



WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

Essential Industries Inc

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at
28391 Essential Rd, Merton, WI 53056
to
the Bark River (Bark River Watershed, Rock River Basin) in Waukesha County

in accordance with the effluent limitations, monitoring requirements and other conditions set
forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Bryan Hartsook
Wastewater Field Supervisor

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - November 01, 2020

EXPIRATION DATE - October 31, 2025

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1 Surface Water Requirements

1.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
001	Combined wastewater discharge from water softener brine discharge, reverse osmosis filter discharge, and non-contact cooling water. Representative grab samples collected at outfall prior to Bark River.

1.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

1.2.1 Sampling Point (Outfall) 001 - NCCW, RO & Water Softener

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Monthly	Total Daily	
Temperature		deg F	Monthly	Grab	Monthly monitoring during calendar year 2024.
BOD ₅ , Total		mg/L	Annual	Grab	
pH Field	Daily Max	9.0 su	Quarterly	Grab	
pH Field	Daily Min	6.0 su	Quarterly	Grab	
Nitrogen, Ammonia (NH ₃ -N) Total		mg/L	Annual	Grab	
Oil & Grease (Hexane)	Daily Max	15 mg/L	Annual	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Annual	Grab	
Suspended Solids, Total	Daily Max	40 mg/L	Monthly	Grab	
Suspended Solids, Total	Monthly Avg	40 mg/L	Monthly	Grab	
Suspended Solids, Total	Monthly Avg	1.98 lbs/day	Monthly	Calculated	
Chloride	Daily Max	1,510 mg/L	Monthly	Grab	Limit becomes effective November 1, 2022. See schedules section 2.1.
Chloride	Monthly Avg	1,510 mg/L	Monthly	Grab	Limit becomes effective November 1, 2022. See schedules section 2.1.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Chloride	Weekly Avg	1,510 mg/L	Monthly	Grab	Limit becomes effective November 1, 2022. See schedules section 2.1.
Phosphorus, Total	6-Month Avg	0.075 mg/L	Monthly	Grab	Final limit becomes effective November 1, 2028. Narrative interim limit is effective immediately. See subsection 1.2.1.2 for narrative limit requirement and schedules subsection 2.2
Phosphorus, Total	Monthly Avg	0.225 mg/L	Monthly	Grab	Final limit becomes effective November 1, 2028. Narrative interim limit is effective immediately. See subsection 1.2.1.2 for narrative limit requirement and schedules subsection 2.2
Phosphorus, Total	Monthly Avg	0.0438 lbs/day	Monthly	Calculated	Final limit becomes effective November 1, 2028. Narrative interim limit is effective immediately. See subsections 1.2.1.2 through 1.2.1.5, schedules subsection 2.2, and subsection 3.3.2 for calculation formula.

1.2.1.1 Potential Removal of Effluent Limitations for Chloride

The effluent limitations for chloride become effective on November 1, 2022 as specified in the Schedules of Compliance Section. Monthly monitoring is required upon permit reissuance.

However, when 11 or more representative results for chloride have been provided to the Department, the permittee may request that the Department make a determination of the need for a limit under section NR 106.05, Wisconsin Administrative Code. For this request, the samples shall be evenly spaced over the period of discharge during at least 12 months and must be tested according to the “Sampling and Testing Procedures” in the Standard Requirements section in this permit. Within 60 days of such request, the Department shall make that determination. If the Department determines that effluent limitations are unnecessary based on the procedures in NR 106.05, Wis. Adm. Code, the Department shall notify the permittee that the limitations will not become effective, pursuant to NR 106.04(4), Wis. Adm. Code. The monitoring requirements for chloride shall be reduced to quarterly and the compliance schedule shall be discontinued. A permit modification is required to implement these changes.

If, after reviewing the data, the Department determines that effluent limitations for chloride are necessary based on the procedures in NR 106.05, Wis. Adm. Code, the requirement to meet the effluent limitations according to the Schedules of Compliance will not be removed nor will the monitoring frequency be reduced.

1.2.1.2 Total Phosphorus Narrative Limit

The discharge shall be controlled such that the amount of phosphorus being discharged on an annual basis does not increase over the permit term, and that the phosphorus Adm. reductions will occur over time through optimization.

1.2.1.3 Alternative Approaches to Phosphorus WQBEL Compliance

Rather than upgrading its wastewater treatment facility to comply with WQBELs for total phosphorus, the permittee may use Water Quality Trading or the Watershed Adaptive Management Option, to achieve compliance under ch. NR 217, Wis. Adm. Code, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. The permittee may also implement an upgrade to its wastewater treatment facility in combination with Water Quality Trading or the Watershed Adaptive Management Option to achieve compliance, provided that the permit is modified, revoked and reissued, or reissued to incorporate any such alternative approach. If the Final Compliance Alternatives Plan concludes that a variance will be pursued, the Plan shall provide information regarding the basis for the variance.

*Note: The Department will prioritize reissuances and revocations, modifications, and reissuances of permits to allow permittees the opportunity to implement adaptive management or nutrient trading in a timely and effective manner.

1.2.1.4 Submittal of Permit Application for Next Reissuance and Adaptive Management or Pollutant Trading Plan or Variance Application

The permittee shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit. If the permittee intends to pursue adaptive management to achieve compliance with the phosphorus water quality based effluent limitation, the permittee shall submit with the application for the next reissuance: a completed Watershed Adaptive Management Request Form 3200-139, the completed Adaptive Management Plan and final plans for any system upgrades necessary to meet interim limits pursuant to NR 217.18, Wis. Adm. Code. If the permittee intends to pursue pollutant trading to achieve compliance, the permittee shall submit an application for water quality trading with the application for the next reissuance. If system upgrades will be used in combination with pollutant trading to achieve compliance with the final water quality-based limit, the reissued permit will specify a schedule for the necessary upgrades. If the permittee intends to seek a variance, the permittee shall submit an application for a variance with the application for the next reissuance.

1.2.1.5 Total Maximum Daily Load (TMDL) Limitations

Approved TMDL: The Rock River TMDL Waste Load Allocation (WLA) for Total Phosphorus and Total Suspended Solids was approved by the U.S. Environmental Protection Agency on September 28, 2011. The permittee formerly held coverage under a wastewater general permit for its non-contact cooling water discharge, and was therefore covered by a grouped waste load allocation under the approved TMDL. The approved TMDL WLAs for Total Suspended Solids and Total Phosphorus for WPDES general permit holders in Reach 55 are 14,000 lbs/year and 74.51 lbs/year. The WLA limits in this permit are 0.0438 lbs/day expressed as a monthly average for Total Phosphorus and 1.98 lbs/day expressed as a monthly average for Total Suspended Solids. The WLA limit for Total Suspended Solids is effective immediately. Refer to the compliance schedule for Total Phosphorus.

2 Schedules

2.1 Water Quality Based Effluent Limits (WQBELs) for Chloride

This compliance schedule requires the permittee to achieve compliance with water quality based effluent limits (WQBELs) for chloride by the specified date.

Required Action	Due Date
Report on Effluent Discharges and Action Plan: The permittee shall prepare a report on effluent discharges and submit it for Department approval. The report shall include an evaluation of collected effluent data, possible source reduction measures, operational improvements or other minor modifications that would enable compliance with the final chloride WQBELs (water quality based effluent limit) or some improved level of effluent quality. The report shall include an action plan and schedule for completion.	10/31/2021
Complete Actions: Complete actions necessary to achieve compliance with the effluent limitations.	10/31/2022

2.2 Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus

The permittee shall comply with the WQBELs for Phosphorus as specified. No later than 14 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance. If a submittal is required, a timely submittal fulfills the notification requirement.

Required Action	Due Date
<p>Operational Evaluation Report: The permittee shall prepare and submit to the Department for approval an operational evaluation report. The report shall include an evaluation of collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that will optimize reductions in phosphorus discharges from the treatment plant during the period prior to complying with final phosphorus WQBELs and, where possible, enable compliance with final phosphorus WQBELs by October 31, 2024. The report shall provide a plan and schedule for implementation of the measures, improvements, and modifications as soon as possible, but not later than October 31, 2024 and state whether the measures, improvements, and modifications will enable compliance with final phosphorus WQBELs. Regardless of whether they are expected to result in compliance, the permittee shall implement the measures, improvements, and modifications in accordance with the plan and schedule specified in the operational evaluation report.</p> <p>If the operational evaluation report concludes that the facility can achieve final phosphorus WQBELs using the existing treatment system with only source reduction measures, operational improvements, and minor facility modifications, the permittee shall comply with the final phosphorus WQBEL by October 31, 2024 and is not required to comply with the milestones identified below for years 3 through 9 of this compliance schedule ('Preliminary Compliance Alternatives Plan', 'Final Compliance Alternatives Plan', 'Final Plans and Specifications', 'Treatment Plant Upgrade to Meet WQBELs', 'Complete Construction', 'Achieve Compliance').</p> <p>STUDY OF FEASIBLE ALTERNATIVES - If the Operational Evaluation Report concludes that the permittee cannot achieve final phosphorus WQBELs with source reduction measures, operational improvements and other minor facility modifications, the permittee shall initiate a study of feasible alternatives for meeting final phosphorus WQBELs and comply with the remaining required actions of this schedule of compliance. If the Department disagrees with the conclusion of the report, and determines that the permittee can achieve final phosphorus WQBELs using the existing treatment system with only source reduction measures, operational improvements, and minor facility modifications, the Department may reopen and modify the permit to include an implementation</p>	10/31/2021

schedule for achieving the final phosphorus WQBELs sooner than November 1, 2028.	
Compliance Alternatives, Source Reduction, Improvements and Modifications Status: The permittee shall submit a 'Compliance Alternatives, Source Reduction, Operational Improvements and Minor Facility Modification' status report to the Department. The report shall provide an update on the permittee's: (1) progress implementing source reduction measures, operational improvements, and minor facility modifications to optimize reductions in phosphorus discharges and, to the extent that such measures, improvements, and modifications will not enable compliance with the WQBELs, (2) status evaluating feasible alternatives for meeting phosphorus WQBELs.	10/31/2022
Preliminary Compliance Alternatives Plan: The permittee shall submit a preliminary compliance alternatives plan to the Department. If the plan concludes upgrading of the permittee's wastewater treatment facility is necessary to achieve final phosphorus WQBELs, the submittal shall include a preliminary engineering design report. If the plan concludes Adaptive Management will be used, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 without the Adaptive Management Plan. If water quality trading will be undertaken, the plan must state that trading will be pursued.	10/31/2023
Final Compliance Alternatives Plan: The permittee shall submit a final compliance alternatives plan to the Department. If the plan concludes upgrading of the permittee's wastewater treatment is necessary to meet final phosphorus WQBELs, the submittal shall include a final engineering design report addressing the treatment plant upgrades, and a facility plan if required pursuant to ch. NR 110, Wis. Adm. Code. If the plan concludes Adaptive Management will be implemented, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 and an engineering report addressing any treatment system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code. If the plan concludes water quality trading will be used, the submittal shall identify potential trading partners. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	10/31/2024
Progress Report on Plans & Specifications: Submit progress report regarding the progress of preparing final plans and specifications. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	10/31/2025
Final Plans and Specifications: Unless the permit has been modified, revoked and reissued, or reissued to include Adaptive Management or Water Quality Trading measures or to include a revised schedule based on factors in s. NR 217.17, Wis. Adm. Code, the permittee shall submit final construction plans to the Department for approval pursuant to s. 281.41, Stats., specifying treatment plant upgrades that must be constructed to achieve compliance with final phosphorus WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified below. (Note: Permit modification, revocation and reissuance, and reissuance are subject to s. 283.53(2), Stats.) Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	10/31/2026
Treatment Plant Upgrade to Meet WQBELs: The permittee shall initiate construction of the upgrades. The permittee shall obtain approval of the final construction plans and schedule from the	06/30/2027

<p>Department pursuant to s. 281.41, Stats. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	
<p>Construction Upgrade Progress Report #1: The permittee shall submit a progress report on construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	12/31/2027
<p>Construction Upgrade Progress Report #2: The permittee shall submit a progress report on construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	06/30/2027
<p>Complete Construction & Achieve Compliance: The permittee shall complete construction of wastewater treatment system upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.</p>	11/01/2028

3 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

3.1 Reporting and Monitoring Requirements

3.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

3.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

3.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

3.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD₅ and Total Suspended Solids shall be considered to be limits of quantitation
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a “0” (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.
- If no discharge occurs through an outfall, flow related parameters (e.g. flow rate, hydraulic application rate, volume, etc.) should be reported as “0” (zero) at the required sample frequency specified for the outfall. For example: if the sample frequency is daily, “0” would be reported for any day during the month that no discharge occurred.

3.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

3.1.6 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

3.1.7 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not

reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

3.2 System Operating Requirements

3.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

3.2.2 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, any bypass is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the 'Noncompliance Reporting' section of this permit.

3.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit,

the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

3.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

3.2.5 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

3.2.6 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

3.2.7 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

3.2.8 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

3.2.9 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

3.3 Surface Water Requirements

3.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

3.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [**Note:** When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [**Note:** When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

3.3.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. ‘Cold Shock’ means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

3.3.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

3.3.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

- a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.
- d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

4 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Water Quality Based Effluent Limits (WQBELs) for Chloride -Report on Effluent Discharges and Action Plan	October 31, 2021	4
Water Quality Based Effluent Limits (WQBELs) for Chloride -Complete Actions	October 31, 2022	4
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Operational Evaluation Report	October 31, 2021	4
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Compliance Alternatives, Source Reduction, Improvements and Modifications Status	October 31, 2022	5
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Preliminary Compliance Alternatives Plan	October 31, 2023	5
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Compliance Alternatives Plan	October 31, 2024	5
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Progress Report on Plans & Specifications	October 31, 2025	5
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Plans and Specifications	October 31, 2026	5
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Treatment Plant Upgrade to Meet WQBELs	June 30, 2027	6
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #1	December 31, 2027	6
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #2	June 30, 2027	6
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Complete Construction & Acheive Compliance	November 1, 2028	6
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	7

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

Southeast Region, 2300 N Dr Martin Luther King Jr Drive, Milwaukee, WI 53212