State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	**1499**	NAICS Code:	**212390**	SPDES Number:	**NY0002984**
Discharge Class (CL):	**01**			DEC Number:	**6-4038-0003/00027**
Toxic Class (TX):	**T**			Effective Date (EDP):	
Major-Sub Drainage Basin:	**09 - 05**			Expiration Date (ExDP):	
Water Index Number:	**SL-25-72-2**	Item No.:	**910 - 1303**	Modification Dates (EDPM):	
Compact Area:	**IJC**				

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

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

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL															
Name:	**Vanderbilt Minerals, LLC - Gouverneur Mineral Division No. 1 Mill**														
Address / Location:	**1837 State Route 812**											County:	**St. Lawrence**		
City:	**Gouverneur**						State:	**NY**				Zip Code:	**13642**		
Facility Location:		Latitude:	**44**	°	**15**	'	**25.6**	" N	& Longitude:	**75**	°	**23**	'	**55.7**	" W
Primary Outfall No.:	**002**	Latitude:	**44**	°	**15**	'	**27.9**	" N	& Longitude:	**75**	°	**23**	'	**57.4**	" W
Wastewater Description:	**Cooling Water**	Receiving Water:	**Turnpike Creek Tributary**				NAICS:	**212390**	Class:	**D**		Standard:	**D**		

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

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

DISTRIBUTION:
BWP Permit Coordinator (permit.coordinator@dec.ny.gov)
DEC Regional Water Engineer
EPA Region II (Region2_NPDES@epa.gov)
DOH - Canton District Office

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

SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	NAICS Code	Outfall Latitude							Outfall Longitude							
006	**Treated Sanitary**	**212390**	**44**	°	**15**	’	**26.7**	” N		**75**	°	**23**	’	**52.9**	” W		
Receiving Water:	**Groundwater**									Class:	**GA**						

DEFINITIONS

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

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Contact and Noncontact Cooling Water, Air Conditioner Condensate, Laboratory Screening Wash Water	Turnpike Creek Tributary	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
								Location		
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	0.090	MGD			1/Week	Instantaneous		X	
Flow	Daily Maximum	Monitor	MGD			1/Week	Instantaneous		X	
pH	Daily Minimum	6.0	SU			1/Month	Grab		X	
	Daily Maximum	9.0	SU							
Temperature	Daily Maximum	90	ºF			1/Month	Grab		X	
Total Suspended Solids (TSS)	Monthly Average	20	mg/L	15	lbs/d	1/Month	Grab		X	
Total Suspended Solids (TSS)	Daily Maximum	40	mg/L	30	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	11	lbs/d	1/Month	Grab		X	
Total Zinc	Daily Maximum	0.47	mg/L	0.35	lbs/d	1/Month	Grab		X	

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
006	Treated Sanitary from Septic Tank/Leach Field	Groundwater	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
								Location		
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
No Monitoring Required										

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 was last revised in May 2018. 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) or that are required to be monitored for by the SPDES permit.

4. **13 Minimum BMPs:** Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify BMPs that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of stormwater elements of the BMP is available in *Developing Your Stormwater Pollution Prevention Plan A Guide for Industrial Operators*, February 2009, EPA 833-B-09-002. As a minimum, the plan shall include the following BMPs:

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

BMPs FOR INDUSTRIAL FACILITIES (continued)

5. **Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater from Construction Activity to Surface Waters -** A SWPPP shall be developed prior to commencing any construction activity that will result in soil disturbance of one or more acres of uncontaminated area[1]. (Note: the disturbance threshold is 5000 SF in the New York City East of Hudson Watershed). The SWPPP shall conform to the current version of the SPDES General Permit for Stormwater Discharges from Construction Activity (CGP), including the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual.* The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity **at least 30 days prior to soil disturbance**. The SWPPP shall be maintained on-site and submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent* (NOI) form shall be submitted (available at www.dec.ny.gov/chemical/43133.html) prior to soil disturbance. Note that submission of the NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges. SWPPPs must be developed for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.

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.

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

MERCURY MINIMIZATION PROGRAM (MMP) - Type IV

On July 31,2024, 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[2] 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 002 to the Regional Water Engineer and to the Bureau of Water Permits certifying that Outfall 002 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)[3] communities and/or 2) Type II sanitary sewer overflow (SSO)[4] 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)[5] 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.

[2]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.
[3] CSO permits are included under the 05 and 07 permit classifications.
[4] These are overflow retention facilities (ORFs) and are included under the 05 and 07 permit classifications.
[5] 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:

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY_____

OUTFALL No. :____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

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

OR:

NYSDEC Division of Water Regional Office Address:

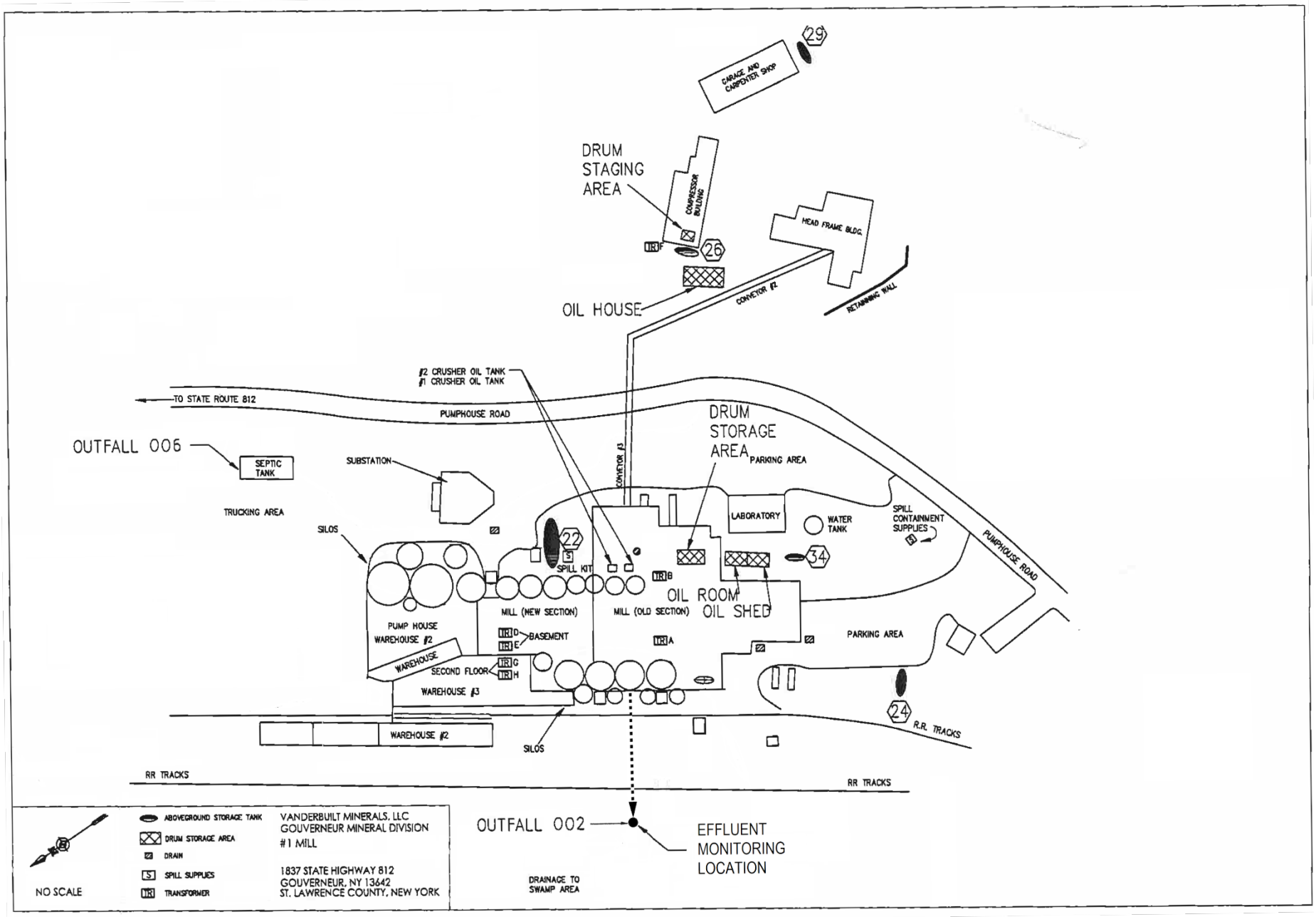
NYSDEC Division of Water Regional Phone: ( ) - ### -####

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

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

MONITORING LOCATIONS

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



GENERAL REQUIREMENTS

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

B. General Conditions

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

C. Operation and Maintenance

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

D. Monitoring and Records

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

E. Reporting Requirements

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

F. Sludge Management

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

G. SPDES Permit Program Fee

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

H. Water Treatment Chemicals (WTCs)

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

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

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

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

B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted for each **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
	BMP PLAN REVIEW The permittee shall annually review the completed BMP plan, last revised in May 2018, 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.	Annually by January 28th
	MERCURY MINIMIZATION PLAN The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	***Maintained Onsite*** EDP + 12 months, annually thereafter by January 28th
	MERCURY - CONDITIONAL EXCLUSION CERTIFICATION Permittee must submit a mercury conditional exclusion certification every five years in order to maintain MMP Type IV status.	July 31, 2029, and every 5 years thereafter

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

E. Monitoring and analysis shall be conducted using sufficiently sensitive test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

F. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.

G. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

H. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.

I. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

SPDES Permit Fact Sheet

Vanderbilt Minerals, LLC

Gouverneur Mineral Division No. 1 Mill

NY0002984

Contents

FIGURES

TABLES

ACRONYMS

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
BMP	Best Management Practices
BPJ	Best Professional Judgement
BPT	Best Practicable Control Technology Currently Available
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CWA	Clean Water Act
DEC, NYSDEC	New York State Department of Environmental Conservation
DMR	Discharge Monitoring Report
DOW	DEC Division of Water
EBPS	Environmental Benefit Permit Strategy
ECL	Environmental Conservation Law
ELGs	Effluent Limitations Guidelines
ENB	Environmental Notice Bulletin
EPA, USEPA	United States Environmental Protection Agency
^{o}F	Degrees Fahrenheit
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
IJC	International Joint Commission
lbs/d	Pounds per Day
MDV	Multiple Discharge Variance
mg/L	Milligrams per Liter
MGD	Million Gallons per Day
ml/L	Milliliter per Liter
MSGP	Multi-Sector General Permit for Stormwater Associated with Industrial Activity
ng/L	Nanograms per Liter
NYCRR	New York Code of Rules and Regulations
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PWL	Priority Waterbodies List
RFI	Request for Information
RIBS	Rotating Intensive Basin Sampling
SAPA	State Administrative Procedure Act
SEQR	State Environmental Quality Review
SIC	Standard Industrial Classification
SPDES	State Pollutant Discharge Elimination System
SU	Standard Units
TBELs	Technology-based Effluent Limitations
TMDL	Total Maximum Daily Load
TOGS	Technical and Operational Guidance Series
TSS	Total Suspended Solids
UPA	Uniform Procedures Act
WET	Whole Effluent Toxicity
WIN	Waters Index Number
WI/PWL	Waterbody Inventory/ Priority Waterbodies List
WQBELs	Water Quality-Based Effluent Limitations

SUMMARY OF PERMIT CHANGES

A State Pollutant Discharge Elimination System (SPDES) permit renewal has been drafted for Vanderbilt Minerals, LLC - Gouverneur Mineral Division No. 1 Mill, pursuant to 6 NYCRR Part 750-1.19, the Priority Ranking System known as the Environmental Benefit Permit Strategy (EBPS).

The changes to the permit are summarized below:

- Removed Outfall 001 that was closed in 2017.
- Increased the monthly average flow limitation to 0.090 MGD at Outfall 002.
- Reduced the effluent limitation for total suspended solids from a daily maximum of 50 mg/L to a daily maximum of 40 mg/L and added a new monthly average effluent limitation of 20 mg/L at Outfall 002.
- Reduced the effluent limitation for total zinc from 0.53 mg/L to 0.47 mg/L at Outfall 002.
- Removed effluent limitations and monitoring requirements for total lead at Outfall 002.
- Added a new daily maximum effluent limitation for oil & grease of 15 mg/L at Outfall 002.
- Express effluent limitations in terms of total mass (lbs/d) for suspended solids, oil & grease, and total zinc at Outfall 002.
- Updated effluent monitoring location diagram.
- Added a new requirement to develop and implement a Mercury Minimization Plan.
- Added a new Schedule of Submittals.
- 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

03/01/2009 The permit was administratively renewed with a new five-year term and expiration date of 02/28/2014.
.

06/01/2012 The last full technical review was performed and the SPDES permit was modified accordingly. The 2012 permit modification has formed the basis of this permit.

03/01/2014 The permit was administratively renewed with a new five-year term and expiration date of 02/28/2019.

06/21/2017 Vanderbilt Minerals submitted a request to modify the permit to remove Outfall 001. The discharge was once-through noncontact cooling water from the air compressors. The air compressors have been removed from service on or around 01/10/2017. DEC revised the facility's EBPS score to reflect the request.

11/21/2019 The permit was administratively renewed with a new five-year term and expiration date of 10/31/2024.

01/16/2024 NYSDEC issued a Request for Information (RFI) to modify and renew the SPDES permit due to the facility's EBPS score[1]. At the time of the RFI, the facility had an EBPS score of 226 and a Region 6 ranking of 3.

04/30/2024 Vanderbilt Minerals submitted a completed SPDES Permit Application NY-2C for Industrial Discharges.

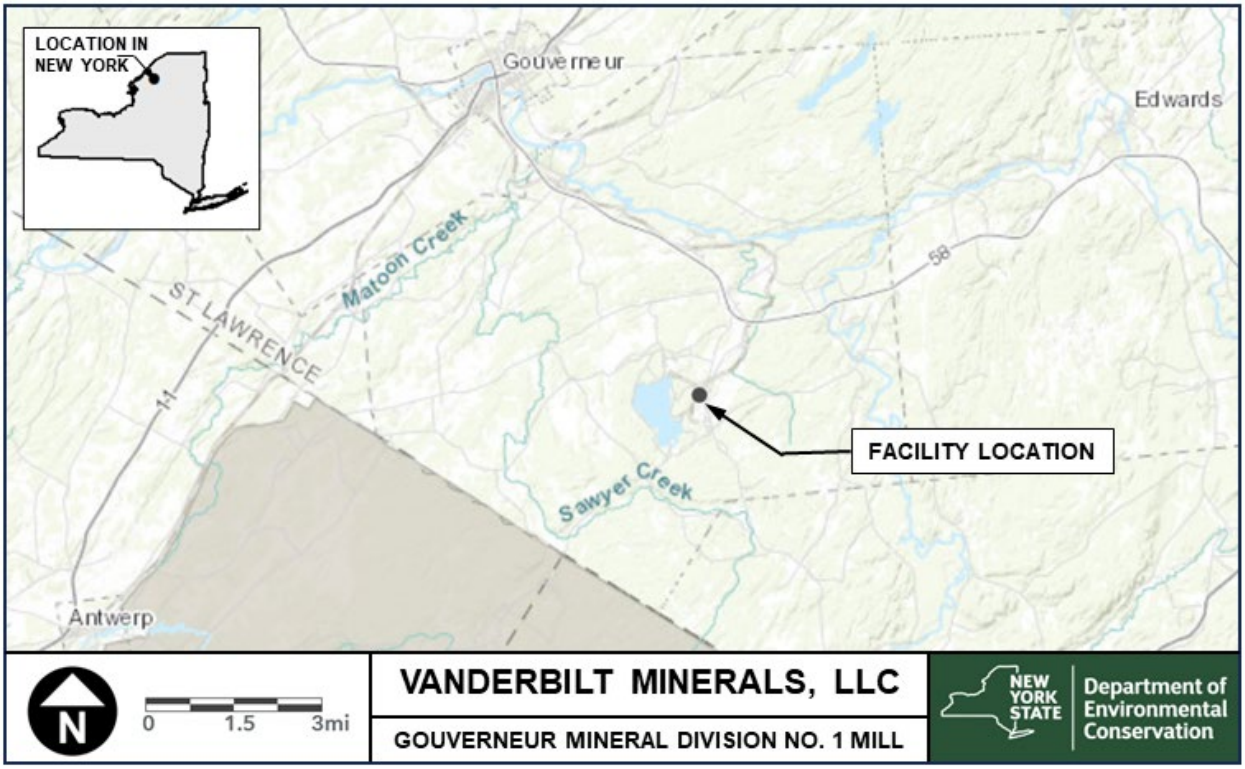
The Notice of Complete Application, published in the Environmental Notice Bulletin and newspapers, contains information on the public notice process.

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

FACILITY INFORMATION

Vanderbilt Minerals, LLC owns and operates the Gouverneur Mineral Division No. 1 Mill in the Town of Fowler, St. Lawrence County, New York.

Figure 1. Location Map



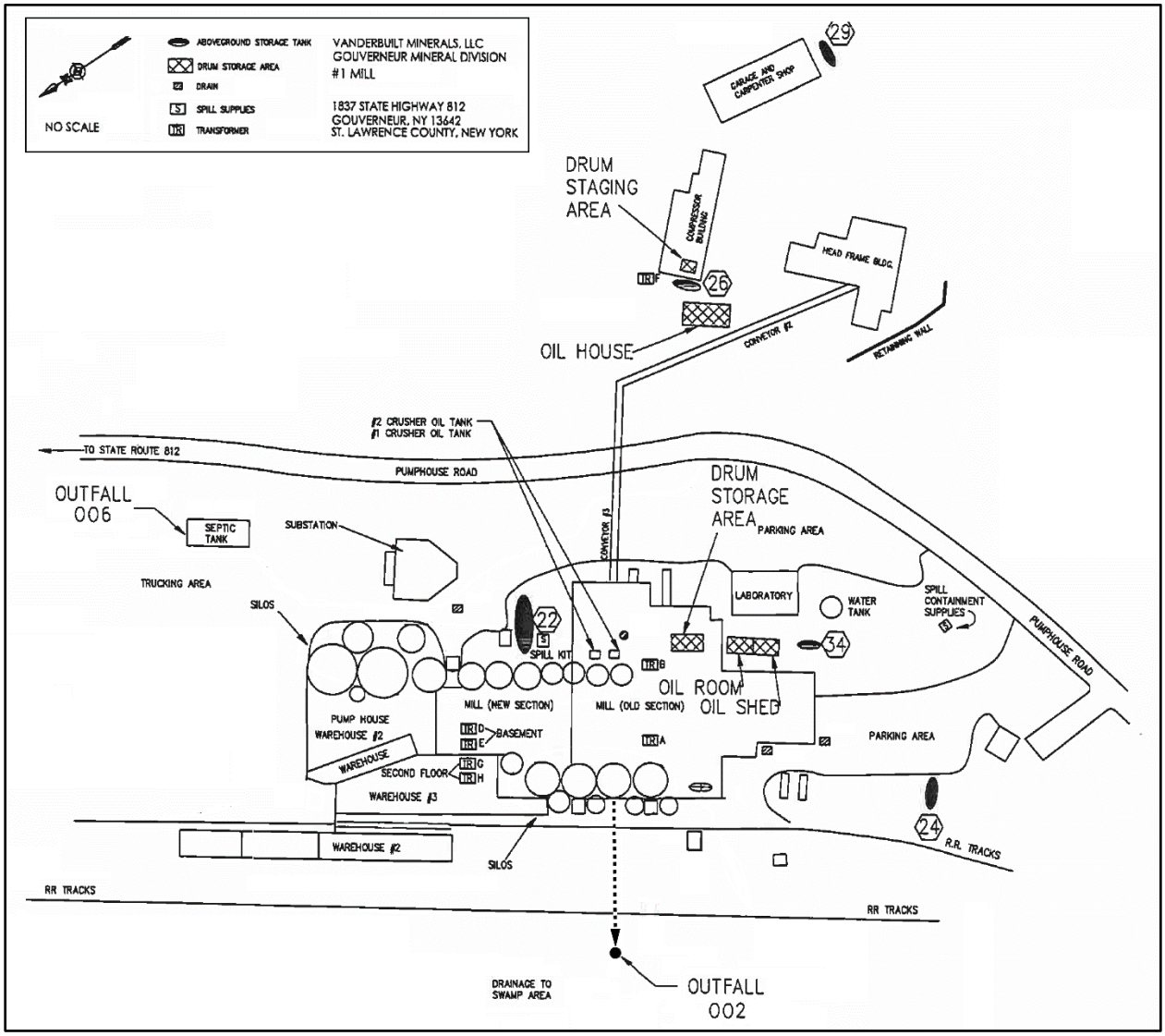
Site Overview

This is an industrial facility with a Standard Industrial Classification (SIC) code 1499, Miscellaneous Nonmetallic Minerals. The facility refines and processes wollastonite. Wollastonite ore is stockpiled on site, dried, milled, packaged, and then shipped to customers. Mining for Wollastonite is not performed onsite, ore is received from Vanderbilt Minerals, Gouverneur Mineral Division Mine #4, which is a separate facility located in the Town of Diana, Lewis County, New York.

Outfall 002 consists of contact and noncontact cooling water, air conditioner condensate, and laboratory wash water from wollastonite screening samples. Air conditioner condensate is treated by an oil/water separator.

Outfall 006 consists of treated sanitary sewage from a 2,800-gallon septic tank and leach field to groundwaters.

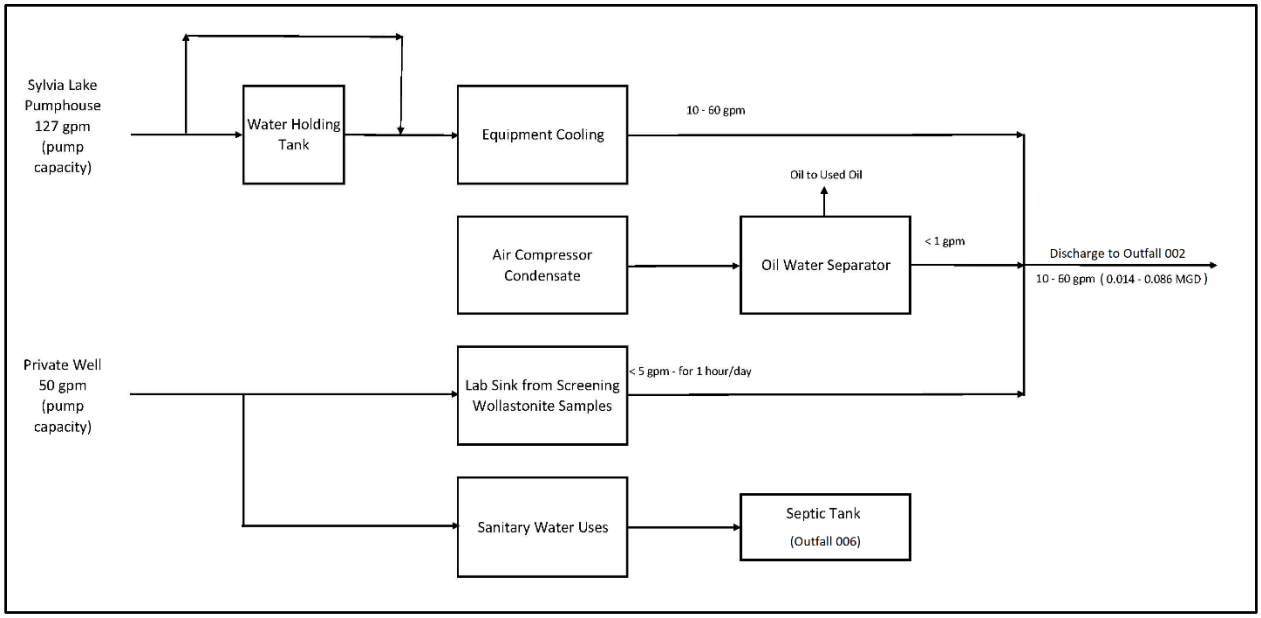
Figure 2. Outfall Locations



Outfall 001 is being discontinued from the permit. Former Outfall 001 use to consist of once-through noncontact cooling water from air compressors to groundwater. The air compressors have been removed from service and discharges ceased on or around 01/10/2017. On 06/21/2017, the facility notified NYSDEC that Outfall 001 was permanently closed and requested a permit modification to remove the outfall. DEC revised the facility's EBPS score to reflect the request.

Stormwater runoff associated with industrial activity is permitted under a separate SPDES Multi Sector General Permit for Stormwater Discharges Associated with Industrial Activity (GP-0-23-001). The permit number is NYR00A595.

Figure 3. Water Flow Schematic



Enforcement History

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

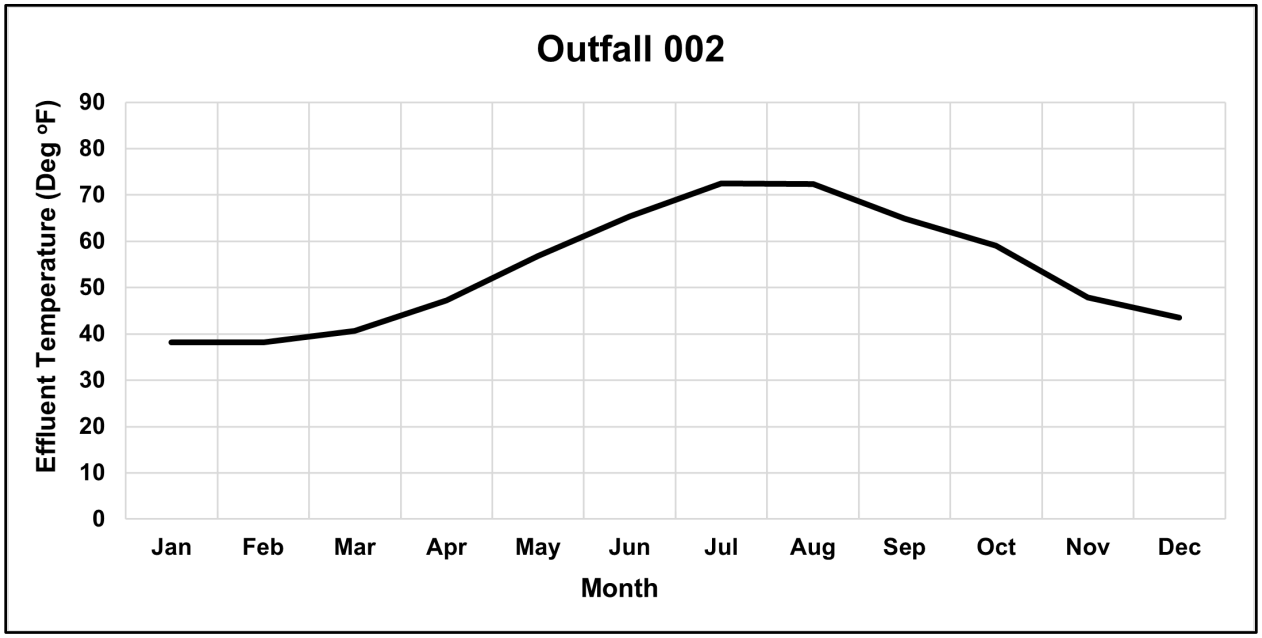
Existing Effluent Quality

The Pollutant Summary Table presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from Discharge Monitoring Reports (DMRs) and the SPDES permit application submitted by the permittee for the period 01/01/2019 to 12/31/2023, and is summarized below. Appendix Link

Table 1. Existing Effluent Quality (2019 - 2023)

Parameter	Type	Units	Effluent Limitation	Minimum	Average	Maximum
Flow	Monthly Ave	MGD	0.054	0.021	0.044	0.072
Flow	Daily Max	MGD	Monitor	0.029	0.059	0.096
pH	Range	SU	6.0 – 9.0	6.9	7.6	8.4
Temperature	Daily Max	°F	90	36	54	75
Suspended Solids	Daily Max	mg/L	50	0.2	3.6	20
Settleable Solids	Daily Max	ml/L	0.1	0.1	0.1	0.1
Lead	Daily Max	mg/L	0.60	<0.01	<0.01	<0.01
Zinc	Daily Max	mg/L	0.53	0.020	0.056	0.176

Figure 4. Effluent Temperature (2019 - 2023)



The thermal discharge at Outfall 002 follows a season cycle in accordance with 6 NYCRR Part 704.2(a).

Interstate Water Pollution Control Agencies

Outfall 002 is located within the Great Lakes watershed and the 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 2. Receiving Water Information

Outfall No.	Design Flow (MGD)	SIC Code	Wastewater Type	Receiving Water
002	0.090	1499	Contact and Noncontact Cooling Water, Treated Air Conditioner Condensate, and Laboratory Screening Wash Water	Turnpike Creek Tributary, Class D
006	0.0028	1499	Treated Sanitary	Groundwater, Class GA
001	Former Outfall 001 – Removing from the Permit, Outfall was eliminated in 2017.			

Reach Description

Outfall 002 discharges to an unnamed and unmapped tributary of Turnpike Creek (Turnpike Creek Tributary). Turnpike Creek is a tributary of the Oswegatchie River and is in the St. Lawrence Watershed. NYSDEC has determined that Turnpike Creek Tributary is intermittent (<0.1 CFS) under low flow conditions based minimumal drainage area. Therefore, in accordance with 6 NYCRR Part 910.4(b), Turnpike Creek Tributary shall be assigned as Class D.

Figure 5. Turnpike Creek Tributary

The best usage of Class D waters is fishing. Due to such natural conditions as intermittency of flow, water conditions not conducive to propagation of game fishery, or stream bed conditions, the waters will not support fish propagation. These waters shall be suitable for fish, shellfish and wildlife survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. Please see the St. Lawrence River Basin Reclassification section of this Fact Sheet for further information.

Outfall 006 discharges to groundwater. The best usage of Class GA waters is as a source of potable water supply. Class GA waters are fresh groundwaters.

The classifications of individual surface waters are specified in 6 NYCRR Parts 800-941. The best uses and standards of quality and purity (water quality standards) applicable to specific water classes are specified in 6 NYCRR Parts 701-706.

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

Impaired Waterbody Information

The Turnpike Creek/Sylvia Lake Outlet and Tributaries, Waterbody Inventory/Priority Waterbodies List segment (PWL No. 0905-0100) is not listed on the 2018 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 Information

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.

NYSDEC has determined that Turnpike Creek Tributary is intermittent (<0.1 CFS) under low flow conditions, applicable water quality standards shall be applied as end-of-pipe effluent limitations with no mixing or dilution with the receiving water.

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.

Water quality information for Turnpike Creek Tributary is estimated using RIBS Station 09-TURN-1.5, Turnpike Creek in Fowler, located about 2 miles downstream stream from where Turnpike Creek Tributary enters the Creek.

Table 3. Receiving Water Quality

Parameter	Units	Mean	Range	Number of Samples
pH	SU	7.6	6.9 - 7.9	5
Hardness (as $CaCO_3$)	mg/L	747	-	1

Water quality standards for certain metals are based a stream hardness. In accordance with NYSDEC permitting guidance for Hardness Based Water Quality Standards (09/14/1989), maximum hardness is capped at 500 mg/L for intermittent streams. This is because hardness-based formulas for metals were derived using values below this value, and use of the formulas would be an extrapolation of the data and the applicability, and toxic effects would be less certain. Therefore, a stream hardness of 500 mg/L will be applied when deriving water quality-based effluent limitations for metals.

Metals Translators

40 CFR 122.45(c) requires that, in most instances, permit limits for metals be expressed as total recoverable. However, water quality standards are typically expressed in the dissolved form of the substance.

To convert between a dissolved and total metal, a "translator" is applied. A metals translator is the fraction of a total recoverable metal in the receiving water that is dissolved.

EPA publication "*The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion*, 1996, EPA 823-B-96-007" provides details to develop site-specific translators when sufficient water quality information is available. If insufficient water quality information to calculate a site-specific translator, the table below provides nationwide translators developed by EPA which will be used when developing effluent limitations for the metals listed in this permit.

Table 4. Metals Translators

Metal	Metal Translator	
	Aquatic Acute A(A)	Aquatic Chronic A(C)
Arsenic	1.000	1.000
Cadmium	(1)	(2)
Chromium (VI)	0.982	0.962
Copper	0.960	0.960
Lead	(3)	(3)
Mercury	0.850	N/A
Nickel	0.998	0.997
Silver	0.850	N/A
Zinc	0.978	0.986

(1) Cadmium A(A) = 1.136672 - [ln (hardness) (0.041838)]
(2) Cadmium A(C) = 1.101672 - [ln (hardness) (0.041838)]
(3) Lead A(A) and A(C) = 1.46203 - [ln(hardness) (0.145712)]
In the above equations, Hardness (as $CaCO_3$) is in mg/L

PERMIT REQUIREMENTS

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

USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility

Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT), Best Available Technology Economically Achievable (BAT), and New Source Performance Standards (NSPS) limitations are based on Effluent Limitation Guidelines developed by USEPA for specific industries[2].

The facility is subject to 40 CFR Part 436, Mineral Mining and Processing Point Source Category, Subpart G - Asbestos and Wollastonite Subcategory. Best Practicable Control Technology Currently Available (BPT) requirements in 40 CFR Part 436.72 are:

(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.

The facility does not discharge process wastewater from mining operations, wollastonite ore is received from an offsite facility. Therefore, the ELGs are satisfied.

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.

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

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 continue implementation of a BMP plan that prevents, or minimizes the potential for, the release of toxic or hazardous pollutants to state waters. The BMP plan requires annual review by the permittee. The facility's BMP Plan was last revised in May 2018.

Stormwater Pollution Prevention Requirements

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

Stormwater discharges at this facility are permitted under the SPDES Multi Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity (GP-0-23-001). The MSGP number is NYR00A595, and the facility is permitted under Sector J, Mineral Mining and Dressing, and Sector P, Land Transportation and/or Warehousing.

Mercury[3]

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 a Non-major EPA/State Significant (Class 01) industrial facility. Low level mercury effluent sampling results submitted with the SPDES permit application was 8.8 ng/L. On July 31, 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: https://www.dec.ny.gov/chemical/127939.html 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 has

[3] In accordance with DOW 1.3.10 Mercury - SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

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 is not being proposed.

Climate Resiliency

Following the 2019 Climate Leadership and Community Protection Act (Climate Act), SPDES permit applicants for certain permit types are required to demonstrate consideration of future physical climate risks, including those due to sea level rise, storm surges, and flooding.

On July 31, 2024, the facility submitted a completed SPDES Permit Supplemental Information Form, Consideration of Future Physical Climate Risk, identifying measures taken to reduce future climate risk. The facility is not located within a FEMA designated flood zone.

St. Lawrence River Basin Reclassification

NYSDEC expects to propose upgrades to the classifications of certain surface waters in 6 NYCRR Part 910 (St. Lawrence River drainage basin). These reclassifications are necessary to meet federal Clean Water Act (CWA) goals for water quality and, if adopted, would result in higher classifications (and thus more stringent water quality standards) for some waters in the St. Lawrence River drainage basin.

Numerous Class D surface waters, which only provide protection for fish survival, would be proposed to be upgraded to higher classifications (Class C or higher), which are protective of both fish survival and fish propagation, and are fully consistent with the "fishable" goal of the CWA. When a water is upgraded from Class D to C (or higher), an additional set of water quality standards would apply to protect the water quality for fish propagation. These are more stringent than the standards for fish survival that apply to Class D waters. Certain waters may also receive protection for trout or trout spawning.

When the rule is proposed, DEC anticipates having one or more public information meetings within the St. Lawrence River drainage basin, along with a public hearing. Notification of the formal public process will be made via both the New York State Register and the Environmental Notice Bulletin.

The permittee discharges to an unmapped and unnamed tributary of Turnpike Creek which is currently a Class D surface water. Should/when the rule takes effect, the effluent limitations may be revised based on the classification of Class C or higher.

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.

Antidegradation

The permit contains effluent limitations which ensure that the best usages of the receiving waters will be maintained. The Notice of Complete Application published in the Environmental Notice

Bulletin contains information on the State Environmental Quality Review (SEQR)[4] determination. Appendix Link

Schedule of Additional Submittals

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

- Annual review of the completed Best Management Practices (BMP) Plan.
- Mercury Minimization Program Annual Status Report (maintained onsite).
- Submittal of a Mercury Conditional Exclusion Certification every five years.

[4] 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° 15' 27.9" N	75° 23' 57.4" W	Turnpike Creek Tributary	D	SL-25-72-2-Trib PWL: 0905-0100	09/05	500[5]	0	0	0	0.095	1	1	1
006	-	-	Groundwater	GA	-	09/05	-	-	-	-	0.0028	-	-	-

POLLUTANT SUMMARY TABLE

Outfall 002

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.													
		Type of Treatment: NA													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[6]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		

General Notes:

- Existing discharge data from 01/01/2019 to 12/31/2023 was obtained from Discharge Monitoring Reports submitted by the permittee and supplemented by the SPDES permit application.
- Procedures from TOGS 1.2.1 were reviewed for the development of Technology Based Effluent Limitations (TBELs).
- All applicable water quality standards were reviewed for development of the Water Quality Based Effluent Limitations (WQBELs).
- 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.
- The basis of an effluent limit is typically the more stringent between the TBEL and WQBEL.

[5] Ambient hardness was capped at 500 mg/L in accordance with NYSDEC permitting guidance for Hardness Based Water Quality Standards (09/14/1989)
[6] Existing Effluent Quality: Unless otherwise stated, Daily Max = 99% lognormal distribution; Monthly Avg = 95% lognormal distribution.

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.
		Type of Treatment: NA

Effluent Parameter	Units	Averaging Period	Existing Discharge Data: Permit Limit	Existing Discharge Data: Existing Effluent Quality[6]	Existing Discharge Data: # of Data Points Detects / Non-Detects	TBELs: Limit	TBELs: Basis	Water Quality Data & WQBELs: Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
Flow Rate	MGD	Monthly Avg	0.054	0.044	48/0	**0.090**	BPJ	Narrative: No alterations that will impair the waters for their best usages.					6 NYCRR Part 703.2	-	TBEL
	MGD	Daily Max	Monitor	0.059	59/0	**Monitor**	6 NYCRR Part 703.2								Monitor

Existing effluent quality are the averages.

TBELs
Flow monitoring is required by 6 NYCRR Part 703.2 and used to calculate pollutant loadings. A monthly average flow limit of 0.090 is based on the permit application and was requested by the permittee to categorize the discharge for annual regulatory fee determinations.

WQBELs
Not Applicable

Basis of Permit Condition
The TBELs are specified.

Effluent Parameter	Units	Averaging Period	Existing Discharge Data: Permit Limit	Existing Discharge Data: Existing Effluent Quality	Existing Discharge Data: # of Data Points Detects / Non-Detects	TBELs: Limit	TBELs: Basis	Water Quality Data & WQBELs: Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
pH	SU	Minimum	6.0	6.9	60/0	**6.0**	TOGS 1.2.1	7.6[7]	-	6.5 - 9.5	Range	-	6 NYCRR Part 703.3	-	TBEL
		Maximum	9.0	8.4	60/0	**9.0**									

Existing discharge data for pH is the lowest minimum and highest maximum that occurred during the 5-year data review period.

TBELs
Consistent with TOGS 1.2.1, the TBELs in the range of 6.0 SU - 9.0 SU and are typically applied to all industrial discharges. The limitations are based on the standard industrial practice of neutralization and represents a reasonably available treatment technology.

WQBELs
The water quality standards for Class D waterbodies is in the range of 6.0 SU – 9.5 SU.

Basis of Permit Condition
The TBELs are more stringent than the WQBELs, therefore the TBELs are specified and are continued from the previous permit.

Additional Information
The following information is being provided for future considerations and planning purposes. Should the St. Lawrence Basin reclassification become codified into regulation, and the receiving water is upgraded from Class D to Class C or higher, the WQBELs for pH shall in the range of 6.5 SU – 8.5 SU and will be incorporated through a SPDES permit modification. Please see the St. Lawrence River Basin Reclassification for more information.

[7] Ambient pH calculated from RIBS Station 09-TURN-1.5, Turnpike Creek in Fowler, located about 2 miles downstream from the confluence with Turnpike Creek Tributary.

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.
		Type of Treatment: NA

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[6]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Temperature	°F	Daily Max	90	75	60/0	-	-	Narrative (Non-Trout): The water temperature at the surface of a stream shall not be raised to more than 90F at any point and... shall not be raised or lowered to more than 5F over the temperature that existed before the addition				**90**	6 NYCRR Part 704.2	-	WQBEL

Existing temperature data is the highest daily maximum that occurred during the 5-year data review period.

TBELs
Not Applicable

WQBELs
The discharge is a thermal discharge consisting of mainly of cooling water. To achieve standards specified in 6 NYCRR Part 704, an effluent temperature limit of 90 ºF is specified.

Basis of Permit Condition
The WQBEL is specified and is continued from the previous permit.

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.
		Type of Treatment: NA

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[6]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Total Suspended Solids (TSS)	mg/L	Monthly Avg	-	-	-	**20**	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
	mg/L	Daily Max	50	20.5	60/0	**40**	BPJ								

Existing effluent quality is the 99th percentile of the lognormal distribution for the 5-year data review period.

TBELs
The basis of current TSS daily maximum limitation of 50 mg/L could not be determined. Consistent with NYSDEC permitting practice, BPJ TBELs include a monthly average of 20 mg/L and a daily maximum of 40 mg/L. These TBELs are consistently applied to cooling water discharges.

In accordance with 40 CFR Part 122.45(f)(1) and 6 NYCRR Part 750-1.10(a), effluent limitations for most pollutants shall be expressed in terms total mass (weight) in lbs/d when applicable. The permitted flow limit is used to convert a concentration effluent limitation to total mass and is calculated as:

Total Mass (lbs/d) = Flow (MGD) x Concentration (mg/L) x 8.34

30-Day Avg = 0.090 MGD x 20 mg/L x 8.34 = 15 lbs/d
Daily Max = 0.090 MGD x 40 mg/L x 8.34 = 30 lbs/d

In addition to TSS concentration limitations, the permit includes TSS limitations expressed as total mass and is a new requirement.

WQBELs
There are no numerical water quality standards for TSS. The TBELs ensure the narrative water quality standard is maintained.

Basis of Permit Condition
The TBELs are being specified and are more stringent than the existing TSS permit limitations.

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.
		Type of Treatment: NA

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[6]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Settleable Solids	mL/L	Daily Max	0.1	<0.1	0/60	**0.1**	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
	TBELs Consistent with NYSDEC permitting practice, BPJ TBEL of 0.1 is consistently applied to thermal discharges. WQBELs There are no numerical water quality standards for Settleable Solids. The TBELs ensure the narrative water quality standard is maintained. Basis of Permit Condition The TBEL is specified and is continued from the previous permit.														
Oil & Grease	mg/L	Daily Max	-	<4.0	1/1	**15**	TOGS 1.2.1	-	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.				6 NYCRR Part 703.2	-	TBEL
	Existing discharge data is based on one sample submitted with the permit application. TBELs The facility utilizes an oil/water separator to treat air compressor condensate. Consistent with TOGS 1.2.1, the TBEL reflect the treatment technology listed in Attachment C for oil/water separation. In accordance with 40 CFR Part 122.45(f)(1) and 6 NYCRR Part 750-1.10(a), effluent limitations for most pollutants shall be expressed in terms total mass (weight) in lbs/d when applicable. The permitted flow limit is used to convert a concentration effluent limitation to total mass and is calculated as: Total Mass (lbs/d) = Flow (MGD) x Concentration (mg/L) x 8.34 Daily Max = 0.090 MGD x 15 mg/L x 8.34 = 11 lbs/d In addition to the concentration effluent limitation, the permit also includes the limitation expressed as total mass. WQBELs There are no numerical water quality standards for Oil and Grease. The TBEL ensure the narrative water quality standard is maintained. Basis of Permit Condition The TBEL is specified and is a new permit requirement.														

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.
		Type of Treatment: NA

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[6]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Lead, Total	mg/L	Daily Max	0.60	<0.01	0/60	0.95	TOGS 1.2.1	-	-	0.95	A(A)	0.95	6 NYCRR Part 703.5	-	Discontinued

Lead has not been detected in the effluent during the 01/01/2019 – 12/31/2023 review period.

TBELs

The existing effluent limitation 0f 0.60 mg/L is a TBEL, but the basis for the limit could not be identified. The facility does not treat for metals removal. Consistent with TOGS 1.2.1, the BPJ TBEL of 0.42 mg/L reflect the treatment technology listed in Attachment C, Category A for settling of nonferrous metals (Category A). This technology represents a commonly available industrial wastewater treatment technology.

WQBELs

Dissolved lead water quality standards for Class D waters is based on Aquatic Acute A(A) criteria. With a hardness of 500 mg/l, the numerical standard is:

Dissolved Lead A(A) = 1.46203 - [ln (hardness) (0.145712)] } exp (1.273 [ln (hardness)] - 1.052)
Dissolved Lead A(A) = 1.46203 - [ln (500 mg/L) (0.145712)] } exp (1.273 [ln (500 mg/L)] - 1.052) = 530 ug/L = 0.530 mg/L.

Applying the EPA metals translator of 0.556 from Table 4 with a hardness of 500 mg/L, the water quality standard and WQBEL for total lead is 0.95 mg/L.

Basis of Permit Condition

Because lead has not been detected in the effluent, effluent limitations and monitoring requirements are necessary and are being discontinued from the permit.

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.
		Type of Treatment: NA

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[6]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Zinc, Total	mg/L	Daily Max	0.53	0.13	45/15	1.5	TOGS 1.2.1	-	-	0.47	A(A)	**0.47**	6 NYCRR Part 703.5	-	WQBEL

Existing effluent quality is the 99th percentile of the lognormal distribution.

TBELs

Consistent with TOGS 1.2.1, the BPJ TBEL of 1.5 mg/L reflect the treatment technology listed in Attachment C, Category A for settling of nonferrous metals (Category A). This technology represents a commonly available industrial wastewater treatment technology.

WQBELs

Dissolved zinc water quality standards for Class D waters is based on Aquatic Acute A(A) criteria and with a hardness of 500 mg/l, the numerical standard is:

Dissolved Zinc A(A) = 0.978 exp(0.8473 [ln(hardness)] + 0.884)
Dissolved Zinc A(A) = 0.978 exp(0.8473 [ln(500 mg/L)] + 0.884) = 458 ug/L = 0.458 mg/L.

Applying the acute EPA metals translator of 0.978 from Table 4, the water quality standard and WQBEL for total zinc is 0.47 mg/L.

In accordance with 40 CFR Part 122.45(f)(1) and 6 NYCRR Part 750-1.10(a), effluent limitations for most pollutants shall be expressed in terms total mass (weight) in lbs/d when applicable. The permitted flow limit is used to convert a concentration effluent limitation to total mass and is calculated as:

Total Mass (lbs/d) = Flow (MGD) x Concentration (mg/L) x 8.34

Daily Max = 0.090 MGD x 0.47 mg/L x 8.34 = 0.35 lbs/d

In addition to the concentration effluent limitation, the permit also includes the limitation expressed as total mass.

Basis of Permit Condition

The WQBEL 0f 0.47 mg/L is more stringent than the TBEL of 1.5 mg/L, and therefore is specified in the permit.

Additional Information

The following information is being provided for future considerations and planning purposes only. Should the St. Lawrence Basin reclassification become codified into regulation, and the receiving water is upgraded from Class D to Class C or higher, Aquatic Chronic A(C) water quality criteria becomes applicable. The calculated WQBEL for total zinc is 0.33 mg/L and will be incorporated through a SPDES permit modification. Please see the St. Lawrence River Basin Reclassification for more information.

Outfall #	002	**Description of Wastewater:** Contact and noncontact cooling water.
		Type of Treatment: NA

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[6]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Total Mercury	ng/L	Daily Max	-	8.8	1/0	-	-	-	-	0.7	H(FC)	-	-	-	DOW 1.3.10
	Please see the Mercury section of this fact sheet and NYSDEC Program Policy DOW 1.3.10 for permitting requirements.														

Outfall 006

Outfall #	006	**Description of Wastewater:** Treated Sanitary Sewage **Type of Treatment:** 2,500 Gallon Septic Tank and Leach Field to Groundwaters													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[8]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		

General Notes:

Discharge is treated sanitary sewage to groundwater from a septic tank followed by a leach field.

The discharge is less than 10,000 gpd. Consistent with SPDES General Permit for Groundwater Discharge of Treated Sanitary Sewage (GP-0-15-001), effluent limitations and monitoring requirements are not required and is continued from the previous permit.

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

Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

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

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

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

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

Outfall and Receiving Water Information

Impaired Waters

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

to determine the existing capabilities of the wastewater treatment plants and to assure that WLAs are allocated equitably.

Interstate Water Pollution Control Agencies

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

Existing Effluent Quality

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

Permit Requirements

Basis for Effluent Limitations

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

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

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(*l*) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this fact sheet. Consistent with current case law[9] and USEPA interpretation[10] anti-backsliding requirements do not apply should a revision to the final effluent limitation take effect before the scheduled date of compliance for that final effluent limitation.

[9] American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)
[10] U.S. EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; 65 Fed. Reg. 31682, 31704 (May 18, 2000); Proposed Water Quality Guidance for the Great Lakes System, 58 Fed. Reg. 20802, 20837 & 20981 (April 16, 1993)

Antidegradation Policy

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

Effluent Limitations

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

Technology-based Effluent Limitations (TBELs) for Industrial Facilities

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

USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility

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

Best Professional Judgement (BPJ)

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

Water Quality-Based Effluent Limitations (WQBELs)

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Additionally, 6 NYCRR Part 701.1 prohibits the discharge of pollutants that will cause impairment of the best usages of the receiving

water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met at the point of discharge and in downstream waters and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6. The DEC considers a mixing zone analysis, critical flows, and reasonable potential analysis when developing a WQBEL.

Mixing Zone Analyses

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

Critical Flows

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

Reasonable Potential Analysis (RPA)

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

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

2) identify water quality criteria applicable to these pollutants;

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

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

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

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

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

Whole Effluent Toxicity (WET) Testing:

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

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

Minimum Level of Detection

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

Monitoring Requirements

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

Other Conditions

Mercury

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

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

Schedules of Compliance

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

Schedule(s) of Additional Submittals

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

Best Management Practices (BMP) for Industrial Facilities

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