by such permit modification or renewal.

(c) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of storm water, or discharges to ground water.

(d) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY_____

OUTFALL No. :____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: ( ) - ### - ####

OR:

NYSDEC Division of Water Regional Office Address:

NYSDEC Division of Water Regional Phone: ( ) - ### -####

(e) 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.

(f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Compliance Date[4]
002	PRELIMINARY ENGINEERING REPORT The permittee shall submit an approvable[5] Preliminary Engineering Report (PER) that meets the requirements of the EFC/DEC Engineering Report Outline (https://www.dec.ny.gov/permits/6054.html). The report shall describe treatment alternatives or other control mechanisms that may be used to comply with the final effluent limitations for Total Suspended Solids and Total Selenium.	EDPM + 9 Months
002	INTERIM PROGRESS REPORT The permittee shall provide a status update for the *Design Documents*.	EDPM + 18 Months
002	DESIGN DOCUMENTS The permittee shall submit approvable[5] Design Documents including a Basis of Design Report (BODR), Plans, Specifications, and Construction Schedule for the selected alternative that will ensure compliance with final effluent limitation(s) for Total Suspended Solids and Total Selenium.	EDPM + 21 Months
002	INTERIM PROGRESS REPORT The permittee shall provide quarterly status updates for *Complete Construction*.	EDPM + 24 Months EDPM + 27 Months EDPM + 30 Months
002	COMPLETE CONSTRUCTION The permittee shall provide a Construction Completion Certification[6] to the DEC (send to the Regional Water Engineer and NetDMR@dec.ny.gov) that the disposal system has been fully completed in accordance with the approved Design Documents.	EDPM + 33 Months
002	COMMENCE OPERATION Following receipt of DEC acceptance of the Construction Completion Certification, the permittee shall comply with the final effluent limitations described in this permit for Total Suspended Solids and Total Selenium.	Upon Department Acceptance
Unless noted otherwise, the above actions are one-time requirements.		

OUTFALL	PARAMETER	INTERIM EFFLUENT LIMIT					MONITORING REQUIREMENTS				Notes
		Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location Inf.	Location Eff.	
002	Total Suspended Solids	Monthly Average	30	mg/L			Each Discharge	24-hr. Comp.	-	X	1
002	Total Suspended Solids	Daily Maximum	50	mg/L			Each Discharge	24-hr. Comp.	-	X	1
002	Total Selenium	Daily Maximum	Monitor	mg/L			Each Discharge	24-hr. Comp.	-	X	1
Notes:	1. Interim limits expire upon Department Acceptance of Construction Completion Certification.										

[4] 6 NYCRR 750-1.14 (a)
[5] 6 NYCRR 750 1.2 (a)(8)
[6] 6 NYCRR 750-2.10 (c)

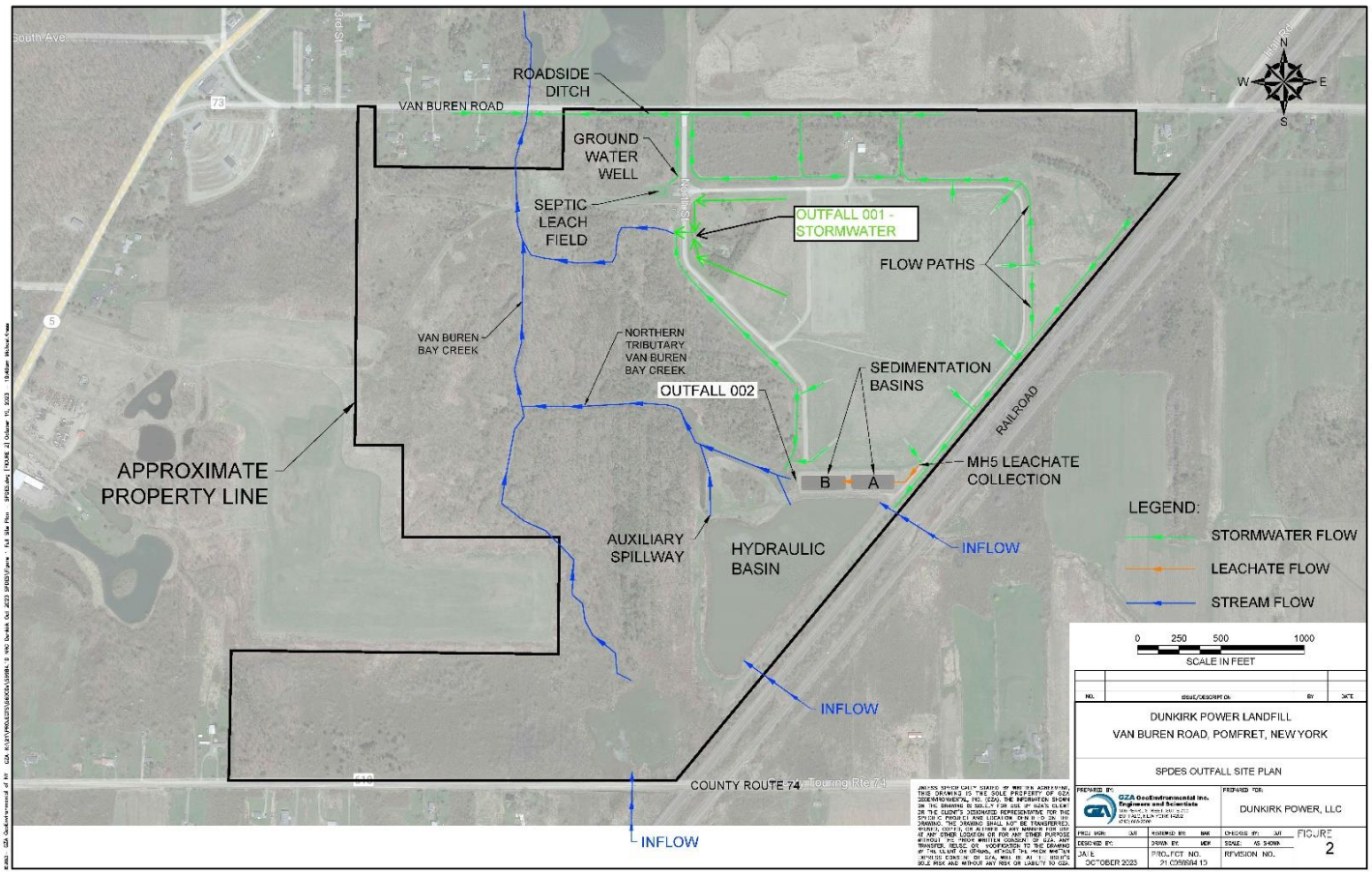
b) The permittee shall submit a Report of Non-compliance Event form with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All notifications shall be sent to the locations 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 requirements without further delay and to limit environmental impact associated with the non-compliance;
3. Any details which tend to explain or mitigate an instance of non-compliance; and
4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.

c) The permittee shall submit copies of any document required by the above schedule of compliance to the DEC Regional Water Engineer and to the Bureau of Water Permits.

MONITORING LOCATIONS

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



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 DEC an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the DEC, 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 DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The DEC 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 DEC. 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 DEC.
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 DEC'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 one (1) month reporting period in accordance with the DMR Manual available on DEC's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at: How To Complete And Submit Discharge Monitoring Reports (DMRs) - NYSDEC. **Hardcopy paper DMRs will only be accepted 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 reported to the Regional Water Engineer 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

Department of Environmental Conservation
Regional Water Engineer, Region 9
700 Delaware Avenue, Buffalo, NY 14209

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
001	BMP PLAN The permittee shall submit an initial BMP Plan. The completed BMP plan shall be reviewed on an annual basis. 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 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. All BMP plan revisions must be submitted to the Regional Water Engineer within 30 days.	EDPM + 6 Months Annually thereafter on January 28th
002	WHOLE EFFLUENT TOXICITY (WET) TESTING WET testing shall be performed as required in the footnote of the permit limits table. The toxicity test report including all information requested of this permit shall be attached to your WET DMRs and sent to the WET@dec.ny.gov email address.	Within 60 days following the end of each monitoring period

Outfall(s)	SCHEDULE OF ADDITIONAL SUBMITTALS - Required Action	Due Date
002	WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM 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.	Annually by January 28th
001, 002	MERCURY MINIMIZATION PLAN The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	***Maintained Onsite*** EDPM + 12 months, annually thereafter
001	TOTAL AMMONIA MINIMIZATION PROGRAM (TAMP) PLAN The permittee must submit an initial TAMP plan to the Regional Water Engineer. The approvable annual report for the TAMP shall be submitted to the Regional Water Engineer.	EDPM + 6 months Annually by January 28th

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.

SPDES Permit Fact Sheet
Dunkirk Power LLC
Dunkirk Fly Ash Landfill
NY0202711

Contents

Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) EBPS permit renewal has been drafted for the Dunkirk Fly Ash Landfill. The changes to the permit are summarized below:

- Updated:
  - Permit format, definitions, and general conditions
  - Permittee Name and Address
  - Permit Limit Table Footnotes
  - Monitoring Locations
- Added:
  - NAICS Code
  - WIN Item Number
  - Compact Area
  - Summary of Additional Outfalls
  - Effluent limitations for Total Ammonia, Total Iron, and Total Mercury at Outfall 001
  - Monitoring for Total Aluminum at Outfall 001
  - Action Levels for Total Nitrogen and Total Phosphorus at Outfall 001
  - Monitoring for Temperature at Outfall 002
  - Effluent limitations for Total Suspended Solids, Oil & Grease, Total Mercury, and Total Selenium at Outfall 002
  - Whole Effluent Toxicity Testing at Outfall 002
  - Stormwater Pollution Prevention Requirements
  - Total Ammonia Minimization Program Requirements
  - Best Management Practices Requirements
  - Mercury Minimization Program Requirements
  - Schedule of Compliance for Total Suspended Solids and Total Selenium
  - Schedule of Additional Submittals
- Removed:
  - Effluent limitations for Total Nickel and Total Zinc at Outfall 002
  - Groundwater Monitoring Program requirements as it is covered under a separate permit
- Changed:
  - Effluent limitation for Total Chromium from 0.2 mg/L to 0.13 mg/L
  - Sample Frequency at Outfall 002 to Each Discharge
  - Sample Type at Outfall 002 to 24-Hour Composite where appropriate

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

12/01/1993 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of September 1, 1998. The 1993 permit, along with all subsequent modifications, has formed the basis of this permit.

The permit was administratively renewed in 2003, 2009, 2014, 2019 and again in 2019. The current permit administrative renewal is effective until April 30, 2024.

8/15/2023 Department issued a Request for Information (RFI) to modify and renew the SPDES permit due to the facility's EBPS score[1]. At the time of the RFI, the facility had an EBPS score of 216 and ranking of 9 out of 79.

11/10/2023 The Dunkirk Power LLC submitted a NY-2C permit application.

Facility Information

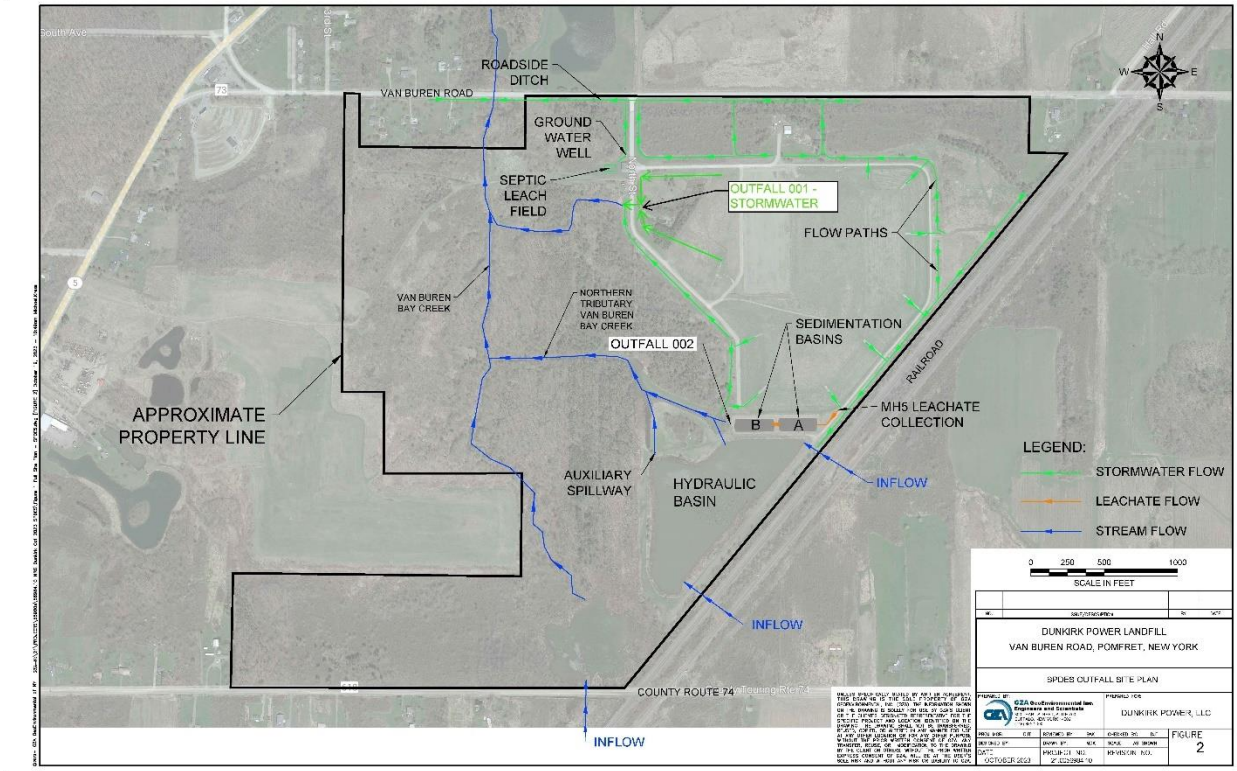
This is an industrial facility (SIC codes 4911 and 4953) that is a solid waste landfill for coal combustion residuals (i.e., fly ash) from the former Dunkirk Steam station. Effluent consists of stormwater (Outfall 001) and leachate from the landfill (Outfall 002). The current treatment system was constructed in 1988 to provide sedimentation to landfill leachate.

The Dunkirk Steam station began operation in 1948 with two 100 MW coal fired steam-electric generating units. In 1959 into 1960, two more coal fired units were added to the station, each capable of generating 200 MW. In 1972 fly ash production increased as electrostatic precipitators were added. Many upgrades to the air pollution control systems occurred throughout the years, including a changeover to fabric filtration with the additions of trona injection, carbon injection and an SNCR system between the years 2009 and 2011. The last boiler unit ceased operation at the power plant in December of 2015.

Sludge from sedimentation basins is typically pumped or excavated and placed in geotubes to be dewatered and placed in the landfill. Outfall 001 conveys stormwater and is 18 inches in diameter and discharges 950 feet from the bank of Van Buren Bay Creek. Outfall 002 conveys treated leachate from two sedimentation basins. The outfall is a batch discharge and occurs when the basins are full. The outfall pipe is 8 inches in diameter and discharges one foot from the bank.

[1] Pursuant to 6 NYCRR 750-1.18 and NYS Environmental Benefit Permit Strategy (EBPS)

Site Overview



Enforcement History

Compliance and enforcement information can be found on the EPA's Enforcement and Compliance History Online (ECHO) website.

Existing Effluent Quality

The Pollutant Summary Table presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from Discharge Monitoring Reports and the application submitted by the permittee for the period 11/1/2020 to 11/30/2023. Appendix Link

Interstate Water Pollution Control Agencies

Outfalls 001 through 011 are located within the Great Lakes watershed and International Joint Commission (IJC) compact area. Appendix Link

Additional Site-Specific Concerns

This facility is also covered under a Part 360 permit (DEC ID 9-0658-00021/00008).

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4953	Stormwater from future cell C and soil stockpile areas	Van Buren Bay Creek, Class C
002	4953	Leachate from Fly Ash Landfill	Van Buren Bay Creek, Class C
004 – 011	4953	Uncontaminated Stormwater	Van Buren Bay Creek, Class C
012	4953	Sanitary wastewater	Groundwater, Class GA

Reach Description: Van Buren Bay Creek (E-41 including trib. 1), as it is colloquially known, is a minor tributary to Lake Erie. This tributary is classified as Class C per 6NYCRR Part 839.6 Item 28. There are no other discharges on the reach before it empties into Lake Erie.

See the Outfall and Receiving Water Summary Table and Appendix for additional information.

Impaired Waterbody Information

The Van Buren Bay Creek (i.e., Minor Tribs to Lake Erie) segment (PWL No. 0105-0015) is not listed on the 2018 New York State Section 303(d) List of Impaired/TMDL Waters, and therefore, there are no applicable waste load allocations (WLAs) for this discharge.

Critical Receiving Water Data & Mixing Zone

Intermittent stream effluent limits (ISEL) have been applied based on the historical Water Quality file. Consistent with Technical and Operational Guidance Series (TOGS) 1.3.1, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution.

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.

USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility

Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT), Best Available Technology Economically Achievable (BAT), and New Source Performance Standards (NSPS) limitations are based on Effluent Limitation Guidelines developed by USEPA for specific industries[2]. The applicable effluent guidelines and limits are listed at the end of the Pollutant Summary Table in the USEPA ELG Calculation Table. Appendix Link

[2] As promulgated under 40 CFR Parts 405 - 471

Whole Effluent Toxicity (WET) Testing

An evaluation of the discharge indicates the potential for toxicity based on the following criteria: Appendix Link

- 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. (#4)

The requirement for WET testing is new. No previous WET data was available to perform a reasonable potential analysis. Consistent with TOGS 1.3.2, given the dilution available and location within the Great Lakes basin, the permit requires chronic WET testing. WET testing action levels of 0.3 TUa and 1.0 TUc have been included in the permit for each species. The acute dilution ratio is less than 3.3 and the acute action level has been set equal to the default value of 0.3 TUa[3]. The chronic action levels represent the chronic dilution ratio. Samples will be collected quarterly.

Anti-backsliding

For Outfall 001, effluent limitation for Oil & Grease and for Outfall 002, effluent limitations for Total Nickel and Zinc are being discontinued because they have not been detected in the effluent for at least three years. Therefore, there is no reasonable potential for the pollutant to exceed the water quality-based effluent limitation and no limitation is required.
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)[4] 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 being continued from the previous permit.

Additionally, the permit contains a requirement to make the Discharge Monitoring Report (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.

Stormwater Pollution Prevention Requirements

The facility discharges stormwater associated with industrial activity and requires SPDES permit coverage under 40 CFR 122.26(a)(6). Due to some parameters being detected in the effluent that have that reasonable potential to exceed water quality standards, stormwater discharges at this facility require coverage under an individual SPDES permit and cannot obtain coverage under the current Multi-Sector General Permit (MSGP) (GP-0-23-001). However, the permit includes

[3] EPA's Technical Support Document Section 5.7.4
[4] As prescribed by 6 NYCRR Part 617

select requirements consistent with the MSGP Sector L, including action levels for Total Nitrogen and Total Phosphorus. This requirement is new.

Mercury[5]

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

The facility is a Class 01 discharger within the Great Lakes watershed and has historically accepted coal ash; therefore, the permit includes requirements for the implementation of MMP Type III.

Based on two data points, 2.1 ng/L at Outfall 001 and 17.4 ng/L at Outfall 002 collected as part of the application, the facility is expected to meet the new daily max permit limit of 50 ng/L (with monthly sampling frequency). The limit represents the general level currently achievable (GLCA) and the data collected will be used to establish an additional 12-month rolling average effluent limit during the next permit review.

A mercury minimization program consisting of the following is also required:

- Additional monitoring of key locations, as defined in the MMP
- Control strategy for implementation of the MMP
- Annual status report (maintained onsite)

Schedule of Compliance

A Schedule of Compliance is being included[6] for the following items (Appendix Link):

- Submittal of approvable engineering design documents, including a basis of design report, with the details of the upgrades needed to comply with the final effluent limitations. The effluent limitations for Total Suspended Solids and Total Selenium at Outfall 002 are a new requirement as the permittee cannot immediately comply with the WQBELs.

Emerging Contaminant Monitoring

Background: Emerging Contaminants, such as Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), and 1,4-Dioxane (1,4-D), have been used in a wide variety of consumer and industrial products as well as in manufacturing processes for decades. These contaminants do not break down easily, therefore their presence in wastewater can remain a concern for years following their discontinued use. As the science surrounding these contaminants is still evolving, additional monitoring is needed to better understand potential sources and background levels. For more information on emerging contaminants, please see the DEC Division of Water web page: Emerging Contaminants In NY's Waters - NYSDEC.

Based on the available sampling data, no additional monitoring is required at this time. Please see the Pollutant Summary Table below for more information.

Schedule of Additional Submittals

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

- Initial BMP Plan and subsequent annual certifications
- WET testing requirements
- Water Treatment Chemical Annual Report

[5] In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.
[6] Pursuant to 6 NYCRR 750-1.14

- Mercury Minimization Plan Annual Status Report
- Initial Total Ammonia Minimization Plan and Annual Reports

Special Conditions

- Authorizes the effluent of the sedimentation pond (Outfall 002) to be transferred to the Dunkirk Power treatment facility if it is not within the specified effluent limits
- Requires at least a 24-hour hold time prior to discharge from Outfall 001
- Includes conditions pertaining to the need to maintain a Part 360 for disposal of solid waste material permit in conjunction with this SPDES permit.

OUTFALL AND RECEIVING WATER SUMMARY TABLE

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	42° 26' 39.16" N	79° 24' 2.05" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	164 (WQ File)	0.0 CFS (WQ File)			.021 (avg)	1:1	1:1	1:1
002	42° 26' 24.29" N	79° 23' 53.12" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	Design Flow	-	-	-
004	42° 26' 23.039" N	79° 23' 44.7" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	1.5 (Max)	-	-	-
005	42° 26' 25.6" N	79° 23' 53.35" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	0.5 (Max)	-	-	-
006	42° 26' 39" N	79° 24' 1.9" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	0.5 (Max)	-	-	-
007	42° 26' 41.76" N	79° 23' 23.96" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	0.85 (Max)	-	-	-
008	42° 26' 46.96" N	79° 23' 45.54" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	0.86 (Max)	-	-	-
009	42° 26' 46.04" N	79° 23' 52.2" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	0.27 (Max)	-	-	-
010	42° 26' 46.07" N	79° 24' 0.96" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	0.40 (Max)	-	-	-
011	42° 26' 46.13" N	79° 24' 1.93" W	Van Buren Bay Creek	C	E-41 including trib. 1 PWL: 0105-0015	01/05	-	-	-	-	0.15 (Max)	-	-	-
012	42° 26' 41.19" N	79° 24' 2.43" W	Groundwater	GA	-		-	-	-	-	< 20 gpd	-	-	-

POLLUTANT SUMMARY TABLE: Outfall 001

Outfall #	001	**Description of Wastewater:** Stormwater from future cell C and soil stockpile areas														
		Type of Treatment: Settling Pond														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality[7]	# 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			
General Notes: Existing discharge data from November 2020 to November 2023 was obtained from Discharge Monitoring Reports 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. The technology based effluent limitations (TBELs) were developed from TOGS 1.2.1 Att.C, for category J (miscellaneous) treatment systems.																
Flow Rate	GPD	Daily Avg	Monitor	**20900** Actual Average	24	Monitor	Antibacksliding	No alterations that will impair the waters for their best usages. (Part 703.2)					-	-	TBEL	
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.															
Flow Rate	GPD	Daily Max	Monitor	**317000** Actual Maximum	24	Monitor	Antibacksliding	No alterations that will impair the waters for their best usages. (Part 703.2)					-	-	TBEL	
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.															
pH	SU	Minimum	6.0	6.7 Actual Min	24	6.0	Antibacksliding	-	-	6.5 – 8.5	Range	6.5 - 8.5	703.3	-	WQBEL	
		Maximum	9.0	8.2 Actual Max	24	9.0										
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. In absence of dilution water in the stream, an effluent limit equal to the WQS is appropriate.															
Total Suspended Solids	mg/L	Daily Avg	50	6.5	22 / 2	50	Antibacksliding	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (Part 703.2)				10.0	ISEL	-	WQBEL	
		Daily Max	100	10.0	22 / 2	100	Antibacksliding									
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Due to intermittent nature of the stream, an effluent limit equal to 10.0 mg/L as daily maximum is appropriate and consistent with TOGS 1.3.1.															

[7] Existing Effluent Quality: Unless otherwise stated, 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 #	001	**Description of Wastewater:** Stormwater from future cell C and soil stockpile areas **Type of Treatment:** Settling Pond													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data: Permit Limit	Existing Discharge Data: Existing Effluent Quality[7]	Existing Discharge Data: # of Data Points Detects / Non-Detects	TBELs: Limit	TBELs: Basis	Water Quality Data & WQBELs: Ambient Bkgd. Conc.	Water Quality Data & WQBELs: Projected Instream Conc.	Water Quality Data & WQBELs: WQ Std. or GV	Water Quality Data & WQBELs: WQ Type	Water Quality Data & WQBELs: Calc. WQBEL	Water Quality Data & WQBELs: Basis for WQBEL	ML	Basis for Permit Requirement
Oil & Grease	mg/L	Daily Max	15	< 5.0	0 / 24	15	Antibacksliding	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. 703.2					-	-	Discontinuation
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. In the absence of numerical standard/Guidance value, WQ evaluation was not performed and therefore TBEL is appropriate.														
Additional Pollutants Detected															
Chemical Oxygen Demand	mg/L	-	-	17	1	-	-	-	WQ standard is not available.					-	No limitation
	In absence of standard/Guidance value for class C stream, WQ analysis was not performed.														
Total Aluminum	mg/L	-	-	0.102	1	Monitor	BPJ	-	-	0.1 (703.5)	A(C)	-	-		TBEL
	In absence of approved analytical procedure, TBEL is suggested per TOGS 1.3.1.														
Total Ammonia (as N)	mg/L			3.5	1	Monitor	BPJ	SUM/WIN	1.24/1.81	1.24/1.81	A(C)	1.24/1.81	703.5		WQBEL
	The WQBELs for summer and winter periods are indicated. These limits are calculated at a pH of 7.5 and temperatures of 25°C and 10°C for summer and winter periods, respectively per TOGS 1.3.1.														
Total Barium	mg/L	-	-	0.050	1	-	-	-	WQ standard for class C is not available.					-	No limitation
Total Iron	mg/L	-	-	0.291	1	Monitor	BPJ	-	0.30	0.30	A(C)	0.30	0.30		WQBEL
	The WQBEL is equal to the WQ standard is applicable due to lack of dilution water in the stream. Since the calculated WQBEL is close to the EEQ (0.30 vs 0.291), therefore WQBEL is indicated.														
Total Manganese	mg/L	-	-	0.182	1	-	-	-	WQ standard for class C is not available.					-	No limitation
	In absence of standard/Guidance value for class C stream, WQ analysis was not performed.														
Total Mercury	ng/L	Daily Max	-	2.1	1	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10
	See Mercury section of this fact sheet.														
Total Organic Carbon	mg/L	-	-	6.7	1	-	-	-	WQ standard is not available.						No limitation
	In absence of standard/Guidance value for class C stream, WQ analysis was not performed.														

Outfall #	001	**Description of Wastewater:** Stormwater from future cell C and soil stockpile areas
		Type of Treatment: Settling Pond

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[7]	# 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 Nitrogen	mg/L	Daily maximum	-	-	-	6.0	MSGP Sector L	-	-	-	-	-	-		TBEL
Total Phosphorus	mg/L	Daily Maximum	-	-	-	2.0	MSGP Sector L	-	-	-	-	-	-		TBEL

POLLUTANT SUMMARY TABLE: Outfall 002

Outfall #	002	**Description of Wastewater:** Leachate from Landfill													
		Type of Treatment: Settling Pond													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[8]	# 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		
General Notes: Existing discharge data from November 2020 to November 2023 was obtained from Discharge Monitoring Reports 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. The technology based effluent limitations (TBELs) were developed from TOGS 1.2.1 Att.C, for category J (miscellaneous) treatment systems.															
Flow Rate	GPD	Daily Avg	Monitor	**615000** Actual Average	35	Monitor	TOGS 1.2.1	No alterations that will impair the waters for their best usages.					703.2	-	TBEL
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.														
Flow Rate	GPD	Daily Max	Monitor	**989000** Actual Maximum	35	Monitor	TOGS 1.2.1	No alterations that will impair the waters for their best usages.					703.2	-	TBEL
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.														
pH	SU	Minimum	6.0	7.3 Actual Min	35	6.0	USEPA ELG BPT	-	-	6.5 – 8.5	Range	6.5 - 8.5	703.3	-	WQBEL
		Maximum	9.0	8.9 Actual Max	35	9.0									
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. In absence of dilution water in the stream, an effluent limit equal to the WQS is appropriate.														
Total Suspended Solids	mg/L	Daily Avg	30	14	35 / 0	30	USEPA ELG BPT	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.			10	703.2	-	ISEL
		Daily Max	50	23	35 / 0	50	Antibacksliding								
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Due to intermittent nature of the stream, an effluent limit equal to 10 mg/L as daily maximum is appropriate and consistent with TOGS 1.3.1.														
Oil & Grease	mg/L	Daily Max	-	-	-	20	USEPA ELG BPT	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.				703.2	-	TBEL
	In absence of numerical standard/Guidance value, WQ evaluation was not performed and therefore TBEL is appropriate.														
Additional Pollutants Detected															

[8] Existing Effluent Quality: Unless otherwise stated, 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 #	002	**Description of Wastewater:** Leachate from Landfill													
		Type of Treatment: Settling Pond													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[8]	# 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 Aluminum	mg/L	Daily Max	1.0	0.41	28 / 7	1.0	Antibacksliding	-	-	0.1 (703.5)	A(C)	-	-		TBEL
	In absence of approved analytical procedure, TBEL is suggested per TOGS 1.3.1.														
Total Arsenic	mg/L	Daily Max	0.1	0.09	12 / 0	0.1	Antibacksliding	-	0.15	0.15	A(C)	0.15	703.5		TBEL
	In absence of dilution water in the stream, WQBEL equal WQ standard is appropriate.														
Total Barium	mg/L	Daily Max	10.0	0.078	11 / 1	10.0	Antibacksliding	-	WQ standard is not available.						TBEL
	In absence of standard/Guidance value, WQ evaluation was not conducted and therefore TBEL is appropriate.														
Total Iron (Net)	mg/L	Daily Max	0.3	0.15 (Actual Max)	33 / 2	0.3 (net)	Antibacksliding	-	0.30	0.30	A(C)	0.30	703.5		T/WQBEL
	The WQBEL is equal to the WQ standard is applicable due to lack of dilution water in the stream.														
Total Manganese	mg/L	Daily Max	3.0	0.41	35 / 0	3.0	Antibacksliding	-	WQ standard for class C is not available.						TBEL
	In absence of standard/Guidance value for class C stream, WQ analysis was not performed.														
Total Nickel	mg/L	Daily Max	2.7	<0.02	0 / 12	NM	BPJ	-	0.079	0.079	A(C)	0.079	703.5		Discontinued
	NM – No monitoring. In absence of dilution water in the stream, WQBEL equal to WQ standard is appropriate.														
Total Zinc	mg/L	Daily Max	0.3	<0.01	0 / 12	NM	BPJ	-	0.128	0.1258	A(C)	0.128	703.5		Discontinued
	In absence of dilution water in the stream, WQBEL equal to WQ standard is appropriate. A translator of 1.014 also considered to convert dissolved form of zinc to total form of the same.														
Total Chromium	mg/L	Daily Max	0.2	0.011	13 / 11	0.2	Antibacksliding	-	0.129	0.111	A(C)	0.129	703.5		WQBEL
	In absence of dilution water in the stream, WQBEL equal to WQ standard is appropriate. A translator of 1.163 also considered to convert dissolved form of zinc to total form of the same.														
Total Mercury	ng/L	Daily Max	-	17.4	1 / 0	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10
Total Selenium	mg/L	From app		0.013	1 / 0	Monitor	BPJ	-	0.005	0.005	A(C)	0.005	703.5		WQBEL
	In absence of dilution water in the stream, WQBEL equal to WQ standard is appropriate.														

Outfall #	002	**Description of Wastewater:** Leachate from Landfill														
		Type of Treatment: Settling Pond														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality[8]	# 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			
Chemical Oxygen Demand	mg/L	From app		61	1 / 0	NM	BPJ		WQ standard is not available.						N/A	
	In absence of standard/Guidance value, WQ analysis was not performed.															
Total Organic Carbon	mg/L	From app		11.7	1 / 0	NM	BPJ		WQ standard is not available.						N/A	
	In absence of standard/Guidance value, WQ analysis was not performed.															

Emerging Contaminants																
Notes: See Emerging Contaminant Monitoring above. Effluent samples were analyzed for the 40 PFAS compounds and 1,4-Dioxane.																
Perfluoro-butanoic Acid (PFBA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**	
Perfluoro-pentanoic Acid (PFPeA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**	
Perfluoro-hexanoic Acid (PFHxA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**	
Perfluoro-heptanoic Acid (PFHpA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**	
Perfluoro-octanoic Acid (PFOA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	TOGS 1.1.1[i]	-	**No Limitation**	
	Based on available data, no additional monitoring is required at this time.															
Perfluoro-nonanoic Acid (PFNA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**	
Perfluoro-decanoic Acid (PFDA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**	

Emerging Contaminants															
Perfluoro-undecanoic Acid (PFUnA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-dodecanoic Acid (PFDoA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-tridecanoic Acid (PFTiA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-tetradecanoic Acid (PFTeA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-butanesulfonic Acid (PFBS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-pentanesulfonic Acid (PFPeS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-hexanesulfonic Acid (PFHxS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-heptanesulfonic Acid (PFHpS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-octanesulfonic Acid (PFOS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	0.160	A(C)	0.160	TOGS 1.1.1	-	**No Limitation**
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-nonanesulfonic Acid (PFNS)	ng/L	Daily Max	-	ND	0 /1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-decanesulfonic Acid (PFDS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-dodecane-sulfonic Acid (PFDoS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-octane-sulfonamide (FOSA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**

Emerging Contaminants																
N-methyl Perfluoro-octanesulfon-amidoacetic Acid (NMeFOSAA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
N-ethyl Perfluoro-octanesulfon-amidoacetic Acid (NEtFOSAA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
4:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
6:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
8:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
N-ethyl Perfluoro-octanesulfon-amide (NEtFOSA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
N-methyl Perfluoro-octanesulfon-amide (NMeFOSA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
N-methyl Perfluoro-octanesulfon-amidoethanol (NMeFOSE)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**
N-ethyl Perfluoro-octanesulfon-amidoethanol (NEtFOSE)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	-	**No Limitation**

Emerging Contaminants																
9-Chlorohexadeca-fluoro-3-oxanonane-1-sulfonic Acid (9Cl-PF3ONS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Hexafluoro-propylene Oxide Dimer Acid (HFPO-DA or GenX)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic Acid (11Cl-PF3OUdS)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
4,8-Dioxa-3H-perfluorononanoic Acid (ADONA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
3-Perfluoropropyl Propanoic Acid (3:3 FTCA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
2H,2H,3H,3H-Perfluoro-octanoic Acid (5:3 FTCA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
3-Perfluoroheptyl Propanoic Acid (7:3 FTCA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Nonafluoro-3,6-dioxaheptanoic Acid (NFDHA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-4-methoxy-butanoic Acid (PFMBA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
Perfluoro-3-methoxy-propanoic Acid (PFMPA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**

Emerging Contaminants															
Perfluoro(2-ethoxyethane)sulfonic Acid (PFEESA)	ng/L	Daily Max	-	ND	0/1	-	-	-	-	-	-	-	-	-	**No Limitation**
1,4-Dioxane	µg/L	Daily Max	-	ND	0/1	-	-	-	-	18	A(C)	18	TOGS 1.1.1	-	**No Limitation**

Table 1, NYS Ambient Water Quality Standards and Guidance Values, February 2023 addendum to June 1998 TOGS 1.1.1.
NYS Department of Health Maximum Contaminant Level (MCL) for finished drinking water.

USEPA EFFLUENT LIMITATION GUIDELINE (ELG) CALCULATIONS

Appendix Link

For the applicable categorical limitations under 40 CFR Part 423, the following basis was used to determine the TBELs:

Outfall	002
40 CFR Part/Subpart	§423.12(b)(1), §423.12(b)(11)
Subpart Name	Steam electric power generating point source category, as applicable to combustion residual leachate

ELG Pollutant	**Daily Max TBEL (mg/L)**	**Monthly Avg. TBEL (mg/L)**
40 CFR § 423.12 - Effluent limitation guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT)		
pH	6.0 – 9.0 (Range)	
Total suspended solids	100.0	30.0
Oil & Grease	20.0	15.0
The above ELGs were determined to be applicable to Dunkirk Fly Ash Landfill since the landfill wastes consists of combustion residual leachate. The Dunkirk Fly Ash Landfill was determined to be exempt from ELG requirements for landfill point source category due to applicability of 40 CFR Part 445.1(f) and exempt from ELG requirements for centralized waste treatment point source category due to the applicability of 40 CFR Part 437.1(c)(4).		

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 95th (monthly average) and 99th (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, 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[9] and USEPA interpretation[10] 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.

[9] American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)
[10] 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)

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 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 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 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 DEC 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 DEC 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 DEC 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 DEC;

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 DEC 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 DEC 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 DEC 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.

[i] Table 1, NYS Ambient Water Quality Standards and Guidance Values, February 2023 addendum to June 1998 TOGS 1.1.1.