WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

Manitowoc Public Utilities

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
701 Columbus Street and 1303 South 8th Street
to
Lake Michigan (Water Body Identification Code 20) in Manitowoc 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 _____
Jason Knutson
Wastewater Supervisor

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - July 01, 2024 **EXPIRATION DATE - June 30, 2029**

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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)**
702	PLANT RAW WATER: At Sampling Point 702, the permittee shall collect representative samples of the combined Lake Michigan intake water from intakes RWSP1, RWPS2, RWPS3 South Rock Crib, and RWPS3 North Rock Crib prior to being used for cooling purposes at any combination of Condensers 5, and 6 , Generators 5 and 6, Turbines 5 and 6, Boiler 8, or Unit 9 noncontact cooling water system and discharged via Outfall 004 or Outfall 009. The permittee shall calculate the combined intake flow rate of RWSP1, RWPS2, RWPS3 South Rock Crib, and RWPS3 North Rock Crib prior use for as cooling water. The permittee shall continuously measure temperature on the intake water from the inlet to Unit 9 NCCW system.
901	INTAKE: Raw water pump system 1 (RWPS1). This intake feeds water to Raw Water Station 1 Well No. 2 prior to being treated at the water treatment facility or used for cooling purposes at the power plant. The permittee shall estimate the intake flow rate by the number of pumps used, pump capacities, and pump run times on a given day.
902	INTAKE: Raw water pump system 2 (RWPS2). This intake feeds water to Raw Water Station 2 prior to being treated at the water treatment facility or used for cooling purposes at the power plant. The permittee shall estimate the intake flow rate by the number of pumps used, pump capacities, and pump run times on a given day.
903	INTAKE: Raw water pump system 3 (RWPS3) South Rock Crib. This intake is one of two rock cribs that serves the RWPS3. The South Rock Crib uses a 48-inch pipe. This intake feeds water to Power Plant Wet Wells 2, 3, and 4 and used for cooling purposes at the power plant. The permittee shall estimate the intake flow rate by the number of pumps used, pump capacities, and pump run times on a given day.
904	INTAKE: Raw water pump system 3 (RWPS3) North Rock Crib. This intake is one of two rock cribs that serves the RWPS3. The North Rock Crib uses a 36-inch pipe. This intake feeds water to Power Plant Wet Wells 2, 3, and 4 and used for cooling purposes at the power plant. The permittee shall estimate the intake flow rate by the number of pumps used, pump capacities, and pump run times on a given day.
905	INTAKE: Former C. Reiss coal dock purchased July 17, 2015. Intake used for fugitive dust control only. Per EPA because no water is used for cooling, requirements for cooling water intake structures is not required. State statute is applicable. The permittee shall estimate the intake flow rate by the number of pumps used, pump capacities, and pump run times on a given day.

1.2 Monitoring Requirements and BTA Determinations

The permittee shall comply with the following monitoring requirements.
The intake(s) has been reviewed for compliance with BTA (Best Technology Available) standards and the BTA determination(s) is listed below.

1.2.1 Sampling Point 702 – Power Plant Raw Water

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Calculated	
Temperature Average		deg F	Daily	Continuous	
Phosphorus, Total		mg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Arsenic, Total Recoverable		µg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Mercury, Total Recoverable		ng/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.See Mercury Monitoring section for more details.

1.2.1.1 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.

1.2.2 Sampling Point 901 - RWPS1

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Estimated	
Intake Water Used Exclusively For Cooling		% Flow	Annual	Calculated	

1.2.2.1 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 RWPS1 cooling water intake system which consists of the following:

- Location: In Lake Michigan 9,000 feet offshore (44°04'35.7"N, 87°37'17.7"W).
- Major Components: The intake consists of three inverted cones that extend 4 to 5 feet above the bottom of the lake. Each cone has a 11.5 foot diameter and is covered with grates made of 0.5 inch wide bars spaced 6-inches on center. The cones are connected to a 48-inch diameter pipe that conveys water to two pump wells
- Maximum Design Intake Flow (DIF): 75 MGD

- Maximum Design Intake Velocity: 9.2 ft/sec

1.2.2.2 Cooling Water Intake BTA (Best Technology Available) Determination

The Department believes that the RWPS1 cooling water intake, as described above in subsection 1.2.1.1, represents BTA for minimizing entrainment, but does not represent BTA for minimizing impingement mortality in accordance with the requirements in section s. 283.31(6), Wis. Stats. and section 316(b) of the Clean Water Act.

1.2.3 Sampling Point 902 - RWPS2

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Estimated	
Intake Water Used Exclusively For Cooling		% Flow	Annual	Calculated	

1.2.3.1 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 RWPS2 cooling water intake system which consists of the following:

- Location: In Lake Michigan 4,000 feet offshore (44°04'43.7"N, 87°38'26.7"W)
- Major Components: The intake is made of two cylindrical wedgewire screens with 3/8-inch-wide slots. Each screen has a 60-inch diameter and are 17.45 feet long. After the screens the water passes through a 60-inch diameter pipe.
- Maximum Design Intake Flow (DIF): 56 MGD
- Maximum Design Intake Velocity: 0.27 ft/sec

1.2.3.2 Cooling Water Intake BTA (Best Technology Available) Determination

The Department believes that the RWPS2 cooling water intake, as described above in subsection 1.2.1.1, represents BTA for minimizing adverse environmental impact in accordance with the requirements in section s. 283.31(6), Wis. Stats. and section 316(b) of the Clean Water Act.

1.2.4 Sampling Point 903 – RWPS3 South Rock Crib

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Estimated	
Intake Water Used Exclusively For Cooling		% Flow	Annual	Calculated	

1.2.4.1 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 East Rock Crib cooling water intake system which consists of the following:

- Location: In Lake Michigan 2,200 feet offshore (44°04'43.9"N, 87°38'54.0"W).
- Major Components: This intake has a 40 foot square footprint and consists of lattice made of 12-inch by 12-inch lumber filled with “one-man” stones.
- Maximum Design Intake Flow (DIF): 26 MGD
- Maximum Design Intake Velocity: 7.1 ft/sec

1.2.4.2 Cooling Water Intake BTA (Best Technology Available) Determination

The Department believes that the East Rock Crib cooling water intake, as described above in subsection 1.2.1.1, represents BTA for minimizing entrainment, but does not represent BTA for minimizing impingement mortality in accordance with the requirements in section s. 283.31(6), Wis. Stats. and section 316(b) of the Clean Water Act.

1.2.5 Sampling Point 904 – RWPS3 North Rock Crib

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Estimated	
Intake Water Used Exclusively For Cooling		% Flow	Annual	Calculated	

1.2.5.1 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 West Rock Crib cooling water intake system which consists of the following:

- Location: In Lake Michigan 1,700 feet offshore (44°04'45.6"N, 87°39'01.0"W).
- Major Components: This intake has an octagonal footprint with alternating sides of 24- and 8-feet ands consists of stones confined within 120 pilings with 2 inches in between each piling.
- Maximum Design Intake Flow (DIF): 26 MGD
- Maximum Design Intake Velocity: 12.6 ft/sec

1.2.5.2 Cooling Water Intake BTA (Best Technology Available) Determination

The Department believes that the West Rock Crib cooling water intake, as described above in subsection 1.2.1.1, represents BTA for minimizing entrainment, but does not represent BTA for minimizing impingement mortality in accordance with the requirements in section s. 283.31(6), Wis. Stats. and section 316(b) of the Clean Water Act.

1.2.6 Sampling Point 905 - MPU North Dock

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Per Occurrence	Estimated	

1.2.6.1 Water Intake - 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 MPU North Dock water intake system which consists of the following:

- Location: Bank of the Manitowoc River approximately 12 feet below the top of the above grade sheet pile. (44°05'29.7"N, 87°39'03.6"W).
- Major Components: The North Dock Intake consists of a 24-inch pipe penetrating the riprap below the surface of the Manitowoc River approximately 12 feet below the top of the above grade sheet pile. Water is withdrawn from a manhole-type well approximately 100 feet to the southeast.
- Maximum Design Intake Flow (DIF): 0.0288 MGD

1.2.6.2 Water Intake BTA Determination

In accordance with s. 283.31(6) Wis. Stats. a BTA determination must be made for this intake. The department has determined that this intake is BTA for achieving the maximum reduction in impingement mortality and entrainment.

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 ch. NR 111, Wis. Adm. Code. **In subsequent permit reissuance applications, the permittee shall provide all the information required in ss. NR 111.41(1) through (7) and (13), Wis. Adm. Code.**

Also include an alternatives analysis report for compliance with the entrainment BTA requirements with the permit application. This alternatives analysis for entrainment BTA shall examine the options for compliance with the entrainment BTA requirement and propose a candidate entrainment BTA to the Department for consideration during its next BTA determination. The analysis must, at least narratively, address and consider the factors listed in s. NR 111.41(13)(a), Wis. Adm. Code, and may consider the factors listed in s. NR 111.41(13)(b), Wis. Adm. Code. The analysis must evaluate, at a minimum, closed-cycle recirculating systems, fine mesh screens with a mesh size of 2mm or smaller, variable speed pumps, water reuse or alternate sources of cooling water, and any additional technology identified by the department at a later date.

Exemptions from some permit application requirements are possible in accordance with s. NR 111.42(1), 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.
- 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.

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)**
105	BACKWASH: At Sampling Point 105, the permittee shall collect representative grab samples of the strainer and microfilter backwash waters from a port hole on the top of the microfiltration backwash basin prior to combining with once-through condenser cooling water from Sampling Point 109 and discharging to Lake Michigan via Outfall 009.The permittee shall estimate the flow rate of the microfiltration backwash by taking the difference in the intake flow rate and filtered water flow rate.
109	IN PLANT: At Sampling Point 109, the permittee shall continuously measure the temperature of the once-through cooling waters from Condensers 5 and 6, and noncontact cooling waters from Unit 9 noncontact cooling water system and Generators 5 and 9 after mixing, but prior to combining with microfilter backwash from Sampling Point 105 and discharging to Lake Michigan via Outfall 009.The permittee shall estimate the flow rate of combined once through condenser cooling water from Condensers 5 and 6, and noncontact cooling water from Unit 9 noncontact cooling water system and Generators 5 and 6 based on pump pressure and pump run times.
110	FIELD BLANK: At Sampling Point 110, the permittee shall collect one field blank on the same day that all other mercury samples collected. The permittee shall report the field blank concentrations when reporting mercury sample results.

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 105 - MICROFILTER BACKWASH

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
Suspended Solids, Total	Daily Max	40 mg/L	Weekly	Grab	
Suspended Solids, Total	Monthly Avg	40 mg/L	Weekly	Grab	
pH (Maximum)	Daily Max	9.0 su	Monthly	Grab	
pH (Minimum)	Daily Min	6.0 su	Monthly	Grab	

2.2.2 Sampling Point 109 - Combined Cooling Waters

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
Temperature Average		deg F	Daily	Continuous	
Temperature Maximum		deg F	Daily	Continuous	

2.2.2.1 Continuous Temperature Monitoring

For monitoring temperature continuously, collect measurements in accordance with s. NR 218.04(13). This means that discrete measurements shall be recorded at intervals of not more than 15 minutes during the 24-hour period. Report the maximum temperature measured during the day on the DMR.

2.2.3 Sampling Point 110 - Mercury Field Blank

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Monthly	Blank	Monitoring only from January 1, 2027 to December 31, 2027.

2.2.3.1 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)**
003	EFFLUENT: At sampling Point 003, the permittee shall collect representative grab samples of the treated fuel pile storm water runoff and dust control water from the fuel (petroleum coke) storage pile that is collected and treated by a settling tank and filter system prior to discharging to Lake Michigan via Outfall 003. The permittee shall estimate the flow rate of the filter system from treating petroleum coke runoff by the pump capacity and pump run time of the sump pump in the wet well that feeds the settling tank and filter prior to discharged to Lake Michigan via Outfall 003.
004	EFFLUENT: At Sampling Point 004, the permittee shall collect representative grab samples of the noncontact cooling waters from air compressors, boiler, and turbine equipment cooling treated with an oil/water separator from the sampling port of the oil/water separator prior to being discharged to Outfall 004. The permittee shall measure the flow rate prior to being treated by an oil/water separator and discharging via Outfall 004 to Lake Michigan.
009	EFFLUENT: At Sampling Point 009, the permittee shall collect representative grab samples of the combined microfiltration backwash, noncontact cooling waters from Condensers 5, 6, and 9; Unit 9 noncontact cooling system and Generators 5 and 6 after mixing, and prior to discharging to Lake Michigan via Outfall 009.The permittee shall estimate the flow rate based on pump pressure and pump run times. The permittee shall continuously measure from the outlet prior to being discharged via Outfall 009. The permittee shall For Whole Effluent Toxicity Testing, the permittee shall collect a minimum of three, equal volume grab samples at approximately equal intervals of time over a 24-hour period and composite those samples.
010	EFFLUENT: At Sampling Point 010, the permittee shall collect representative grab composite samples of untreated Lake Michigan water that is pumped or drained from the Raw Water Stations 1 and 2 for pump house shore well cleaning and zebra mussel control from the discharge catch basin prior to being discharged to Lake Michigan via Outfall 010. The permittee shall estimate the flow rate of untreated Lake Michigan Water for pump house shore well cleaning and/or zebra mussel control by the known volume of the wet wells, pump capacities, and pump run times.

3.2 Monitoring Requirements and Effluent Limitations

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

3.2.1 Sampling Point (Outfall) 003 - Fuel Pile Runoff

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Per Occurrence	Estimated	Monitoring is required only when discharging from the settling tank.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Suspended Solids, Total	Daily Max	50 mg/L	Per Occurrence	Grab	Monitoring is required only when discharging from the settling tank.
pH Field	Daily Max	9.0 su	Quarterly	Grab	Monitoring is required only when discharging from the settling tank.
pH Field	Daily Min	6.0 su	Quarterly	Grab	Monitoring is required only when discharging from the settling tank.
Copper, Total Recoverable	Daily Max	43 µg/L	Quarterly	Grab	Monitoring is required only when discharging from the settling tank.
Copper, Total Recoverable	Daily Max	0.047 lbs/day	Quarterly	Calculated	Monitoring is required only when discharging from the settling tank.
Zinc, Total Recoverable	Daily Max	320 µg/L	Quarterly	Grab	Monitoring is required only when discharging from the settling tank.
Zinc, Total Recoverable	Daily Max	0.35 lbs/day	Quarterly	Calculated	Monitoring is required only when discharging from the settling tank.
Mercury, Total Recoverable		ng/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Arsenic, Total Recoverable		µg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Phosphorus, Total		mg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
PFOS		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Sampling and Reporting Requirements section below and PFOS/PFOA Minimization Plan Determination of Need section below and compliance schedule.
PFOA		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Sampling and Reporting Requirements section below and PFOS/PFOA Minimization Plan Determination of Need section below and compliance schedule.

3.2.1.1 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.

3.2.1.2 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 documented in the reports submitted as part of the PFOS/PFOA Minimization Plan Determination of Need schedule of the permit.

3.2.1.3 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.

3.2.2 Sampling Point (Outfall) 004 - OIL/WATER SEPARATOR

Monitoring Requirements and Effluent 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	Quarterly	Grab	
pH Field	Daily Max	9.0 su	Quarterly	Grab	
pH Field	Daily Min	6.0 su	Quarterly	Grab	

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Total		mg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Copper, Total Recoverable	Daily Max	40 µg/L	Quarterly	Grab	
Copper, Total Recoverable	Daily Max	0.055 lbs/day	Quarterly	Grab	
Temperature Maximum		deg F	Daily	Grab	Monitoring only from January 1, 2027 to December 31, 2027. Monitoring only required on days when discharge occurs.
Arsenic, Total Recoverable		µg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Mercury, Total Recoverable		ng/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
PFOS		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Sampling and Reporting Requirements section below and PFOS/PFOA Minimization Plan Determination of Need section below and compliance schedule.
PFOA		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Sampling and Reporting Requirements section below and PFOS/PFOA Minimization Plan Determination of Need section below and compliance schedule.

3.2.2.1 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), 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.

3.2.2.2 Effluent Temperature Monitoring

For monitoring temperature continuously, collect measurements in accordance with s. NR 218.04(13). This means that discrete measurements shall be recorded at intervals of not more than 15 minutes during the 24-hour period. In either case, report the maximum temperature measured during the day on the DMR. For seasonal discharges collect measurements either manually or continuously during the period of operation and report the daily maximum effluent temperature on the DMR.

3.2.2.3 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 documented in the reports submitted as part of the PFOS/PFOA Minimization Plan Determination of Need schedule of the permit.

3.2.2.4 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.

3.2.2.5 Polychlorinated Biphenyls

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

3.2.3 Sampling Point (Outfall) 009 - COOLING WATER & BACKWASH

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Calculated	

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
BOD_5, Total		mg/L	Per Occurrence	Grab Comp	Monitoring only required when controlling Zebra Mussels at this outfall.
Dissolved Oxygen	Daily Min	5.0 mg/L	Per Occurrence	Grab Comp	Monitoring required and limits applicable only when controlling Zebra Mussels at this outfall.
Chlorine, Total Residual	Daily Max	38 µg/L	Per Occurrence	Grab Comp	Monitoring required and limits applicable only when controlling Zebra Mussels at this outfall.
Copper, Total Recoverable		µg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Phosphorus, Total		mg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Arsenic, Total Recoverable		µg/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Mercury, Total Recoverable		ng/L	Monthly	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Temperature Maximum		deg F	Daily	Grab	Monitoring only from January 1, 2027 to December 31, 2027.
Acute WET		TU_a	See Listed Qtr(s)	Grab Comp	See WET testing section below for listed quarters and more detail.
Chronic WET		TUc	See Listed Qtr(s)	Grab Comp	See WET testing section below for listed quarters and more detail.
PFOS		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Sampling and Reporting Requirements section below and PFOS/PFOA Minimization Plan Determination of Need section below and compliance schedule.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
PFOA		ng/L	Monthly	Grab	Monitoring only. See PFOS/PFOA Sampling and Reporting Requirements section below and PFOS/PFOA Minimization Plan Determination of Need section below and compliance schedule.

3.2.3.1 BOD_5, Dissolved Oxygen and Total Residual Chlorine Sample Frequency

The permittee shall monitor for BOD5, dissolved oxygen and total residual chlorine only during the discharge of water that has been treated for zebra mussel control and only under the following conditions:

- Dissolved oxygen monitoring is required only when bisulfite is used for zebra mussel control; and
- Total residual chlorine monitoring is required only when chlorine, in any form, is used for zebra mussel control.

3.2.3.2 BOD_5 Sample Type

The permittee shall collect a minimum of three, equal-volume grab samples at approximately equal intervals of time over the duration of discharge of water that has been treated for zebra mussel control. The grab samples shall be combined prior to testing for BOD_5.

3.2.3.3 Dissolved Oxygen Sample Type

The permittee shall measure the concentration of dissolved oxygen at least three times and at approximately equal intervals of time over the duration of discharge of water that has been treated for zebra mussel control. The permittee shall report the average of the dissolved oxygen measurements as the daily value.

3.2.3.4 Total Residual Chlorine Sample Type

The permittee shall collect a minimum of three, equal volume grab samples at approximately equal intervals of time over the duration of discharge of water that has been treated for zebra mussel control. Each grab sample shall be tested for total residual chlorine. The permittee shall report the average of the total residual chlorine test results as the daily value.

3.2.3.5 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), 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.

3.2.3.6 Effluent Temperature Monitoring

For manually measuring effluent temperature, grab samples should be collected at 6 evenly spaced intervals during the 24-hour period. Alternative sampling intervals may be approved if the permittee can show that the maximum effluent temperature is captured during the sampling interval. For monitoring temperature continuously, collect

measurements in accordance with s. NR 218.04(13). This means that discrete measurements shall be recorded at intervals of not more than 15 minutes during the 24-hour period. In either case, report the maximum temperature measured during the day on the DMR. For seasonal discharges collect measurements either manually or continuously during the period of operation and report the daily maximum effluent temperature on the DMR.

3.2.3.7 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 documented in the reports submitted as part of the PFOS/PFOA Minimization Plan Determination of Need schedule of the permit.

3.2.3.8 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.

3.2.3.9 Polychlorinated Biphenyls

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

3.2.3.10 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.

3.2.3.11 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Grab sample collected from Lake Michigan outside the mixing zone of the discharge from Outfalls 003, 004, 009, and 010 and out of the influence from any other known discharges unless the use of a different control water source is approved by the department prior to use.

Instream Waste Concentration (IWC): 9%

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, 30, 10, 3, 1% and any additional selected by the permittee.

WET Testing Frequency:

Acute tests are required during the following quarters:

- **Acute:** October 1st – December 31st, 2024, July 1st – September 30th, 2026, April 1st – June 30th, 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 January 1st – March 31st, 2029

Chronic tests are required during the following quarters:

- **Chronic:** October 1st – December 31st, 2024, July 1st – September 30th, 2026, April 1st – June 30th, 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 January 1st – March 31st, 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 11.0 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).

3.2.4 Sampling Point (Outfall) 010 - RWPS WET WELLS

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Per Occurrence	Estimated	Monitor the total daily flow rate per discharge occurrence.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
BOD_5, Total	Daily Max	30 mg/L	Per Occurrence	Grab Comp	Monitoring required and limits apply only when controlling Zebra Mussels at this outfall.
Dissolved Oxygen	Daily Min	5.0 mg/L	Per Occurrence	Grab Comp	Monitoring required and limits apply only when controlling Zebra Mussels at this outfall.
Suspended Solids, Total		mg/L	Per Occurrence	Grab Comp	Monitoring only required when controlling Zebra Mussels at this outfall.
Chlorine, Total Residual	Daily Max	38 µg/L	Per Occurrence	Grab Comp	Monitoring required and limits apply only when controlling Zebra Mussels at this outfall.

3.2.4.1 BOD_5, TSS, Dissolved Oxygen and Total Residual Chlorine Sample Frequency

The permittee shall monitor for BOD5, dissolved oxygen and total residual chlorine only during the discharge of water that has been treated for zebra mussel control and only under the following conditions:

- Dissolved oxygen monitoring is required only when bisulfite is used for zebra mussel control; and
- Total residual chlorine monitoring is required only when chlorine, in any form, is used for zebra mussel control.

3.2.4.2 BOD_5 and TSS Sample Type

The permittee shall collect a minimum of three, equal-volume grab samples at approximately equal intervals of time over the duration of discharge of water that has been treated for zebra mussel control. The grab samples shall be combined prior to testing for BOD_5.

3.2.4.3 Dissolved Oxygen Sample Type

The permittee shall measure the concentration of dissolved oxygen at least three times and at approximately equal intervals of time over the duration of discharge of water that has been treated for zebra mussel control. The permittee shall report the average of the dissolved oxygen measurements as the daily value.

3.2.4.4 Total Residual Chlorine Sample Type

The permittee shall collect a minimum of three, equal volume grab samples at approximately equal intervals of time over the duration of discharge of water that has been treated for zebra mussel control. Each grab sample shall be tested for total residual chlorine. The permittee shall report the average of the total residual chlorine test results as the daily value.

3.3 Zebra Mussel Control

3.3.1 Leakage of Treated Water

During treatment of intake pipes and shore wells for zebra mussel control, the intake pipes must be sealed to prevent any leakage of treated water to Lake Michigan. This condition is applicable to both the Power Plant and the Water Plant.

3.3.2 Zebra Mussel Control Treatment

In the event that the permittee wishes to commence use of a zebra mussel control treatment additive other than sodium bisulfite and hypochlorite, the permittee shall notify the Department and not initiate use of the additive until the permittee receives the Department's written approval or this permit is modified in accordance with s. 283.53, Stats. The permittee's notification to the Department shall identify the new additive, specify the application rate and provide aquatic toxicity information including at least one 48-hour LC_{50} or EC_{50} value for either *Daphnia magna or Ceriodaphnia dubia* and at least one 96-hour LC_{50} or EC_{50} value for either fathead minnow, rainbow trout or bluegill sunfish. Restrictions on the use of the new additive may be included in the Department's authorization letter. This written approval shall be deemed as authority in accordance with sec. 283.53, Wis. Stats. This condition is applicable to both the Power Plant and the Water Plant.

4 Schedules

4.1 Impingement Mortality BTA

Schedule to meet the selected impingement mortality BTA option of a 0.5 fps maximum design intake velocity.

Required Action	Due Date
Compliance Option: If the permittee has chosen to move forward with a different option of compliance with the impingement mortality BTA standards the permittee must inform the department by this date.	04/01/2025
Plans and Specifications: If the chosen compliance option involves a modification to the existing CWIS, the permittee must submit plans and specifications for the chosen option of compliance with the impingement mortality BTA standards by this date.	04/01/2026
Progress Report: Submit a report detailing the changes made so far as well as a timeline of any further changes that need to be made to the CWIS.	04/01/2027
Construction: If construction was deemed necessary in order to comply with the IM BTA determination, the permittee shall complete construction by this due date. This is also the date when compliance with the IM BTA standards must start being met.	04/01/2028

4.2 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
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. 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.	07/01/2025
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. 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. The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan. 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. 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	07/01/2026

action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.	

4.3 Annual Certification Statements and Reports for Intake Structure

Submit an annual certification statement and report by January 31st of each year as specified by Section 1.3.3.1, Annual Certification Statement and Report, in accordance with the following schedule.

Required Action	Due Date
Submit Annual Certification Statement and Report #1:: Submit an annual certification statement and report on the water intake structures. The annual certification shall include a summary of maintenance and operation of water intake structure technologies, a summary of visual or remote inspections conducted, and a summary of any substantial modifications to the operation of any units that will impact cooling water withdrawals or operation of the water intake structure.	01/31/2025
Submit Annual Certification Statement and Report #2:: Submit a second annual certification statement as defined above.	01/31/2026
Submit Annual Certification Statement and Report #3:: Submit a third annual certification statement as defined above.	01/31/2027
Submit Annual Certification Statement and Report #4:: Submit a fourth annual certification statement as defined above.	01/31/2028
Submit Annual Certification Statement and Report #5:: Submit a fifth annual certification statement as defined above.	01/31/2029
Ongoing Annual Certification Statements and Reports:: Continue to submit Annual Certification Statements and Reports until permit reissuance has been completed.	

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, a reporting limit of 2.0 mg/L for BOD_5 and 2.5 mg/L 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

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).

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, except in cases of Water Quality Trading, wherein the applicable periods are January through June and July through December.]

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 Total Residual Chlorine Requirements

When total residual chlorine (TRC) limit(s) or monitoring are included in a permit, the permittee shall comply with the following conditions:

a) The permittee shall perform TRC monitoring required in this permit using an approved method from ch. NR 219, Wis. Adm. Code, which produces a detection limit that is less than or equal to the permitted limit or produces the lowest economically feasible detection limit if the approved methods cannot meet the permit limit. If the facility cannot achieve a detection limit less than or equal to the permit limit using the approved methods, contact the laboratory accreditation program for guidance.

b) The permittee shall determine the limit of detection (LOD) as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, or the permittee shall contact the laboratory accreditation program for information on how to determine a verified detection limit allowed just for TRC. If the verified detection limit is determined using the special procedure, then the LOD and limit of quantitation (LOQ) shall be set to be equal to the verified detection limit determined from this special procedure.

c) The permittee shall determine compliance with the TRC limit(s) as follows:

1. If the facility determines a statistical LOD as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, and the measured TRC levels are less than the LOD, the permittee shall report the results as less than the LOD (<LOD). For this situation the LOQ shall be established at 3.33 times the LOD or at the concentration of the lowest standard in the calibration curve. TRC levels that are < LOD are in compliance with the TRC limit.

2. If the facility determines the verified detection limit using the laboratory accreditation program special procedure, this verified detection limit shall be reported as the LOD and LOQ. If the measured TRC levels are less than the LOD, the permittee shall report the results as < LOD. TRC levels that are < LOD are in compliance with the TRC limit.

3. If the facility determines the statistical LOD as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, and the measured TRC levels are greater than the statistical LOD but less than the LOQ, TRC levels are in compliance with the TRC limit - except when the measured levels are consistently reported between the LOD and LOQ. When the measured TRC levels are consistently reported between the LOD and LOQ, the facility shall take action to determine the reliability of detected results (such as resampling and/or re-calculating dosages) and shall adjust the chemical feed system if necessary to reduce the chances of detecting levels between the statistical LOD and LOQ.

4. If the facility determines the statistical LOQ as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, or determines the verified detection limit using the laboratory accreditation program special procedure, TRC measured levels that are greater than the statistical LOQ and the TRC limit, are not in compliance with the TRC limit. The permittee shall report the level as a limit exceedance.

5. If the facility determines the statistical LOD as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, and the measured level is < LOD, then a "0" (zero) value may be substituted for any test result less than the statistical LOD when calculating the average or mass discharge values. Calculated values shall then be compared directly to the average or mass limits to determine compliance.

6. If the facility determines the verified detection limit using the laboratory accreditation program special procedure and the measured level is < LOD (set equal to the verified detection limit), then a "0" (zero) value may be substituted for any test result less than the LOD when calculating the average or mass discharge values. Calculated values shall then be compared directly to the average or mass limits to determine compliance.

5.3.8 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.

5.3.9 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.

5.3.10 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.

5.3.11 PFOS and PFOA 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
Impingement Mortality BTA -Compliance Option	April 1, 2025	20
Impingement Mortality BTA -Plans and Specifications	April 1, 2026	20
Impingement Mortality BTA -Progress Report	April 1, 2027	20
Impingement Mortality BTA -Construction	April 1, 2028	20
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge	July 1, 2025	20
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge and Evaluation of Need	July 1, 2026	20
Annual Certification Statements and Reports for Intake Structure -Submit Annual Certification Statement and Report #1	January 31, 2025	21
Annual Certification Statements and Reports for Intake Structure -Submit Annual Certification Statement and Report #2	January 31, 2026	21
Annual Certification Statements and Reports for Intake Structure -Submit Annual Certification Statement and Report #3	January 31, 2027	21
Annual Certification Statements and Reports for Intake Structure -Submit Annual Certification Statement and Report #4	January 31, 2028	21
Annual Certification Statements and Reports for Intake Structure -Submit Annual Certification Statement and Report #5	January 31, 2029	21
Annual Certification Statements and Reports for Intake Structure -Ongoing Annual Certification Statements and Reports	See Permit	21
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	22

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:
Northeast Region, 2984 Shawano Ave, Green Bay, WI 54313-6727