WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

Wisconsin Public Service Corp

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
NEQ Sec 27 T22N R18E and W1/2 Sec 4 T21N R19E
to
Lower Fox River, located in the Plum Creek-Fox River Watershed in the Lower Fox River Basin Name: Lower Fox River, (WBIC): 117900

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 _____
Nate Willis
Wastewater Section Manager

_____
Date Permit Signed/Issued for Modification

PERMIT TERM: EFFECTIVE DATE - September 01, 2023 **EXPIRATION DATE - August 31, 2028**
EFFECTIVE DATE OF MODIFICATION: July 01, 2026

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
701	Water from the Heart of the Valley Wastewater Treatment Facility prior to any treatment by Fox Energy

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - Inflow from HOV WW

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
Mercury, Total Recoverable		ng/L	Monthly	Grab	
Mercury, Total Recoverable		lbs/month	Monthly	Calculated	
BOD_5 Total		lbs/day	Daily	Calculated	Daily monitoring is required during the months of May to October and 1x/week from November to April
BOD_5 Total		mg/L	Daily	Grab	Daily monitoring is required during the months of May to October and 1x/week from November to April

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.

1.2.1.2 Total BOD Monitoring

The mg/L and lb/day BOD_5 for sample point 701 can be completed on the DMR with data provided by Heart of the Valley. However, if Heart of the Valley does not provide this data to WPS Fox Energy, then WPS Fox Energy is

required to complete this sampling and calculations. Because of this variability, a note must be included on the DMR indicating which entity is taking the initial sample and doing the calculation.

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)**
102	Field blank sample collected at the same time as the 001 effluent sample

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 102 - Effluent field blank

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Monthly	Blank	

2.2.1.1 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 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	Discharge from the condenser cooling tower system to the Fox River. The condenser cooling system water consists of a mixture of various amounts of clarified intake water, reverse osmosis reject water, quenched blowdown of demineralized boiler water, service water to floor and sink drains, groundwater from electrical vault seepage and other miscellaneous clear waters.
088	Discharge reporting to show compliance with BOD Waste Load Allocation limits for the Fox River at Kaukauna. This is a compliance evaluation sample point; it is NOT an acutal discharge pipe to the Fox River.

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 - Power Plant Effluent

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
Temperature Maximum	Daily Max	120 deg F	Daily	Continuous	
BOD_5, Total		mg/L	Daily	24-Hr Comp	See limits for May through October in BOD5 Limits Section of below.
BOD_5, Total		lbs/day	Daily	Calculated	See limits for May through October in BOD5 Limits Section below.
pH (Minimum)	Daily Min	4.0 su	Daily	Continuous	
pH (Maximum)	Daily Max	11 su	Daily	Continuous	
pH Exceedances Greater Than 60 Minutes	Daily Max	0 Number	Daily	Continuous	
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Continuous	
Suspended Solids, Total	Daily Max	100 mg/L	Weekly	24-Hr Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	Weekly	24-Hr Comp	
Suspended Solids, Total	Daily Max	413 lbs/day	Weekly	Calculated	

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Suspended Solids, Total	Monthly Avg	215 lbs/day	Weekly	Calculated	
Mercury, Total Recoverable	Monthly Avg	ng/L	Monthly	Grab	Monitoring only.
Mercury, Total Recoverable	Monthly Avg	lbs/Month	Monthly	Calculated	Monitoring only.
Oil & Grease (Hexane)	Daily Max	20 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	
Phosphorus, Total	Monthly Avg	3.3 lbs/day	Weekly	Calculated	
Phosphorus, Total	Rolling 12 Month Avg	1.0 mg/L	Weekly	24-Hr Comp	
Halogen, Total Residual as Cl2	Daily Max	69 ug/L	Daily	Calculated	
Chromium, Total Recoverable	Daily Max	0.2 mg/L	Monthly	24-Hr Comp	
Chromium, Total Recoverable	Monthly Avg	0.2 mg/L	Monthly	24-Hr Comp	
Zinc, Total Recoverable	Daily Max	1.0 mg/L	Monthly	24-Hr Comp	
Zinc, Total Recoverable	Monthly Avg	1.0 mg/L	Monthly	24-Hr Comp	
PFOS		ng/L	Monthly	Grab	Monitoring only. See the PFOS and PFOA Minimization Plan Requirements section and the PFOS and PFOA Minimization Plan Schedule.
PFOA		ng/L	Monthly	Grab	Monitoring only. See the PFOS and PFOA Minimization Plan Requirements section and the PFOS and PFOA Minimization Plan Schedule.
Acute WET	Daily Max	1.85 TU_a	Annual	24-Hr Comp	

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), 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.

3.2.1.2 Effluent Temperature Monitoring

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. For seasonal discharges collect measurements during the period of operation and report the daily maximum effluent temperature on the DMR.

3.2.1.3 Effluent Temperature Limitations

Limits for Temperature, Maximum: The effluent limitations for "Temperature, Maximum" become effective upon permit reissuance. Monitoring is required continuously upon permit reissuance. Daily maximum temperatures shall be reported so that applicable daily maximum limits can be compared to the reported daily maximum temperatures and applicable weekly average limits can be compared to the weekly averages of the reported daily maximum temperatures.

3.2.1.4 Continuous pH Monitoring

The permittee shall maintain the pH of the discharge within the range of 6.0 to 9.0 standard units (s.u.) except excursions are permitted subject to the following conditions:

- The pH is monitored continuously;
- The total time during which the pH is outside the range of 6.0 to 9.0 s.u. shall not exceed 446 minutes in any calendar month;
- No individual pH excursion outside the range of 6.0 to 9.0 s.u. shall exceed 60 minutes in duration;
- No individual pH excursion shall be outside the range of 4.0 to 11.0 s.u.; and
- On a daily basis, the permittee shall report the minimum and maximum pH, the total time that the pH is outside the range of 6.0 to 9.0 s.u. and the number of pH excursions outside the range of 6.0 to 9.0 that exceed 60 minutes in duration.

3.2.1.5 Total Maximum Daily Load (TMDL) Limitations

The Lower Fox River TMDL Waste Load Allocation (WLA) for Total Phosphorus and Total Suspended Solids was approved by the U.S. Environmental Protection Agency on May 18, 2012. The approved TMDL WLA limit for Total Phosphorus is 3.3 lbs/ day as a monthly average, and the approved TMDL WLA limits for Total Suspended Solids are 215 lbs/day as a monthly average and 413 lbs/day as a daily maximum.

3.2.1.6 TSS TMDL Water Quality Based Effluent Limitation(s)

The existing categorical TSS effluent limits are 30 mg/L as a monthly average and 100 mg/L as a daily maximum. The final water quality based effluent limits for TSS are 215 lbs/day as a monthly average and 413 lbs/day as a daily maximum and will take effect upon permit reissuance.

3.2.1.1 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.

3.2.1.2 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.

3.2.1.3 PFOS and PFOA Minimization Plan Requirements

The permittee is required to implement the approved PFOS and PFOA Minimization Plan in accordance with s. NR 106.99, Wis. Adm. Code. The permittee shall (a) maintain effluent quality at or below the current effluent PFOS and PFOA concentrations, (b) implement the pollutant minimization plan dated 02/18/2026 as approved by the Department, and (c) perform the actions listed in the compliance schedule. (See the Schedules section herein.)

3.2.1.4 Outfall 001 Discharge Velocity

When wastewater is discharged through outfall 001, the permittee shall maintain a minimum discharge velocity of 10 feet/second.

3.2.1.5 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.

3.2.1.6 Mercury Discharge Requirements

The operation of the Fox Energy power generation facilities shall result in no addition of mercury mass to the facility’s wastewater discharge to the Fox River. Fox Energy shall continue mercury pollutant elimination procedures within the facility so that process chemicals and water treatment additives included in the wastewater discharge are substantially mercury free. Fox Energy shall continue to utilize existing water treatment facilities unless treatment system modifications are approved by the Department. Note that the Fox Energy wastewater discharge through outfall 001 may contain mercury received with the intake water from the Heart of the Valley wastewater treatment facility.

3.2.1.7 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Fox River water upstream of the Fox Energy discharge. The control water samples shall be collected from areas outside of the mixing zone and of any other discharge if possible.

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.

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: 1st quarter in 2024, 2nd quarter in 2025, 3rd quarter in 2026, 4th quarter in 2027.** and any additional selected by the permittee.

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 **4th quarter in 2028**.

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 **1.85** for either species. The TU_a shall be calculated as follows: $TU_a = 100 \div LC_{50}$. 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).

3.2.1.8 Polychlorinated Biphenyls

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

3.2.1.9 Other Priority Pollutants

Except as shown in Table 3.2.1 for total chromium and total zinc, the discharge shall be limited to no detectable amount for the other priority pollutants contained in chemicals added for cooling tower maintenance. Compliance with this limitation shall normally be demonstrated through annual monitoring. However, where the permittee requests and the Department approves in writing, instead of monitoring, compliance with the limitations for the 126 priority pollutants may be determined by engineering calculations which demonstrate that the regulated pollutants are not present or are present in no detectable amounts.

3.2.1.10 Total Metals Analyses

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

3.2.1.11 Metal Cleaning Wastes

This permit specifically prohibits the discharge of metal cleaning wastes resulting from the cleaning of any metal process equipment, such as boiler tube cleaning, boiler fireside cleaning, air preheater cleaning, turbine blade washing, and the like.

3.2.1.12 BOD_5 Daily Maximum and 7-Day-Average lbs/day Effluent Limitations

BOD_5 lbs/day in the Fox Energy effluent shall be limited during the months of May through October as specified below. **Daily monitoring is required during the months of May to October and 1x/week from November to April.** Fox Energy may operate under any of three conditions as discussed below. The applicable BOD_5 effluent limitations specified below correspond to these three operating conditions:

1. **HOV is discharging all of its effluent to the Fox River**

   Daily Maximum $BOD_5\ Load_{FE}$ shall be less than $1.2 \times WLA_{HOV} - (Q_{HOV} \times C_{HOV} \times 8.34)$.
   7-day$[BOD_5\ Load_{FE}]$ shall be less than 7-day$[WLA_{HOV} - (Q_{HOV} \times C_{HOV} \times 8.34)]$.

2. **HOV is diverting a portion, but not all, of its effluent to FE**

   Daily Maximum $BOD_5\ Load_{FE}$ shall be less than $1.2 \times [(Q_{FEin} \div Q_{HOV}) \times WLA_{HOV}]$.
   7-day$[BOD_5\ Load_{FE}]$ shall be less than 7-day$[(Q_{FEin} \div Q_{HOV}) \times WLA_{HOV}]$.

3. **HOV is diverting all of its effluent to FE, and FE is using some flow from its holding pond to meet cooling water demand**

   Daily Maximum $BOD_5\ Load_{FE}$ shall be less than $1.2 \times WLA_{HOV}$.
   7-day$[BOD_5\ Load_{FE}]$ shall be less than 7-day$[WLA_{HOV}]$.

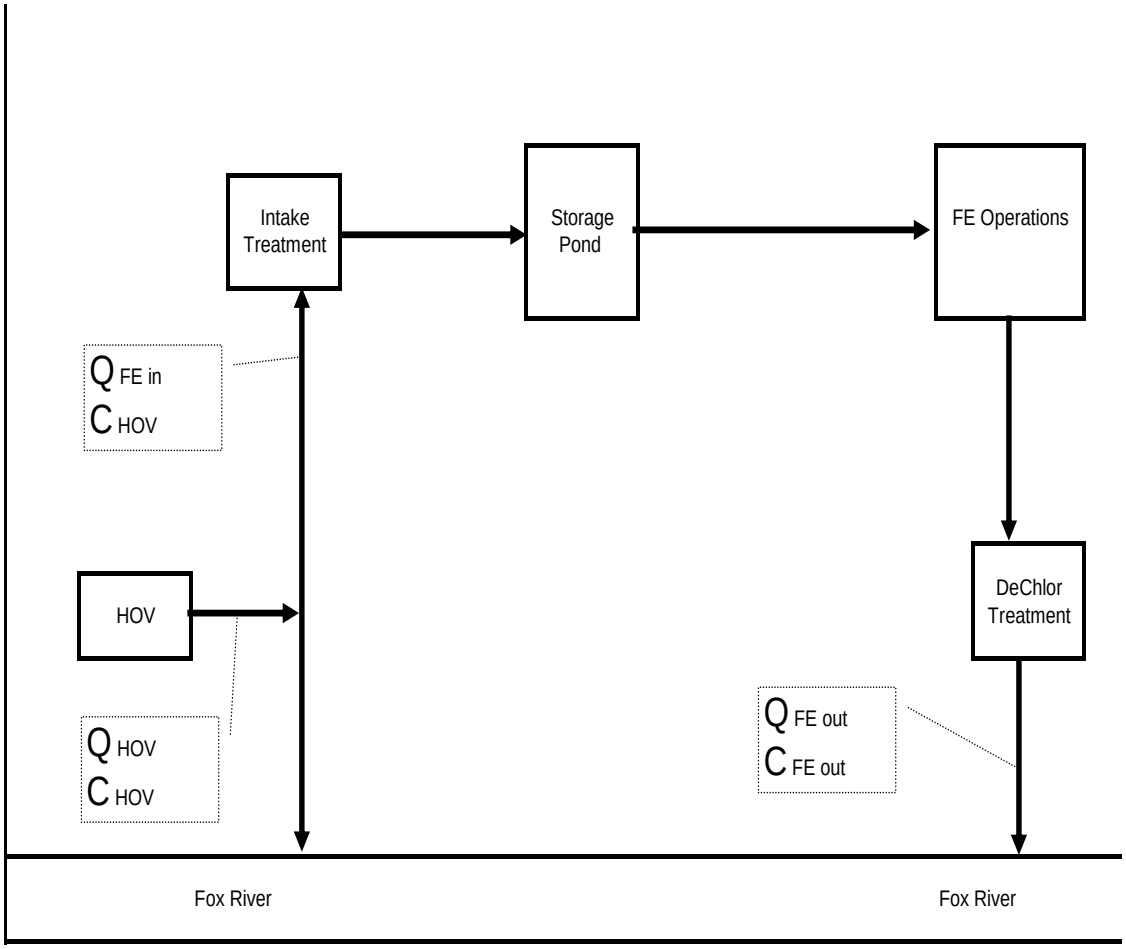
3.2.1.13 BOD_5 Allocation Definitions and Abbreviations:

- "FE" means the Fox Energy power plant.
- "HOV" means Heart of the Valley wastewater treatment plant.
- "$BOD_5\ Load_{FE}$" means the actual BOD_5 mass of the effluent from FE, expressed in pounds per day. Expressed algebraically, $BOD_5\ Load_{FE} = Q_{FEout} \times C_{FEout} \times 8.34$.
- "7-day [xxxx]" means the seven-day sum, for seven consecutive days, of whatever parameter is within the brackets. For example, "7-day$[BOD_5\ Load_{FE}]$" means the BOD_5 mass of the effluent from FE over a seven-day period, expressed in pounds. Algebraically, $BOD_5\ Load_{FE} = [Q_{FEout} \times C_{FEout} \times 8.34]_{DAY\ 1} +$

  $[Q_{FEout} \times C_{FEout} \times 8.34]_{DAY\ 2} + [Q_{FEout} \times C_{FEout} \times 8.34]_{DAY\ 3} \ \ldots$ through $_{DAY\ 7}]$.
- "Q_{FEin}" means that portion of the flow of effluent from HOV which is diverted to FE, and is expressed in millions of gallons per day (MGD).
- "Q_{HOV}" means the flow of effluent from HOV before any is diverted to FE, and is expressed in MGD.
- "Q_{FEout}" means the flow of effluent from the FE wastewater treatment system to the Fox River, and is expressed in MGD.
- "C_{HOV}" means the concentration of the HOV effluent, and is expressed in milligrams per liter (mg/L).
- "C_{FEout}" means the concentration of the effluent from the FE wastewater treatment system to the Fox River, and is expressed in mg/L.
- "WLA_{HOV}" means the BOD_5 waste load allocation for HOV, and is the maximum pounds per day of BOD_5 that HOV is allowed to discharge under its WPDES permit. HOV records its BOD_5 waste load allocation on a daily basis during the months of May through October.
- 8.34 is a multiplier used to convert concentration and flow to a mass rate. Its units are pounds per gallon.

- 1.2 is an allocation adjustment factor corresponding to the 120% used in s. NR 212.40(6), Wis. Admin. Code.

3.2.1.14 BOD_5 Allocation Definitions and Abbreviations Diagram:



3.2.2 Sampling Point (Outfall) 088 - WLA Compliance for BOD

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
WLA 7 Day Sum Of BOD_5 Discharged	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May 1- October 31, each year.
WLA BOD_5 Discharged	Daily Max - Variable	lbs/day	Daily	Calculated	Applies May 1- October 31, each year.
WLA BOD_5 Value		lbs/day	Daily	Calculated	Applies May 1- October 31, each year. In this row, the permittee reports the calculated limits for a given day.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
WLA 7 Day Sum Of WLA Values		lbs/day	Daily	Calculated	Applies May 1- October 31, each year. In this row, the permittee reports the calculated limits for a given 7-day period.

4 Land Application Requirements

4.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
201	Use of service water for dust suppression on roads and parking lots on site, as building wash water and for fire suppression testing.

4.2 Monitoring Requirements and Limitations

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

4.2.1 Sampling Point (Outfall) 201 - Dust Suppression and Building Washwater

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gal	Monthly	Estimated	

4.3 Permitted Discharges

The discharge(s) shall be limited to the waste type(s) designated.

Service Water for Dust Suppression-Monitoring and Reporting

Service water may be used for fugitive dust control on roads and parking lots within the Fox Energy power plant site. The application of this water shall be limited so the dust control water seeps into the ground within the Fox Energy site, and an estimated volume shall be recorded in a monthly log and summarized in an annual report to the department as stated in the Schedules Section.

Use of Service Water for Building Wash Water-Monitoring and Reporting

Service water may be used to clean the exterior of buildings on the Fox Energy site. The wash water will be limited so that water seeps into the ground with the Fox Energy site, and an estimated volume shall be recorded in a monthly log and summarized in an annual report to the department as stated in the Schedules Section.

Service Water used for Fire Suppressant Testing

Fire suppressant testing water is discharged to the cooling tower during required testing routines. During these required tests if any water discharges to the ground, and an estimated volume shall be recorded in a monthly log and summarized in an annual report to the department as stated in the Schedules Section.

4.4 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

4.4.1 Runoff Control

The discharge flow rate shall be limited to prevent the runoff of service water or service water mixed with rainwater. The service water may not be discharged during any rainfall events that cause runoff from the site. Uncontaminated storm water may be allowed to drain from the site.

During Fire suppression tests, if any water discharges to the ground, and an estimated volume shall be recorded in a daily log and summarized in an annual report to the department as stated in the Schedules Section.

4.4.2 Winter Operations

Winter operation may be allowed as long as the soil surface remains unfrozen. Since treatment efficiency decreases in the winter, the department may require storage or additional treatment of the runoff during cold weather.

4.4.3 Approval of Water Treatment Additives for Groundwater Discharge

Permittees shall not place water treatment additives in the service water used for building washing or dust suppression unless the water treatment additive use is approved, in writing, by the Department. Whenever the quantity of a discharge containing additives is increased or the concentration of a water treatment additive is increased, the permittee shall obtain a separate written approval from the Department. The permittee shall maintain records of the monthly water treatment additive use including the additive name, manufacturer, and daily maximum amount used and such usage shall be reported as required by this permit. The permittee shall provide the following information regarding water treatment additives to receive Department approval:

- the commercial name of the additive and the Material Safety Data Sheet (MSDS);
- the proposed frequency of use;
- the amount or concentration to be used; and
- the anticipated discharge concentration

4.4.4 Best Management Practices (BMPs)

Activities covered by this permit shall implement applicable BMPs listed below to minimize or eliminate the discharge of contaminants to groundwater and/or surface waters. The permittee shall maintain a copy of BMPs at the site where washing is being performed.

4.4.4.1 Degreasing chemicals:

Degreasing chemicals that contain halogenated hydrocarbons shall not be added to washing solutions.

4.4.4.2 Chemical brighteners/cleaners:

Any such materials, such as hydrofluoric acid on stainless steel, shall be limited to maintain the pH of the washwater discharge between 6.0 and 9.0 standard units, inclusive.

5 Schedules

5.1 Service water use reporting

Service Water used as specified in the Land Application Section shall be reported on an annual basis.

Required Action	Due Date
Service water use reporting: Service water used as specified in the Land Applciation Section shall be summarized and submitted in an annual report. The information shall be presented as a yearly total for each separate action. If these actions do not result in a considerable amount of data, the information may be summarized in the notes section of the DMR.	January 31 of each year

5.2 Mercury Pollutant Minimization Program

As a condition of the variance to the water quality based effluent limitation(s) for mercury granted in accordance with s. NR 106.145(6), Wis. Adm. Code, the permittee shall perform the following actions.

Required Action	Due Date
Annual Mercury Progress Reports: Submit an annual mercury progress report related to the pollutant minimization activities for the previous year. The annual mercury progress report shall: Include an analysis of trends in total effluent mercury concentrations based on mercury sampling; and Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury. The first annual mercury progress report is to be submitted by the Due Date.	03/31/2024
Annual Mercury Progress Report #2: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	03/31/2025
Annual Mercury Progress Report #3: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	03/31/2026
Annual Mercury Progress Report #4: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	03/31/2027
Annual Mercury Progress Report #5: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	03/31/2028
Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued by the date the permit expires, the permittee shall continue to submit annual mercury reports for the previous year following the due date of Annual Mercury Progress Reports listed above. Annual Mercury Progress reports shall include the information as defined above.	

5.3 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.	10/31/2024

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.	
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 action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.	10/31/2025

5.4 PFOS and PFOA Minimization Plan

This compliance schedule requires the permittee to achieve compliance by the Due Date.

Required Action	Due Date
Submit Progress Report #1: Submit an annual progress report. The annual progress report shall: Indicate which source reduction measures or activities in the approved PFOS and PFOA minimization plan have been implemented; Identify which suspected sources have been monitored; Include an analysis of trends in weekly, monthly and annual average PFOS and/or PFOA concentrations; and Include an analysis of how influent and effluent concentrations vary with time and with significant loadings of PFAS such as loads from industries or other sources into the collection system.	06/30/2027
Submit Progress Report #2 and Re-evaluation: Submit a progress report on the success in the implementation of the PFAS minimization plan. The report shall include a summary of all actions taken and analysis of trends in weekly, monthly, and annual average PFOA and/or PFOS effluent concentrations. If initial PMP actions were not successful enough to result in PFOA and/or PFOS reductions below the values in s. NR 102.04(8)(d)1., Wis. Adm. Code, the permittee shall submit an updated PMP with the permit application for reissuance. Based on facility and PMP specifics the permittee may be allowed up to 53 additional months after the permit expiration date to implement additional PMP actions before being required to install PFAS treatment technologies. This schedule may be modified to adjust compliance schedule dates to incorporate any changes in minimization plan goals and actions or as new information is made available to the department.	02/29/2028

Submit Progress Report #3: Submit the PFOS and PFOA minimization progress report as defined above.	09/30/2028
Submit Progress Report #4: Submit the PFOS and PFOA minimization progress report as defined above.	09/30/2029
Submit Progress Report #5: Submit the PFOS and PFOA minimization progress report as defined above.	09/30/2030
Submit Progress Report #6: Submit the PFOS and PFOA minimization progress report as defined above.	09/30/2031
Submit Final Progress Report and Re-evaluation: Submit a progress report on the success in the implementation of the PFOS and PFOA minimization plan. The report shall include a summary of all actions taken and analysis of trends in weekly, monthly, and annual average PFOS and/or PFOA effluent concentrations. If initial PMP actions were not successful enough to result in PFOS and/or PFOA reductions below the values in s. NR 102.04(8)(d)1., Wis. Adm. Code, the permittee shall be required to install PFAS treatment technologies to meet the calculated WQBELs.	03/31/2032
Submit Preliminary Engineering Report: The permittee shall submit a report outlining the various options for compliance with the applicable PFOS and/or PFOA WQBELs to the Department for review.	03/31/2033
Plan and Specification Submittal: The permittee shall submit final construction plans and specifications to the Department for approval pursuant to ch. NR 108, Wis. Adm. Code, specifying treatment plant upgrades that must be constructed to achieve compliance with the applicable PFOS and/or PFOA WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified below.	03/31/2034
Treatment Plant Upgrade to Meet Limitations: The permittee shall initiate bidding, procurement, and/or construction of the project. The permittee shall obtain approval of final constructions plans and schedule from the Department pursuant to s. 281.41, Stats., prior to initiating activities defined as construction under ch. NR 108, Wis. Adm. Code. Upon approval of the final construction plans/specifications and schedule by the Department, the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications.	03/31/2035
Complete Construction: The permittee shall complete construction of the wastewater treatment plant upgrades.	03/31/2036
Achieve Compliance: The permittee shall achieve compliance with the PFOS water quality-based effluent limit of 8 ng/L as a monthly average.	04/30/2036

6 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).

6.1 Reporting and Monitoring Requirements

6.1.1 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.

6.1.2 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.

6.1.3 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.

6.1.4 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.

6.1.5 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.

6.1.6 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.

6.1.7 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.

6.2 System Operating Requirements

6.2.1 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**.

6.2.2 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.

6.2.3 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.

6.2.4 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.

6.2.5 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.

6.2.6 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).

6.2.7 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.

6.2.8 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.

6.2.9 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.

6.3 Surface Water Requirements

6.3.1 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.

6.3.2 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.

6.3.3 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.

6.3.4 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).

6.3.5 Visible Foam or Floating Solids

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

6.3.6 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.

6.3.7 Chloride Notification

The permittee shall notify the Department in writing of any proposed changes which may affect the characteristics of the wastewater, which results in an increase in the concentration of chloride, under the authority of sections 283.31(4)(b) and 283.59(1), Stats. This notification shall include a description of the proposed source of chlorides and the anticipated increase in concentration. Following receipt of the notification, the Department may propose a modification to the permit.

6.3.8 Total Residual Chlorine Requirements (When De-Chlorinating Effluent)

Test methods for total residual chlorine, approved in ch. NR 219 - Table B, Wis. Adm. Code, normally achieve a limit of detection of about 20 to 50 micrograms per liter and a limit of quantitation of about 100 micrograms per liter. Reporting of test results and compliance with effluent limitations for chlorine residual and total residual halogens shall be as follows:

- Sample results which show no detectable levels are in compliance with the limit. These test results shall be reported on Wastewater Discharge Monitoring Report Forms as "< 100 µg/L". (Note: 0.1 mg/L converts to 100 µg/L)
- Samples showing detectable traces of chlorine are in compliance if measured at less than 100 µg/L, unless there is a consistent pattern of detectable values in this range. These values shall also be reported on Wastewater Discharge Monitoring Report Forms as "<100 µg/L." The facility operating staff shall record actual readings on logs maintained at the plant, shall take action to determine the reliability of detected results (such as re sampling and/or calculating dosages), and shall adjust the chemical feed system if necessary to reduce the chances of detects.

- Samples showing detectable levels greater than 100 µg/L shall be considered as exceedances, and shall be reported as measured.
- To calculate average or mass discharge values, a "0" (zero) may be substituted for any test result less than 100 µg/L. Calculated values shall then be compared directly to the average or mass limitations to determine compliance.

6.3.9 Compliance with Phosphorus Limitation

Compliance with the concentration limitation for phosphorus shall be determined as a rolling twelve-month average and shall be calculated as follows:

First, determine the pounds of phosphorus for an individual month by multiplying the average of all the concentration values for phosphorus (in mg/L) for that month by the total flow for the month in Million Gallons times the conversion factor of 8.34.

Then, the monthly pounds of phosphorus determined in this manner shall be summed for the most recent 12 months and inserted into the numerator of the following equation.

$$\text{Average concentration of P in mg/L} = \frac{\text{Total lbs of P discharged (most recent 12 months)}}{\text{Total flow in MG (most recent 12 months) X 8.34}}$$

The compliance calculation shall be performed each month with a reported discharge volume after substituting data from the most recent month(s) for the oldest month(s). A calculated value in excess of the concentration limitation will be considered equivalent to a violation of a monthly average.

6.3.10 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.

6.3.11 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.

6.3.12 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.

6.4 Land Application Requirements

6.4.1 Land Application Characteristic Report

The analytical results from testing of liquid wastes, by-product solids and sludges that are land applied shall be reported annually on the Characteristic Report Form 3400 49. The report form shall be submitted electronically no later than the date indicated on the form. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive 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.
The permittee shall use the following convention when reporting sludge 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 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .
All sludge results shall be reported on a dry weight basis.

6.4.2 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.
Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. Note: It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.

- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil	3611B – Alumina
3640A - Gel Permeation	3660B - Sulfur Clean Up (using copper shot instead of powder)
3630C - Silica Gel	3665A - Sulfuric Acid Clean Up

6.4.3 Annual Land Application Report

The annual totals for the land application loadings of liquid wastes, by-product solids and sludges to field spreading sites shall be submitted electronically on the Annual Land Application Report Form 3400-55 by January 31, each year whether or not waste is land applied. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive 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.

6.4.4 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive 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.

6.4.5 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

6.4.6 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

6.4.7 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

$$\text{Wet Weight Solids: } \frac{\text{lbs of solids} \times \%\text{solids} \times \%\text{chloride}}{\text{acres land applied} \times 100 \times 100} = \text{lbs chloride/acre}$$

$$\text{Liquid: } \frac{\text{mg/L chloride} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs chloride/acre}$$

6.4.8 Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges

NR 214.17(4) and NR 214.18(4) Wis. Adm. Code specify that the total pounds of nitrogen land applied per acre per year shall be limited to the nitrogen needs of the cover crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. This permit requires that the Total Kjeldahl Nitrogen calendar year application amount shall not exceed 165 pounds per acre per year, except when alternate numerical nitrogen loading limits (consistent with the above sections of NR 214) are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

$$\text{Wet Weight Solids and Sludges: } \frac{\text{lbs of solids} \times \%\text{solids} \times \%\text{ TKN}}{\text{acres land applied} \times 100 \times 100} = \text{lbs TKN/acre}$$

$$\text{Liquid: } \frac{\text{mg/L TKN} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs TKN/acre}$$

6.4.9 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

6.4.10 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

6.4.11 Soil Incorporation Requirements

- Liquid Sludge Requirements: The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The

permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- Cake Sludge Requirements: After land application, cake sludge shall be incorporated into the soil. The timing of such incorporation and other related requirements and procedures shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- Liquid Wastewater Requirements: The Department may require that liquid wastewater be incorporated or injected into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater, when such injection or incorporation is necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- By-Product Solids Requirements: The Department may limit the volume of by-products solids that are landspread on a specific site when necessary to prevent surface runoff or leaching of contaminants to groundwater and objectionable odors. By-product solids shall, after application, be plowed, disced, or otherwise incorporated into the soil. Requirements and procedures for the incorporation of byproduct solids into the soil shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

6.4.12 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Service water use reporting -Service water use reporting	See Permit	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Reports	March 31, 2024	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #2	March 31, 2025	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #3	March 31, 2026	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #4	March 31, 2027	14
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #5	March 31, 2028	14
Mercury Pollutant Minimization Program -Annual Mercury Reports After Permit Expiration	See Permit	14
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge	October 31, 2024	14
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge and Evaluation of Need	October 31, 2025	15
PFOS and PFOA Minimization Plan -Submit Progress Report #1	June 30, 2027	15
PFOS and PFOA Minimization Plan -Submit Progress Report #2 and Re-evaluation	February 29, 2028	15
PFOS and PFOA Minimization Plan -Submit Progress Report #3	September 30, 2028	16
PFOS and PFOA Minimization Plan -Submit Progress Report #4	September 30, 2029	16
PFOS and PFOA Minimization Plan -Submit Progress Report #5	September 30, 2030	16
PFOS and PFOA Minimization Plan -Submit Progress Report #6	September 30, 2031	16
PFOS and PFOA Minimization Plan -Submit Final Progress Report and Re-evaluation	March 31, 2032	16
PFOS and PFOA Minimization Plan -Submit Preliminary Engineering Report	March 31, 2033	16
PFOS and PFOA Minimization Plan -Plan and Specification Submittal	March 31, 2034	16
PFOS and PFOA Minimization Plan -Treatment Plant Upgrade to Meet Limitations	March 31, 2035	16
PFOS and PFOA Minimization Plan -Complete Construction	March 31, 2036	16
PFOS and PFOA Minimization Plan -Achieve Compliance	April 30, 2036	16
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	25

Other Methods of Disposal or Distribution Report Form 3400-52	by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit	25
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	17

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:
Central Office, 101 S Webster St, P.O. Box 7921, Madison, WI 53707-7921