WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

McKinley Paper WI Company

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
540 PROSPECT ST
to
Lower Fox River, located in the Plum and Kankapot Creeks Watershed in the Lower Fox Basin

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 _____
Heidi Schmitt Marquez
Wastewater Field Supervisor

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - July 01, 2025 **EXPIRATION DATE – June 30, 2030**

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1 Influent Requirements - Water Intake Structure (WIS)

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
710	Water withdrawn from the Lower Fox River used for cooling and process water.

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 710 - UNTREATED RIVER IN-TAKE WATER

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Intake Water Used Exclusively For Cooling		Percent	Monthly	Calculated	
Flow Rate		MGD	Monthly	Measure	
Mercury, Total Recoverable		ng/l	Monthly	Grab	

1.2.1.1 WIS - 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 water intake system which consists of the following:

- Location: The intake is located at N 44 16’ 22” W 88 17’ 55” on the Lower Fox River
- General Description: The intake is a 36” pipe with a 5’ x 14’ nonmetallic bar screen in front of it that separates into two flow paths. The edge of the intake is flush against the concrete reinforced bank of the river, as in the intake does not extend into the river. The NCCW flow path is drawn by three 10 million gallon per day (MGD) pumps of which one is primarily used, the second is only used for high flow conditions in the warmest months, and the third is a backup. The river water is pumped into Brassert drum strainers and then piped to NCCW applications. During the warmest four months of the year, the high flow that is not recirculated for cooling or used for process water may be returned to the river. During the eight cooler months, the NCCW is routed back to the freshwater intake system. The process flow path is through a traveling screen and wet well before reaching the three 10 MGD pumps (the first and second pumps are variable frequency) that pass the water through sand filters. This water is sent into the paper manufacturing process.
- Major Components: 36” pipe with a 5’ x 14’ nonmetallic bar screen and a traveling mesh screen.

- Maximum Design Intake Flow (DIF): 20 MGD.
- Maximum Design Intake Velocity: 0.74 feet per second (fps) at the bar screen prior to the pumps,
    - Given:
        - Flow Rate, Q = 30.1 cfs
        - Wetted Area, = 50 ft^2
        - Percent Open Area to Wetted Area of Screen: 81%
        - Open area of screen, A= 40.5 ft^2
    - Calculation:
        - V = 30.1 cfs/40.5 ft^2
        - V = 0.74 feet/second

1.2.1.2 Water Intake BTA (Best Technology Available) Determination

The permittee is not subject to 316(b) since they use <25% of their water exclusively for cooling purposes. The federal regulations and NR 111 (the state adoption of the federal 316(b) regulations) apply only to facilities that withdraw >2 MGD DIF and use at least 25% of that water exclusively for cooling purposes. However, s. 283.31(6), Wis. Stats., is a state statute that requires all water intakes to represent best technology available regardless of their flow rate or proportion of water used exclusively for cooling purposes. DNR determines whether these intakes (those not subject to NR 111 or federal regulations) meet BTA requirements using the 2020 guidance, which contains less stringent requirements and additional flexibilities beyond what is required in NR 111 and the federal regulations.

The permittee is not required to submit the application materials required in NR 111 Subch. V if they use <25% of the water withdrawn exclusively for cooling purposes. However, the department has broad authority to require permittees to submit any information we feel is necessary to make a BTA determination.

The Department has determined that the 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. The permittee shall complete the actions specified in the intake evaluation schedule of this permit to bring the intake into conformance with BTA requirements. This BPJ for meeting BTA for impingement mortality is contingent upon the facility completing the requirements outlined in the Industrial Intake Structure Evaluation Compliance Schedule.

1.3 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 Water Intake Structure

BTA determinations for entrainment and impingement mortality at 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), (2), and (13) and applicable provisions of ss. NR 111.41 (3) to (7) if, on a whole facility basis, the amount of water used exclusively for cooling is above 25% on an AIF-basis and the design intake flow exceeds 2 MGD at the time of permit application submittal.**

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

1.3.3 Endangered Species Act

Nothing in this permit authorizes take for the purpose of a facility's compliance with the Endangered Species Act. Refer to 40 CFR §125.98 (b) (1) and (2).

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
103	Field blank to accompany mercury monitoring.

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 103 – 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	

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, Waste Type/Sample Contents and Treatment Description (as applicable)**
007	EFFLUENT: Noncontact cooling water from the main mill discharged via outfall 007, which is located on the south bank of the Lower Fox River adjacent to the No. 1 Paper Machine building. Grab samples shall be collected prior to discharge to the Lower Fox River via the outfall.
010	EFFLUENT: Combined effluent from the primary and secondary treatment systems discharged via outfall 010, which is located in a sampling shed on the south bank of the Fox River adjacent to the Unox clarifier. Composite samples shall be collected prior to discharge to the Lower Fox River via the outfall.
012	EFFLUENT: Noncontact cooling water from chilled water system condensers, air compressors, vacuum seal water, and heat exchangers discharged via outfall 012, which is located on the south bank of the Fox River approximately 150 yards upstream of the Combined Locks Dam and at the No. 7 Paper Machine building. Grab samples shall be collected prior to discharge to the Lower Fox River via outfall 012.

3.2 Monitoring Requirements and Effluent Limitations

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

3.2.1 Sampling Point (Outfall) 007 - MAIN MILL NCCW; (Outfall) 012 – PAPER MACHINE 7 NCCW

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Weekly	Total Daily	
Chlorine, Total Residual	Daily Max	38 µg/L	Monthly	Grab	
Chlorine, Total Residual	Monthly Avg	38 µg/L	Monthly	Grab	
Temperature		deg F	Continuous	Grab	

3.2.1.1 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 either manually or continuously during the period of operation and report the daily maximum effluent temperature on the DMR.

3.2.2 Sampling Point (Outfall) 010 - PRIMARY EFFLUENT OUTFALL

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD_5, Total		mg/L	Daily	24-Hr Flow Prop Comp	
BOD_5, Total	Daily Max	13251 lbs/day	Daily	Calculated	Technology Based Effluent Limit.
BOD_5, Total	Monthly Avg	6734 lbs/day	Daily	Calculated	Technology Based Effluent Limit.
Suspended Solids, Total		mg/L	Daily	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	3,013 lbs/day	Daily	Calculated	See TMDL Calculations section.
Suspended Solids, Total	Monthly Avg	1,058 lbs/day	Daily	Calculated	Calculate the average of total monthly mass of TSS discharged and report on the last day of the month on the DMR. See TMDL Calculations permit section.
Mercury, Total Recoverable	Daily Max	11 ng/L	Monthly	Grab	Variance Limit.
Nitrogen, Ammonia (NH_3-N) Total		mg/L	Monthly	24-Hr Comp	
pH (Minimum)	Daily Min	4.0 su	Daily	Continuous	
pH (Maximum)	Daily Max	11.0 su	Daily	Continuous	
pH Exceedances Greater Than 60 Minutes	Daily Max	0 Number	Daily	Calculated	See "Continuous pH Monitoring" below for pH limits and allowed excursions
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Calculated	
Phosphorus, Total	Monthly Avg	0.60 mg/L	5/Week	24-Hr Flow Prop Comp	This interim MDV limit is the highest attainable condition (HAC) and is effective upon permit reissuance.
Phosphorus, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of phosphorus discharged and report on the last day of the month on the DMR. See TMDL permit section.
PFOS		ng/L	Monthly	Grab	
PFOA		ng/L	Monthly	Grab	

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Temperature		deg F	5/Week	Grab	
Chronic WET		rTU_c	See listed Quarters	24-Hr Comp	
Acute WET		rTU_a	See listed Quarters	24-Hr Comp	
Flow, River		cfs	Daily	Calculated	Monitoring required May through October only.
WLA Previous 4 Day Avg River Flow		cfs	Daily	Continuous	Monitoring required May through October only.
WLA Previous Day River Temp		Deg F	Daily	Continuous	Monitoring required May through October only.
WLA BOD Value		lbs/day	Daily	Continuous	Monitoring required May through October only.
WLA Adjusted Value		lbs/day	Daily	Continuous	Monitoring required May through October only.
WLA BOD_5 Discharged	Daily Max - Variable	lbs/day	Daily	Continuous	Monitoring required May through October only.
WLA 7 Day Sum Of WLA Values		lbs/day	Daily	Continuous	Monitoring required May through October only.
WLA 7 Day Sum Of BOD_5 Discharged	Daily Max - Variable	lbs/day	Daily	Continuous	Monitoring required May through October only.

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 Mercury Variance – Implement Pollutant Minimization Program Plan

This permit contains a variance to the water quality-based effluent limit (WQBEL) for mercury approved in accordance with s. 283.15, Stats. As conditions of this variance the permittee shall (a) maintain effluent quality at or below the interim effluent limitation specified in the table above, (b) implement the mercury pollutant minimization measures specified below, (c) follow the Pollutant Minimization Program Plan dated **August 26, 2024**, and (d) perform the actions listed in the schedule (See the Schedules section herein):

1. **Study Background Mercury Concentrations**: Continue monitoring the intake water to the mill from the Lower Fox River by collecting a river influent sample at the same time and frequency that the mill's effluent is collected. *Note: Years 1-5.*

2. **Implement a mercury equipment evaluation program:**

    a. Identify light bulbs that contain mercury (fluorescent tubes, metal halide lamps, mercury vapor lights, and high-pressure sodium lights). *Note: Years 1-5.*

    b. Collect and recycle certain types of mercury containing batteries (lead/acid, nickel/cadmium, and lithium halide). *Note: Years 1-5.*

c. Identify devices that contain mercury (e.g. thermostats). *Note: Years 2-5.*

d. Conduct a facility sweep for glass, mercury containing thermometers and have them removed from the facility and properly disposed. *Note: Year 1.*

e. Create a training program for McKinley Paper employees on the proper handling and disposal of mercury containing devices. *Note: Years 1-5.*

f. Replace mercury containing devices with mercury free or low-level mercury alternatives when the device becomes inoperable (e.g. replacement of facility lighting systems with LED light bulbs). *Note: Years 1-5.*

3. Implement a chemical screening program:

a. Screen and maintain a database of all existing and new chemicals for mercury. Screening includes a review of safety data sheet information, vendor product sheets, and/ or other vendor provided materials to determine the presence of mercury. *Note: Years 1-5.*

b. Based on screening, any and all chemicals containing reportable quantities of mercury will be noted and alternatives with less or no mercury will be determined if they are available and feasible for replacement. *Note: Years 1-5.*

4. Track mercury disposal: Implement tracking of the total annual volume and final disposal location of wastewater effluent and sludge generated at the site that may contain mercury. *Note: Years 1-5.*

5. Provide Reports to WDNR:

a. Produce an annual report that compiles all influent and effluent mercury data collected and includes trend graphs. Provide narrative summaries of the mercury equipment evaluation, chemical screening, and disposal programs. *Note: Years 1-4.*

b. Produce a five-year summary report that compiles the data from the previous four annual reports along with five-year trend graphs. Provide a narrative summary for the five-years of mercury equipment evaluation, chemical screening, and disposal programs. *Note: Year 5.*

3.2.2.3 Continuous pH Monitoring

The permittee shall maintain the pH of the discharge within the range of 6.0 standard units (s.u.) to 9.0 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.

3.2.2.4 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.

3.2.2.5 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.

3.2.2.6 MDV (Multi-Discharger Variance) Requirements

Optimization: The permittee shall continue to optimize performance to control phosphorus discharges in accordance with s. 283.16(6), Wis. Stats. See the Schedules section for optimization requirements.

Watershed Provisions: The permittee is required to implement watershed measures to reduce the amount of phosphorus entering the receiving water. The permittee has selected the following approved watershed measure.

Payment to County for Phosphorus Reduction: The permittee shall make payments for phosphorus reduction to the county or counties approved by the Department per s. 283.16(8), Wis. Stats. The permittee shall make a total payment by March 1 of each year in the amount equal to the per pound amount of $[Enter the price per pound] times the number of pounds by which the effluent phosphorus discharged during the previous year exceeded the permittee's target value or $640,000, whichever is less. The target value is based on the TMDL-derived limit per s. 283.16(1)(h), Wis. Stats., and is applicable during the months that the MDV is in effect. The MDV is in effect year-round. Refer to the Schedules section for the scheduled annual requirements.

Annual Payment Calculation: The annual payment is equal to the phosphorus load from all outfalls that exceeds the target value multiplied by $**64.75 (to be recalculated in the spring of 2025 prior to reissuance of the permit)** per pound. Use the steps shown below to calculate the annual payment. In addition, the Department shall send a statement to the permittee specifying total payment due to the participating counties each year in accordance with the Schedules section.

Annual Payment = [Annual Phosphorus Load – Annual Target Load] × Price Per Pound

Calculation Steps:
●Calculate pounds of phosphorus discharged for each month that the MDV is in effect:
Monthly Phosphorus Load (lbs/month) = Total Monthly Flow (MG) × Monthly Avg. TP effluent conc. (mg/L) × 8.34
●Sum the lbs/month discharged for the months that the MDV is in effect to calculate the annual phosphorus load:
Annual Phosphorus Load (lbs/year) = ∑ [Monthly Phosphorus Load (lbs/month)]
●Calculate the Target Load (lbs/month) for each month that the MDV is in effect.

Target Value = TMDL Derived Limit [12.9 lbs/day]

Monthly Target Load (lbs/month) = Monthly Average Phosphorus Limit (lbs/day) × Number of Days in the Month

Month	Monthly Ave Total P Effluent Limit (lbs/day)	Monthly Target Load = Monthly Ave. TP Limit (lbs/day) × Number of Days in Month
Jan	12.9	400
Feb	12.9	361
March	12.9	400
April	12.9	387
May	12.9	400
June	12.9	387
July	12.9	400
Aug	12.9	400
Sept	12.9	387
Oct	12.9	400
Nov	12.9	387
Dec	12.9	400

●Calculate the monthly payment for each month the MDV is in effect:

Monthly Payment = [Monthly Phosphorus Load (lbs/month) – Monthly Target Load (lbs/month)] × Price Per Pound

●Calculate the annual payment:

Annual Payment ($) = ∑ [Monthly Payment ($)]

3.2.2.7 MDV Reopener Clause

Pursuant to ss. 283.16(7) and 283.16(9), Wis. Stats., the Department may modify or revoke and reissue this permit to modify or eliminate the terms and conditions related to the multi-discharger variance, under any one of the following conditions:

- The Department determines, as part of the highest attainable condition (HAC) review required under s. 283.16(3m), Wis. Stats., the effluent limitations currently in effect are no longer consistent with the HAC for the point source or category of point sources applicable to the permittee's discharge.

- The Department submits to EPA a request to renew the MDV pursuant to s. 283.16(3)(g), Wis. Stats., and the MDV is subsequently renewed with variance requirements that differ from the current MDV requirements.

- The Department does not receive EPA approval to renew the current MDV, which is currently set to expire on February 6, 2027.

3.2.2.8 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.

3.2.2.1 Total Maximum Daily Load (TMDL) Limitations

Approved TMDL: The Lower Fox TMDL Waste Load Allocation (WLA) for TSS, and Phosphorus was approved by the U.S. Environmental Protection Agency on March 2012. The approved TMDL WLA limits for TSS are: 3013 lbs/day as a Daily Maximum and 1058 lbs/day as a Monthly Average. The approved TMDL WLA limits for Phosphorus are: 38.8 lbs/day as a Monthly Average and 12.9 lbs/day as a 6-Month Average. For this permit term, the permittee has applied for the Multi-Discharger Variance (MDV) for phosphorus as provided for in s. 283.16, Wis. Stats., and approved by USEPA on February 6, 2017 until February 5, 2027. The permittee was approved for the MDV on **03/30/2023.** This permit contains reporting of the 12-month rolling sum phosphorus load in order to stay consistent with how the data is used when reviewing watershed-wide TMDL impacts.

Effluent results shall be calculated as follows:
Total Monthly Discharge (lbs/month): = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

12-Month Rolling Sum of Total Monthly Discharge (lbs/yr): =the sum of the most recent 12 consecutive months of Total Monthly Discharges.

3.2.2.2 Sample Frequency for Flow, BOD_5, Total Suspended Solids, and Phosphorus

- Without public notice, the Department may modify this permit to increase the monitoring frequency for BOD_5, total suspended solids, phosphorus or any combination of the three parameters to daily should the permittee exceed effluent limitations for one or more of the three parameters, fail to submit Discharge Monitoring Report Forms, or is subject to formal enforcement action.

3.2.2.3 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Lower Fox River

Instream Waste Concentration (IWC): 4%

Acute Mixing Zone Concentration: N/A

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:** third quarter 2025, second quarter 2026, first quarter 2027, fourth quarter 2028, third quarter 2029, second quarter 2030

  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 the third quarter 2031.

Chronic tests are required during the following quarters:

- **Chronic:** third quarter 2025, second quarter 2026, first quarter 2027, fourth quarter 2028, third quarter 2029, second quarter 2030
- 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 the third quarter 2031.

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 (fathead minnow (Pimephales promelas) and waterflea (Ceriodaphnia dubia)). 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 100/4 =25 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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

3.2.2.4 Wasteload Allocated Water Quality Related Effluent Limitations

Each year during the months of May through October inclusive the total daily discharge of BOD_5 from Outfall 010 is limited to the following wasteload allocated (WLA) water quality related effluent limitations. Wasteload allocation limitations do not supersede technology-based effluent limitations. Rather, both the wasteload allocation limitation for BOD_5 and the daily maximum limitation of 13,251 lbs/day of BOD_5 must be met.

- **Definitions:**
  - Point source wasteload allocation values (pounds per day BOD_5) in the following tables represent water quality-based effluent limitations. Fox River flow and temperature conditions used to determine a point

source allocation value for a given day shall be the representative measurements of the flow averaged over the previous 4 days and temperature of the previous day.

- A representative measurement of flow is the previous four-day average flow value derived daily from continuous river flow monitoring data for the Fox River. These daily measurements of river flow are collected at the Appleton Lutz Park- USGS/ACOE Gauge Station – or other alternative method or site approved by the Department –and reported by the Lower Fox River Dischargers Association.
- A representative measurement of temperature is the daily average temperature value of the previous day derived from continuous river temperature monitoring data for the Fox River as reported by the Lower Fox River Dischargers Association.

- **Determination of Effluent Limitations:** For purposes of determining compliance with wasteload allocated water quality based effluent limitations, the following conditions shall be met:
  - The total discharge of BOD_5 from Outfall, 010 for any 7-consecutive day period (present day's discharge plus the 6 previous day's discharge) may not exceed the sum of the daily point source wasteload allocation values from the following tables, as defined above, for the same 7-consecutive day period (present day's allocation plus the 6 previous day's allocation).
  - For any day, the total discharge of BOD_5 from Outfall 010 shall not exceed 120 percent of the daily point source wasteload allocation value (point source allocation value times 1.20) from the following tables, as defined above.

- **Monitoring Requirements:** The same 24-hour period, plus or minus 8 hours, shall be utilized for the collection of composite and continuous samples for river flow and temperature and all effluent characteristics, including effluent flow and BOD_5.

3.2.2.5 Waste Load Allocation Requirements

Each year during the months of May through October, the discharge of BOD_5 from Sample Point/Outfall 010 is limited to the following waste load allocated water quality related effluent limitations in addition to the effluent limitations contained in section 3.2.1.

3.2.2.5.1 Definitions

- *BOD_5 Allocation*: McKinley Paper's allocation of BOD_5 (pounds per day BOD_5), as listed in Tables 1 through 5, represent water quality related effluent limitations. The flow and temperature conditions used to determine the BOD_5 allocation for a given day are defined below.

- *Flow*: A representative measurement of flow is the previous four days average flow value derived daily from continuous river flow monitoring data for the Fox River measured at the Appleton Lutz Park- USGS/ACOE Gauge Station – or other alternative method or site approved by the Department –and reported by the Lower Fox River Discharger's Association.

- *Temperature*: A representative measurement of temperature is the daily average temperature value of the previous day derived from continuous river temperature monitoring data for the Fox River as reported by the Lower Fox River Discharger's Association.

3.2.2.5.2 Determination of Effluent Limitations

For purposes of determining compliance with the waste load allocated water quality related BOD_5 effluent limitations, the following conditions shall be met:

- The sum of the actual daily discharges of BOD_5 for any 7-consecutive-day period shall not exceed the sum of the daily BOD_5 allocation values from Tables 1 through 5 for the same 7-consecutive day period.

- For any one-day period, the actual discharge of BOD_5 shall not exceed 1.2 times the BOD_5 allocation value from Tables 1 through 5 for that day.

3.2.2.5.3 Monitoring Requirements

Effluent sampling results for Sample Point/Outfall 001 are compared to table values using the previous four-day average river flow and previous day's temperature values.

3.2.2.5.4 Reporting Requirements

During the months of May through October inclusive the permittee shall report, the following information:

(a) The daily average river flow value (cfs);

(b) The average of the previous 4 days river flow values (cfs);

(c) The daily average river temperature value (°F);

(d) The daily BOD_5 allocation value (lbs. BOD_5 per day) from Tables 1 through 5;

(e) The daily adjusted BOD_5 allocation value (1.2 x daily BOD_5 allocation value);

(f) The actual discharge value of BOD_5 (lbs. BOD_5 per day);

(g) The sum of the daily BOD_5 allocation values (lbs/day BOD_5) for each 7-consecutive-day period (present day allocation plus the 6 previous days allocation); and

(h) The sum of the actual daily discharge values of BOD_5 (lbs/day BOD_5) for each 7-consecutive-day period (present day discharge plus the 6 previous days discharge).

3.2.2.5.5 Missing Discharge Values

If there is no lbs/day BOD_5 value available, but there was a discharge, for one or more days of the seven consecutive days, add the values from the table only from those days corresponding to days actual measured values are available. If there is no discharge, use a zero for that day. For all days on which there is no measured value the permittee shall submit a written explanation to the Basin Engineer.

3.2.2.5.6 Waste Load Allocation Tables 1 – 5

3.2.2.6 Point Source Wasteload Allocation Values (pounds per day of BOD_5) for

May and June

River Temperature (previous day average in °F)	Flow at Rapide Croche Dam (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	3832	4007	4332	4717	5129	5545	5949	6328	6732	7132	7770	8682	10008	12540	14425
82 TO 85	3810	4008	4358	4785	5231	5668	6088	6475	6910	7460	8162	9153	10556	13346	15628
78 TO 81	3757	4005	4421	4913	5407	5880	6373	6954	7605	8099	8804	10020	11617	14751	17918
74 TO 77	3702	3999	4505	5058	5584	6245	6932	7603	8145	8680	9573	10850	12506	16489	19734
70 TO 73	3661	4014	4605	5221	5980	6763	7517	8088	8710	9355	10340	11888	13458	18661	19734
66 TO 69	3665	4101	4762	5613	6496	7371	8031	8702	9471	10199	11309	12889	14792	19734	19734
62 TO 65	3738	4242	5178	6188	7214	7990	8794	9649	10483	11325	12747	14231	16783	19734	19734
58 TO 61	3910	4680	5857	7085	8031	9031	10059	10986	12071	13156	14429	16511	19734	19734	19734
54 TO 57	4422	5429	6954	8143	9432	10644	11892	13297	14345	15504	17402	19734	19734	19734	19734
50 TO 53	5321	6706	8292	9983	11517	13301	14790	16287	17951	19734	19734	19734	19734	19734	19734
46 TO 49	6903	8378	10542	12759	15153	17166	19413	19734	19734	19734	19734	19734	19734	19734	19734

42 TO 45	9076	11093	14317	17682	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734
≤41	12549	15971	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734

3.2.2.7 Point Source Wasteload Allocation Values (pounds per day of BOD_5) for

July

River Temperature (previous day average in ºF)	Flow at Rapide Croche Dam (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	3808	3967	4317	4707	5044	5135	5294	5529	5737	5843	6147	6702	7548	9983	11662
82 TO 85	3840	4030	4354	4768	5156	5392	5560	5708	5859	6184	6653	7240	8398	10921	12997
78 TO 81	3812	4061	4436	4864	5264	5613	5908	6230	6624	6967	7458	8443	9700	12647	15502
74 TO 77	3818	4060	4503	4954	5366	5867	6485	6948	7366	7764	8553	9573	10836	14617	18367
70 TO 73	3781	4093	4554	5037	5678	6445	7203	7680	8196	8784	9600	10597	12065	16964	19734
66 TO 69	3773	4142	4648	5374	6265	7160	7836	8531	9220	9848	10577	11717	13611	19734	19734
62 TO 65	3826	4232	4997	6008	7089	7901	8737	9630	10267	10842	11788	13281	15749	19734	19734
≤61	3952	4570	5725	7030	8029	9086	10122	10795	11545	12347	13664	15704	19112	19734	19734

3.2.2.8 Point Source Wasteload Allocation Values (pounds per day of BOD_5) for

August

River Temperature (previous day average in ºF)	Flow at Rapide Croche Dam (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	3355	3496	3836	4250	4660	5029	5347	5623	5876	6108	6422	6710	7368	9408	10774
82 TO 85	3355	3528	3891	4326	4740	5117	5449	5731	6010	6235	6675	7085	8166	10338	11998
78 TO 81	3355	3581	3981	4442	4882	5274	5623	5935	6408	6883	7291	8215	9277	11849	14368
74 TO 77	3355	3616	4069	4560	5021	5437	5957	6577	7071	7532	8286	9171	10371	13660	17062
70 TO 73	3355	3653	4158	4674	5170	5906	6602	7152	7709	8303	9165	10156	11429	15901	19734
66 TO 69	3357	3744	4289	4899	5749	6571	7222	7858	8582	9353	10146	11168	12869	18628	19734
62 TO 65	3445	3875	4556	5531	6510	7285	8068	8902	9867	10397	11245	12602	14914	19734	19734
≤61	3596	4163	5276	6453	7411	8413	9477	10375	11050	11780	12981	14906	18122	19734	19734

3.2.2.9 Point Source Wasteload Allocation Values (pounds per day of BOD_5) for

September

River Temperature (previous day average in ºF)	Flow at Rapide Croche Dam (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥86	3355	3355	3355	3718	4175	4597	4991	5354	5698	6014	6430	6855	7515	9449	10834
82 TO 85	3355	3355	3355	3812	4279	4711	5099	5456	5821	6149	6414	7067	8188	10313	12004
78 TO 81	3355	3355	3457	3967	4454	4909	5325	5700	6039	6310	6922	8013	9131	11706	14368
74 TO 77	3355	3355	3581	4112	4619	5090	5521	5949	6445	6934	7725	8920	10158	13479	17048
70 TO 73	3355	3355	3698	4256	4776	5398	5939	6477	7065	7656	8704	9869	11119	15716	19734
66 TO 69	3355	3355	3863	4446	5237	5900	6540	7199	7917	8702	9787	10821	12498	18459	19734
62 TO 65	3355	3438	4067	5021	5829	6591	7389	8211	9192	10014	10840	12196	14558	19734	19734
58 TO 61	3355	3671	4756	5753	6693	7695	8751	9904	10615	11323	12506	14458	17725	19734	19734
54 TO 57	3475	4395	5643	6832	8121	9526	10644	11519	12506	13603	15392	18226	19734	19734	19734
50 TO 53	4318	5437	6969	8696	10454	11698	12950	14378	15957	17660	19734	19734	19734	19734	19734
46 TO 49	5559	7008	9347	11623	13297	15202	17339	19709	19734	19734	19734	19734	19734	19734	19734
42 TO 45	7599	9910	13052	15645	18618	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734
≤41	11172	14517	18889	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734

3.2.2.10 Point Source Wasteload Allocation Values (pounds per day of BOD_5) for

October

River Temperature (previous day average in ºF)	Flow at Rapide Croche Dam (previous four-day average in cfs)														
	750 OR LESS	751 TO 1000	1001 TO 1250	1251 TO 1500	1501 TO 1750	1751 TO 2000	2001 TO 2250	2251 TO 2500	2501 TO 2750	2751 TO 3000	3001 TO 3500	3501 TO 4000	4001 TO 5000	5001 TO 8000	8001 OR MORE
≥60	3355	3355	3404	3995	4526	5115	5757	6439	7185	8009	9436	10615	12459	18867	19734
62 TO 65	3355	3355	3587	4342	5041	5796	6620	7450	8476	9587	10554	11996	14486	19734	19734
58 TO 61	3355	3355	4103	4946	5872	6889	7956	9153	10256	10978	12206	14243	17702	19734	19734
54 TO 57	3355	3714	4799	5965	7260	8664	10152	11093	12098	13213	15061	18020	19734	19734	19734
50 TO 53	3567	4534	6033	7746	9645	11182	12439	13868	15477	17213	19734	19734	19734	19734	19734
46 TO 49	4564	5965	8268	10717	12645	14553	16699	19081	19734	19734	19734	19734	19734	19734	19734
42 TO 45	6400	8662	11939	14810	17757	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734
≤41	9916	13116	17798	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734	19734

4 Off-site Sludge Disposal Requirements

4.1 Sampling Point(s)

This section shall be limited to the waste type(s) designated in the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
017	CAKE SLUDGE: Cake sludge generated by the belt filter presses from the uncoated paper processing and Coated Free Sheet (CFS) process. Sludge disposal is primarily comprised of landfills, either the McKinley owned and operated landfill or another licensed landfill.

4.2 Monitoring Requirements and Limitations

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

4.2.1 Sampling Point (Outfall) 017 - Sludge Sent to Landfill

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Volume		Tons/year	Annual	Measure	
PFOA + PFOS		µg/kg	Annual	Calculated	
PFAS Dry Wt			Annual	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

4.2.1.1 Sludge Monitoring for PFAS

Sampling shall occur for perfluoroalkyl and polyfluoroalkyl compounds (PFAS) listed in the table below and as indicated in sampling point sections above. Monitoring shall occur at each sample point when sludge is generated regardless of the end use (i.e. land applied, hauled to another facility, landfilled).

PERFLUOROALKYLCARBOXILIC Acids (PFCAs)	
PFBA	Perfluorobutanoic acid
PFPeA	Perfluroropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluroroundecanoic acid

PFDoA	Perfluorododecanoic acid
PFTriA	Perfluorotridecanoic acid
PFTeDA	Perfluorotetradecanoic acid
PERFLUOROALKYLSULFONIC Acids (PFSAs)	
PFBS	Perfluorobutane sulfonic acid
PFPeS	Perfluroropentane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFHpS	Perfluoroheptane sulfonic acid
PFOS	Perfluorooctane sulfonic acid
PFNS	Perfluorononane sulfonic acid
PFDS	Perfluorodecane sulfonic acid
PFDoS	Perfluorododecane sulfonic acid
TELOMER SULFONIC Acids	
4:2 FTSA	4:2 fluorotelomersulfonic acid
6:2 FTSA	6:2 fluorotelomersulfonic acid
8:2 FTSA	8:2 fluorotelomersulfonic acid
PERFLUOROOCTANCESULFONAMIDES (FOSAs)	
PFOSA	Perfluroroctane sulfonamide
N-MeFOSA	N-Methyl perfluoroocatane sulfonamide
N-EtFOSA	N-Ethyl perfluorooctane sulfonamide
PERFLUOROOCTANCESULFONAMIDOACETIC Acids	
N-MeFOSAA	N-Methyl perfluoroocatane sulfonamidoacetic acid
N-EtFOSAA	N-Ethyl perfluorooctane sulfonamidoacetic acid
NATIVE PERFLUOROOCTANCESULFONAMIDOETHANOLS (FOSEs)	
N-MeFOSE	N-Methyl perfluorooctane sulfonamideoethanol
N-EtFOSE	N-Ethyl perfluorooctane sulfonamidoethanol
PERFLUOROALKYLETHERCARBOXYLIC Acids (PFECAs)	
HFPO-DA	Hexafluoropropylene oxide dimer acid
DONA	4,8-dioxa-3H-perfluorononanoic acid
CHLORO-PERFLUOROALKYLSULFONATE	
F-53B Major	9-chloroehexadecafluoro-3-oxanone-1-sulfonic acid
F-53B Minor	11-chloroelcosafluoro-3-oxaundecane-1-sulfonic acid

Note: If WDNR Lab Certification removes a particular compound from the reporting list above and upon receiving written communication from the department, reporting for that compound is no longer required.

4.2.1.2 Sampling and Reporting Sludge Samples for PFAS

Representative sludge samples shall be collected at each sample point as listed. At minimum, liquid sludge storage/digesters should be thoroughly mixed prior to sampling. Cake sludge samples should consist of seven equal size discrete samples and be collected from different areas and depths then composited into one sample for laboratory analysis.

Note: If additional equipment is used for collecting sludge samples (i.e., shovels, compositing buckets, bottles, etc.), then a one-time equipment blank is recommended to be collected with the first sample. An equipment blank sample is collected by passing laboratory verified PFAS-free water over or through field sampling equipment before the

collection of a representative sludge sample. The equipment blank result shall be reported on the annual Sludge Characteristics Form (3400-049) in the comment section when reporting PFAS concentrations in the sludge.
The permittee shall report each of the PFAS sludge monitoring results on the annual Sludge Characteristics and Monitoring Form (3400-049) as provided by the department. The permittee shall also report the summation of PFOS and PFOA on this same form. All results shall be reported in dry weight. The annual Sludge Characteristics and Monitoring Form (3400-049) are due January 31, of the year following the collection of the sludge samples.
The laboratory performing the analysis on any samples shall be certified for the applicable PFAS compounds in the solids matrix by the Wisconsin Laboratory Certification Program established under s. 299.11, Wis. Stats., and 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 solids, 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.

4.3 Landspreading or Discharge to Manure Pit(s) Prohibition

The permittee is not authorized under this permit to landspread any of the wastes associated with outfall 017 and is not authorized to store these wastes in manure storage structure(s).

4.3.1.1 Reporting and Recordkeeping Requirements

The permittee shall comply with the following reporting and recordkeeping requirements.

4.3.2 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, or incinerated. 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.

4.3.3 Daily Disposal Log

The permittee shall maintain a daily disposal log of all waste(s) hauled to another facility, landfill, or incinerator for disposal.

5 Schedules

5.1 Industrial Intake Structure Evaluation

The permittee shall upgrade the surface water intake structure to meet BTA for impingement mortality.

Required Action	Due Date
Action Plan: The facility shall review all options to comply with BTA (Best Technology Available) requirements for impingement mortality. The facility shall submit a plan to the department for review and approval that describes actions the facility has determined to be the most appropriate to achieve the BTA requirements for impingement mortality. The plan shall include at least two feasible options in the event that the first option is not achievable. The facility shall commence implementation of the plan as soon as possible after department approval.	07/01/2026
Update Report: The facility shall submit a report describing the actions taken thus far and any additional planned actions that still need to be completed to achieve compliance with the BTA for impingement mortality requirements, including a detailed timeline for completion	07/01/2027
Summary Report: The facility shall submit a report describing the implementation/installation of the chosen option to comply with the BTA requirements for impingement mortality. If the chosen option included construction and/or equipment upgrades and additional time is needed to complete additional construction steps, the facility shall identify the remaining steps and provide completion dates for each step.	07/01/2028
Complete Actions: The facility shall complete all actions necessary to achieve compliance with the BTA for impingement mortality requirements.	07/01/2029

5.2 Industrial Sludge Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Industrial Sludge Management Plan: Submit an update to the management plan to explain and optimize the industrial sludge system and demonstrate compliance with ch. NR 214, Wis. Adm. Code, requirements. This plan shall include a detailed description of the treatment processes that generate industrial sludge, the characteristics and related data of the industrial sludge, current and potential disposal methods, and applicable contract haulers utilized for sludge transport. If the facility decides to start land applying waste, the facility is required to complete an updated Landspreading Management Plan (LMP) in accordance with s. NR 214.18(6)(c), Wis. Adm. Code, and submit it for by the department prior to commencement of landspreading sludge.	07/01/2027

5.3 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: Indicate which mercury pollutant minimization activities or activities outlined in the Pollutant Minimization Program Plan have been implemented and state which, if any, activities from the	10/01/2025

Pollutant Minimization Program Plan were not pursued and why; Include an assessment of whether each implemented pollutant minimization activity appears to be effective or ineffective at reducing pollutant discharge concentrations and identify actions planned for the upcoming year; Identification of barriers that have limited program effectiveness and adjustments to the program that will be implemented during the next year to help address these barriers; 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.	
Annual Mercury Progress Report #2: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	10/01/2026
Annual Mercury Progress Report #3: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	10/01/2027
Annual Mercury Progress Report #4: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	10/01/2028
Final Mercury Report: Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations. The report shall: Summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, activities from the Pollutant Minimization Program Plan were not pursued and why; Include an assessment of which pollutant minimization activities appear to have been effective or ineffective. Evaluate any needed changes to the pollutant reduction strategy accordingly; Identification of barriers that have limited program effectiveness and adjustments to the program that will be implemented during the next variance term (if applicable) to help address these barriers; Include an analysis of trends in mercury concentrations based on sampling and data during the current permit term; and Include an analysis of how influent and effluent mercury varies with time and with significant loadings of mercury. If the permittee intends to reapply for a mercury variance per s. NR 106.145, Wis. Adm. Code, for the reissued permit, a detailed Pollutant Minimization Program Plan outlining the pollutant minimization activities proposed for the upcoming permit term shall be submitted along with the final report. An updated pollutant minimization plan shall: Include an explanation of why or how each pollutant minimization activity will result in reduced discharge of the target pollutant; Evaluate any new available information on pollutant sources, timing, and concentration to update the mass balance assumptions and expected sources of the pollutant, and Identify any information needs that would help to better determine pollutant sources and make plans	10/01/2029

to collect that information.	
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.	

5.4 Phosphorus Schedule - Continued Optimization

The permittee is required to optimize performance to control phosphorus discharges per the following schedule.

Required Action	Due Date
Optimization: The permittee shall continue to implement the optimization plan as previously approved to optimize performance to control phosphorus discharges. Submit a progress report on optimizing removal of phosphorus by the Due Date.	10/01/2025
Progress Report #2: Submit a progress report on optimizing removal of phosphorus.	10/01/2026
Progress Report #3: Submit a progress report on optimizing removal of phosphorus.	10/01/2027
Progress Report #4: Submit a progress report on optimizing removal of phosphorus.	10/01/2028
Progress Report #5: Submit a progress report on optimizing removal of phosphorus.	10/01/2029

5.5 Phosphorus Payment per Pound to County

The permittee is required to make annual payments for phosphorus reductions to the participating county or counties in accordance with s. 283.16(8), Wis. Stats, and the following schedule. The price per pound will be set at the time of permit reissuance and will apply for the duration of the permit.

Required Action	Due Date
Annual Verification of Phosphorus Payment to County: The permittee shall make a total payment to the participating county or counties approved by the Department by March 1 of each calendar year. The amount due is equal to the following: [(lbs of phosphorus discharged minus the permittee's target value) times $**64.75 per pound (to be recalculated in the spring of 2025 prior to reissuance of the permit)**)] or $640,000, whichever is less. See the payment calculation steps in the Surface Water section. The permittee shall submit Form 3200-151 to the Department by March 1 of each calendar year indicating total amount remitted to the participating counties to verify that the correct payment was made. The first payment verification form is due by the specified Due Date. Note: The applicable Target Value is the TMDL derived limit value as defined by s. 283.16(1)(h), Wis. Stats. The "per pound" value is $50.00 adjusted for CPI.	03/01/2026
Annual Verification of Payment #2: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2027
Annual Verification of Payment #3: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2028
Annual Verification of Payment #4: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2029
Annual Verification of Payment #5: Submit Form 3200-151 to the Department indicating total	03/01/2030

amount remitted to the participating counties.	
Continued Coverage: If the permittee intends to seek a renewed variance, an application for the MDV (Multi Discharger Variance) shall be submitted as part of the application for permit reissuance in accordance with s. 283.16(4)(b), Wis. Stats.	
Annual Verification of Payment After Permit Expiration: In the event that this permit is not reissued prior to the expiration date, the permittee shall continue to submit Form 3200-151 to the Department indicating total amount remitted to the participating counties by March 1 each year.	

5.6 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.	07/01/2026
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.	07/01/2027

6 Standard Requirements

Chapter 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), Wis. Adm. Code.

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 completed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sampling shall be performed in accordance with procedures contained in s. NR 140.16, Wis. Adm. Code, and the WDNR publications, Groundwater Sampling Desk Reference (PUBL-DG-037-96) and Groundwater Sampling Field Manual (PUBL-DG-038-96). The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation and/or groundwater standard. If the required level cannot be met by any of the methods available in ch. 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 fees under ch. NR 101, Wis. Adm. Code, 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.

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 preventive 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

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).

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, 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.

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 Visible Foam or Floating Solids

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

6.3.5 Surface Water Uses and Criteria

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

a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.

b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.

c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.

d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

6.3.6 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.

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

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.

6.3.7 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.

6.3.8 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.

6.3.9 Reopener Clause

Pursuant to s. 283.15(11), Wis. Stat. and 40 CFR 131.20, the Department may modify or revoke and reissue this permit if, through the triennial standard review process, the Department determines that the terms and conditions of this permit need to be updated to reflect the highest attainable condition of the receiving water.

6.3.10 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.

6.4 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 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.

6.4.3 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.

6.4.4 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.

6.4.5 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.

6.4.6 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:

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

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

6.4.7 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"):

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

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

6.4.8 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.

6.4.9 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.

6.4.10 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.

6.4.11 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
Industrial Intake Structure Evaluation -Action Plan	July 1, 2026	20
Industrial Intake Structure Evaluation -Update Report	July 1, 2027	20
Industrial Intake Structure Evaluation -Summary Report	July 1, 2028	20
Industrial Intake Structure Evaluation -Complete Actions	July 1, 2029	20
Industrial Sludge Management Plan -Industrial Sludge Management Plan	July 1, 2027	20
Mercury Pollutant Minimization Program -Annual Mercury Progress Reports	October 1, 2025	20
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #2	October 1, 2026	21
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #3	October 1, 2027	21
Mercury Pollutant Minimization Program -Annual Mercury Progress Report #4	October 1, 2028	21
Mercury Pollutant Minimization Program -Final Mercury Report	October 1, 2029	21
Mercury Pollutant Minimization Program -Annual Mercury Reports After Permit Expiration	See Permit	22
Phosphorus Schedule - Continued Optimization -Optimization	October 1, 2025	22
Phosphorus Schedule - Continued Optimization -Progress Report #2	October 1, 2026	22
Phosphorus Schedule - Continued Optimization -Progress Report #3	October 1, 2027	22
Phosphorus Schedule - Continued Optimization -Progress Report #4	October 1, 2028	22
Phosphorus Schedule - Continued Optimization -Progress Report #5	October 1, 2029	22
Phosphorus Payment per Pound to County -Annual Verification of Phosphorus Payment to County	March 1, 2026	22
Phosphorus Payment per Pound to County -Annual Verification of Payment #2	March 1, 2027	22
Phosphorus Payment per Pound to County -Annual Verification of Payment #3	March 1, 2028	22
Phosphorus Payment per Pound to County -Annual Verification of Payment #4	March 1, 2029	22
Phosphorus Payment per Pound to County -Annual Verification of Payment #5	March 1, 2030	23
Phosphorus Payment per Pound to County -Continued Coverage	See Permit	23
Phosphorus Payment per Pound to County -Annual Verification of Payment After Permit Expiration	See Permit	23
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent	July 1, 2026	23

Discharge		
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge and Evaluation of Need	July 1, 2027	23
Characteristic Report Form 3400-49	no later than the date indicated on the form	31
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	31
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	31
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	24

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