



Department of  
Environmental  
Conservation

# State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code: <b>1499</b>	NAICS Code: <b>212390</b>	SPDES Number:	<b>NY0110779</b>
Discharge Class (CL):	<b>01</b>	DEC Number:	<b>6-2324-00005/00004</b>
Toxic Class (TX):	<b>N</b>	Effective Date (EDP):	
Major-Sub Drainage Basin:	<b>09 - 06</b>	Expiration Date (ExDP):	
Water Index Number:	<b>SL-25-7-3-55-P 24-5</b>	Item No.: <b>910 - 1188</b>	Modification Dates (EDPM):
Compact Area:	<b>IJC</b>		

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

PERMITTEE NAME AND ADDRESS			
Name:	<b>Vanderbilt Minerals, LLC</b>	Attention:	<b>James Knowlden, President</b>
Street:	<b>P.O. Box 89</b>	State:	<b>NY</b> Zip Code: <b>13642</b>
City:	<b>Gouverneur</b>	Phone:	<b>(315) 287-0100</b>
Email:	<b>jknowlden@vanderbiltminerals.com</b>		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL											
Name:	<b>Vanderbilt Minerals, LLC - Gouverneur Mineral Division No. 4 Mine</b>										
Address / Location:	<b>14009 Hermitage Road</b>						County:	<b>Lewis</b>			
City:	<b>Diana</b>				State:	<b>NY</b>		Zip Code:	<b>13648</b>		
Facility Location:	Latitude:	<b>44</b> °	<b>07</b> '	<b>17.2</b> " N	& Longitude:	<b>75</b> °	<b>22</b> '	<b>40.4</b> " W			
Primary Outfall No.:	<b>001</b>	Latitude:	<b>44</b> °	<b>07</b> '	<b>25.9</b> " N	& Longitude:	<b>75</b> °	<b>22</b> '	<b>49.6</b> " W		
Wastewater Description:	<b>Mine Pit Dewatering</b>	Receiving Water:	<b>Clark Creek</b>			NAICS:	<b>212390</b>	Class:	<b>C</b>	Standard:	<b>C(T)</b>

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

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

#### DISTRIBUTION:

BWP Permit Coordinator ([permit.coordinator@dec.ny.gov](mailto:permit.coordinator@dec.ny.gov))  
Regional Water Engineer  
EPA Region II ([Region2\\_NPDES@epa.gov](mailto:Region2_NPDES@epa.gov))  
NYSDOH - Watertown District Office

Permit Administrator:	<b>Jessica Hart</b>	
Address:	Dulles State Office Building 317 Washington Street Watertown, NY 13601	
Signature		Date

## DEFINITIONS

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

## PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Mine Pit Dewatering	Clark Creek	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Daily Maximum	Monitor	MGD			1/Month	Instantaneous		X	
pH	Daily Minimum	6.5	SU			1/Month	Grab		X	
	Daily Maximum	8.5	SU							
Total Suspended Solids (TSS)	Monthly Average	25	mg/L	540	lbs/d	1/Month	Grab		X	
Total Suspended Solids (TSS)	Daily Maximum	45	mg/L	980	lbs/d	1/Month	Grab		X	
Settleable Solids	Daily Maximum	0.1	mL/L			1/Month	Grab		X	
Oil & Grease	Daily Maximum	15	mg/L	330	lbs/d	1/Month	Grab		X	

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## SPECIAL CONDITIONS

- (a) Subject to the provisions of the following paragraphs of this section, there shall be no discharge of process generated wastewater pollutants into navigable waters.
- (b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process wastewater impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10 year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.
- (c) Process generated wastewater shall mean any wastewater used in the slurry transport of mined material, air emissions control, or processing exclusive of mining. The term shall also include any other water which becomes commingled with such wastewater in a pit, pond, lagoon, mine, or other facility used for treatment of such wastewater. Dewatering of groundwater infiltration and stormwater from the mine pit floor is not process wastewater, provided it is not comingled with process generated wastewater.

## BEST MANAGEMENT PRACTICES (BMPs) FOR INDUSTRIAL FACILITIES

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

1. **General** - The permittee shall develop, maintain, and implement a Best Management Practices (BMP) plan to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and stormwater discharges including, but not limited to, drainage from raw material storage. The BMP plan shall be documented in narrative form and shall include the 13 minimum BMPs and any necessary plot plans, drawings, or maps. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the plan and may be incorporated by reference. A copy of the current BMP plan shall be submitted to the DEC as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized DEC representatives upon request.
2. **Compliance Deadlines** - The initial BMP plan shall be submitted in accordance with the Schedule of Submittals to the Regional Water Engineer. The BMP plan shall be implemented within 6 months of submission, unless a different time frame is approved by the Department. The BMP plan **shall be reviewed annually** and shall be modified whenever (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the plan is inadequate, or (c) a letter from the DEC identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.
3. **Facility Review** - The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases. The review shall address all substances present at the facility that are identified in the SPDES application Form NY-2C (available at [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/form2c.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2c.pdf)) or that are required to be monitored for by the SPDES permit.
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	6. Security	10. Spill Prevention & Response
2. Reporting of BMP Incidents	7. Preventive Maintenance	11. Erosion & Sediment Control
3. Risk Identification & Assessment	8. Good Housekeeping	12. Management of Runoff
4. Employee Training	9. Materials/Waste Handling, Storage, & Compatibility	13. Street Sweeping
5. Inspections and Records		

## BMPs FOR INDUSTRIAL FACILITIES (continued)

5. **Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater from Construction Activity to Surface Waters** - A SWPPP shall be developed prior to commencing any construction activity that will result in soil disturbance of one or more acres of uncontaminated area<sup>1</sup>. (Note: the disturbance threshold is 5000 SF in the New York City East of Hudson Watershed). The SWPPP shall conform to the current version of the SPDES General Permit for Stormwater Discharges from Construction Activity (CGP), including the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual*. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity **at least 30 days prior to soil disturbance**. The SWPPP shall be maintained on-site and submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent* (NOI) form shall be submitted (available at [www.dec.ny.gov/chemical/43133.html](http://www.dec.ny.gov/chemical/43133.html)) prior to soil disturbance. Note that submission of the NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges. SWPPPs must be developed for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.
6. **Required Sampling For "Hot Spot" Identification** - Development of the BMP plan shall include sampling of waste stream segments for the purpose of pollutant "hot spot" identification. The economic achievability of effluent limits will not be considered until plant site "hot spot" sources have been identified, contained, removed or minimized through the imposition of site specific BMPs or application of internal facility treatment technology. For the purposes of this permit condition a "hot spot" is a segment of an industrial facility (including but not limited to soil, equipment, material storage areas, sewer lines etc.) which contributes elevated levels of problem pollutants to the wastewater or stormwater collection system of that facility. For the purposes of this definition, problem pollutants are substances for which treatment to meet a water quality or technology requirement may, considering the results of waste stream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is sufficiently higher than the concentration of that same pollutant at the compliance monitoring location so as to allow for an economically justifiable removal, isolation, or B.A.T. treatment of wastewaters emanating from the segment.

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

## MERCURY MINIMIZATION PROGRAM (MMP) - Type IV

On 10/03/2024, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.A.3. of DOW 1.3.10.

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below.
2. MMP Elements - The MMP must be a written document and must include any necessary drawings or maps of the facility and/or collection system. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP must include the following elements<sup>2</sup> as described in detail below:
  - a. Conditional Exclusion Certification - A certification (Appendix D of *DOW 1.3.10*), signed in accordance with 750-1.8 Signature of SPDES forms, must be submitted once every five (5) years for Outfall 001 to the Regional Water Engineer and to the Bureau of Water Permits certifying that Outfall 001 for the facility is neither a mercury source nor receives flows from a mercury source. Criteria to determine if a facility has a mercury source are as follows:
    - The facility is or receives discharge from 1) individually permitted combined sewer overflow (CSOs)<sup>3</sup> communities and/or 2) Type II sanitary sewer overflow (SSO)<sup>4</sup> facilities;
    - One or more effluent samples which exceed 12 ng/L, including samples taken as a result of the SPDES application process;
    - Internal or tributary waste stream samples exceed the GLCA effluent limitation **AND** the final effluent samples are less than the GLCA due primarily to dilution by uncontaminated or less contaminated waste streams. Both components of this criterion may include samples taken as a result of the SPDES application process;
    - A permit application or other information indicates that mercury is handled on site and could be discharged through outfalls;
    - Outfalls which contain legacy mercury contamination;
    - The facility's collection system receives discharges from a dental and/or categorical industrial user (CIU)<sup>5</sup> that may discharge mercury;
    - The facility accepts hauled wastes; or,
    - The facility is defined as a categorical industry that may discharge mercury. This may also include dentists, universities, hospitals, or laboratories which have their own SPDES permit.
  - b. Control Strategy - The control strategy must contain the following minimum elements:
    - i. Equipment and Materials – Equipment and materials (e.g., thermometers, thermostats) used by the permittee, which may contain mercury, must be evaluated by the permittee. As equipment and materials containing mercury are updated/replaced, the permittee must use mercury-free alternatives, if possible.
    - ii. Bulk Chemical Evaluation – For chemicals, used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain a manufacturer's certificate of analysis, a chemical analysis performed by a certified laboratory, and/or a notarized affidavit which describes the substances' mercury concentration and the detection limit achieved. If possible, the permittee must only use bulk chemicals utilized in the wastewater treatment process which contain <10 ppb mercury.

<sup>2</sup>Neither monitoring nor outreach is required for facilities meeting the criteria for MMP Type IV, but monitoring and/or outreach can be included in the permittee's control strategy.

<sup>3</sup>CSO permits are included under the 05 and 07 permit classifications.

<sup>4</sup>These are overflow retention facilities (ORFs) and are included under the 05 and 07 permit classifications.

<sup>5</sup>CIUs include those listed under Federal Regulation in 40 CFR Part 400.

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

- c. **Status Report** - An **annual** status report must be developed and maintained on site, in accordance with the [Schedule of Additional Submittals](#), summarizing:
- i. Review of criteria to determine if the facility has a potential mercury source;
    - a. If the permittee no longer meets the criteria for MMP Type IV, the permittee must notify the DEC for a permittee-initiated permit modification;
  - ii. All actions undertaken, pursuant to the control strategy, during the previous year; and
  - iii. Actions planned, pursuant to the control strategy, for the upcoming year.

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

3. **MMP Modification** - The MMP must be modified whenever:
- a. Changes at the facility, or within the collection system, increase the potential for mercury discharges;
  - b. A letter from the DEC identifies inadequacies in the MMP.

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

### DEFINITIONS:

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



## 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.

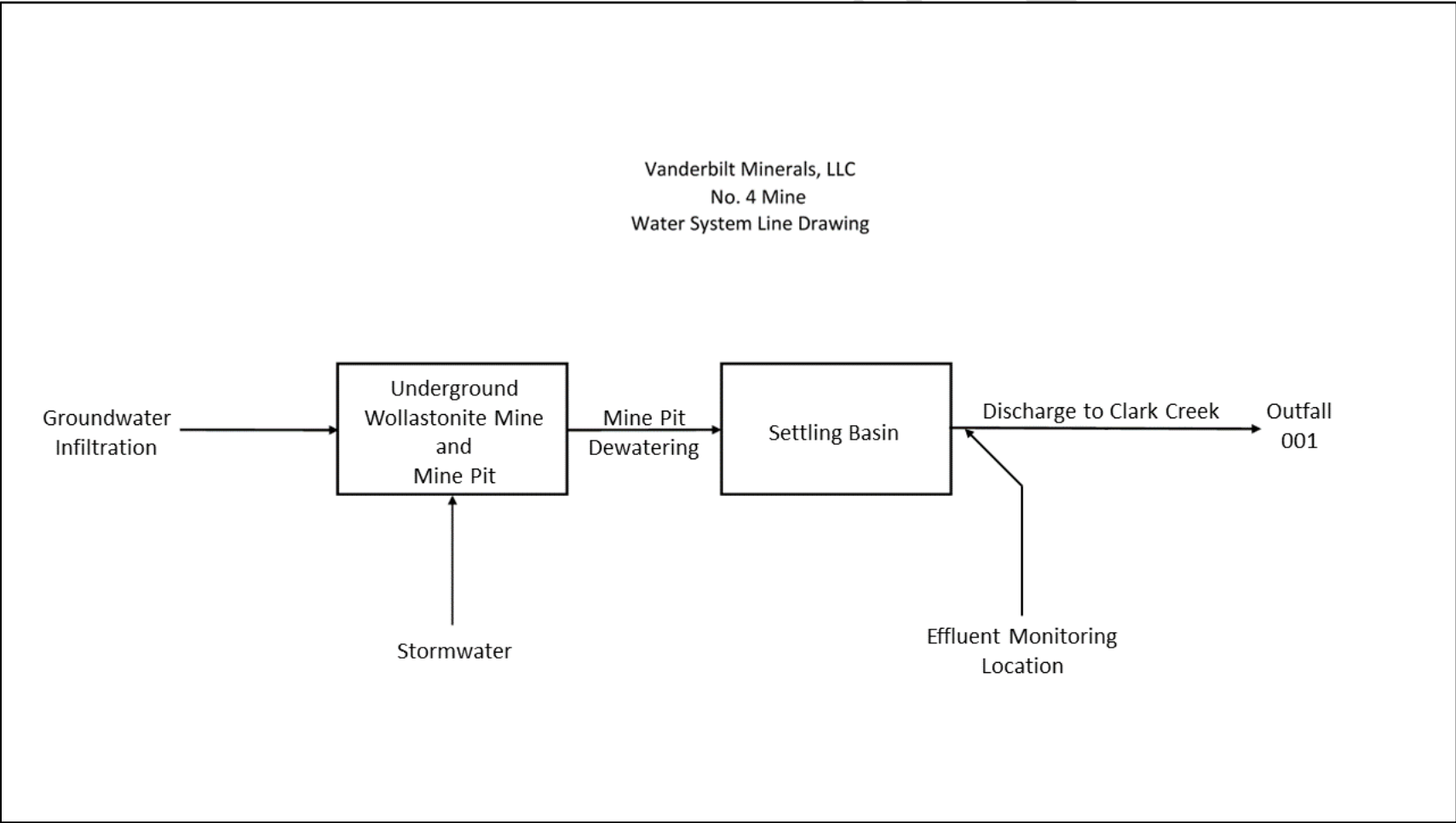
The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

<p><b>N.Y.S. PERMITTED DISCHARGE POINT</b></p> <p><b>SPDES PERMIT No.: NY_____</b></p> <p><b>OUTFALL No. : _____</b></p> <p>For information about this permitted discharge contact:</p> <p>Permittee Name: _____</p> <p>Permittee Contact: _____</p> <p>Permittee Phone:       ( ) - ### - #####</p> <p>OR:</p> <p>NYSDEC Division of Water Regional Office Address:</p> <p>NYSDEC Division of Water Regional Phone: ( ) - ### - #####</p>
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- (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 location(s) specified below:



## GENERAL REQUIREMENTS

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

### B. General Conditions

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

### C. Operation and Maintenance

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

### D. Monitoring and Records

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

### E. Reporting Requirements

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

### F. Sludge Management

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

### G. SPDES Permit Program Fee

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

### H. Water Treatment Chemicals (WTCs)

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

- WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized by the DEC.
- 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.
- The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form and WTC Annual Report Form* are available from the DEC's website at: <http://www.dec.ny.gov/permits/93245.html>

## RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- A. The monitoring information required by this permit shall be retained for a period of at least five years from the date of the sampling for subsequent inspection by the Department or its designated agent.
- B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted for each **1** month reporting period in accordance with the DMR Manual available on DEC's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at: [How To Complete And Submit Discharge Monitoring Reports \(DMRs\) - NYSDEC](#). **Hardcopy paper DMRs will only be accepted if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

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

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

Department of Environmental Conservation  
Regional Water Engineer, Region 6  
State Office Building, Watertown, New York, 13601-3787 Phone: (315) 785-2513

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

- D. Schedule of Additional Submittals:

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

Outfall(s)	SCHEDULE OF ADDITIONAL SUBMITTALS - Required Action	Due Date
001	<u>BMP PLAN</u> The permittee shall submit and annually review, the completed BMP plan on an annual basis. The BMP plan shall be modified whenever: (a) changes at the facility materially increase the potential for releases of pollutants, (b) actual releases indicate the plan is inadequate, or (c) a letter from the DEC identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions must be submitted to the Regional Water Engineer within 30 days.	EDP + 6 months, annually by January 28 <sup>th</sup> thereafter
001	<u>MERCURY MINIMIZATION PLAN</u> The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	<b>Maintained Onsite</b> EDP + 6 months, annually by January 28 <sup>th</sup> thereafter
001	<u>MERCURY - CONDITIONAL EXCLUSION CERTIFICATION</u> Permittee must submit a mercury conditional exclusion certification with low-level mercury effluent sampling results every five years in order to maintain MMP Type IV status.	10/03/2029 and every 5 years thereafter

## RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS (continued)

- 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**

## **Vanderbilt Minerals, LLC**

### **Gouverneur Mineral Division No. 4 Mine**

#### **NY0110779**



## Contents

SUMMARY OF PERMIT CHANGES .....	4
ADMINISTRATIVE HISTORY .....	5
FACILITY INFORMATION .....	6
Site Overview .....	6
Enforcement History .....	8
Existing Effluent Quality .....	8
Interstate Water Pollution Control Agencies .....	8
RECEIVING WATER INFORMATION.....	9
Reach Description .....	9
Impaired Waterbody Information.....	10
Critical Receiving Water Flow Data .....	10
Receiving Water Quality Information .....	12
PERMIT REQUIREMENTS.....	14
USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility.....	14
Whole Effluent Toxicity (WET) Testing .....	15
Discharge Notification Act Requirements.....	15
Best Management Practices (BMPs) for Industrial Facilities .....	15
Stormwater Pollution Prevention Requirements.....	15
Mercury .....	16
Emerging Contaminant Monitoring .....	16
Anti-backsliding .....	16
Antidegradation .....	17
Schedule of Additional Submittals .....	17
Special Conditions.....	17
OUTFALL AND RECEIVING WATER SUMMARY TABLE .....	18
POLLUTANT SUMMARY TABLE.....	18
Outfall 001 .....	18
USEPA EFFLUENT LIMITATION GUIDELINE (ELG) CALCULATIONS .....	23
APPENDIX A: REGULATORY AND TECHNICAL BASIS OF PERMIT AUTHORIZATIONS .....	24
Regulatory References.....	24
Outfall and Receiving Water Information .....	25
Interstate Water Pollution Control Agencies .....	25
Existing Effluent Quality.....	25
Permit Requirements.....	25

APPENDIX B: ACRONYMS .....32

## Figures

Figure 1. Facility Location Map ..... 6  
Figure 2. Site Overview ..... 7  
Figure 3. Clark Creek and Tributaries .....10  
Figure 4. Mass Balance Schematic .....13  
Figure 5. 24-Hour Design Rainfall Depths at No. 4 Mine .....15

## Tables

Table 1. Outfall Information ..... 9  
Table 2. Flow-Duration Percent Exceedance .....11  
Table 3. Critical Low Flows .....12  
Table 4. Dilution Ratios .....12  
Table 5. Receiving Water Quality .....13



## SUMMARY OF PERMIT CHANGES

A State Pollutant Discharge Elimination System (SPDES) permit modification and renewal has been drafted for Gouverneur Mineral Division No. 4 Mine, pursuant to 6 NYCRR Part 750-1.18, and 750-1.19, the Priority Ranking System known as New York State's Environmental Benefit Permit Strategy (EBPS).

The changes to the permit are summarized below:

- Corrected the stream classification from Class C to Class C(T).
- Corrected the minor drainage basin from 05 (Oswegatchie River) to 06 (Indian River).
- Reduced the daily maximum effluent limit for total suspended solids from 50 mg/L to 45 mg/L and added a new monthly average effluent limit of 25 mg/L.
- Reduced the effluent limits for pH from 6.0 - 9.0 SU to 6.5 - 8.5 SU.
- Added a new effluent limit of 0.1 ml/L for settleable solids.
- Removed iron and zinc from the permit.
- Increased the sampling frequency from once every two months to once per month.
- Added a new requirement to develop and implement a best management practices plan.
- Added a new requirement to develop and implement a mercury minimization plan.
- Updated permittee contact information.
- Updated permit pages to reflect current format, definitions, nomenclature, and latest general conditions.

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

## ADMINISTRATIVE HISTORY

- 05/01/1988 The current SPDES permit became effective with a new five-year term and expiration date of 05/01/1993. The 1988 permit, along with all subsequent modifications, has formed the basis of this permit.
- 01/01/1994 The permit was administratively renewed with a new 5-year term and expiration date of 01/01/1999.
- 12/15/1996 A Department initiated modification was issued to correct the Water Index Number (WIN) of the receiving water.
- 07/09/1998 A Department initiated modification was issued adding Discharge Notification Act (DNA) requirements.
- 11/03/1998 A permittee-initiated modification was issued authorizing stormwater discharges.
- 01/01/1999 The permit was administratively renewed with a new 5-year term and expiration date of 01/01/2004.
- 01/01/2004 The permit was administratively renewed with a new 5-year term and expiration date of 01/01/2009.
- 03/19/2004 A Department initiated modification was issued to comply with the amendment of existing regulations contained in 6 NYCRR Part 750-2.
- 12/01/2009 The permit was administratively renewed with a new 5-year term and expiration date of 11/30/2014.
- 12/01/2014 The permit was administratively renewed with a new 5-year term and expiration date of 11/30/2019.
- 12/01/2019 The permit was administratively renewed with a new 5-year term and expiration date of 11/30/2024.
- 07/15/2024 DEC issued a Request for Information (RFI) to modify and renew the SPDES permit due to the facility's EBPS score<sup>1</sup>. At the time of the RFI, the facility had an EBPS score of 278 and a NYSDEC Region 6 ranking of 1.
- 09/18/2024 Vanderbilt Minerals, LLC submitted a NY-2C permit application.

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

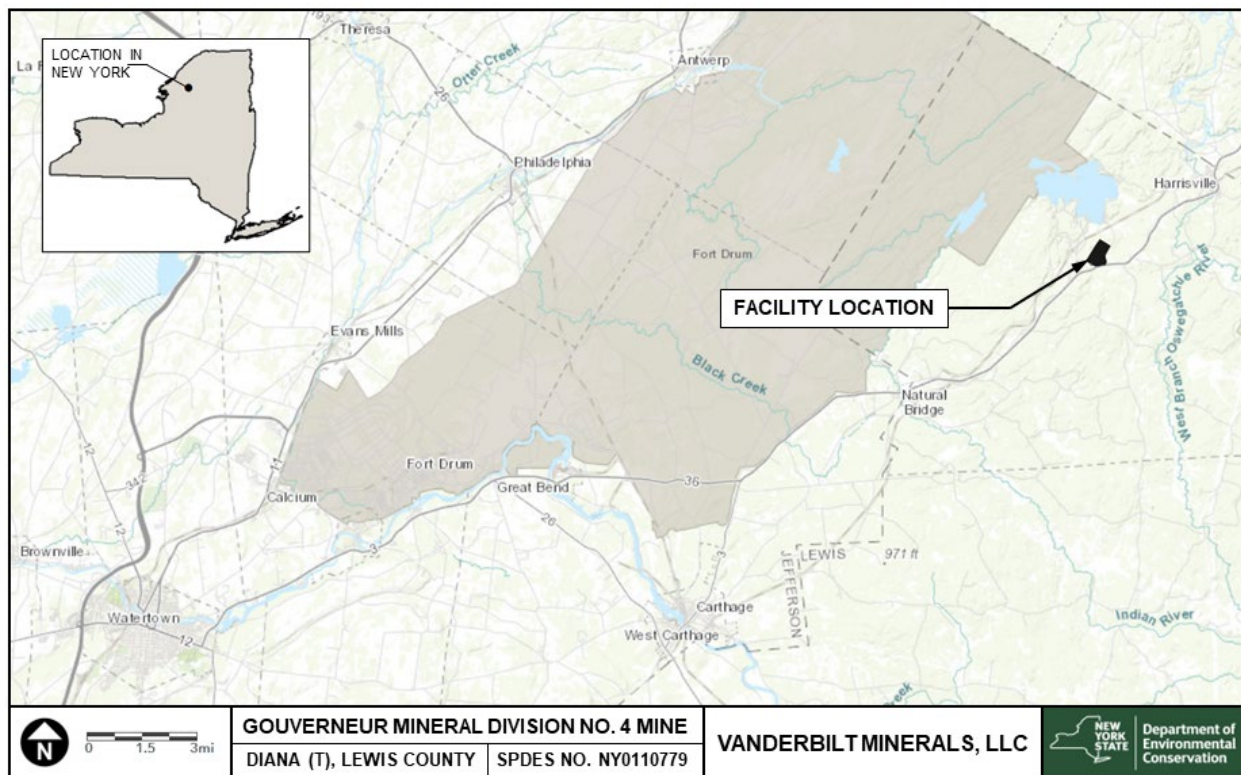
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<sup>1</sup> Pursuant to 6 NYCRR 750-1.18 and NYS Environmental Benefit Permit Strategy (EBPS)

## FACILITY INFORMATION

Gouverneur Mineral Division No. 4 Mine is owned and operated by Vanderbilt Minerals, LLC. The facility is in the Town of Diana, Lewis County, NY, about 30 miles northeast of the City of Watertown and 3.5 miles southwest from the hamlet of Harrisville.

Figure 1. Facility Location Map



### Site Overview

This is an industrial facility (SIC Code 1499, Miscellaneous Nonmetallic Minerals) that mines wollastonite ore and is subject to categorical effluent limit guidelines (ELG) specified in 40 CFR Part 436, Mineral Mining and Processing Point Source Category. See [USEPA ELG Calculations](#) section of this factsheet.

Wollastonite is a natural occurring mineral composed of calcium, silicon and oxygen ( $\text{CaSiO}_3$ ) and is found in metamorphic rocks. In the United States, the mineral is mined exclusively in New York. Manufacturing uses of the material includes ceramics, plastics, paints, welding rods, and as a substitute for asbestos.

Wollastonite mining occurs underground as a dry operation using room and pillar methods. The extracted ore is crushed and stockpiled on onsite. The crushed ore is then shipped using dump trucks to a separate facility (Gouverneur Mineral Division No. 1 Mill) in the Town of Fowler for further processing.

Effluent consists of dewatering from the mine pit. The treatment system consists of a settling pond. Dewatering is composed entirely of stormwater and ground water seepage.

To dewater the mine pit, the permittee pumps groundwater infiltration and accumulated stormwater from the mine floor to an underground pond located about 275 feet below the surface. Submersible pumps then extract the water from the underground pond through a ten-inch pipe into the above ground settling pond for particulate removal. The discharge volume is governed by the water level within the underground pond. From the above ground settling ponds, the effluent (treated wastewater) is discharged to Clark Creek through Outfall 001. The discharge is intermittent as the mine pit is dewatered as needed.

Figure 2. Site Overview



Stormwater from areas outside the mine pit is permitted under a separate SPDES Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity.

### Enforcement History

The facility has had no SPDES related enforcement actions or effluent violations for the past five years (2019 - 2023). Compliance and enforcement information can be found on the EPA's [Enforcement and Compliance History Online \(ECHO\)](#) website.

### Existing Effluent Quality

The [Pollutant Summary Table](#) presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from Discharge Monitoring Reports and the application submitted by the permittee for the period 01/01/2019 to 12/31/2023. [Appendix Link](#)

### Interstate Water Pollution Control Agencies

Outfall 001 is located within the Great Lakes watershed and International Joint Commission (IJC) compact area. The IJC Great Lakes Water Quality Agreement (GLWQA) is an agreement between the United States and Canada to restore and maintain the chemical, physical and biological integrity of the waters of the Great Lakes Basin Ecosystem. [Appendix Link](#)

There are no permit conditions or effluent limitations required under the GLWQA that are applicable to this facility.

## RECEIVING WATER INFORMATION

The facility discharges via the following outfalls:

Table 1. Outfall Information

Outfall No.	Design Flow (MGD)	SIC Code	Wastewater Type	Receiving Water
001	2.6	1499	Mine Dewatering	Clark Creek, Class C(T)

Consistent with NYSDEC Technical and Operational Guidance Series (TOGS) 1.2.1 - Industrial Permit Writing, critical effluent flows to evaluate water quality were set to the long-term average of the daily maximum flows based on the past five years (2019 - 2023) of effluent flow monitoring information obtained from Discharge Monitoring Reports (DMRs) submitted by the permittee.

### Reach Description

Clark Creek is in the Indian River drainage basin and is part of the St. Lawrence River watershed. The creek has a drainage area of 4.4 square miles before emptying into Lake Bonaparte. The drainage area at Outfall 001 is 2.6 square miles.

Clark Creek (Trib. of Lake Bonaparte) is specified in 6 NYCRR Part 910.6, Table 1, Item 1188, with a Waters Index Number of SL-25-7-3-55-P 24-5 and is classified as a Class C(T) fresh surface water at Outfall 001.

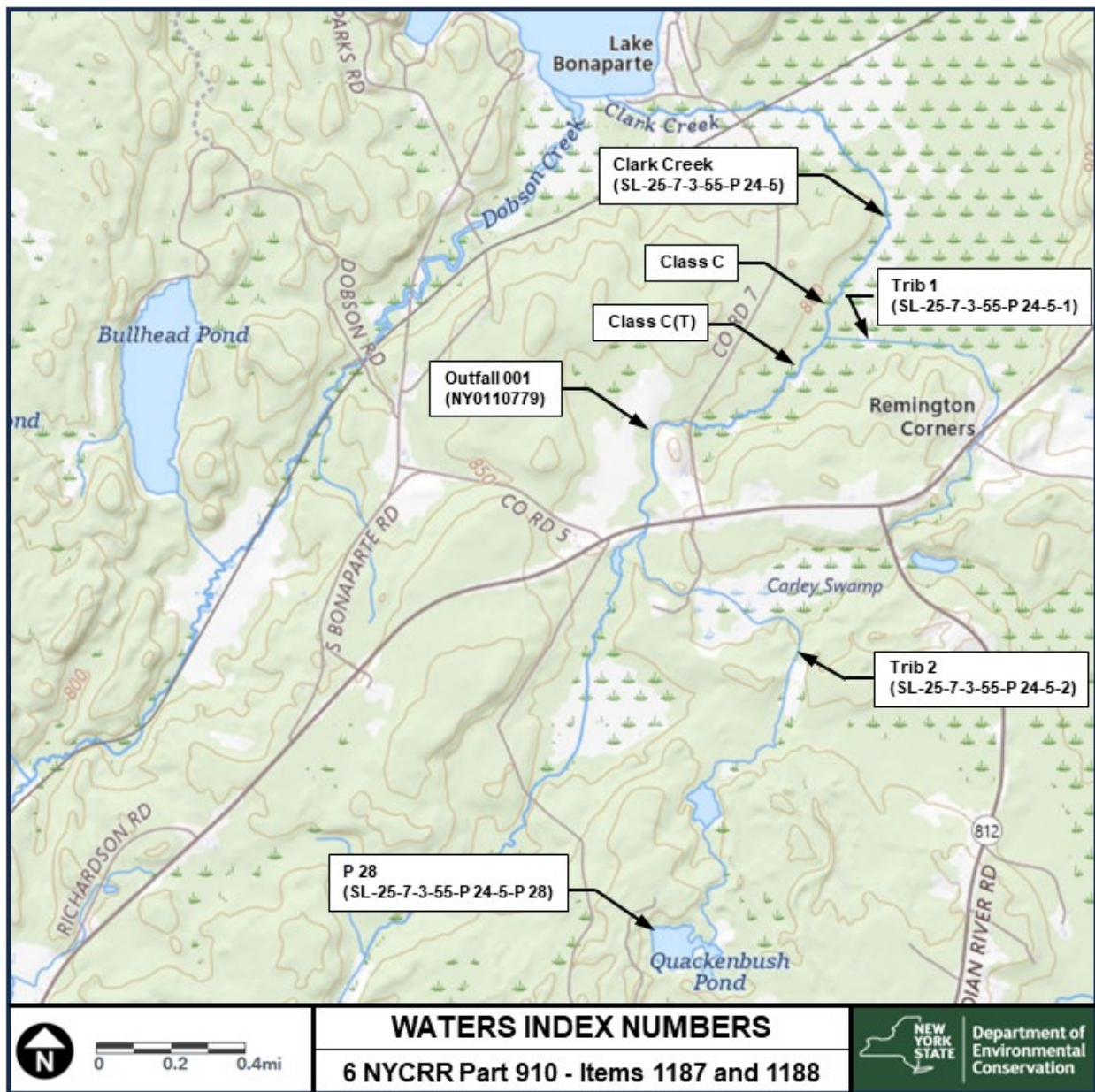
The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. The symbol (T) means that the classified waters are trout waters. Any water quality standard, guidance value, or thermal criterion that specifically refers to trout or trout waters applies.

The stream classification changes from Class C(T) to Class C at the confluence with Trib. 1, located about a half-mile downstream from Outfall 001.

Lake Bonaparte is about 2 miles downstream from Outfall 001 and is classified as Class B. The best usages of Class B waters are primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival.

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

Figure 3. Clark Creek and Tributaries



### Impaired Waterbody Information

Clark Creek (Trib. of Lake Bonaparte) segment (PWL No. 910-1188) is not listed on the 2020/2022 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters, and therefore, there are no applicable wasteload allocations (WLAs) for this discharge.

### Critical Receiving Water Flow Data

NYSDEC typically uses critical low flows to evaluate effluent limitations to ensure water quality standards are maintained. The 1Q10, 7Q10 and 30Q10 flows can be thought of as the lowest 1-Day, 7-Day and 30-Day average flows that are expected to occur on average once every 10 years.

The 1Q10 flow is used to assess for aquatic acute A(A), the 7Q10 for aquatic chronic A(C), and the 30Q10 for human, aesthetic, wildlife (HEW) water quality standards.

There is no available flow information for Clark Creek or nearby streams similar in size. The nearest USGS gaging station with sufficient information to calculate critical low flows analytically is USGS 04262500, West Branch Oswegatchie River near Harrisville, located about 5 miles from Outfall 001. Low flow statistics were calculated using the USGS Hydrologic Toolbox computer software based on the Log-Pearson Type III distribution. Results are summarized below:

Gage ID:	USGS 04262500
Gage Name:	West Branch Oswegatchie River near Harrisville
Period of Record Used:	April 1, 1917 - March 31, 2023
Drainage Area at Gage (mi <sup>2</sup> ):	258
1Q10 Flow at Gage (CFS):	37.7
7Q10 Flow at Gage (CFS):	44.6
30Q10 Flow at Gage (CFS):	56.5

To estimate critical low flows at Clark Creek, flow duration statistics were calculated at both Outfall 001 and long-term gaging station USGS 04262500 using the [USGS StreamStats](#) online application. Flow duration is the percent of time that stream flows were equaled or exceeded.

StreamStats uses regression equations based on “*Estimation of unaltered daily mean streamflow at ungaged streams of New York, excluding Long Island, water years 1961–2010: U.S. Geological Survey Scientific Investigations Report 2014–5220, 2015*”.

The flow duration regression equations incorporates site-specific watershed characteristics such as drainage area, stream length and slope, average summer precipitation, hydrologic soil types, and basin elevation. Flow duration analysis results for each site are as follows:

Table 2. Flow-Duration Percent Exceedance

Percent Exceedance (%)	Outfall 001 (CFS)	USGS 04262500 (CFS)
1	38.2	3780
5	15.5	1790
10	9.85	1190
15	7.51	878
20	5.89	701
25	5.06	564
35	3.71	399
50	2.48	274
65	1.48	163
75	1.01	114
80	0.845	94.5
85	0.705	77.4
90	0.595	61.3
95	0.469	46.0
99	0.343	30.5



The ratio of the 50% flow-duration values for Outfall 001 to USGS 04262500 in Table 2 was used as a weighting factor times the critical low flows calculated at USGS 04262500 to estimate the critical low flows for Clark Creek.

$$1Q10 = (2.48/274) \times 37.7 \text{ CFS} = 0.34 \text{ CFS}$$

$$7Q10 = (2.48/274) \times 44.6 \text{ CFS} = 0.40 \text{ CFS}$$

$$30Q10 = (2.48/274) \times 56.5 \text{ CFS} = 0.51 \text{ CFS}$$

To express the critical receiving water flows from cubic feet per second (CFS) to million gallons per day (MGD), a multiplier of 0.6463 is applied. The critical flows in MGD are:

Table 3. Critical Low Flows

Outfall	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)
001	0.22	0.26	0.33

The 1Q10, 7Q10, and 30Q10 flows were used to calculate the acute, chronic, and human, aesthetic, wildlife (HEW) dilution ratios, respectively.

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

Table 4. Dilution Ratios

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	1.08:1	1.10:1	1.13:1	TOGS 1.3.1 (Gage Analysis)

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

### Receiving Water Quality Information

NYSDEC continuously collects water quality information on rivers, streams, lakes, estuaries, and coastal waters in New York. The Rotating Integrated Basin Studies (RIBS) Program monitors rivers, lakes and streams. The RIBS program is designed so that all 17 major drainage basins in the state are monitored every five years, with 3 to 4 basins being monitored each year. The RIBS program also includes routine monitoring stations that are sampled each year regardless of the 5-year cycle.

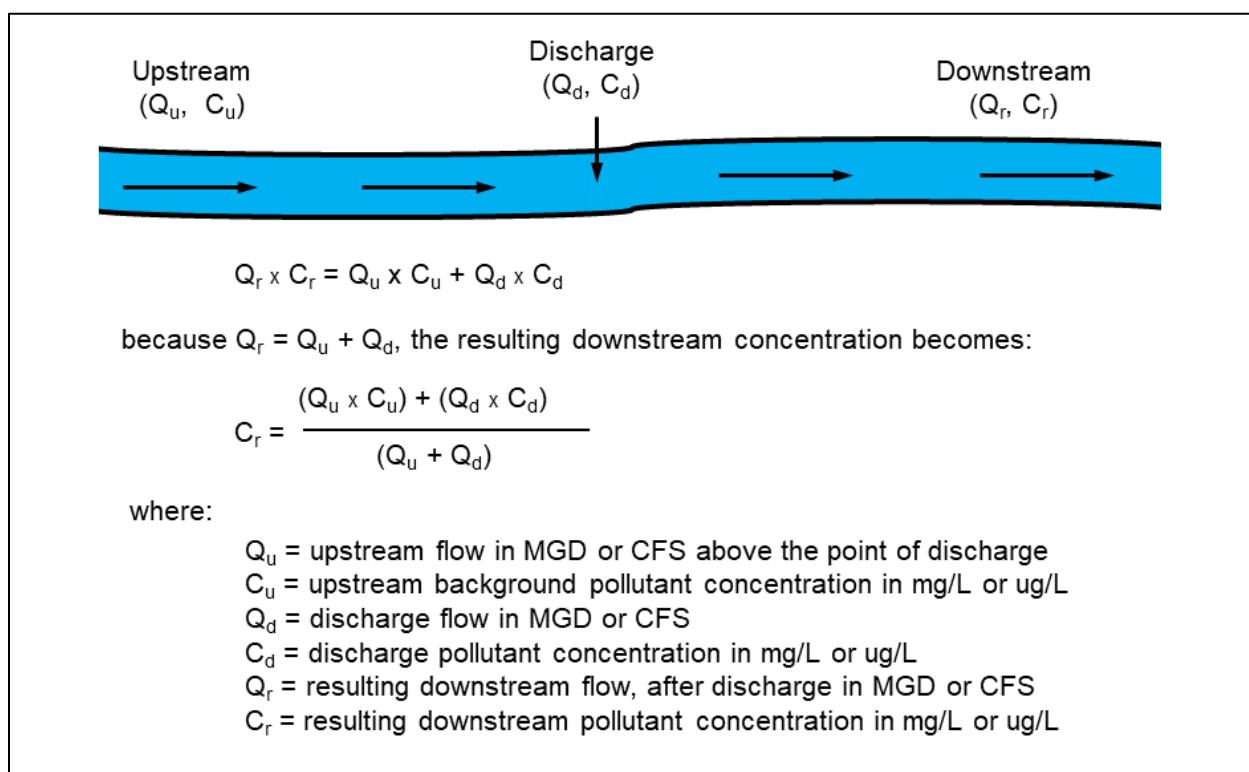
There is no useable water quality information available for Clark Creek or nearby streams. NYSDEC has calculated representative median estimates of hardness and pH for each of the 17 major watersheds in New York using ambient data from the RIBS program from 2012 - 2022 which is used when site-specific water quality information is not available. Representative default values for the St. Lawrence basin is below.

Table 5. Receiving Water Quality

Parameter	Units	Default Value
pH	SU	7.6
Hardness (as CaCO <sub>3</sub> )	mg/L	73

For conservative pollutants with rapid and complete mixing, a steady-state, mass-balance approach is used to calculate the downstream water quality resulting from a discharge. A conservative pollutant is a pollutant that does not readily degrade or breakdown in the environment and is mitigated primarily by dilution after entering receiving waters.

Figure 4. Mass Balance Schematic



## PERMIT REQUIREMENTS

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

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

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

ELGs for this facility are specified in 40 CFR Part 436.72 and includes the following BPT requirements:

- (a) Subject to the provisions of the following paragraphs of this section, there shall be no discharge of process generated wastewater pollutants into navigable waters.
- (b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process wastewater impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

Process generated wastewater is any wastewater used in the slurry transport of mined material, air emissions control, or processing exclusive of mining. The term shall also include any other water which becomes commingled with such wastewater in a pit, pond, lagoon, mine, or other facility used for treatment of such wastewater. Dewatering of groundwater infiltration and stormwater from the mine pit floor is not process wastewater, provided it is not comingled with process generated wastewater.

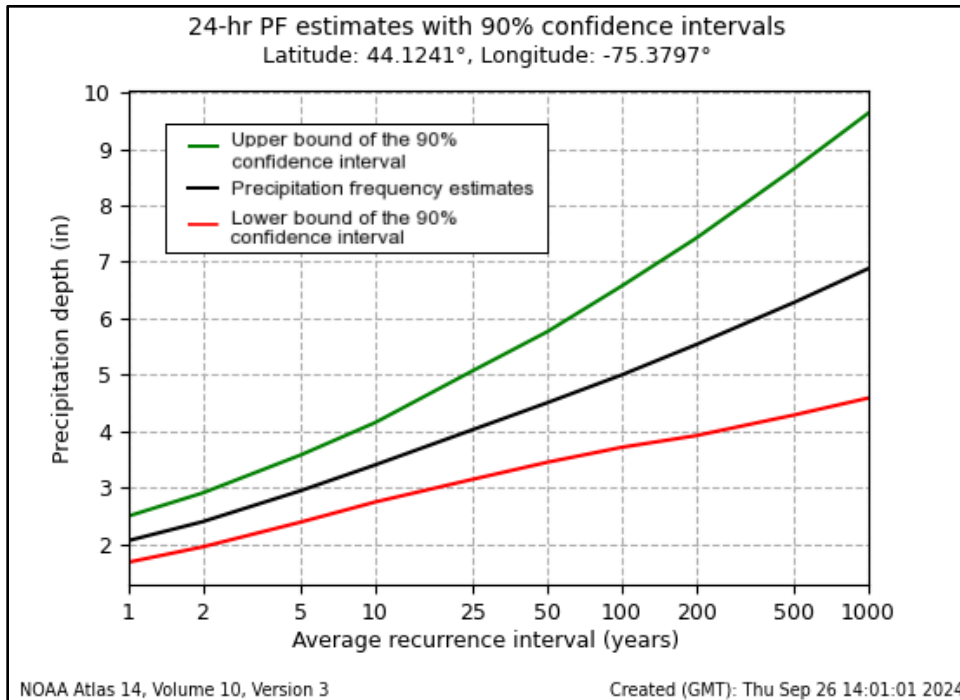
The National Oceanic and Atmospheric Administration (NOAA) established rainfall statistics for New York in "*NOAA Atlas 14 Volume 10 Version 3, Precipitation-Frequency Atlas of the United States, Northeastern States, Revised 2019*". NOAA Atlas 14 supersedes NOAA Technical Memorandum NWS HYDRO-35, Weather Bureau Technical Paper No. 40, and Weather Bureau Technical Paper No. 49 in New York.

NYSDEC has determined that the 10-year, 24-hour rainfall event at the facility location is 3.41 inches. Site specific rainfall statistics are available through the NOAA Precipitation Frequency Data Server (PFDS) at: <https://hdsc.nws.noaa.gov/pfds/>.

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<sup>2</sup> As promulgated under 40 CFR Parts 405 - 471

Figure 5. 24-Hour Design Rainfall Depths at No. 4 Mine



### Whole Effluent Toxicity (WET) Testing

None of the seven criteria that are indicative of potential toxicity listed in TOGS 1.3.2 and in the Appendix to this factsheet are applicable to this facility. Therefore, WET testing is not included in the draft permit. [Appendix Link](#)

### Discharge Notification Act Requirements

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

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

### Stormwater Pollution Prevention Requirements

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

Stormwater discharges at this facility are permitted under a separate SPDES Multi Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity (GP-0-23-001). The

MSGP number is NYR00B205, and the facility is permitted under Sector J, Mineral Mining and Dressing, and Sector P, Land Transportation and/or Warehousing.

### Mercury<sup>3</sup>

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

#### [Appendix Link](#)

The facility is categorized as Non-major EPA/State Significant (Class 01) industrial facility. Low level mercury effluent sampling results submitted with the SPDES permit application were 2.7 ng/L.

On 10/03/2024, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.A.3. of DOW 1.3.10 and the effluent measured <12 ng/L. Therefore, consistent with DOW 1.3.10, the permit includes requirements for the implementation of MMP Type IV and does not include mercury effluent limitations. The [Schedule of Additional Submittals](#) includes a mercury minimization plan annual status report (maintained onsite), and re-certification of the exclusion every five years. As part of the re-certification, the effluent must be sampled and continue to measure <12 ng/L. This requirement is new.

### Emerging Contaminant Monitoring

Emerging Contaminants, such as Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), and 1,4-Dioxane (1,4-D), have been used in a wide variety of consumer and industrial products as well as in manufacturing processes for decades. These contaminants do not break down easily, therefore their presence in wastewater can remain a concern for years following their discontinued use. As the science surrounding these contaminants is still evolving, additional monitoring is needed to better understand potential sources and background levels. For more information on emerging contaminants, please see the DEC Division of Water web page: [Emerging Contaminants In NY's Waters - NYSDEC](#) and [TOGS 1.3.13](#), Industrial Permitting Strategy for Implementing Guidance Values for PFOA, PFOS, and 1,4-Dioxane.

Emerging contaminant monitoring required by the SPDES permit application resulted in all non-detects for PFOA/PFOS and 1,4 Dioxane. Industrial operations performed by the permittee have not been identified a potential source of PFOA/PFOS, and 1,4-Dioxane in TOGS 1.3.13, Tables A and B. Therefore, additional emerging contaminant monitoring, effluent limitations, or other permit conditions are not being proposed.

### Anti-backsliding

In general, state and federal regulations prohibit the relaxation of effluent limitations in permits unless one of the specified exceptions applies. [Appendix Link](#)

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

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<sup>3</sup> In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

### Antidegradation

The permit contains effluent limitations which ensure that the best usages of the receiving waters will be maintained. The Notice of Complete Application published in the Environmental Notice Bulletin contains information on the State Environmental Quality Review (SEQR)<sup>4</sup> determination. [Appendix Link](#)

### Schedule of Additional Submittals

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

- Submittal of a Best Management Practices (BMP) Plan and Annual BMP Facility Review.
- Mercury Minimization Program development and Annual Status Report (maintained onsite).
- Submittal of a Mercury Conditional Exclusion Certification Form every five years in order to maintain MMP Type IV status.

### Special Conditions

Conditions have been added to the permit prohibiting the discharge of process generated wastewater in accordance with BPT requirements specified in 40 CFR Part 436.72. Please see the [USEPA Effluent Limitation Guidelines \(ELGs\) Applicable to Facility](#) section for more information.

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<sup>4</sup> As prescribed by 6 NYCRR Part 617

## 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	44° 07' 25.9" N	75° 22' 49.6" W	Clark Creek	C(T)	WIN: SL-25-7-3-55-P 24-5 PWL: 910-1188	09/05	73 <sup>5</sup>	0.22	0.26	0.33	2.6	1.08:1	1.10:1	1.13:1

## POLLUTANT SUMMARY TABLE

### Outfall 001

Outfall #	001	Description of Wastewater: Mine Dewatering Wastewater													
		Type of Treatment: Settling Basin													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
<b>General Notes:</b>															
<ul style="list-style-type: none"> <li>Existing discharge data from 01/01/2019 to 12/31/2023 was obtained from Discharge Monitoring Reports submitted by the permittee and supplemented by the SPDES permit application.</li> <li>Procedures from TOGS 1.2.1 and NYSDEC permitting guidance were reviewed for the development of Technology Based Effluent Limitations (TBELs). TBELs for common treatment technologies are listed in TOGS 1.2.1, Attachment C.</li> <li>All applicable water quality standards were reviewed for development of the Water Quality Based Effluent Limitations (WQBELs).</li> <li>The water quality standard and WQBEL shown below represent the most stringent of the water quality standard for the designated protection types specified in 6 NYCRR Parts 700-706.</li> <li>The basis of the final effluent limitation is typically the more stringent between the TBEL and WQBEL.</li> <li>Final effluent limitations are typically expressed to two (2) significant digits in accordance with EPA NPDES Permit Writer's Manual (2010).</li> </ul>															

<sup>5</sup> Ambient hardness based on NYSDEC standard default values calculated for the St. Lawrence watershed.

<sup>6</sup> Existing Effluent Quality: Unless otherwise stated, Daily Max = 99% lognormal; Monthly Avg = 95% lognormal.

Outfall #	001	Description of Wastewater: Mine Dewatering Wastewater														
		Type of Treatment: Settling Basin														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis			
Flow Rate	MGD	Daily Max	Monitor	2.6	60/0	<b>Monitor</b>	6 NYCRR Part 750-1.13	Narrative: No alterations that will impair the waters for their best usages.						<a href="#">6 NYCRR Part 703.2</a>	-	Monitor
	Existing effluent is the average for the period of 2019 - 2023.															
<b>TBELs</b>																
Flow monitoring is required in accordance with 6 NYCRR Part 750-1.13 and is necessary to calculate pollutant loadings.																
<b>WQBELs</b>																
Not applicable, narrative water quality standards.																
<b>Basis of Permit Condition</b>																
Flow will continue to be monitored.																
pH	SU	Minimum	6.0	7.1	51/0	6.0	BPJ TOGS 1.2.1	7.6 <sup>7</sup>	6.1	6.5 - 8.5	Range	<b>6.5 - 8.5</b>	<a href="#">6 NYCRR Part 703.3</a>	-	WQBEL	
		Maximum	9.0	8.2	51/0	9.0			8.9							
Existing effluent quality is the lowest minimum and highest maximum for the period of 2019 - 2023.																
<b>TBELs</b>																
Consistent with TOGS 1.2.1, BPJ TBELs in the range of 6.0 - 9.0 reflect the available treatment technology listed in Attachment C.																
<b>WQBELs</b>																
The projected instream concentrations (PIC) with the TBELs under aquatic acute A(C) critical low flow conditions (7Q10) are calculated as:																
$\text{pH Min} = (0.26 \text{ MGD} \times 7.6 \text{ SU}) \times (2.6 \text{ MGD} \times 6.0) / (0.26 \text{ MGD} + 2.6 \text{ MGD}) = 6.1 \text{ SU}$																
$\text{pH Max} = (0.26 \text{ MGD} \times 7.6 \text{ SU}) \times (2.6 \text{ MGD} \times 9.0) / (0.26 \text{ MGD} + 2.6 \text{ MGD}) = 8.9 \text{ SU}$																
There is a reasonable potential to exceed water quality standards under critical low flow conditions. Therefore, effluent limitations equal to pH water quality standards are necessary to maintain water quality.																
<b>Basis of Permit Condition</b>																
The WQBELs are more stringent than the TBELs and are specified in the permit. The proposed effluent limitations are also more stringent than the previous permit.																

<sup>7</sup> Ambient pH based on NYSDEC standard default values calculated for the St. Lawrence watershed.



Outfall #	001	Description of Wastewater: Mine Dewatering Wastewater													
		Type of Treatment: Settling Basin													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Total Suspended Solids (TSS)	mg/L	Monthly Avg	-	-	-	25	BPJ	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.	6 NYCRR Part 703.2	-	-	-	TBEL	
		Daily Max	50	5.1	39/12	45	BPJ								
	lbs/d	Monthly Avg	-	-	-	540	BPJ								
		Daily Max	-	-	-	980	BPJ								
<p>Existing effluent quality is the 99<sup>th</sup> percentile calculated from the lognormal distribution for the period of 2019 - 2023. Non-detects were set to the reported detection level.</p> <p><b>TBELs</b>                      Solid matter is the primary pollutant of concern for mine pits/quarries discharging dewatering wastewater. The basis of the previous TSS limit could not be determined from NYSDEC records. BPJ TBELs include a monthly average of 25 mg/L and a daily maximum of 45 mg/L. These limits are based on NYSDEC guidance for stone/sand/gravel mining facilities and were taken from federal standards for the industrial sand category.</p> <p>In accordance with 6 NYCRR Part 750-1.10(a) and 40 CFR Part 122.45(f)(1), effluent limitations for most pollutants shall be expressed in terms total mass (weight) in lbs/d when applicable. The design flow is used to convert a concentration effluent limitation to total mass and is calculated as:</p> <p style="padding-left: 40px;">Total Mass (lbs/d) = Flow (MGD) x Concentration (mg/L) x 8.34</p> <p style="padding-left: 40px;">Monthly Avg = 2.6 MGD x 25 mg/L x 8.34 = 542 ≈ 540 lbs/d                      Daily Max = 2.6 MGD x 45 mg/L x 8.34 = 976 ≈ 980 lbs/d</p> <p>Effluent limitations are typically expressed to two significant digits as recommended by the EPA NPDES Permit Writer's Manual (2010).</p> <p><b>WQBELs</b>                      Not applicable – narrative water quality standards.</p> <p><b>Basis of Permit Condition</b>                      The TBELs are specified in the permit. The proposed effluent limitations are more stringent than the previous permit. TSS limitations expressed in lbs/day and the monthly average limit are new permit requirements.</p>															

Outfall #	Description of Wastewater: Mine Dewatering Wastewater														
	Type of Treatment: Settling Basin														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Settleable Solids	ml/L	Daily Max	-	< 0.1	0/1	<b>0.1</b>	BPJ 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.			<a href="#">6 NYCRR Part 703.2</a>	-	TBEL	
	Existing effluent quality based on sampling results submitted with SPDES Permit Application form NY-2C. The current permit does not include effluent limitations or monitoring requirements for settleable solids.  <b>TBELs</b> Solid matter is the primary pollutant of concern for mine pits/quarries discharging dewatering wastewater. BPJ TBELs includes a daily maximum of 0.1 ml/L and are based on NYSDEC guidance for stone/sand/gravel mining facilities.  <b>WQBELs</b> Not applicable – narrative water quality standards.  <b>Basis of Permit Condition</b> The TBEL is specified in the permit and is a new requirement.														
Oil & Grease	mg/L	Daily Max	15	4.1	1/50	<b>15</b>	BPJ TOGS 1.2.1	-	Narrative: No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.			<a href="#">6 NYCRR Part 703.2</a>	-	TBEL	
		Daily Max	-	-	-	<b>330</b>	-								
Existing effluent quality is the average with non-detects set to the reported detection level. Too many non-detects to calculate meaningful lognormal statistics.  <b>TBELs</b> BPJ TBELs includes a daily maximum of 15 mg/L and are based on NYSDEC guidance for stone/sand/gravel mining facilities and TOGS 1.2.1, Attachment C.  In accordance with 6 NYCRR Part 750-1.10(a) and 40 CFR Part 122.45(f)(1), effluent limitations for most pollutants shall be expressed in terms total mass (weight) in lbs/d when applicable. The design flow is used to convert a concentration effluent limitation to total mass and is calculated as:  $\text{Total Mass (lbs/d)} = \text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34$ $\text{Daily Max} = 2.6 \text{ MGD} \times 15 \text{ mg/L} \times 8.34 = 325 \approx 330 \text{ lbs/d}$ <b>WQBELs</b> Not applicable – narrative water quality standards.  <b>Basis of Permit Condition</b> The TBEL is specified in the permit and is a new requirement.															

Outfall #	Description of Wastewater: Mine Dewatering Wastewater														
	Type of Treatment: Settling Basin														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>6</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Iron, Total	mg/L	Daily Max	4.0	0.06	3/48	-	-	-	-	-	-	-	-	-	Discontinued
	<p>Existing effluent quality is the average with non-detects set to the reported detection level. Too many non-detects to calculate meaningful lognormal statistics.</p> <p><b>Basis of Permit Condition</b>            Iron is being removed from the permit. 48 of 51 of the effluent samples were non-detect with the highest detectable result in the past 5 years at 0.17 mg/L. Therefore, effluent limitations and monitoring requirements are unnecessary.</p> <p>In addition, water quality standards for iron for Class C waterbodies no longer apply, only Class A waters and groundwaters are included in the standards. 6 NYCRR Part 703.5 was amended in 2008, which occurred after the current permit was issued, removing iron water quality standards for Class B, C, and D waters.</p>														
Zinc, Total	mg/L	Daily Max	0.6	0.037	2/49	-	-	-	-	-	-	-	<a href="#">6 NYCRR Part 703.5</a>	-	Discontinued
	<p>Existing effluent quality is the average with non-detects set to the reported detection level. Too many non-detects to calculate meaningful lognormal statistics.</p> <p><b>Basis of Permit Condition</b>            Iron is being removed from the permit. 49 of 51 of the effluent samples were non-detect with the highest detectable result in the past 5 years at 0.05 mg/L. Therefore, effluent limitations and monitoring requirements are unnecessary.</p>														
Mercury, Total	ng/L	Daily Max	-	2.7	1/0	-	-	-	-	0.7	H(FC)	-	<a href="#">6 NYCRR Part 703.5</a>	-	DOW 1.3.10
	<p>Existing effluent quality based on sampling results submitted with SPDES Permit Application form NY-2C.</p> <p><b>Basis of Permit Condition</b>            For more information regarding New York's Multiple Discharge Variance (MDV) and Mercury Minimization Program (MMP) requirements, please see the <a href="#">Mercury section of this fact sheet</a>.</p>														

## USEPA EFFLUENT LIMITATION GUIDELINE (ELG) CALCULATIONS

### [Appendix Link](#)

For the applicable categorical limitations under 40 CFR Part 436, Mineral Mining and Processing Point Source Category the following basis was used to determine the TBEL:

<b>Outfall</b>	001		
<b>40 CFR Part/Subpart</b>	§436.72, Subpart G		
<b>Subpart Name</b>	Asbestos and Wollastonite Subcategory		

ELG Pollutant	Daily Max Multiplier	Monthly Avg. Multiplier	Production Rate (Million lbs/d)	Daily Max TBEL (lbs/d)	Monthly Avg. TBEL (lbs/d)
<b>40 CFR Part 436.72 Subpart G – ELGs for Best Practicable Control Technology Currently Available (BPT)</b>					
(a) Subject to the provisions of the following paragraphs of this section, there shall be no discharge of process generated wastewater pollutants into navigable waters.					
(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process wastewater impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.					
<b>Note(s):</b> The facility does not discharge process generated wastewater.					

## APPENDIX A: REGULATORY AND TECHNICAL BASIS OF PERMIT AUTHORIZATIONS

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

### Regulatory References

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

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

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

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

## Outfall and Receiving Water Information

### Impaired Waters

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

### Interstate Water Pollution Control Agencies

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

### Existing Effluent Quality

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

## Permit Requirements

### Basis for Effluent Limitations

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

When conducting a full technical review of an existing permit, the previous effluent limitations form the basis for the next permit. Existing effluent quality is evaluated against the existing effluent limitations to determine if these should be continued, revised, or deleted. Generally, existing limitations are continued unless there are changed conditions at the facility, the facility demonstrates an ability to meet more stringent limitations, or in response to updated regulatory

requirements. Pollutant monitoring data is also reviewed to determine the presence of additional contaminants that should be included in the permit based on a reasonable potential analysis to cause or contribute to a water quality standards violation.

### Anti-backsliding

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

### Antidegradation Policy

New York State implements the antidegradation portion of the CWA based upon two documents: (1) Organization and Delegation Memorandum #85-40, "Water Quality Antidegradation Policy" (September 9, 1985); and, (2) TOGS 1.3.9, "Implementation of the NYSDEC Antidegradation Policy – Great Lakes Basin (Supplement to Antidegradation Policy dated September 9, 1985) (undated)." The permit for the facility contains effluent limitations which ensure that the existing best usage of the receiving waters will be maintained. To further support the antidegradation policy, SPDES applications have been reviewed in accordance with the State Environmental Quality Review Act (SEQR) as prescribed by 6 NYCRR Part 617.

### Effluent Limitations

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

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

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

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

In many cases, BPT, BCT, BAT and NSPS limitations are based on effluent guidelines developed by USEPA for specific industries, as promulgated under 40

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

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

CFR Parts 405-471. Applicable guidelines, pollutants regulated by these guidelines, and the effluent limitation derivation for facilities subject to these guidelines is in the [USEPA Effluent Limitation Guideline Calculations Table](#).

#### *Best Professional Judgement (BPJ)*

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

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

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

#### *Mixing Zone Analyses*

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

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

#### *Critical Flows*

In accordance with TOGS 1.2.1 and 1.3.1, WQBELs are developed using dilution ratios that relate the critical low flow condition of the receiving waterbody to the



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

#### Reasonable Potential Analysis (RPA)

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

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

The DEC uses modeling tools to estimate the expected concentrations of the pollutant in the receiving water and develop WQBELs. These tools were developed

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

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

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

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

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

1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
2. There are uncertainties in the development of TMDLs, WLAs, and WQBELs, caused by inadequate ambient and/or discharge data, high natural background concentrations of pollutants, available treatment technology, and other such factors.
3. There is the presence of substances for which WQBELs are below analytical detectability.

4. There is the possibility of complex synergistic or additive effects of chemicals, typically when the number of metals or organic compounds discharged by the permittee equals or exceeds five.
5. There are observed detrimental effects on the receiving water biota.
6. Previous WET testing indicated a problem.
7. POTWs which exceed a discharge of 1 MGD. Facilities of less than 1 MGD may be required to test, e.g., POTWs <1 MGD which are managing industrial pretreatment programs.

### *Minimum Level of Detection*

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

### *Monitoring Requirements*

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

### *Other Conditions*

#### *Mercury*

The multiple discharge variance (MDV) for mercury was developed in accordance with 6 NYCRR 702.17(h) “to address widespread standard or guidance value attainment issues including the presence of a ubiquitous pollutant or naturally high levels of a pollutant in a watershed.” The first MDV was issued in October 2010, and subsequently revised and reissued in 2015; each subsequent iteration of the MDV is designed to build off the previous version, to make reasonable progress towards the water quality standard (WQS) of 0.7 ng/L dissolved mercury. The MDV is necessary because human-caused conditions or sources of mercury prevent attainment of the WQS and cannot be remedied (i.e., mercury is ubiquitous in New York waters at levels above the WQS and compliance with a water quality based effluent limitation (WQBEL) for mercury cannot

be achieved with demonstrated effluent treatment technologies). The DEC has determined that the MDV is consistent with the protection of public health, safety, and welfare. During the effective period of this MDV, any increased risks to human health are mitigated by fish consumption advisories issued periodically by the NYSDOH.

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

### Schedules of Compliance

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

### Schedule(s) of Additional Submittals

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

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

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

## APPENDIX B: ACRONYMS

The following list of common acronyms is meant to support multiple types of SPDES Fact Sheets and may contain terms not applicable to this specific permit.

1Q10	1-Day, 10-Year Low Flow
7Q10	7-Day, 10-Year Low Flow
30Q10	30-Day, 10-Year Low Flow
A(A)	Aquatic Acute
A(C)	Aquatic Chronic
AL	Action Level
BAT	Best Available Technology Economically Achievable
BCCs	Bioaccumulative Chemicals of Concern
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BOD <sub>5</sub>	5-Day Biochemical Oxygen Demand
BPJ	Best Professional Judgement
BPT	Best Practicable Technology Currently Available
°C	Degrees Celsius
BTA	Best Technology Available
CAFO	Concentrated Animal Feeding Operation
CBOD	Carbonaceous Biochemical Oxygen Demand
CBOD <sub>5</sub>	5-Day Carbonaceous Biochemical Oxygen Demand
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CIU	Categorical Industrial User
CMOM	Capacity, Management, Operation, and Maintenance
CSLAP	Citizens Statewide Lake Assessment Program
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
CV	Coefficient of Variation
CWA	Clean Water Act
CWIS	Cooling Water Intake Structure
DEC, NYSDEC	New York State Department of Environmental Conservation
DIM	Department-Initiated Modification
DMR	Discharge Monitoring Report
DNA	Discharge Notification Act
DO	Dissolved Oxygen
DOH, NYSDOH	New York State Department of Health
DOW	NYSDEC Division of Water

DRBC	Delaware River Basin Commission
DWO	Dry Weather Overflow
EBPS	Environmental Benefit Permit Strategy
ECHO	Enforcement and Compliance History On-Line
ECL	Environmental Conservation Law
EDP	Effective Date of Permit
EDPM	Effective Date of Permit Modification
EEQ	Existing Effluent Quality
EFC, NYSEFC	New York Environmental Facilities Corporation
ELG	Effluent Limitations Guidelines or Effluent Guidelines
ENB	Environmental Notice Bulletin
EPA, USEPA	U.S. Environmental Protection Agency
ExDP	Expiration Date of Permit
°F	Degrees Fahrenheit
FROSI	Fast Report on Significant Industrial Users
GLCA	General Level Currently Achievable
GLWQA	Great Lakes Water Quality Agreement
GPD	Gallons per Day
GV	Water Quality Guidance Value established by NYSDEC in TOGS 1.1.1
HEW	Human/Aesthetic/Wildlife Protection
IDV	Individual Discharge Variance
I/I	Infiltration and Inflow
IJC	International Joint Commission
ILCA	Individual Level Currently Achievable
ISC	Interstate Sanitation Commission
ISEL	Intermittent Stream Effluent Limitations
lbs/d	Pounds per Day
LTCP	Long-Term Control Plan
MDL	Method Detection Limit
MDV	Multiple Discharge Variance
mg/L	Milligrams per Liter
MGD	Million Gallons per Day
ML	Minimum Level
ml/L	Milliliter per Liter
MMP	Mercury Minimization Program
MOA	Memorandum of Agreement
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit for Stormwater Associated with Industrial Activity
NAICS	North American Industry Classification System
NCCW	Noncontact Cooling Water

NetDMR	Network Discharge Monitoring Report
ng/L	Nanograms per Liter
NMC	Nine Minimum Controls
NSPS	New Source Performance Standards
NYCRR	New York Code of Rules and Regulations
ORF	Overflow Retention Facility
ORSANCO	Ohio River Valley Water Sanitation Commission
PCB	Polychlorinated biphenyls
PCCM	Post-Construction Compliance Monitoring
PCI or P/C/I	Private/Commercial/Institutional
PEQ	Projected Effluent Quality
PFAS	Per-and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonic Acid
PIC	Projected Instream Concentration
PIM	Permittee-Initiated Modification
PMP	Pollutant Minimization Program
PonSAT	Ponded Waterbody Based Effluent Limit Screening Analysis Tool
POSS	Publicly Owned Sewer System
POTW	Publicly Owned Treatment Works
PWL	Priority Waterbodies List
RFI	Request for Information
RIBS	Rotating Intensive Basin Sampling
RP	Reasonable Potential
RPA	Reasonable Potential Analysis
RPD	Reasonable Potential Determination
RSAT	River-Based Effluent Limit Screening Analysis Tool
RWE	Regional Water Engineer
SAPA	State Administrative Procedure Act
SEQR	State Environmental Quality Review
SIC	Standard Industrial Classification
SIU	Significant Industrial User
SNC	Significant Noncompliance
SPCC	Spill Prevention Control and Countermeasure
SPDES	State Pollutant Discharge Elimination System
SPRTK	Sewage Pollution Right to Know Act
SRBC	Susquehanna River Basin Commission
SSO	Sanitary Sewer Overflow
SU	Standard Units
STEP	Septic Tank Effluent Pumping

SWPPP	Stormwater Pollution Prevention Plan
TBELs	Technology-based Effluent Limitations
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TOGS	Technical and Operational Guidance Series
TSD	Technical Support Document
TSS	Total Suspended Solids
TUa	Acute Toxicity Unit
TUc	Chronic Toxicity Unit
ug/L, µg/L	Micrograms per Liter
UOD	Ultimate Oxygen Demand
UPA	Uniform Procedures Act
USGS	United States Geologic Survey
UV	Ultraviolet
WET	Whole Effluent Toxicity
WIN	Waters Index Number
WIP	Watershed Implementation Plan
WI/PWL	Waterbody Inventory/ Priority Waterbodies List
WLA	Wasteload Allocation
WMDL	Watershed Daily Maximum Load
WQ	Water Quality
WQBELs	Water Quality-Based Effluent Limitations
WQS	Water Quality Standard
WTC	Water Treatment Chemical
WWOP	Wet Weather Operating Plan
WWTF	Wastewater Treatment Facility
WWTP	Wastewater Treatment Plant