



WPDES PERMIT

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

Wisconsin Electric Power Company - Port Washington Generating Station

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at

146 South Wisconsin Street, Port Washington WI 53074

to

**LAKE MICHIGAN (SAUK AND SUCKER CREEK WATERSHEDS, SHEBOYGAN RIVER BASIN) IN
OZAUKEE 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 for Modification

PERMIT TERM: EFFECTIVE DATE - October 01, 2023
EFFECTIVE DATE OF MODIFICATION: January 01, 2025

EXPIRATION DATE - September 30, 2028

TABLE OF CONTENTS

1 INFLUENT REQUIREMENTS - COOLING WATER INTAKE STRUCTURE (CWIS)	1
1.1 SAMPLING POINT(S)	1
1.2 MONITORING REQUIREMENTS AND BTA DETERMINATIONS	1
1.2.1 <i>Sampling Point 901 - COOLING WATER INTAKE</i>	1
1.2.2 <i>Sampling Point 902 - EMERGENCY INTAKE</i>	3
1.3 COOLING WATER INTAKE STRUCTURE STANDARD REQUIREMENTS	4
1.3.1 <i>Future BTA for Cooling Water Intake Structure</i>	4
1.3.2 <i>Visual or Remote Inspections</i>	5
1.3.3 <i>Reporting Requirements for Cooling Water Intake</i>	5
1.3.4 <i>Intake Screen Discharges and Removed Substances</i>	5
1.3.5 <i>Endangered Species Act</i>	5
2 IN-PLANT REQUIREMENTS	6
2.1 SAMPLING POINT(S)	6
2.2 MONITORING REQUIREMENTS AND LIMITATIONS	6
2.2.1 <i>Sampling Point 103 - LOW VOLUME WASTEWATER</i>	6
2.2.2 <i>Sampling Point 105 - BLOWDOWN #11; 106- BLOWDOWN #12; 107- BLOWDOWN #21; 108- BLOWDOWN #22</i>	7
2.2.3 <i>Sampling Point 110 - OIL/WATER SEPARATOR #2; 111- OIL/WATER SEPARATOR #1</i>	7
2.2.4 <i>Sampling Point 120 - FIELD BLANK</i>	9
3 SURFACE WATER REQUIREMENTS	10
3.1 SAMPLING POINT(S)	10
3.2 MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS	10
3.2.1 <i>Sampling Point (Outfall) 001 - CONDENSER COOLING WATER</i>	10
3.2.2 <i>Sampling Point (Outfall) 002 - CONDENSER COOLING WATER - ALT</i>	15
4 SCHEDULES	16
4.1 COOLING WATER INTAKE STRUCTURE (CWIS) ANNUAL CERTIFICATION STATEMENT	16
4.2 TEMPERATURE ALTERNATIVE EFFLUENT LIMIT (AEL)	16
4.3 PHOSPHORUS OPTIMIZATION	16
4.4 EMERGENCY INTAKE INVESTIGATION	17
4.5 ENTRAINMENT BTA FEASIBILITY AND IMPLEMENTATION	17
4.6 PFOS/PFOA MINIMIZATION PLAN DETERMINATION OF NEED	18
5 STANDARD REQUIREMENTS	19
5.1 REPORTING AND MONITORING REQUIREMENTS	19
5.1.1 <i>Monitoring Results</i>	19
5.1.2 <i>Sampling and Testing Procedures</i>	19
5.1.3 <i>Recording of Results</i>	19
5.1.4 <i>Reporting of Monitoring Results</i>	20
5.1.5 <i>Records Retention</i>	20
5.1.6 <i>Other Information</i>	20
5.1.7 <i>Reporting Requirements – Alterations or Additions</i>	20
5.2 SYSTEM OPERATING REQUIREMENTS	20
5.2.1 <i>Noncompliance Reporting</i>	21
5.2.2 <i>Bypass</i>	21
5.2.3 <i>Scheduled Bypass</i>	21
5.2.4 <i>Controlled Diversions</i>	22
5.2.5 <i>Proper Operation and Maintenance</i>	22
5.2.6 <i>Operator Certification</i>	22
5.2.7 <i>Spill Reporting</i>	22
5.2.8 <i>Planned Changes</i>	22
5.2.9 <i>Duty to Halt or Reduce Activity</i>	23

5.3 SURFACE WATER REQUIREMENTS	23
5.3.1 <i>Permittee-Determined Limit of Quantitation Incorporated into this Permit</i>	23
5.3.2 <i>Appropriate Formulas for Effluent Calculations</i>	23
5.3.3 <i>Effluent Temperature Requirements</i>	23
5.3.4 <i>Energy Emergency Events</i>	24
5.3.5 <i>Visible Foam or Floating Solids</i>	24
5.3.6 <i>Surface Water Uses and Criteria</i>	24
5.3.7 <i>Additives</i>	24
5.3.8 <i>Whole Effluent Toxicity (WET) Monitoring Requirements</i>	24
5.3.9 <i>Whole Effluent Toxicity (WET) Identification and Reduction</i>	24
5.3.10 <i>PFOS and PFAS Requirements</i>	25
6 SUMMARY OF REPORTS DUE	26

1 Influent Requirements - Cooling Water Intake Structure (CWIS)

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
901	INTAKE: Lake Michigan cooling water intake structure and background water quality monitoring. Grab or 24-hour flow proportional composite samples are collected at the intake tunnel inside the Traveling Screen Room.
902	EMERGENCY INTAKE: Lake Michigan (Port Washington Harbor) emergency cooling water intake structure, which is infrequently used. Flow rate monitoring only and notification to the Department is required when used per permit section 1.2.2.4.

1.2 Monitoring Requirements and BTA Determinations

The permittee shall comply with the following monitoring requirements. The intakes have been reviewed for compliance with BTA (Best Technology Available) standards and the BTA determinations are listed below.

1.2.1 Sampling Point 901 - COOLING WATER INTAKE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	Flow is calculated using pump run times and pump design capacity from pump curves.
Intake Water Used Exclusively For Cooling		% Flow	Annual	Calculated	See section 1.3.3.1 for additional submittal requirements for calculation methods.
Temperature Average		deg F	Daily	Continuous	
Temperature Maximum		deg F	Daily	Continuous	
Arsenic, Total Recoverable		µg/L	Quarterly	24-Hr Flow Prop Comp	See 'Total Metals Analyses' and 'Sample Analysis' sections below. If the facility is unable to collect a composite sample, a grab sample may be used instead. In which case, a note should be made within the comment section of the DMR.
Mercury, Total Recoverable		ng/L	Quarterly	Grab	Monitoring to occur during calendar years 2025, 2026, and 2027. See 'Mercury Monitoring' section below.

1.2.1.1 CWIS - Authority to Operate and Description

The permittee shall at all times properly operate and maintain all water intake facilities. The permittee shall give advance notice to the Department of any planned changes in the location, design, operation, or capacity of the intake structure. The permittee is authorized to use the Lake Michigan porous dike cooling water intake system which consists of the following:

- **Location:** Intake 901 is located to the east of the generating station near the shore of Lake Michigan in Ozaukee County in eastern Wisconsin.
- **General Description:** Intake 901 withdraws water from an intake pond created by a porous dike.
- **Major Components:**
 - A porous dike created an intake pond from which water is removed by entering the mouth of the existing intake channel that is 1200 feet long and 75 feet wide for most of its length. A trash rack at the end of the channel has 1-inch steel bars with 5.5-inch openings. Water then enters an intake tunnel 350 feet long that leads to an intake chamber containing vertical traveling screens 3/16-inch wide by 5/8-inch high. Debris and any fish are removed with a continuous, low-pressure backwash that discharges to a sluiceway 2 feet by 2 feet that connects to the Outfall 001 discharge tunnel. The system is equipped with a high-pressure line that can be used if needed.
 - The porous dike is a rubble mound structure constructed of various sized quarried stone with large armor stone on the exposed outer layer. It's located on the bed of Lake Michigan in 14 to 21 feet of water, approximately 860 feet long, 90 to 120 feet wide at the base, and 15 to 23 feet wide at the crest. The quantity of rock is estimated at 40,170 cubic yards weighing 62,630 tons.
- **Maximum Design Intake Flow (DIF):** The design of the porous dike, with larger stone in the core, has a relatively high permeability to allow up to 565,000 gallons/minute (814 MGD) of cooling water to be drawn through the pore space between the stones into the intake pond while limiting the head loss on the shoreward side.
- **Maximum Through-Screen Design Intake Velocity:** The design intake flow through velocity at the face of the porous dike is not to exceed 0.5 feet per second, at the design flow rate of 565,000 gallon/minute and 100-year low lake level.

1.2.1.2 Cooling Water Intake BTA (Best Technology Available) Determination

The Department has made a conditional determination that the current intake structure meets the 0.5 feet per second maximum design intake velocity option for complying with the impingement mortality BTA standards (s. NR 111.12(1)(a)(2), Wis. Adm. Code). In order to confirm this conditional BTA determination, within two years of the reissuance date, the permittee shall submit a report showing that PWGS has investigated engineering solutions to modify and/or replace the current flow control gate of the emergency intake and that one of the solutions evaluated is implemented by the date required in section 4.4 of this permit. In addition to the required report on the modification and/or replacement of the flow control gate the permittee must also conduct a study on the impingement mortality covering a 12-month period after the flow control gate has been sealed. The permittee shall submit a report which includes the results of the impingement mortality study and compares those results to the results of prior impingement mortality studies.

Pending completion and department review of a Feasibility Study, the department has conditionally determined that the BTA for entrainment is the current design and operation of the intake system with the addition and operation of a variable frequency drive (VFD) on at least one intake pump. Unless the department determines that use of a VFD is infeasible after review of a Feasibility Report completed by the permittee, the VFD shall be installed in accordance with Schedule section 4.5 of this permit and operated in a manner that minimizes the amount of water withdrawn while meeting plant needs. Prior to installing a VFD on at least one intake pump the permittee shall complete a study on the feasibility of using at least one VFD.

1.2.1.3 Total Metals Analyses

Measurements of total metals and total recoverable metals shall be considered as equivalent.

1.2.1.4 Sample Analysis

Samples shall be analyzed using a method which provides adequate sensitivity so that results can be quantified at a level of quantitation below the calculated/potential effluent limit, unless not possible using the most sensitive approved method.

1.2.1.5 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

1.2.2 Sampling Point 902 - EMERGENCY INTAKE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Per Occurrence	Estimated	A new methodology to estimate flow rate will need to be established by the permittee and approved by the department prior to reporting on the DMR.
Intake Water Used Exclusively For Cooling		% Flow	Annual	Calculated	See section 1.3.3.1 for additional submittal requirements for calculation methods.

1.2.2.1 Authority to Operate and Use Limitations

The emergency cooling water intake structure described below is authorized for use but has use restrictions as listed below. Monitoring and reporting are required.

- **Location:** Intake 902 is located on the north side of the generating station on the shore of Lake Michigan in Ozaukee County in eastern Wisconsin.
- **General Description:** The emergency intake 902 withdraws water directly from Lake Michigan through a 54.2 sq. ft open area.
- **Major Components:** The emergency intake 902 withdraws water through an 8.4' by 10' rectangular opening in the dock wall with 6 vertical sections of the steel sheet piling left in place to serve as a bar rack with 10" wide openings. Water from the emergency intake then passes through the same traveling screens described within the primary intake. Debris and any fish are removed with a continuous, low-pressure backwash that discharges to a sluiceway 2 feet by 2 feet that connects to the Outfall 001 discharge tunnel. The system is equipped with a high-pressure line that can be used if needed.
- **Maximum Design Intake Flow (DIF):** The estimated maximum achievable flow through the emergency intake is 150,000 gpm (330 cfs).

Maximum Through-Screen Design Intake Velocity: The design intake flow through velocity at the emergency 902 intake is 6 feet per second.

1.2.2.2 Use Limitations

- Use of the emergency water intake shall be minimized to the extent practicable. The permittee shall only operate the emergency cooling water intake in the event the porous dike is unable to allow an adequate volume of lake water to enter the intake pond that would disrupt the amount of necessary cooling water. In addition, the permittee may operate the emergency water intake to flush it or to test the gates (refer to bullets 5 and 6 below).
- The permittee shall remedy the cause of the reduced flow and return the porous dike water intake to service as soon as practicable. Causes for use of the emergency cooling water intake include ice-up conditions, or the porous dike becomes plugged with debris or biological growths such as cladophora, zebra mussels, and quagga mussels.
- The cooling water volume demand shall be reduced to the extent practicable by reducing the power capacity utilization when the emergency cooling water intake is used.
- Use of the emergency cooling water intake shall be avoided to the extent practicable during periods when fish stocking is conducted in Sauk Creek or within the Port Washington harbor. Fish stocking may occur during the periods of March 1st to May 15th and September 1st to November 1st.
- The permittee may flush the emergency cooling water intake as needed to ensure cleanliness by opening the intake and discharging to Outfall 001.
- The permittee may perform emergency water intake gate tests to assure proper operation.

1.2.2.3 BTA Determination

The emergency cooling water intake is included as a component of the water intake system technologies, and is also considered to be BTA. Because of its limited use on an emergency basis its environmental impact is minimized.

1.2.2.4 Monitoring and Reporting

The permittee shall notify the Department within 5 days after any use of the emergency cooling water intake system. The date and the duration during which the intake is open shall be monitored and reported. The permittee shall provide notification to the DNR field contact.

1.3 Cooling Water Intake Structure Standard Requirements

The following requirements and provisions apply to all water intake structures identified as sampling points in subsection 1.1.

1.3.1 Future BTA for Cooling Water Intake Structure

BTA determinations for entrainment and impingement mortality at cooling water intake structures will be made in each permit reissuance, in accordance with ss. NR 111.12-13, Wis. Adm. Code. **In subsequent permit reissuance applications, the permittee shall provide all the information required in NR 111.40(2)(c), Wis. Adm. Code.**

Exemptions from some permit application requirements are possible in accordance with s. NR 111.42(1)(a), Wis. Adm. Code, where information already submitted is sufficient. If an exemption is desired, a request for reduced application material requirements must be submitted at least 2 years and 6 months prior to permit expiration. Past submittals and previously conducted studies may satisfy some or all of the application material requirements.

1.3.2 Visual or Remote Inspections

The permittee shall conduct a weekly visual inspection or employ a remote monitoring device during periods when the cooling water intake is in operation. The inspection frequency shall be weekly to ensure the intakes are maintained and operated to function as designed.

1.3.3 Reporting Requirements for Cooling Water Intake

The permittee shall adhere to the reporting requirements listed below:

1.3.3.1 Annual Certification Statement and Report

Submit an annual certification statement signed by the authorized representative with information on the following, no later than January 31st for the previous year:

- Certification that water intake structure technologies are being maintained and operated as set forth in this permit, or a justification to allow a modification of the practices. Include a summary of the required Visual or Remote Inspections.
- If there are substantial modifications to the operation of any unit that impacts the cooling water withdrawals or operation of the water intake structure, provide a summary of those changes.
- A calculation of the percent used for cooling, including provision of data and methods used in the calculation.
- If the information contained in the previous year's annual certification is still applicable, the certification may simply state as such.

1.3.4 Intake Screen Discharges and Removed Substances

Floating debris and accumulated trash collected on the cooling water intake trash rack shall be removed and disposed of in a manner to prevent any pollutant from the material from entering the waters of the State pursuant to s. NR 205.07 (3) (a), Wis. Adm. Code, except that backwashes may contain fine materials that originated from the intake water source such as sand, silt, small vegetation or aquatic life.

1.3.5 Endangered Species Act

Nothing in this permit authorizes take for the purpose of a facility's compliance with the Endangered Species Act. Refer to s. NR 111.16(4)(b), Wis. Adm. Code.

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
103	LOW VOLUME WASTEWATER (LVW): Combined low volume wastewater discharge includes boiler makeup water treatment system wastewater (multi-media filter backwash and reverse osmosis reject water), process water sampling drains, and demineralized water storage tank overflow line for Power Block 2. Grab and 24-hour flow proportional composite samples are collected from a sampling tap on the water treatment equipment wastewater discharge piping.
105	BOILER BLOWDOWN LVW: Heat recovery steam generator (HRSG) #11 blowdown tank discharge. Grab samples taken from a sample tap on the HRSG #11 blowdown tank discharge piping.
106	BOILER BLOWDOWN LVW: Heat recovery steam generator (HRSG) #12 blowdown tank discharge. Grab samples taken from a sample tap on the HRSG #12 blowdown tank discharge piping.
107	BOILER BLOWDOWN LVW: Heat recovery steam generator (HRSG) #21 blowdown tank discharge. Grab samples taken from a sample tap on the HRSG #21 blowdown tank discharge piping.
108	BOILER BLOWDOWN LVW: Heat recovery steam generator (HRSG) #22 blowdown tank discharge. Grab samples taken from a sample tap on the HRSG #22 blowdown tank discharge piping.
110	OIL/WATER SEPARATOR: Oil/water separator effluent from Power Block 2. Grab samples taken from a drain/sample tap on the oil/water separator #2 effluent piping.
111	OIL/WATER SEPARATOR: Oil/water separator effluent from Power Block 1. Grab samples taken from a drain/sample tap on oil/water separator #1 effluent piping.
120	FIELD BLANK: Sample point for reporting results of mercury field blanks collected using standard sample handling procedures.

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 103 - LOW VOLUME WASTEWATER

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
Suspended Solids, Total	Daily Max	100 mg/L	Monthly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Monthly	24-Hr Flow Prop Comp	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Quarterly	Grab	

2.2.2 Sampling Point 105 - BLOWDOWN #11; 106- BLOWDOWN #12; 107- BLOWDOWN #21; 108- BLOWDOWN #22

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	Flow is calculated using pump run times and pump design capacity from pump curves.
Suspended Solids, Total	Daily Max	100 mg/L	Monthly	Grab	
Suspended Solids, Total	Monthly Avg	30 mg/L	Monthly	Grab	
Oil & Grease (Hexane)	Daily Max	20 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Quarterly	Grab	

2.2.3 Sampling Point 110 - OIL/WATER SEPARATOR #2; 111- OIL/WATER SEPARATOR #1

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
Oil & Grease (Hexane)	Daily Max	15 mg/L	Monthly	Grab	
BOD ₅ , Total	Monthly Avg	20 mg/L	Annual	Grab	
BETX, Total	Monthly Avg	750 µg/L	Annual	Grab	See 'Total BETX' section below.
PAHs	Monthly Avg	0.1 µg/L	Annual	Grab	See 'PAH' section below.
Benzo(a)pyrene	Monthly Avg	0.1 µg/L	Annual	Grab	See 'Benzo(a)pyrene' section below.
Naphthalene	Monthly Avg	70 µg/L	Annual	Grab	See 'Naphthalene' section below.

2.2.3.1 Total BETX

Total BETX shall include a summation of the following individual compounds: Benzene, ethylbenzene, toluene and total xylenes.

2.2.3.2 PAH Group of Ten

Polycyclic aromatic hydrocarbons (PAH's) shall include a summation of the following ten individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. Compliance with the monthly average PAH limit can be demonstrated by reporting a no detect of all of these PAH compounds, or by reporting the sum of the PAH individual compounds equal to or less than 0.1 µg/L. If a PAH compound is detected

between the level of detection (LOD) and level of quantitation (LOQ) the value shall be reported on the DMR, but it is not considered an exceedance if the LOQ is greater than 0.1 µg/L.

In determining compliance with the 0.1 µg/L limit, the permittee may use the toxicity equivalent factors shown below. For calculating the concentration for the PAH group of 10, multiply the concentration of each PAH compound by the corresponding TEF value and then sum the results. For results <LOD, a zero may be used for the concentration. Refer to Standard Requirement 5.1.4.

	PAH Compounds	TEF - Toxicity Equivalent Factor
1	Benzo(a)anthracene	0.1
2	Benzo(b)fluoranthene	0.1
3	Benzo(g,h,i)perylene	0.01
4	Benzo(k)fluoranthene	0.01
5	Chrysene	0.001
6	Dibenzo(a,h)anthracene	1
7	Fluoranthene	0.001
8	Indeno(1,2,3-cd)pyrene	0.1
9	Phenanthrene	0.001
10	Pyrene	0.001

2.2.3.3 Benzo(a)pyrene

The PAH compound benzo(a)pyrene is regulated separately. Compliance can be demonstrated by reporting no detect, or by reporting a detected amount equal to or less than 0.1 µg/L.

2.2.3.4 Naphthalene

The PAH compound naphthalene is regulated separately. Compliance can be demonstrated by reporting no detect, or by reporting a detected amount equal to or less than 70 µg/L.

2.2.3.5 Operating Requirements

The permittee shall comply with the following:

- The oil and water separator treatment controls for petroleum contaminated water shall be adequately sized, designed, operated and maintained.
- Oil and water separators shall only be used to treat wastewater contaminated with petroleum. No material (e.g., waste oil or petroleum products contaminated with minor amounts of water) shall be intentionally placed into the system for treatment or storage. All product spills shall be removed from the oil and water separator as soon as is practicable.
- Accumulated solids, oil and grease shall be removed on a periodic basis to maintain the hydraulic capacity of the oil and water separator and prevent the carryover of the oil and grease. The water discharge side of the separator (effluent chamber) shall be maintained; there shall be no oil sheen or scum on the water or oil accumulation on the equipment. All removed substances shall be properly disposed of (paragraph 2.2.3.6).
- The oil and water separator shall be inspected for proper operation at a minimum on a monthly basis.

2.2.3.6 Disposal of Waste Oil and Solids

Waste oil and solids removed from the oil and water separator shall be disposed of at a site or operation licensed by the Department under chs. NR 500 to 522, Wis. Adm. Code (solid waste regulations), or chs. NR 600 to 685, Wis. Adm. Code (hazardous waste regulations). The following documentation shall be maintained on-site regarding the

removal and disposal of these wastes: (a) the amount removed, (b) date of removal, (c) person or company who hauled the waste, and (d) disposal site for the waste. A summary of each year's waste removal and disposal shall be submitted with the annual monitoring summary.

2.2.4 Sampling Point 120 - FIELD BLANK

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Quarterly	Blank	Monitoring to occur during calendar years 2025, 2026, and 2027. See 'Mercury Monitoring' section below.

2.2.4.1 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wisconsin Administrative Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3 Surface Water Requirements

3.1 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	EFFLUENT: Combined wastewater discharge includes non-contact condenser cooling water, low volume wastewater, oil/water separator discharge, and other untreated minor flows. Grab and 24-hour flow proportional composite samples are collected at the discharge tunnel inside the Traveling Screen Room.
002	ALTERNATE USE: Alternate outfall which recirculates heated effluent from Outfall 001 back into the water intake channel. This outfall is mainly used to prevent ice formation in the intake channel in the winter and for macroinvertebrate (zebra and quagga mussel) control with thermal treatments. Flow monitoring only and notification to the Department is required prior to thermal treatment per permit section 3.2.2.2.

3.2 Monitoring Requirements and Effluent Limitations

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

3.2.1 Sampling Point (Outfall) 001 - CONDENSER COOLING WATER

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	Flow is calculated using recirculation gate position, pump run times, and pump design capacity from pump curves.
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Temperature Average		deg F	Daily	Continuous	
Temperature Maximum		deg F	Daily	Continuous	
Heat	Daily Avg	3,320 MBTU/hr	Daily	Calculated	
Phosphorus, Total	6-Month Avg	0.2 mg/L	Monthly	24-Hr Flow Prop Comp	This is an interim limit. See the 'Phosphorus' section below.
Arsenic, Total Recoverable		µg/L	Quarterly	24-Hr Flow Prop Comp	See 'Total Metals Analyses' and 'Sample Analysis' sections below.
Mercury, Total Recoverable		ng/L	Quarterly	Grab	Monitoring to occur during calendar years 2025, 2026, and 2027. See 'Mercury Monitoring' section below.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
PFOS		ng/L	Quarterly	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
PFOA		ng/L	Quarterly	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual during the permit term. See 'WET Monitoring' section below for monitoring dates and WET requirements.
Chronic WET	Monthly Avg	2.0 TU _c	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual during the permit term. See 'WET Monitoring' section below for monitoring dates and WET requirements.

3.2.1.1 Total Metals Analyses

Measurements of total metals and total recoverable metals shall be considered as equivalent.

3.2.1.2 Sample Analysis

Samples shall be analyzed using a method which provides adequate sensitivity so that results can be quantified at a level of quantitation below the calculated/potential effluent limit, unless not possible using the most sensitive approved method.

3.2.1.3 Heat Limitation

The daily average alternative effluent limit (AEL) for temperature of 3320 MBTU/hr, approved in accordance with Subchapter VI of ch. NR 106, Wis. Code, becomes effective upon permit issuance. The limit represents the maximum total heat addition from both generating units 1 and 2, on a year-round basis, to ensure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife.

EtaPRO power plant performance evaluation software (or equivalent) may be used to determine the daily average heat addition from the condensers. This program is used to determine the heat energy at the inlet to the steam condensers and at the outlet of the steam condensers. The difference between the inlet and outlet energy is called the “heat duty” and is expressed in million British thermal units per hour (MBTU/hr). All of the energy lost as the steam is condensed to water is absorbed by the circulating water system and discharged through Outfall 001 or 002.

If the above method is not used to calculate the heat addition, the daily average heat addition can be calculated from flow and temperature data using the following formula:

$$\text{Heat addition (MBTU/hr)} = \text{flow} \times \Delta T \times 0.3475$$

Flow is the average daily cooling water flow rate in million gallons per day (MGD), ΔT is the average daily difference in temperature between the water intake at Sampling Point 901 and the condenser outlet measured at Outfall 001, and 0.3475 is a conversion factor.

Note: The AEL for temperature approved in this permit may be renewed in subsequent permit reissuances. An AEL renewal request must be supported with justification in the next permit application. Refer to schedule 4.2.

3.2.1.4 Mercury Monitoring

The permittee shall collect and analyze all mercury samples according to the data quality requirements of ss. NR 106.145(9) and (10), Wis. Adm. Code. The limit of quantitation (LOQ) used for the effluent and field blank shall be less than 1.3 ng/L, unless the samples are quantified at levels above 1.3 ng/L. The permittee shall collect at least one mercury field blank for each set of mercury samples (a set of samples may include combinations of intake, influent, effluent or other samples all collected on the same day). The permittee shall report results of samples and field blanks to the Department on Discharge Monitoring Reports.

3.2.1.5 Phosphorus Water Quality-Based Effluent Limitation(s)

The 0.2 mg/L 6-month average limit for phosphorus is an interim limit pending the development of a near shore or whole lake model in accordance with s. NR 217.13(4), Wis. Adm. Code. The permittee shall continue to reduce phosphorus as much as practical from their discharge and continue to minimize phosphorus in their discharge. See the Schedules section for optimizing removal of phosphorus. The interim limit for phosphorus is in effect unless:

- (A) A near shore or whole lake model is developed to calculate water quality-based effluent phosphorus limits for discharges to Lake Michigan. Upon Department approval of the model, the Department may modify, revoke and reissue, or reissue the permit to incorporate revised limitations.

If the Department incorporates revised phosphorous limitations into the permit, the permittee may submit an Adaptive Management Plan and a completed Request Form 3200-139, an application for Water Quality Trading or an application for a variance.

If a variance is approved for the next reissuance, interim limits and conditions will be imposed in the reissued permit in accordance with s. 283.15, Wis. Stats., and applicable regulations. A permittee may apply for a variance to the phosphorus WQBEL at the next reissuance even if the permittee did not apply for a phosphorus variance as part of this permit reissuance.

Additional Requirements: If a water quality-based effluent limit has taken effect in a permit, any increase in the limit is subject to s. NR 102.05(1) and ch. NR 207, Wis. Adm. Code. When a six-month average effluent limit is specified for Total Phosphorus, the applicable averaging periods are May through October and November through April.

3.2.1.6 PFOS/PFOA Sampling and Reporting Requirements

For grab samples, as defined per s. NR 218.04(10), Wis. Adm. Code, a single sample at a location as defined by the sample point description shall be taken during the time of the day most representative to capture all potential discharges. If extra equipment besides the sample bottle is used to collect the sample, it is recommended that a one-time equipment blank is collected with the first sample. An equipment blank would be collected by passing laboratory-verified PFAS-free water over or through field sampling equipment before the collection of a grab sample to evaluate potential contamination from the equipment used during sample.

If any equipment blanks are performed, these results shall be reported in the comments section of the eDMR and shall also be documented in the reports submitted as part of the PFOS/PFOA Minimization Plan Determination of Need schedule of the permit.

3.2.1.7 PFOS/PFOA Minimization Plan Determination of Need

The permittee shall monitor PFOS and PFOA as specified in the table above and report on the effluent concentrations including trends in monthly and annual average PFOS and PFOA concentrations as specified in the PFOS/PFOA Minimization Plan Determination of Need Schedule.

If, after reviewing the data, the Department determines that a minimization plan for PFOS and PFOA is necessary based on the procedures in s. NR 106.98(4), Wis. Adm. Code, the Department will notify the permittee in writing that a PFOS and PFOA minimization plan that satisfies the requirements in s. NR 106.99, Wis. Adm. Code, is required. The permittee shall submit an initial plan for Department approval no later than 90 days after written notification was sent from the Department in accordance with s. NR 106.985(2)(a), Wis. Adm. Code. Pursuant to s. NR 106.985(2)(b), Wis. Adm. Code, as soon as possible after Department approval of the PFOS and PFOA minimization plan, the Department will modify or revoke and reissue the permit in accordance with public notice procedures under ch. 283, Wis. Stats., and ch. NR 203, Wis. Adm. Code, to include the PFOS and PFOA minimization plan and other related terms and condition.

If, however, the Department determines that a PFOS and PFOA minimization plan is unnecessary based on the procedures in s. NR 106.98(4), Wis. Adm. Code, the Department shall notify the permittee that no further action is required. Per s. NR 106.98(3)(a), Wis. Adm. Code, the Department may reduce monitoring frequency to once every 3 months (quarterly) on a case-by-case basis, but only after at least 12 representative results have been generated. If the permittee requests a reduction in monitoring and the Department agrees a reduction would be appropriate, the permit may be modified in accordance with public notice procedures under ch. 283, Wis. Stats., and ch. NR 203, Wis. Adm. Code, to incorporate this change.

3.2.1.8 Polychlorinated Biphenyls

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

3.2.1.9 Additives

The permittee shall maintain a record of the dosage rate of all additives used on a monthly basis. The additives may be changed during the term of the permit following procedures in the 'Additives' subsection of the Standard Requirements.

3.2.1.10 Macroinvertebrate Control

The Port Washington Generating Station normally uses thermal treatments to control macroinvertebrates, as described under Outfall 002. If chlorine is proposed as an optional chemical treatment for controlling zebra mussels or other biofouling, the permit must be modified to include the appropriate chlorine monitoring requirements and limitations. Plans and specifications for the installation of chemical addition and dechlorination equipment must be submitted for approval in accordance with ch. NR 108, Wis. Adm. Code.

3.2.1.11 Arsenic

The permittee shall monitor arsenic to document the discharge does not cause or contribute to an excursion above an applicable water quality standard. The permit may be modified or revoked and reissued if new information indicates changes that no longer support the finding that a permit limit is not needed as provided in paragraph D of procedure 5 in appendix F of 40 CFR Part 132. Changes include monitoring that shows that arsenic is added or changes to operation and would result in addition of arsenic to discharge water.

3.2.1.12 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lake Michigan

Instream Waste Concentration (IWC): 50%, dilution within Port Washington Harbor is 1:1

Dilution series: At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 75, 50, 25, 12.5% and any additional selected by the permittee.

WET Testing Frequency:

Acute tests shall be conducted once each year, in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters:

- **Acute:** January 1 – March 31, 2024; April 1 – June 30, 2025; July 1 – September 30, 2026
October 1 – December 31, 2027; January 1 – March 31, 2028

Acute WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in October 1 – December 31, 2029.

Chronic tests shall be conducted once each year, in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters:

- **Chronic:** January 1 – March 31, 2024; April 1 – June 30, 2025; July 1 – September 30, 2026
October 1 – December 31, 2027; January 1 – March 31, 2028

Chronic WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in October 1 – December 31, 2029.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 2.0 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3.2.2 Sampling Point (Outfall) 002 - CONDENSER COOLING WATER - ALT

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	Flow is calculated using recirculation gate position, pump run times, and pump design capacity from pump curves.

3.2.2.1 Alternative Outfall

Some or all of the effluent from Outfall 001 may be diverted to alternative Outfall 002. The recirculation gate at Outfall 001 shall be slowly opened and closed to prevent thermal shock to aquatic life in the harbor.

Outfall 002 may be used for the following purposes:

- Prevent the build-up of ice in the water intake channel and formation of frazil ice on the trash racks, traveling water screens, and the porous dike. During the winter effluent from Outfall 001 may be routed to the intake channel to deice the trash racks and traveling water screens, or into the water intake pond to deice the porous dike.
- Control macroinvertebrates (zebra mussels and quagga mussels) with a thermal treatment. During a thermal treatment effluent may be routed away from Outfall 001 to the intake channel to maintain a water temperature above 95°F for several hours. Thermal treatments may occur once or twice a year and are limited to the summer months (June through August) to prevent thermal shock to aquatic life.
- Backwash the porous dike to help flush out any plugging that may occur from biofouling or debris. During a backwash, effluent is routed away from Outfall 001 to the water intake pond, and the emergency cooling water intake is used to prevent the recirculation of the effluent into the water intake. This would generate a net discharge through the porous dike from the water intake pond back into Lake Michigan.

3.2.2.2 Thermal Treatment Notification

The permittee shall notify the Department 5 days before (or as much in advance as possible) any thermal treatments for the control of macroinvertebrates. The date and the duration during which the Outfall 002 discharges shall be monitored and reported (through flow monitoring on the DMR). The permittee shall provide notification to the basin engineer located at the Plymouth Service Center (Curtis Nickels 920-892-8756 ext. 3030 or email Curtis.Nickels@wisconsin.gov), and the Southeast Region Fisheries Management Supervisor at the Great Lakes Water Institute (Bradley Eggold 414-382-7921 or email Bradley.Eggold@wisconsin.gov).

3.2.2.3 Mussel Control Exemption

An exemption from the AEL for temperature is authorized under this permit for controlling macroinvertebrates at Outfall 002, as allowed under s. NR 106.74 (5), Wis. Adm. Code.

4 Schedules

4.1 Cooling Water Intake Structure (CWIS) Annual Certification Statement

Submit an annual certification statement as required by influent section 1.3.3.1 'Annual Certification Statement and Report' of the permit.

Required Action	Due Date
Annual Certification Statement: Submit an Annual Certification on the water intake structure, as required by section 1.3.3.1.	01/31/2024
Annual Certification Statement: Submit an Annual Certification on the water intake structure, as required by section 1.3.3.1.	01/31/2025
Annual Certification Statement: Submit an Annual Certification on the water intake structure, as required by section 1.3.3.1.	01/31/2026
Application Materials Exemption Request: Submit a statement by the due date on whether or not the permittee wishes to request a 316(b) application materials exemption. If no exemption is being requested, all applicable requirements in s. NR 111.40(2)(c), Wis. Adm. Code shall be submitted with the application for reissuance of this permit.	03/31/2026
Annual Certification Statement: Submit an Annual Certification on the water intake structure, as required by section 1.3.3.1.	01/31/2027
Annual Certification Statement: Submit an Annual Certification on the water intake structure, as required by section 1.3.3.1.	01/31/2028
Application Materials: Submit the application materials required in NR 111.40(2)(c), Wis. Adm. Code with the application for reissuance of this permit.	04/03/2028

4.2 Temperature Alternative Effluent Limit (AEL)

The alternative effluent limit (AEL) for temperature approved in this permit may be renewed in subsequent permit reissuances. An AEL renewal request must be supported with justification in the next permit application.

Required Action	Due Date
Submit AEL Request: The permittee shall submit an AEL Request with the WPDES reissuance application. This request shall demonstrate that the conditions and the assumptions included in the March 2020 study are still accurate and apply to the current discharge. If discharge conditions have significantly changed (i.e. increased/decreased flow, or increased/decreased heat loads), then a full Thermal Study, similar to the 2020 study, will need to be repeated and the findings submitted with the application.	04/03/2028

4.3 Phosphorus Optimization

No later than 14 days following the due date, the permittee shall notify the Department in writing of its compliance or noncompliance with the required action. If a submittal is part of the required action, then a timely submittal fulfills the written notification requirement.

Required Action	Due Date
Optimization Summary Report: The permittee shall continue to implement phosphorus optimization efforts throughout the permit term and identify any new optimization efforts.	03/31/2028

<p>The permittee shall submit a final report documenting successes in reducing phosphorus concentrations in the effluent. The report shall summarize the actions taken for continued optimization of phosphorus removal. The report shall also include an analysis of trends in monthly and annual total effluent phosphorus concentrations based on sampling during the current permit term and include an evaluation of collected effluent data. Any intake phosphorus data collected shall also be submitted. The final report shall also identify any possible source reduction measures and operational improvements to continue to optimize removal of phosphorus in the future.</p>	
--	--

4.4 Emergency Intake Investigation

Investigation to confirm the conditional BTA determination for impingement mortality.

Required Action	Due Date
Emergency Intake Investigation Report: In accordance with section 1.2.1.2, the permittee shall submit a report to the department detailing engineering solutions to modify and/or replace the flow control gate at the harbor entrance of the emergency intake and shall select one of the options discussed to proceed with implementing.	09/30/2024
Complete Implementation: The permittee shall finish implementation of the selected engineering solution by this date.	09/30/2025
Study Plan: The permittee shall submit a plan outlining the impingement mortality study in which the impingement mortality rate is determined after the flow control gate has been modified and/or replaced is determined and compared to the impingement mortality rate prior to the flow control gate being modified or replaced. The study shall cover a 12-month period.	09/30/2026
Commence Study: The permittee shall commence monitoring associated with the study plan.	03/31/2027
Submit Study: The permittee shall submit a study in which the impingement mortality rate is determined after the flow control gate has been modified and/or replaced is determined and compared to the impingement mortality rate prior to the flow control gate being modified or replaced.	03/31/2028

4.5 Entrainment BTA Feasibility and Implementation

Report on the feasibility of pumps with variable frequency drives (VFDs) and implementation of one or more VFDs if deemed feasible.

Required Action	Due Date
Progress Report: Submit a report on the progress that has been made on the feasibility report, as required by section 1.2.1.2.	09/30/2024
Submit Feasibility Report: The permittee shall submit a report in which the feasibility of installing a variable frequency drive (VFD) on at least one intake pump at PWGS is investigated.	09/30/2025
Progress Report: Unless the department notifies the permittee in writing that, after review of the Feasibility Report, the department has determined that VFDs are infeasible, the permittee shall submit a report on the progress of procurement and installation of one or more VFDs if the use of VFDs has been deemed to be feasible.	09/30/2026
Complete Implementation: Unless the department notifies the permittee in writing that, after review of the Feasibility Report, the department has determined that VFDs are infeasible, the permittee shall finish installation and the pumps shall be in operation by this date.	09/30/2027

4.6 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
<p>Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p>	09/30/2024
<p>Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p> <p>The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan.</p> <p>If the Department determines a PFOS/PFOA minimization plan is needed based on a reasonable potential evaluation, the permittee will be required to develop a minimization plan for Department approval no later than 90 days after written notification was sent from the Department. The Department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued.</p> <p>If, however, the Department determines there is no reasonable potential for the facility to discharge PFOS or PFOA above the narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code, no further action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.</p>	09/30/2025

5 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).

5.1 Reporting and Monitoring Requirements

5.1.1 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.

5.1.2 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.

5.1.3 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.

5.1.4 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.

5.1.5 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.

5.1.6 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.

5.1.7 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.

5.2 System Operating Requirements

5.2.1 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.**

5.2.2 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.

5.2.3 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.

5.2.4 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.

5.2.5 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.

5.2.6 Operator Certification

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).

5.2.7 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.

5.2.8 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.

5.2.9 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.

5.3 Surface Water Requirements

5.3.1 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.

5.3.2 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.

5.3.3 Effluent Temperature Requirements

Weekly Average Temperature – If temperature limits are included in this permit, Weekly Average Temperature shall be calculated as 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 pursuant to Wis. Adm. Code, s. NR 102.28. ‘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 pursuant to Wis. Adm. Code, s. NR 102.29.

5.3.4 Energy Emergency Events

The Department will use enforcement discretion whenever there are exceedances of effluent temperature limitations for the electric generating facility during an energy emergency warning or when an energy emergency event has been declared under a Federal Energy Regulatory Commission order (Standard EOP-002, North American Electric Reliability Corporation).

5.3.5 Visible Foam or Floating Solids

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

5.3.6 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.

5.3.7 Additives

In the event that the permittee wishes to commence use of a water treatment additive, or increase the usage of the additives greater than indicated in the permit application, the permittee must get a written approval from the Department prior to initiating such changes. This written approval shall provide authority to utilize the additives at the specific rates until the permit can be either reissued or modified in accordance with s. 283.53, Stats. Restrictions on the use of the additives may be included in the authorization letter.

5.3.8 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the *"State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition"* (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

5.3.9 Whole Effluent Toxicity (WET) Identification and Reduction

Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

- A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;

- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including the following actions:
 - a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
 - b) Identify the compound(s) causing toxicity. Conduct toxicity screening tests on the effluent at a minimum of once per month for six months to determine if toxicity recurs. Screening tests are WET tests using fewer effluent concentrations conducted on the most sensitive species. If any of the screening tests contain toxicity, conduct a toxicity identification evaluation (TIE) to determine the cause. TIE methods are available from USEPA “Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures (EPA/600/6-91/003) and “Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I” (EPA/600/6-91/005F).
 - c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
 - d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)
- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;
- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

5.3.10 PFOS and PFAS Requirements

The laboratory performing the analysis on any samples shall be certified for the applicable PFAS compounds in the aqueous matrix by the Wisconsin Laboratory Certification Program established under s. 299.11, Wis. Stats., in accordance with s. NR 149.41, Wis. Adm. Code. If the EPA Office of Water publishes a 1600 series isotope dilution method for the analysis of PFAS in wastewater, the department recommends the use of the EPA method.

The department may reject any sample results if results are produced by a laboratory that is not in compliance with certification requirements under ch. NR 149, Wis. Adm. Code.

6 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Cooling Water Intake Structure (CWIS) Annual Certification Statement - Annual Certification Statement	January 31, 2024	16
Cooling Water Intake Structure (CWIS) Annual Certification Statement - Annual Certification Statement	January 31, 2025	16
Cooling Water Intake Structure (CWIS) Annual Certification Statement - Annual Certification Statement	January 31, 2026	16
Cooling Water Intake Structure (CWIS) Annual Certification Statement - Application Materials Exemption Request	March 31, 2026	16
Cooling Water Intake Structure (CWIS) Annual Certification Statement - Annual Certification Statement	January 31, 2027	16
Cooling Water Intake Structure (CWIS) Annual Certification Statement - Annual Certification Statement	January 31, 2028	16
Cooling Water Intake Structure (CWIS) Annual Certification Statement - Application Materials	April 3, 2028	16
Temperature Alternative Effluent Limit (AEL) -Submit AEL Request	April 3, 2028	16
Phosphorus Optimization -Optimization Summary Report	March 31, 2028	16
Emergency Intake Investigation -Emergency Intake Investigation Report	September 30, 2024	17
Emergency Intake Investigation -Complete Implementation	September 30, 2025	17
Emergency Intake Investigation -Study Plan	September 30, 2026	17
Emergency Intake Investigation -Commence Study	March 31, 2027	17
Emergency Intake Investigation -Submit Study	March 31, 2028	17
Entrainment BTA Feasibility and Implementation -Progress Report	September 30, 2024	17
Entrainment BTA Feasibility and Implementation -Submit Feasibility Report	September 30, 2025	17
Entrainment BTA Feasibility and Implementation -Progress Report	September 30, 2026	17
Entrainment BTA Feasibility and Implementation -Complete Implementation	September 30, 2027	17
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge	September 30, 2024	18
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge and Evaluation of Need	September 30, 2025	18
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	19

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 - Plymouth, 1155 Pilgrim Rd, Plymouth, WI 53073