State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	**3291**	NAICS Code:	**327910**	SPDES Number:	**NY0203335**
Discharge Class (CL):	**01**			DEC Number:	**9-2911-00160/00023**
Toxic Class (TX):	**T**			Effective Date (EDP):	
Major-Sub Drainage Basin:	**01 - 01**			Expiration Date (ExDP):	
Water Index Number:	**O-158**	Item No.:	**837.4 - 1**	Modification Dates (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:	**Washington Mills Electro Minerals Corp.**	Attention:	**Ryan Labertew**		
Street:	**P.O. Box 423**				
City:	**Niagara Falls**	State:	**NY**	Zip Code:	**14302**
Email:	**rlabertew@washingtonmills.com**	Phone:	**(716) 278-6755**		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL																
Name:	**Washington Mills Electro Minerals**															
Address / Location:	**1801 Buffalo Avenue**											County:	**Niagara**			
City:	**Niagara Falls**						State:	**NY**				Zip Code:	**14302**			
Facility Location:		Latitude:	**43**	°	**04**	’	**50**	” N	& Longitude:		**79**	°	**02**	’	**10**	” W
Primary Outfall No.:	**001**	Latitude:	**43**	°	**04**	’	**19**	” N	& Longitude:		**79**	°	**02**	’	**16**	” W
Wastewater Description:	**Contact and Non-Contact Cooling Water & Stormwater Runoff**		Receiving Water:	**Niagara River**		NAICS:	**327910**		Class:	**A-Special**						

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:
CO BWP - Permit Coordinator
BWP – Permit Writer
CO BWC - SCIS
RWE
RPA
EPA Region II

Permit Administrator:			
Address:	700 Delaware Ave, Buffalo, NY 14202		
Signature:		Date:	/ /

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SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
003	**River Water Strainer Backwash**	**N/A**	**43** ° **04** ' **43** " N	**79** ° **02** ' **08** " W
Receiving Water:	**Niagara River**			Class: **A-Special**
Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
004	**Stormwater**	**N/A**	**43** ° **04** ' **53** " N	**79** ° **02** ' **04** " W
Receiving Water:	**Niagara River**			Class: **A-Special**

DEFINITIONS

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

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Furnace Contact & Non-contact Cooling Water & Stormwater Runoff	Niagara River		

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	Monitor	MGD			Weekly	Meter		X	
Flow	Daily Maximum	Monitor	MGD			Weekly	Meter		X	
pH	Daily Minimum	6.5	SU			Weekly	Grab		X	
	Daily Maximum	8.5	SU							
Temperature	Monthly Average	Monitor	ºF			Weekly	Grab		X	
Temperature	Daily Maximum	90	ºF			Weekly	Grab		X	
Settleable Solids	Monthly Average	Monitor	mL/L			Weekly	Grab		X	
Settleable Solids	Daily Maximum	0.1	mL/L			Weekly	Grab		X	
Total Suspended Solids (TSS)	Monthly Average	20	mg/L	230	lbs/d	2/Month	Grab		X	
Total Suspended Solids (TSS)	Daily Maximum	40	mg/L	Monitor	lbs/d	2/Month	Grab		X	
Total Dissolved Solids (TDS)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	Monthly	Grab		X	
Total Dissolved Solids (TDS)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	Monthly	Grab		X	
Total Aluminum	Monthly Average	Monitor	mg/L	6.4	lbs/d	2/Month	Grab		X	
Total Aluminum	Daily Maximum	Monitor	mg/L	11	lbs/d	2/Month	Grab		X	
Total Boron	Monthly Average	Monitor	mg/L	5.9	lbs/d	2/Month	Grab		X	
Total Boron	Daily Maximum	Monitor	mg/L	11	lbs/d	2/Month	Grab		X	

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
003	River Water Strainer Backwash	Niagara River		

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	Monitor	MGD			Weekly	Meter		X	
Flow	Daily Maximum	Monitor	MGD			Weekly	Meter		X	
pH	Daily Minimum	6.5	SU			Monthly	Grab		X	
	Daily Maximum	8.5	SU							
Settleable Solids	Monthly Average	Monitor	mL/L			Weekly	Grab		X	
Settleable Solids	Daily Maximum	0.1	mL/L			Weekly	Grab		X	
Total Suspended Solids (TSS)	Monthly Average	20	mg/L	Monitor	lbs/d	Monthly	Grab		X	
Total Suspended Solids (TSS)	Daily Maximum	40	mg/L	Monitor	lbs/d	Monthly	Grab		X	

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
004	Stormwater Runoff	Niagara River		

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
								Location		
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	Monitor	MGD			Weekly	Meter		X	1
Flow	Daily Maximum	Monitor	MGD			Weekly	Meter		X	1
pH	Daily Minimum	6.5	SU			Weekly	Grab		X	1
	Daily Maximum	8.5	SU							1
Total Suspended Solids (TSS)	Monthly Average	20	mg/L	230	lbs/d	Monthly	Grab		X	1
Total Suspended Solids (TSS)	Daily Maximum	40	mg/L	Monitor	lbs/d	Monthly	Grab		X	1
Settleable Solids	Daily Maximum	0.1	mL/L	Monitor	lbs/d	Weekly	Grab		X	1
Total Dissolved Solids (TDS)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	Monthly	Grab		X	1
Total Dissolved Solids (TDS)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	Monthly	Grab		X	1, 3
Total Dissolved Solids (TDS)	Daily Maximum	20,000	mg/L	Monitor	lbs/d	Monthly	Grab		X	1, 4

FOOTNOTES:

1. 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-0-17-004, 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.

   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. Additional sampling guidelines and exceptions have been detailed and authorized by the Department, within the storm water sampling plan, dated July 15, 2016.

2. Uncontaminated stormwater only – no process wastewater permitted. Turbidity must be at a level that will not cause substantial visible contrast to natural conditions in the receiving water. No visible oil sheen or globules of grease may be discharged.

3. Limit expires at EDP + 2 years.

4. Limit becomes effective at EDP + 2 years.

BIOLOGICAL MONITORING REQUIREMENTS

All submissions under this section should provide:

One (1) paper and an electronic copy to the Energy Unit Leader[1];
One (1) copy of the cover letter to the Division of Water
State Pollution Discharge Elimination System (SPDES)
Compliance Information Section; and
One (1) copy of the cover letter to the Regional Water Engineer;
unless otherwise noted.

Impingement Mortality and Entrainment Characterization Study

1. Within three (3) months of the Effective Date of the Permit (EDP + 3 months), the permittee must submit an approvable plan for an *Impingement Mortality and Entrainment Study* at Washington Mills. The study plan must include a schedule for implementation, standard operating procedures for data collection, and a final report. At a minimum, the final report must include:

   a. A taxonomic identification of all fish documented to frequent the Niagara River in the vicinity of the facility, and natural life history information on each of these species.

   b. An overall estimate of the number of fish impinged and entrained at current operating conditions, and at calculation baseline conditions. For each flow scenario, estimates shall be presented in total numbers of organisms, identified to species, or lowest practical taxon. Estimates for each taxonomic group shall also be subdivided by life stage.

In addition, the *Impingement Mortality and Entrainment Characterization Study* must be generally consistent with the following guidelines:

   c. Impingement Abundance Monitoring
      i. Duration - two years for facilities with no previous impingement monitoring.
      ii. Intensity - At a minimum, one continuous 24-hour collection will be made in every, seven-day calendar period for a continuous 24- month period. The collections will be scheduled to take place within the first two days of each period so that the remainder of the period is available for an alternate collection, should plant operation or equipment malfunction and prevent impingement collection on the day initially scheduled. If for any reasons, a collection cannot be made within a given seven-day period, the subsequent collection shall proceed as scheduled. If more than 1,000 fish are collected in 24-hours of sampling, an additional 24-hour collection will be initiated within 72 hours.
      iii. Traveling screens shall be washed until they are clean prior to the start of the 24-hour collection period.
      iv. Average intake temperature before sampling, average discharge temperature and total facility flows shall be recorded on a daily basis, tabulated and included as an appendix in the final report.

[1] Energy Unit Leader, NYSDEC, Bureau of Habitat, 625 Broadway 5th Floor, Albany, NY 12233-4756

v. Collection efficiency shall be determined quarterly for each major species. Major species are defined as those occurring at greater than 10% abundance, and species of important recreational or commercial fishing interest.
vi. The final report shall include a chapter on the facility and site description. In the description of the facility's operation, there will be a complete description of the condenser cooling water system including the number of traveling screens, dimensions, type, mesh size, standard operating procedures, screen washwater sluice configuration and disposition of the screen washings, and the nature and estimated quantities of debris collected at this facility.
vii. Water quality measurements will be taken in conjunction with the impingement sampling program. Measurements will include salinity, pH, and dissolved oxygen.
viii. Every 6 months the permittee shall submit a status report describing the sampling activities that took place during the prior 6 months, and any events that affected sampling efforts.
viiii. The final report shall include a summary table that includes estimates of the total numbers of fishes impinged, by species, for the study period based upon (1) continuous operation of all pumps at full rated flow and (2) actual operational and flow data for the study period. The final report shall also include data collected during the study, and must be submitted in tabular, graphic, and electronic (Excel or similar) formats.

d. Entrainment Abundance Monitoring
i. Duration - two years for facilities with no previous entrainment monitoring.
ii. Intensity - At a minimum, one continuous 24-hour collection will be made in every, seven-day calendar period during April through August for a 2-year period. The collections will be scheduled to take place within the first two days of each period so that the remainder of the period is available for an alternate collection, should plant operation or equipment malfunction and prevent entrainment collection on the day initially scheduled. If for any reasons, a collection cannot be made within a given seven-day period, the subsequent collection shall proceed as scheduled.
iii. All samples will be analyzed for ichthyoplankton and juvenile fish.
iv. Proposed methods for sample processing, quality control, quality assurance, and splitting will be described in the scope of work submitted for DEC approval.
v. Every 6 months the permittee shall submit a status report describing the sampling activities that took place during the prior 6 months, and any events that affected sampling efforts.
vi. The final report and data shall include a summary table that includes estimates of the total numbers of fish entrained, by species and life stage, for the study period based upon (1) continuous operation of all pumps at full rated flow and (2) actual operational and flow data for the study period. The final report shall also include data collected during the study, and must be submitted in tabular, graphic, and electronic (Excel or similar) formats.

Once approved by the Department, the permittee must conduct the *Impingement Mortality and Entrainment Characterization Study* according to the approved schedule. The *Impingement Mortality and Entrainment Characterization Study* and approved schedule will become an enforceable condition of this SPDES permit.

Design and Construction Technology Review

2. Within six (6) months after the Department's approval of the *Impingement Mortality and Entrainment Study* final report, the permittee must submit an approvable *Design and Construction Technology Review* that includes:

    a. An analysis of all feasible technologies and/or operational measures, including analysis of a closed-cycle cooling system, capable of being installed and implemented at Washington Mills. For each feasible alternative include:
        i. A detailed description of the alternative (including preliminary drawings and site maps, if appropriate);
        ii. A discussion of the engineering feasibility of the alternative;
        iii. An assessment of the mitigative benefits in reducing impingement mortality and entrainment abundance for all life stages of fish through utilization of the alternative;
        iv. A breakdown of all applicable costs including costs associated with capital improvements, operation and maintenance, and construction downtime;
        v. An estimate of the time required to implement the alternative; and
        vi. An evaluation of any adverse environmental impacts to aquatic biota, habitat, or water quality that may result from construction, installation, and use of the alternative.

Proposed Suite of Technologies and Operational Measures

3. Within 1 month of the Department's approval of the *Design and Construction Technology Review*, the permittee must submit, for Department review and consideration, a proposed suite of technologies or operational measures that meets the requirements of 6 NYCRR Part 704.5 and Section 316(b) CWA:

    a. Alone, or in combination, these technologies or operational measures *minimize* impingement mortality and entrainment of fish at Washington Mills.

    b. The reductions in entrainment and impingement mortality resulting from the proposed technologies and/or operational measures can be no less stringent, and if possible, should be substantially greater than the following performance requirements:

    i. Entrainment must be reduced by at least 60 percent from the calculation baseline;
    ii. Impingement mortality must be reduced by at least 80 percent from the calculation baseline.

NOTE: Based on this and other relevant information, the Department will select technologies and/or operational measures that meet the requirements of 6 NYCRR Part 704.5, and Section 316(b) CWA, 40 CFR 125 Subpart J and will modify this SPDES permit to require the use of these selected technologies and/or operational measures.

Technology Installation and Operation Plan

4. Within 3 months of the effective date of the permit modification requiring technologies and/or operational measures to meet requirements of 6 NYCRR Part 704.5 and Section 316(b) CWA, the permittee must submit an approvable *Technology Installation and Operation Plan*. This plan must include:

    a. a schedule for installing and implementing the technologies and/or operational measures selected to meet requirements of 6 NYCRR Part 704.5 and Section 316(b) CWA; and

    b. the methodology for assessing the efficacy of these technologies and operational measures.

Verification Monitoring Study – Plan and Report

5. Within 3 months of Department approval of the *Technology Installation and Operation Plan*, the permittee must submit an approvable *Verification Monitoring Study Plan*. This plan must include details of procedures to confirm that the necessary reductions in impingement and entrainment required by this permit are being achieved, and must include the following:

    a. At a minimum, one year of in-plant impingement and entrainment monitoring to verify the full-scale performance of BTA measures.

    b. A description of the frequency and duration of monitoring, the parameters to be monitored, and the basis for determining the parameters and the frequency and duration for monitoring.

    c. A schedule of implementation.

    d. A draft proposed Standard Operation Procedure (SOP) that describes the sampling protocols for these monitoring studies.

    The plan and SOP must be updated as required by the Department. Upon receipt of Department approval, the permittee must complete the *Verification Monitoring Study* in accordance with the approved schedule. The *Verification Monitoring Study Plan* and approved schedule will become an enforceable condition of this SPDES permit.

6. Within 6 months of the completion of the *Verification Monitoring Study* the permittee must submit an approvable report to the Energy Unit Leader that demonstrates compliance with 6 NYCRR Part 704.5 and Section 316(b) CWA.

Additional Reporting Requirements

7. The permittee must maintain records of all data, reports and analysis pertaining to compliance with 6 NYCRR Part 704.5, and Section 316(b) CWA for a period no less than 10 years from the Effective Date of the Permit.

General Requirement

8. Modification of the facility cooling water intake must not occur without prior Department approval. The permittee must submit written notification, including detailed descriptions and plans, to the NYSDEC Energy Unit; the Director of the Bureau of Water Compliance Program; and both the Regional Permit Administrator and the Regional Water Engineer, Region 9, at least 60 days prior to any proposed change which would result in the alteration of the permitted operation, location, design, construction, or capacity of the cooling water intake structure. The permittee must submit with the written notification a demonstration that the change reflects the best technology available for minimizing adverse environmental impacts pursuant to 6 NYCRR Part 704.5 and Section 316(b) CWA. As determined by NYSDEC, a permit modification application in accordance with 6 NYCRR Part 621 may be required.

SCHEDULE OF SUBMITTALS

Outfall(s)	Parameter(s) Affected	Required Action	Due Date
	N/A	1. Submit an approvable *Impingement and Entrainment Study* Plan	EDP + 3 months
		2. Submit an approvable *Design and Construction Technology Review*	IM&E approval +6 months
		3. Submit a proposed suite of technologies or operational measures for Department review and consideration	DCTR approval + 1 month
		4. Submit an approvable *Technology Installation and Operation Plan*	EDPM* + 3 months
		5. Submit an approvable *Verification Monitoring Study Plan*	TIOP approval + 3 months
		6. Submit an approvable report to the Energy Unit Leader that demonstrates compliance with 6 NYCRR Part 704.5 and 316(b) of the Clean Water Act	VMP approval +6 months

*From the suite of technologies and/or operational measures submitted for review, the Department will select technologies and/or operational measures that meet the requirements of 6NYCRR Part 704, section 704.5, Section 316(b) of the Clean Water Act, and the performance goals of Commissioner Policy #52. Subsequent to these selections the Department will modify this permit.

STORMWATER POLLUTION PREVENTION REQUIREMENTS

NO EXPOSURE CERTIFICATION

The permittee submitted a Conditional Exclusion for No Exposure Form on 6/28/2022, certifying that all industrial activities and materials are completely sheltered from exposure to rain, snow, snowmelt, and/or stormwater runoff. The permittee must maintain a condition of no exposure for the exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, the permittee must notify the Regional Water Engineer. The permittee must recertify a condition of no exposure every five years by completing the “No Exposure Certification Form” found on the NYSDEC website.

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 Department as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.
2. **Compliance Deadlines** – 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 Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. 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://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2c.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 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[2]. (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.

6. **Required Sampling For "Hot Spot" Identification** - Development of the BMP plan shall include sampling of waste stream segments for the purpose of pollutant "hot spot" identification. The economic achievability of effluent limits will not be considered until plant site "hot spot" sources have been identified, contained, removed or minimized through the imposition of site specific BMPs or application of internal facility treatment technology. For the purposes of this permit condition a "hot spot" is a segment of an industrial facility (including but not limited to soil, equipment, material storage areas, sewer lines etc.) which contributes elevated levels of problem pollutants to the wastewater and/or stormwater collection system of that facility. For the purposes of this definition, problem pollutants are substances for which treatment to meet a water quality or technology requirement may, considering the results of waste stream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is sufficiently higher than the concentration of that same pollutant at the compliance monitoring location so as to allow for an economically justifiable removal and/or isolation of the segment and/or B.A.T. treatment of wastewaters emanating from the segment.

7. **Facilities with Petroleum and/or Chemical Bulk Storage (PBS and CBS) Areas** - Compliance must be maintained with all applicable regulations including those involving releases, registration, handling and storage (6 NYCRR 595-599 and 612-614). Stormwater discharges from handling and storage areas should be eliminated where practical.

   A. Spill Cleanup - All spilled or leaked substances must be removed from secondary containment systems as soon as practical and for CBS storage areas within 24 hours, unless written authorization is received from the Department. The containment system must be thoroughly cleaned to remove any residual contamination which could cause contamination of stormwater and the resulting discharge of pollutants to waters of the State. Following spill cleanup the affected area must be completely flushed with clean water three times and the water removed after each flushing for proper disposal in an on-site or off-site wastewater treatment plant designed to treat such water and permitted to discharge such wastewater. Alternately, the permittee may test the first batch of stormwater following the spill cleanup to determine discharge acceptability. If the water contains no pollutants at concentrations above the applicable effluent limits or Action Levels it may be discharged. Otherwise it must be disposed of as noted above. See *Discharge Monitoring* below for the list of parameters to be sampled for.

   B. Discharge Operation - Stormwater must be removed before it compromises the required containment system capacity. Each discharge may only proceed with the prior approval of the permittee staff person responsible for ensuring SPDES permit compliance. Bulk storage secondary containment drainage systems must be locked in a closed position except when the operator is in the process of draining accumulated stormwater. Transfer area secondary containment drainage systems must be locked in a closed position during all transfers to or from these systems and must not be reopened unless the transfer area is clean of contaminants. Stormwater discharges from secondary containment systems should be avoided during periods of precipitation. A logbook shall be maintained on site noting the date, time and personnel supervising each discharge.

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

BMPs FOR INDUSTRIAL FACILITIES (continued)

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

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

(i) *Bulk Storage Secondary Containment Systems:*

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

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

(ii) *Transfer Area Secondary Containment Systems:*

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

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

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

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

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

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: ( ) - ### -####

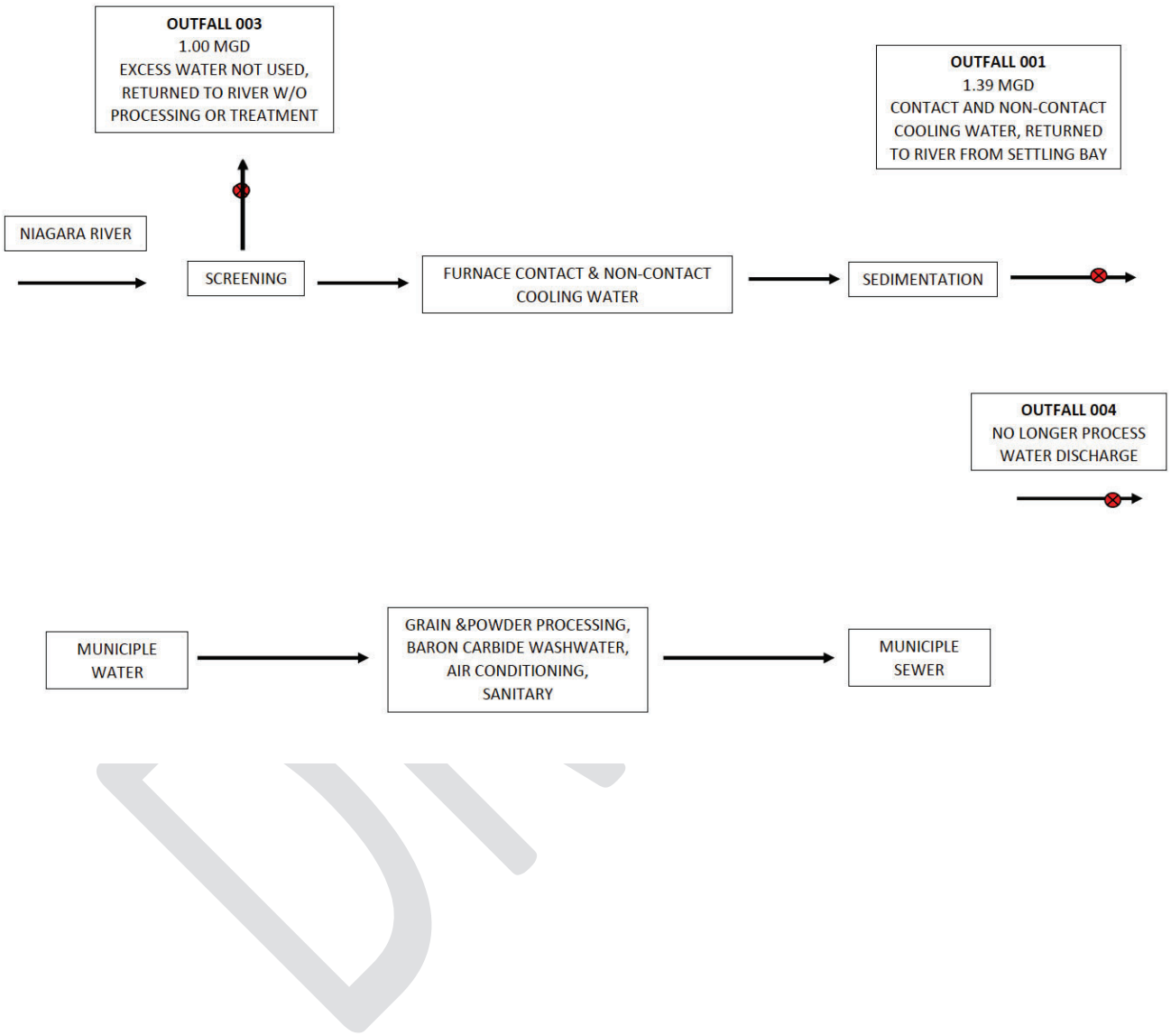
(e) Upon request, the permittee shall make available electronic or hard copies of the sampling data to the public. In accordance with the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS page of your permit, each DMR shall be maintained (either electronically or as a hard copy) on record for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

MONITORING LOCATIONS

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

FLOW DIAGRAM
WASHINGTON MILLS ELECTROMINERALS CORP



SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Due Date
004	SCHEDULE OF COMPLIANCE STATUS REPORTS Submit interim status reports on the progress related to meeting the final limit for Total Dissolved Solids.	EDP + 9 months, and every 9 months thereafter until EDP + 2 Years
004	ENGINEERING REPORT The permittee shall submit an approvable engineering report prepared by a Professional Engineer licensed to practice engineering in New York State detailing the facility improvements that will be implemented to comply with the final effluent limitation for Total Dissolved Solids. Approvable is defined as that which can be approved by the Department with only minimal revision. Minimal revision shall mean revised and resubmitted to the Department within sixty days of notification by the Department of the revisions that are necessary. All approvable engineering submissions must include the seal and signature of the professional engineer. COMPLETE CONSTRUCTION & COMMENCE OPERATION The permittee shall complete implementation of facility improvements and comply with the final effluent limitation for Total Dissolved Solids.	EDP + 1 Year EDP + 2 Years

The above compliance actions are one-time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.

INTERIM EFFLUENT LIMITS FOR PARAMETERS SUBJECT TO THIS SCHEDULE OF COMPLIANCE

Outfall	Parameter(s) Affected	Interim Effluent Limit			Limits Apply	Notes	Interim Limits Expire
		Frequency	Limit	Units			
004	Total Dissolved Solids	1/month	Monitor	mg/L	Year-Round	1	EDP + 2 Years
Notes:	1. The limit type is Daily Maximum.						

b) The permittee shall submit a written notice of compliance or non-compliance 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 such compliance or non-compliance notification 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 NYSDEC Regional Water Engineer and to the Bureau of Water Permits.

GENERAL REQUIREMENTS

A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through H as follows:

B. General Conditions

1.	Duty to comply	6 NYCRR 750-2.1(e) & 2.4
2.	Duty to reapply	6 NYCRR 750-1.16(a)
3.	Need to halt or reduce activity not a defense	6 NYCRR 750-2.1(g)
4.	Duty to mitigate	6 NYCRR 750-2.7(f)
5.	Permit actions	6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h)
6.	Property rights	6 NYCRR 750-2.2(b)
7.	Duty to provide information	6 NYCRR 750-2.1(i)
8.	Inspection and entry	6 NYCRR 750-2.1(a) & 2.3

C. Operation and Maintenance

1.	Proper Operation & Maintenance	6 NYCRR 750-2.8
2.	Bypass	6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7
3.	Upset	6 NYCRR 750-1.2(a)(94) & 2.8(c)

D. Monitoring and Records

1.	Monitoring and records	6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d)
2.	Signatory requirements	6 NYCRR 750-1.8 & 2.5(b)

E. Reporting Requirements

1.	Reporting requirements for non-POTWs	6 NYCRR 750-2.5, 2.6, 2.7, &1.17
2.	Anticipated noncompliance	6 NYCRR 750-2.7(a)
3.	Transfers	6 NYCRR 750-1.17
4.	Monitoring reports	6 NYCRR 750-2.5(e)
5.	Compliance schedules	6 NYCRR 750-1.14(d)
6.	24-hour reporting	6 NYCRR 750-2.7(c) & (d)
7.	Other noncompliance	6 NYCRR 750-2.7(e)
8.	Other information	6 NYCRR 750-2.1(f)

F. Sludge Management
The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.

G. SPDES Permit Program Fee
The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.

H. Water Treatment Chemicals (WTCs)
New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.

1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized by the Department.
2. The permittee shall maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure excessive levels of WTCs are not used.
3. The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form and WTC Annual Report Form* are available from the Department's website at: http://www.dec.ny.gov/permits/93245.html

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

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

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

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by NYSDEC. Instructions on the use of NetDMR can be found at https://www.dec.ny.gov/chemical/103774.html. **Hardcopy paper DMRs will only be received at the address listed below, directed to the Bureau of Water Compliance, if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

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

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

Department of Environmental Conservation
Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505 Phone: (518) 402-8111

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
All	BMP PLAN The permittee shall submit an updated BMP plan and review annually. The BMP plan shall be modified whenever: (a) changes at the facility materially increase the potential for releases of pollutants, (b) actual releases indicate the plan is inadequate, or (c) a letter from the Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions must be submitted to the Regional Water Engineer within 30 days.	EDP + 6 Months, Annually thereafter on January 28th
001	TEMPERATURE SUMMARY REPORT The permittee shall include an effluent temperature summary report as an attachment to the DMR when temperature spikes greater than 90°F occur. This summary shall include the number of times the effluent temperature exceeds 90°F as well as the minimum, average, and maximum duration of these temperature spikes.	Monthly, As Applicable

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 Washington Mills Electro Minerals NY0203335

Contents

Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) permittee-initiated permit modification has been drafted for the Washington Mills Electro Minerals. The changes to the permit are summarized below:

- Updated permit format, definitions, and general conditions.
- Toxic Class changed to "T" due to presence of metals limits.
- Removed total residual chlorine (TRC) limits from the permit.
- Updated sample type for Total Suspended Solids, Total Dissolved Solids, Total Aluminum and Total Boron at Outfall 001.
- Updated wastewater type for Outfall 004.
- Removed the temperature, Total Aluminum, and Total Boron limits from Outfall 004 and added a Daily Maximum Total Dissolved Solids limit. A compliance schedule was added for the TDS limit.

This factsheet 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 factsheet.

Administrative History

12/1/1997 The last full technical review was performed, and the SPDES permit became effective with a new five-year term and expiration date of 12/1/2002. The 1997 permit, along with all subsequent modifications, has formed the basis of this permit.

The permit was administratively renewed in 2008, 2016, and 2021. The current permit administrative renewal is effective until 11/30/2026.

6/1/2002 The permit was modified to include reduced TSS limits at Outfalls 001 and 004; Aluminum and Boron limits replaced action levels at Outfalls 001 and 004; BMP Plan requirements were updated; and compliance with the Discharge Notification Act was required.

3/25/2022 The Washington Mills Electro Minerals Corp submitted a NY-2C application and a request to modify the permit to remove Outfall 004; remove Total Residual Chlorine (TRC) from permit limits; remove settleable solids from permit limits; change to bimonthly sampling for all parameters; and change sample type for all parameters from 3-hour composite to grab.

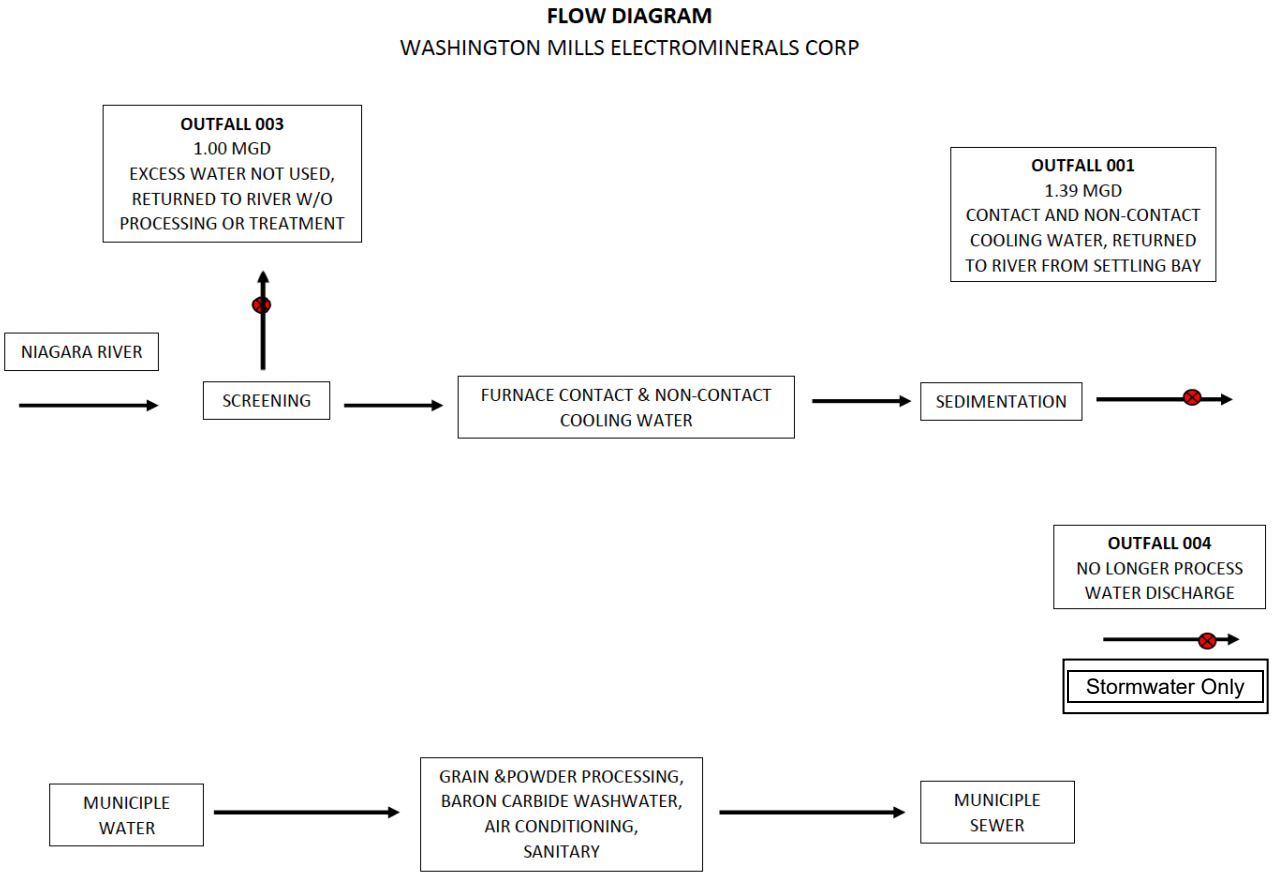
Facility Information

This is an industrial facility (SIC code 3291) that produces abrasives. Washington Mills withdraws water from the Niagara River through a surface water intake. Water is screened and either immediately discharged through Outfall 003 or screened and used for non-contact and contact cooling water. The water flows from contact and non-contact cooling to sedimentation where it is subsequently discharged out of Outfall 001. Stormwater is also discharged from Outfall 001. Only stormwater is discharged from Outfall 004.

Cooling Water Intake Structure (CWIS) Biological Monitoring

The facility currently uses a once-through cooling system to withdraw water from the Niagara River using a cooling water intake structure and is subject to the performance goals of Commissioner's Policy 52 (CP-52). Appendix B contains the Biological Fact Sheet with details on the permit requirements related to the CWIS.

Site Overview



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 7/1/2019 to 7/31/2022.

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	3291	Furnace Contact & Non-Contact Cooling Water & Stormwater Runoff	Niagara River, Class A-Special
003	N/A	River Water Strainer Backwash	Niagara River, Class A-Special
004	N/A	Stormwater	Niagara River, Class A-Special

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

Impaired Waterbody Information

The Niagara River segment (PWL No. 0101-0006) was first listed on the 1998 New York State Section 303(d) List of Impaired/TMDL Waters as impaired due to PCBs. The segment continues to be listed as of the 2020-2022 NYS Section 303(d) List. A TMDL has not been developed to address the impairment, and therefore, there are no applicable wasteload allocations (WLAs) for this facility.

Critical Receiving Water Data & Mixing Zone

In accordance with TOGS 1.3.1, a standard 100:1 chronic dilution ratio and 50:1 acute dilution ratio are applied.

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

Permit Requirements

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

Anti-backsliding

The limitations contained in the permit are at least as stringent as the previous permit limits and there are no instances of backsliding.

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)[1] determination. Appendix Link

[1] As prescribed by 6 NYCRR Part 617

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 DMR sampling data available to the public upon request. This requirement is updated from the previous permit.

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.

The facility discharges stormwater associated with industrial activity that would require SPDES permit coverage under 40 CFR 122.26. BMPs consistent with requirements contained in the NYS MSGP (GP-0-17-004) Sector E have been included in the permit, and pollutants associated with the industrial activity are to be controlled through implementation of source controls developed and implemented under this BMP plan. This requirement is being continued from the previous permit.

Stormwater Pollution Prevention Requirements

The facility discharges stormwater associated with industrial activity and requires SPDES permit coverage under 40 CFR 122.26(a)(6).

On 6/28/2022, the permittee submitted a Conditional Exclusion for No Exposure Form, certifying that all industrial activities and materials are completely sheltered from exposure. This condition must be maintained for the exclusion to remain applicable. The schedule of submittals also includes a due date for re-certification every five years as required by 40 CFR 122.26(g)(iii). This requirement is new.

Compliance Schedule

A compliance schedule was added to the permit for Total Dissolved Solids at Outfall 004. The schedule includes an engineering evaluation of effluent TDS and implementation of the recommended alternative(s). An interim monitoring requirement was added to the permit that shall be effective for a 2-year period prior to the final limit becoming effective.

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	43° 04' 19" N	79° 02' 16" W	Niagara River	A-Special	ONT-158 PWL: 0101-0006	01 / 01	-	-	-	-	-	50:1	100:1	100:1
003	43° 04' 43" N	79° 02' 08" W	Niagara River	A-Special	ONT-158 PWL: 0101-0006	01 / 01	-	-	-	-	-	50:1	100:1	100:1
004	43° 04' 53" N	79° 02' 04" W	Niagara River	A-Special	ONT-158 PWL: 0101-0006	01 / 01	-	-	-	-	-	50:1	100:1	100:1

POLLUTANT SUMMARY TABLE

Outfall 001

Outfall #	001	**Description of Wastewater:** Furnace Contact & Non-contact Cooling Water & Stormwater Runoff													
		Type of Treatment: Sedimentation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[2]	# 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 07/1/2019 to 07/1/2022 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.															
Flow Rate	MGD	Daily Max	Monitor	1.49 Actual Average	35	**Monitor**	TOGS 1.2.1	Narrative: No alterations that will impair the waters for their best usages.					703.2	-	Monitor
		Monthly Avg	Monitor	1.36 Actual Average	35	**Monitor**	TOGS 1.2.1								
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.														

[2] Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Outfall #	001	**Description of Wastewater:** Furnace Contact & Non-contact Cooling Water & Stormwater Runoff													
		Type of Treatment: Sedimentation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[2]	# 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		
pH	SU	Minimum	6.5	7.6 Actual Min	35	**6.5**	TOGS 1.2.1	-	-	6.5 – 8.5	Range	Select	703.3	-	TBEL
		Maximum	8.5	8.5 Actual Max	35	**8.5**									
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. The limit is rolled over from the previous permit.														
Temperature	°F	Monthly Avg	**Monitor**	55 Actual Average	35	-	-	-	Narrative (Non-Trout): The water temperature at the surface of a stream shall not be raised to more than **90F** at any point and... shall not be raised or lowered to more than 5F over the temperature that existed before the addition				704.2	-	Monitor
		Daily Max	90	83 Actual Max	35	-	-								WQBEL
	Consistent with 6 NYCRR 750-1.13(a), monitoring is required and may be used to inform future permitting decisions. This requirement is continued from the previous permit.														
Total Dissolved Solids (TDS)	mg/L	Daily Max	**Monitor**	402	35/0	-	-	-	-	200	Narrative	20,000	703.3	-	Monitor
		Monthly Avg	**Monitor**	293	35/0	-	-		-	-	-	-	-		
	lbs/d	Daily Max	**Monitor**	15659	35/0	-	-		-	-	-	-	-		
		Monthly Avg	**Monitor**	7326	35/0	-	-								
	The monitoring requirement is continued from the previous permit.														
Total Suspended Solids (TSS)	mg/L	Daily Max	40	27.5	35/0	**40**	TOGS 1.2.1	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.				703.2	-	TBEL
		Monthly Avg	20	9.7	34/1	**20**	TOGS 1.2.1								
	lbs/d	Daily Max	**Monitor**	331	35/0	**-**	-								
		Monthly Avg	230	107	34/1	**230**	BPJ								
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. The limits are protective of water quality and are rolled over from the previous permit.														

Outfall #	001	**Description of Wastewater:** Furnace Contact & Non-contact Cooling Water & Stormwater Runoff													
		Type of Treatment: Sedimentation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[2]	# 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		
Settleable Solids	mL/L	Daily Max	0.1	0.1 Actual Max	13/22	**0.1**	TOGS 1.2.1	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages				703.2	-	TBEL
		Monthly Avg	**Monitor**	0.1 Actual Average	13/22	-	-								Monitor
	Consistent with TOGS 1.2.1 Attachment C, the TBEL is reflective of the treatment technology and is reasonably protective of the WQS.														
Total Residual Chlorine (TRC)	mg/L	Daily Max	0.50	0.42	35/0	-	-	-	-	0.005	A(C)	0.50	703.5	0.03	Discontinued
		Daily Avg	Monitor	0.07	35/0	-	-								Discontinued
	lbs/d	Daily Max	Monitor	5.0	35/0	-	-	-	-	-	-	-	-	-	Discontinued
		Monthly Avg	Monitor	0.83	35/0	-	-								Discontinued
	In accordance with TOGS 1.3.1E, water quality-based effluent limitations are not required due to the available dilution. The Daily Maximum limit and Monthly Average monitoring requirement have been removed from the permit.														
Additional Pollutants Detected															
Total Aluminum	mg/L	Daily Max	**Monitor**	0.39	23/12	4.0	TOGS 1.2.1	-	-	0.1	A(C)	10.	703.5	-	Monitor
		Monthly Avg	**Monitor**	0.19	19/16	2.0	TOGS 1.2.1								
	lbs/d	Daily Max	11	5.2	25/10	**11**	**BPJ**	-	-	-	-	-	-	-	TBEL
		Monthly Avg	6.4	2.1	21/14	**6.4**	**BPJ**								
	There is no reasonable potential to exceed the water quality standard. The existing mass loading limits are rolled over from the previous permit.														
Total Boron	mg/L	Daily Max	**Monitor**	0.95	23/12	1.8	TOGS 1.2.1	-	-	10.	A(C)	1,000	703.5	-	Monitor
		Monthly Avg	**Monitor**	0.19	19/16	0.84	TOGS 1.2.1								
	lbs/d	Daily Max	11	12.8	23/12	**11**	BPJ	-	-	-	-	-	-	-	TBEL
		Monthly Avg	5.9	2.2	19/16	**5.9**	BPJ								
	There is no reasonable potential to exceed the water quality standard. The existing mass loading limits are rolled over from the previous permit.														

Outfall 003

Outfall #	003	**Description of Wastewater:** River Water Strainer Backwash **Type of Treatment:** Screening													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[3]	# 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 07/1/2019 to 07/1/2022 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.															
Flow Rate	MGD	Daily Max	Monitor	1.17 Actual Average	35	**Monitor**	TOGS 1.2.1	Narrative: No alterations that will impair the waters for their best usages.					703.2	-	Monitor
		Monthly Avg	Monitor	1.08 Actual Average	35	**Monitor**	TOGS 1.2.1								
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.														
pH	SU	Minimum	6.5	7.6 Actual Min	35	**6.5**	TOGS 1.2.1	-	-	6.5 – 8.5	Range	Select	703.3	-	TBEL
		Maximum	8.5	8.5 Actual Max	35	**8.5**									
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. The limit is rolled over from the previous permit.														
Total Suspended Solids (TSS)	mg/L	Daily Max	40	19.6	34/1	**40**	TOGS 1.2.1	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.				703.2	-	TBEL
		Monthly Avg	20	11.4	34/1	**20**	TOGS 1.2.1								
	lbs/d	Daily Max	-	-	-	-	-								
		Monthly Avg	-	-	-	-	-								
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. The limits are protective of water quality and are rolled over from the previous permit.														

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

Outfall #	003	**Description of Wastewater:** River Water Strainer Backwash													
		Type of Treatment: Screening													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[3]	# 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		
Settleable Solids	mL/L	Daily Max	0.1	0.1 Actual Max	14/21	**0.1**	TOGS 1.2.1	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages				703.2	-	TBEL
		Monthly Avg	**Monitor**	0.1 Actual Average	14/21	-	-								Monitor
	Consistent with TOGS 1.2.1 Attachment C, the TBEL is reflective of the treatment technology and is reasonably protective of the WQS.														
Total Residual Chlorine (TRC)	mg/L	Daily Max	0.50	0.24	35/0	-	-	-	-	0.005	A(C)	0.50	703.5	0.03	Discontinued
		Daily Avg	Monitor	0.06	35/0	-	-								Discontinued
	lbs/d	Daily Max	Monitor	0.56	35/0	-	-	-	-	-	-	-	-	-	Discontinued
		Monthly Avg	Monitor	2.6	35/0	-	-								Discontinued
	In accordance with TOGS 1.3.1E, water quality-based effluent limitations are not required due to the available dilution. The Daily Maximum limit and Monthly Average monitoring requirement have been removed from the permit.														

Outfall 004

Outfall #	004	**Description of Wastewater:** Stormwater														
		Type of Treatment:														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[4]	# 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 07/1/2019 to 07/1/2022 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.															
Flow Rate	MGD	Daily Max	Monitor	0.01 Actual Average	35	**Monitor**	TOGS 1.2.1	Narrative: No alterations that will impair the waters for their best usages.					703.2	-	Monitor
		Monthly Avg	Monitor	0.01 Actual Average	35	**Monitor**	TOGS 1.2.1								
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.														
pH	SU	Minimum	6.5	7.0 Actual Min	35	**6.5**	TOGS 1.2.1	-	-	6.5 – 8.5	Range	Select	703.3	-	TBEL
		Maximum	8.5	8.4 Actual Max	35	**8.5**									
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. The limit is rolled over from the previous permit.														
Temperature	°F	Monthly Avg	**Monitor**	53.2 Actual Average	35	-	-	-	Narrative (Non-Trout): The water temperature at the surface of a stream shall not be raised to more than **90F** at any point and... shall not be raised or lowered to more than 5F over the temperature that existed before the addition				704.2	-	Discontinued
		Daily Max	90	73.4 Actual Max	35	-	-								Discontinued
	A temperature limit is no longer needed since the non-contact cooling water discharge has been eliminated.														

[4] Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-log=normal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Outfall #	004	**Description of Wastewater:** Stormwater **Type of Treatment:**													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[4]	# 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 Dissolved Solids (TDS)	mg/L	Daily Max	Monitor	257657	35/0	-	-	-	-	200	Narrative	**20,000**	703.3	-	WQBEL
		Monthly Avg	Monitor	442814	35/0	-	-	-	-	-	-	-	-		
	lbs/d	Daily Max	**Monitor**	9111	35/0	-	-	-	-	-	-	-	-		Monitor
		Monthly Avg	**Monitor**	7850	35/0	-	-								
	A concentration limit equal to the WQBEL is specified. A compliance schedule will be added to allow the permittee time to comply with the new limit. The loading monitoring requirement is continued from the previous permit.														
Total Suspended Solids (TSS)	mg/L	Daily Max	40	83.5	35/0	**40**	TOGS 1.2.1	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.				703.2	-	TBEL
		Monthly Avg	20	40	35/0	**20**	TOGS 1.2.1								
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. The limits are protective of water quality and are rolled over from the previous permit. BMP improvements will be targeted to improve compliance with the limits. A compliance schedule cannot be offered since the limits are not WQBELs.														
Settleable Solids	mL/L	Daily Max	0.1	0.1 Actual Max	14/21	**0.1**	TOGS 1.2.1	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages				703.2	-	TBEL
		Monthly Avg	**Monitor**	0.1 Actual Average	14/21	-	-								Monitor
	Consistent with TOGS 1.2.1 Attachment C, the TBEL is reflective of the treatment technology and is reasonably protective of the WQS.														
Total Residual Chlorine (TRC)	mg/L	Daily Max	0.50	0.02	35/0	-	-	-	-	0.005	A(C)	0.50	703.5	0.03	Discontinued
		Daily Avg	Monitor	0.02	35/0	-	-								Discontinued
	lbs/d	Daily Max	Monitor	0.00	35/0	-	-	-	-	-	-	-	-	-	Discontinued
		Monthly Avg	Monitor	0.00	35/0	-	-								Discontinued
	In accordance with TOGS 1.3.1E, water quality-based effluent limitations are not required due to the available dilution. The Daily Maximum limit and Monthly Average monitoring requirement have been removed from the permit.														

Outfall #	004	**Description of Wastewater:** Stormwater **Type of Treatment:**													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[4]	# 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		
Additional Pollutants Detected															
Total Aluminum	mg/L	Daily Max	Monitor	0.61	22/13	4.0	TOGS 1.2.1	-	-	0.1	A(C)	10.	703.5	-	Discontinued
		Monthly Avg	Monitor	0.41	22/13	2.0	TOGS 1.2.1								
	lbs/d	Daily Max	0.93	0.38	23/12	0.93	BPJ	-	-	-	-	-	-	-	Discontinued
		Monthly Avg	0.71	0.25	23/12	0.71	BPJ								
	There is no reasonable potential to exceed the water quality standard. The parameter has been removed from the permit.														
Total Boron	mg/L	Daily Max	Monitor	0.95	23/12	1.8	TOGS 1.2.1	-	-	10.	A(C)	1,000	703.5	-	Discontinued
		Monthly Avg	Monitor	0.19	19/16	0.84	TOGS 1.2.1								
	lbs/d	Daily Max	2.0	12.8	23/12	2.0	BPJ	-	-	-	-	-	-	-	Discontinued
		Monthly Avg	1.4	2.2	19/16	1.4	BPJ								
	There is no reasonable potential to exceed the water quality standard. The parameter has been removed from the permit.														

Appendix A: Regulatory and Technical Basis of Permit Authorizations

The Appendix is meant to supplement the factsheet 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 factsheet:

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 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 wasteload allocations (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, and/or in response to updated regulatory requirements. Pollutant monitoring data is also reviewed to determine the presence of additional contaminants that should be included in the permit based on a reasonable potential analysis to cause or contribute to a water quality standards violation.

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(*l*) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this factsheet. Consistent with current case law[5] and USEPA interpretation[6] 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.

[5] American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)
[6] 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 and/or Best Management Practices (BMPs). CWA sections 301(b) and 402, ECL sections 17-0509, 17-0809 and 17-0811, and 6 NYCRR 750-1.11 require technology-based controls on effluents. TBELs are set based upon an evaluation of New Source Performance Standards (NSPS), Best Available Technology Economically Achievable (BAT), Best Conventional Pollutant Control Technology (BCT), Best Practicable Technology Currently Available (BPT), and/or Best Professional Judgment (BPJ).

USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility

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

Best Professional Judgement (BPJ)

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

Water Quality-Based Effluent Limitations (WQBELs)

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. 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 and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1,

1.3.2, 1.3.5 and 1.3.6. The Department considers a mixing zone analysis, critical flows, and reasonable potential analysis when developing a WQBEL.

Mixing Zone Analyses

In accordance with TOGS 1.3.1., the Department may perform additional analysis of the mixing condition between the effluent and the receiving waterbody. Mixing zone analyses using plume dispersion modeling are conducted in accordance with the following:
"EPA Technical Support Document for Water Quality-Based Toxics Control" (March 1991); EPA Region VIII's "Mixing Zones and Dilution Policy" (December 1994); NYSDEC TOGS 1.3.1, "Total Maximum Daily Loads and Water Quality-Based Effluent Limitations" (July 1996); "CORMIX v11.0" (2019).

Critical Flows

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

Reasonable Potential Analysis (RPA)

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

1) identify the pollutants present in the discharge(s) based upon existing data, sampling data collected by the permittee as part of the permit application or a short-term high intensity monitoring program, or data gathered by the Department;

2) identify water quality criteria applicable to these pollutants;

3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA's Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,

4) calculate WQBELs (if necessary). Factors considered in calculating WQBELs include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources.

The Department uses modeling tools to estimate the expected concentrations of the pollutant in the receiving water and develop WQBELs. These tools were developed in part using the methodology referenced above. If the estimated concentration of the pollutant in the receiving water is expected to exceed the ambient water quality standard or guidance value (i.e. numeric interpretation of a narrative water quality standard), then there is a reasonable potential that the discharge may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. If a TMDL is in place, the facility's WLA for that pollutant is applied as the WQBEL.

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

A Watershed Maximum Daily Load (WMDL) may be developed by the Department to account for the cumulative effect of multiple discharges of conservative toxic pollutants to ensure water quality standards are met in downstream segments. The WMDL uses a simple dilution model, assuming full mix in the receiving stream, to calculate the maximum allowable pollutant load that can be discharged and still meet water quality standards during critical low flow in downstream segments such as those with sensitive receptors (e.g. public water supply) or higher water classification. WQBELs are established to ensure that the cumulative mass load from point source discharges does not exceed the maximum allowable load to ensure permit limits are protective of water quality.

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

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.

Appendix B: Biological Fact Sheet

Biological Fact Sheet - Cooling Water Intake Structure
Bureau of Ecosystem Health, Energy Unit

Name of Facility: Washington Mills Electrominerals Corp.
Owner/Operator: Washington Mills Electrominerals Corp.
SPDES #: NY0203335
Location: Niagara County, New York
City of Niagara Falls
Niagara River

1. Description of Facility

The Washington Mills facility (or facility) is located on the North shore of the Niagara River in Niagara Falls. The facility manufactures and distributes abrasive products for further refinement by other industrial suppliers.

The facility uses up to 8.64 million gallons per day of cooling water in the manufacturing process. The cooling water intake structure (CWIS) consists of a 6' square cement opening located 15' below the water surface. Water is withdrawn through a channel and directed to the pumphouse. Any debris collected from the cooling water is filtered out via a ½" square mesh screen and returned to the river.

Once the cooling water has been used in the system, the heated water is discharged back to the Niagara River at a maximum temperature of 90°F.

2. Ecological Resource

The Niagara River in the vicinity of the Washington Mills facility is a Class A-Special water. The best usages of Class A-S waters are "as a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish and wildlife propagation and survival." Additionally, this classification may be given to international boundary waters that, if appropriately treated, meet New York Department of Health drinking water standards, and are considered safe for drinking water purposes.

Washington Mills has not conducted any biological monitoring at the facility. However, based on information collected in 2006-2007 at the nearby Huntley Generating station, the following fish can be expected to occur in the vicinity of the CWIS, and include but are not limited to: emerald shiner, gizzard shad, rainbow smelt, rock bass, spottail shiner, and yellow perch.

3. Discussion of Best Technology Available

According to 6 NYCRR Part 704.5 - *Intake structures* and Section 316(b) of the federal Clean Water Act, the location, design, construction, and capacity of cooling water intake structures must reflect the "best technology available" (BTA) for minimizing adverse environmental impact. The identification of BTA is a technology driven determination, however, the final decision may also consider cost.

4. Determination of Best Technology Available

Washington Mills will be required to submit a list of proposed technologies and operational measures that can minimize impingement mortality and entrainment at the facility. After evaluating all the available BTA alternatives, the Department will determine the technology or combination of

technologies and/or operational measures which meet the requirements of §704.5 and §316(b) CWA at the Washington Mills facility.

5. Monitoring Requirements

The SPDES permit contains biological monitoring requirements directing the facility to conduct a study to determine the abundance of fish impinged and entrained in the facility's CWIS. After the Department makes a BTA determination for Washington Mills and the BTA technology is implemented, the facility will execute a monitoring program to verify compliance with the required percent reductions in impingement and entrainment.

6. Legal Requirements

The requirements for the cooling water intake structure in this State Pollutant Discharge Elimination System permit are consistent with the policies and requirements embodied in the New York State Environmental Conservation Law, in particular - Sec.1-0101.1.; 1-0101.2.; 1-0101.3.b., c.; 1-0303.19.; 3-0301.1.b., c., i., s. and t.; 11-0107.1; 11-0303.; 11-0535.2; 11-1301.; 11-1321.1.; 17-0105.17.; 17-0303.2., 4.g.; 17-0701.2., 6 NYCRR Part 704.5 Section 316(b) CWA, and the rules thereunder, specifically 40 CFR Parts 122 and 125.

7. Summary of Proposed Permit Changes

Additions

Biological Monitoring Requirement 1	Permittee must conduct an Impingement and Entrainment Characterization Study
Biological Monitoring Requirement 2	Permittee must submit a Design and Construction Technology Review
Biological Monitoring Requirement 3	Permittee must submit a Proposed Suite of Technologies and Operational Measures
Biological Monitoring Requirement 4	Permittee must submit a Technology Installation and Operation Plan
Biological Monitoring Requirement 5	Permittee must submit a Verification Monitoring Study Plan
Biological Monitoring Requirement 6	Permittee must submit a Verification Monitoring Report
Biological Monitoring Requirement 7	Permittee must maintain records for 10 years
Biological Monitoring Requirement 8	Permittee may not modify the cooling water intake structure without prior Departmental approval

8. References

6 NYCRR §701.4 Classifications -Surface Waters and Groundwaters, Fresh Surface Waters Class A-Special (A-S) fresh surface waters

6 NYCRR §704.5 Criteria Governing Thermal Discharges- Intake Structures

40 CFR Parts 122 and 125 https://www.epa.gov/npdes/npdes-regulations

33 U.S.C. 1251 Section 316(b) https://www.epa.gov/sites/default/files/2017-08/documents/federal-water-pollution-control-act-508full.pdf

Neu-Velle LLC. 2021. Engineer Report- Water Withdrawal Permit. Prepared for Washington Mills 1801 Buffalo Ave. Niagara Falls, NY.

Neu-Velle LLC. 2022. NY2c SPDES permit renewal application. Prepared for Washington Mills 1801 Buffalo Ave. Niagara Falls, NY.

Shaw Environmental, Inc. 2007. 2006-2007 Impingement & Entrainment Study NRG Huntley Power, LLC Huntley Steam Station.

Document prepared by C. Kimble and last revised on June 2, 2022.