



WPDES PERMIT

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

Ahlstrom Mosinee LLC

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at
Highway 153 East
to
The Wisconsin River

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

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

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Jason Knutson, P.E.
Wastewater Section Chief

Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - April 01, 2024

EXPIRATION DATE - March 31, 2029

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1 Influent Requirements - Cooling Water Intake Structure (CWIS)

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
701	Wisconsin River water intake structure for process and cooling 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 701 - MILL WATER INTAKE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	
Intake Water Used Exclusively For Cooling		Percent	Annual	Calculated	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	

1.2.1.1 CWIS - Authority to Operate and Description

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

- Location: 44°47'27.1"N, 89°41'40.3"W.
- General Description: Water enters the structure via a 5'8" wide by 14'5" long inlet channel and flows into a settling chamber. Here there is a sump overflow weir where excess river water commingles with NCCW that is then discharged through Outfall 005. At the end of the settling chamber, water passes bar screens which consist of ½" steel bars spaced 1 ¼" on center where it flows by gravity through two concrete pipes (36" and 24"). Water is then pumped to the mill for screening prior to use as process and cooling water.
- Maximum Design Intake Flow (DIF): 31.3 MGD
- Maximum Design Intake Velocity: 4.97 ft/s (flow through 36" pipe after bar rack).

1.2.1.2 Cooling Water Intake BTA (Best Technology Available) Determination

The Department believes that the cooling water intake, as described above in subsection 1.2.1.1, does not represent BTA for minimizing adverse environmental impact in accordance with the requirements in section s. 283.31(6), Wis. Stats. and section 316(b) of the Clean Water Act. A compliance schedule is included for the facility to come into compliance with this requirement.

1.2.1.3 Mercury Monitoring

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

1.3 Cooling Water Intake Structure Standard Requirements

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

1.3.1 Future BTA for Cooling Water Intake Structure

BTA determinations for entrainment and impingement mortality at cooling water intake structures will be made in each permit reissuance, in accordance with ch. NR 111, Wis. Adm. Code. **In subsequent permit reissuance applications, the permittee shall provide all the information required in ss. NR 111.41(1) through (7) and (13), Wis. Adm. Code., if the facility meets the applicability criteria in s. NR 111.02, Wis. Adm. Code. S. NR 111.41(13) requires submittal of an alternatives analysis report for compliance with the entrainment BTA requirements with the permit application.** This alternatives analysis for entrainment BTA shall examine the options for compliance with the entrainment BTA requirement and propose a candidate entrainment BTA to the Department for consideration during its next BTA determination. The analysis must, at least narratively, address and consider the factors listed in s. NR 111.41(13)(a), Wis. Adm. Code, and may consider the factors listed in s. NR 111.41(13)(b), Wis. Adm. Code. The analysis must evaluate, at a minimum, closed-cycle recirculating systems, fine mesh screens with a mesh size of 2mm or smaller, variable speed pumps, water reuse or alternate sources of cooling water, and any additional technology identified by the department at a later date.

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

1.3.2 Visual or Remote Inspections

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

1.3.3 Reporting Requirements for Cooling Water Intake

The permittee shall adhere to the reporting requirements listed below:

1.3.3.1 Annual Certification Statement and Report

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

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

1.3.4 Intake Screen Discharges and Removed Substances

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

1.3.5 Endangered Species Act

Nothing in this permit authorizes take for the purpose of a facility's compliance with the Endangered Species Act. The permittee shall notify the department of any endangered species or lake sturgeon observed to be impinged in the intake structure.

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
106	Field blank to accompany mercury monitoring.
107	Sampling point 107 will be used to report flow into the Holding Pond.

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point 106 - MERCURY FIELD BLANK

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury, Total Recoverable		ng/L	Quarterly	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.

2.2.2 Sampling Point 107 - Holding Pond

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Daily	Total Daily	

2.2.2.1 Daily Log

The permittee shall keep a daily log to record usage of the Holding Pond. The daily log shall include at a minimum: the date of use, source of wastewater pumped to the Holding Pond (one of the 6 diversion points), volume of wastewater pumped to the Holding Pond in gallons, duration of the wastewater diversion to the Holding Pond, reasons for diversion of wastewater to the Holding Pond, and volume of any wastewater pumped from the Holding Pond. Daily Logs shall be held on-site and made available upon request.

2.2.2.2 Annual Report

The permittee shall submit an annual report summarizing the daily logs for the previous year. This should include the volumes from each point of discharge to the pond, reasons for diversion, and any steps taken to minimize diversions to the pond. The annual reports shall be submitted by February 1st each year.

3 Surface Water Requirements

3.1 Sampling Point(s)

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

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
001	At Sampling Point 001, a Parshall flume that is located downstream from the secondary clarifier, treated process wastewaters shall be monitored prior to discharge to the Wisconsin River via Outfall 001. Outfall 001 is located in the center of the east channel of the Wisconsin River approximately 440 yards downstream from the U.S. Highway 153 bridge.
005	At Sampling Point 005, which is located at a Parshall flume just upgradient from the outfall, noncontact cooling water and main mill sump overflow of untreated river water shall be monitored after mixing, but prior to discharge to the Wisconsin River via Outfall 005. Outfall 005 is located on the east bank of the east channel of the Wisconsin River approximately 330 yards downstream from the U.S. Highway 153 bridge.
007	At Sampling Point 007, which is located at the base of No. 1 Hydro Generator wheel assembly, bearing noncontact cooling and lubrication water shall be monitored prior to combining with hydro wheel discharge.
008	At Sampling Point 008, which is located on the generating wheel subfloor, backwash from the filter used to treat cooling water for No. 1 Hydro Generator shall be monitored prior to combining with hydro wheel discharge.
010	At Sampling Point 010 (formerly 001A), process wastewater which has bypassed the secondary clarifier is sampled prior to discharge via Outfall 010. Outfall 010 is located on the east bank of the east channel of the Wisconsin River approximately 400 yards downstream from the U.S. Highway 153 bridge.
011	Sampling Point 011 represents the combined loadings from Outfalls 001 and 010.
602	Downstream sampling point for monitoring to develop a site specific translator for dissolved copper limits. Sample point is located in the Wisconsin River at the Beans Eddy boat landing.

3.2 Monitoring Requirements and Effluent Limitations

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

3.2.1 Sampling Point (Outfall) 001 - TREATED EFFLUENT

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	5/Week	24-Hr Flow Prop Comp	BOD ₅ Monitoring is 5/Week November through April.
BOD ₅ , Total		mg/L	Daily	24-Hr Flow Prop Comp	Daily monitoring is required May through October (only when discharging).

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total		mg/L	5/Week	24-Hr Flow Prop Comp	
Mercury, Total Recoverable	Daily Max	8.3 ng/L	Quarterly	Grab	
Temperature Maximum		deg F	Daily	Continuous	
Phosphorus, Total	Rolling 12 Month Avg	1.0 mg/L	Weekly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Daily Max	36 µg/L	Monthly	Grab	
Copper, Total Recoverable	Monthly Avg	36 µg/L	Monthly	Grab	
PFOA		ng/L	Monthly	Grab	
PFOS		ng/L	Monthly	Grab	
Acute WET		TU _a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See listed calendar quarters below.
Chronic WET	Monthly Avg	4.3 TU _c	See Listed Qtr(s)	24-Hr Flow Prop Comp	See listed calendar quarters below.
pH (Continuous)			Daily	Continuous	See "Continuous pH Monitoring" below for pH limits and allowed excursions

3.2.1.1 Mercury Monitoring

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

3.2.1.2 Effluent Temperature Monitoring

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

3.2.1.3 PFOS/PFOA Sampling and Reporting Requirements

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

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

3.2.1.4 PFOS/PFOA Minimization Plan Determination of Need

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

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

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

3.2.1.5 Continuous pH Monitoring

The permittee shall maintain the pH of the discharge within the range of 5.0 to 9.0 standard units (s.u.) except excursions are permitted subject to the following conditions:

- The pH is monitored continuously;
- The total time during which the pH is outside the range of 5.0 to 9.0 s.u. shall not exceed 446 minutes in any calendar month;
- No individual pH excursion outside the range of 5.0 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 5.0 to 9.0 s.u. and the number of pH excursions outside the range of 5.0 to 9.0 that exceed 60 minutes in duration.

3.2.1.6 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Wisconsin River

Instream Waste Concentration (IWC): 23%

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:** April through June 2024, July through September 2025, October through December 2026, January through March 2027, and April through June 2028.

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

Chronic tests are required during the following quarters:

- **Chronic:** April through June 2024, July through September 2025, October through December 2026, January through March 2027, and April through June 2028.

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

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

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

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 4.3 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

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

3.2.2 Sampling Point (Outfall) 005 - PULP AND PAPER MILL NCCW

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

3.2.2.1 Effluent Temperature Monitoring

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

3.2.3 Sampling Point (Outfall) 007 - HYDRO GENERATOR NCCW

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Quarterly	Estimated	
Temperature		deg F	Quarterly	Grab	
Copper, Total Recoverable	Daily Max	24 µg/L	Monthly	Grab	
Copper, Total Recoverable	Monthly Avg	24 µg/L	Monthly	Grab	
Copper, Total Recoverable	Daily Max	0.015 lbs/day	Monthly	Calculated	

3.2.3.1 Effluent Temperature Monitoring

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

3.2.4 Sampling Point (Outfall) 008 - FILTER BACKWASH

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Quarterly	Estimated	
Suspended Solids, Total		mg/L	Quarterly	Grab	

3.2.5 Sampling Point (Outfall) 010 - CONTROLLED DIVERSION OUTFALL

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	Monitoring required only when discharging.
BOD ₅ , Total		mg/L	5/Week	Composite	BOD ₅ Monitoring is 5/Week November through April (only when discharging).

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
BOD ₅ , Total		mg/L	Daily	Composite	Daily monitoring is required May through October (only when discharging).
Suspended Solids, Total		mg/L	5/Week	Composite	Monitoring required only when discharging.
Mercury, Total Recoverable	Daily Max	8.3 ng/L	Quarterly	Grab	Monitoring required only when discharging.
Temperature Maximum		deg F	Daily	Continuous	Monitoring required only when discharging.
Phosphorus, Total	Rolling 12 Month Avg	1.0 mg/L	Weekly	Composite	Monitoring required only when discharging.
Copper, Total Recoverable	Daily Max	36 µg/L	Monthly	Grab	Monitoring required only when discharging.
Copper, Total Recoverable	Monthly Avg	36 µg/L	Monthly	Grab	Monitoring required only when discharging.
PFOA		ng/L	Monthly	Grab	Monitoring required only when discharging.
PFOS		ng/L	Monthly	Grab	Monitoring required only when discharging.
pH (Continuous)			Daily	Continuous	See "Continuous pH Monitoring" below for pH limits and allowed excursions

3.2.5.1 Discharge via Outfall 010

The permittee shall conform to the requirements of s. 7.2.4 'Controlled Diversions', when discharging from Outfall 010. Effluent monitoring for Outfalls 001 and 010 (previously 001A) shall be performed at Sampling Point 001. Because of the temporary nature of discharges from Outfall 010, samples to be collected shall be composite, defined as a combination of individual samples of equal volume taken at approximately equal intervals not exceeding one hour over the course of the temporary discharge.

3.2.5.2 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.

3.2.5.3 Effluent Temperature Monitoring

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

3.2.5.4 Total Maximum Daily Load (TMDL) Limitations for Total Phosphorus

The Wisconsin River Basin TMDL for total phosphorus was approved by the U.S. Environmental Protection Agency on April 26, 2019. Additional Site-Specific Criteria (SSC) for Lakes Petenwell, Castle Rock, and Wisconsin and the related Waste Load Allocation (WLA) included in Appendix K of the TMDL report were adopted by rule in s. NR 102.06 (7), Wis. Adm. Code, on June 1, 2020, and approved by the U.S. Environmental Protection Agency on July 9, 2020. The permittee’s approved SSC-based WLA is **12,043 lbs/year**, and results in a calculated phosphorus mass limit of **90 lbs/day as a monthly average**. The 12-month rolling sum of total monthly phosphorus (lbs/yr) shall be reported each month for direct comparison to the facility’s WLA.

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.

3.2.5.5 PFOS/PFOA Sampling and Reporting Requirements

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

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

3.2.5.6 Continuous pH Monitoring

The permittee shall maintain the pH of the discharge within the range of 5.0 to 9.0 standard units (s.u.) except excursions are permitted subject to the following conditions:

- The pH is monitored continuously;
- The total time during which the pH is outside the range of 5.0 to 9.0 s.u. shall not exceed 446 minutes in any calendar month;
- No individual pH excursion outside the range of 5.0 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 5.0 to 9.0 s.u. and the number of pH excursions outside the range of 5.0 to 9.0 that exceed 60 minutes in duration.

3.2.6 Sampling Point (Outfall) 011 - 001 + 010 COMBINED

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
BOD ₅ , Total	Daily Max	6,534 lbs/day	5/Week	Calculated	BOD ₅ Monitoring is 5/Week November through April.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
BOD ₅ , Total	Monthly Avg	3,348 lbs/day	5/Week	Calculated	BOD ₅ Monitoring is 5/Week November through April.
BOD ₅ , Total		lbs/day	Daily	Calculated	Daily monitoring is required May through October only.
Suspended Solids, Total	Daily Max	13,392 lbs/day	5/Week	Calculated	
Suspended Solids, Total	Monthly Avg	6,968 lbs/day	5/Week	Calculated	
Phosphorus, Total	Monthly Avg	90 lbs/day	Weekly	Calculated	
Phosphorus, Total		lbs/month	Monthly	Calculated	
Phosphorus, Total		lbs/yr	Monthly	Calculated	
Copper, Total Recoverable	Daily Max	4.0 lbs/day	Monthly	Calculated	
WLA Previous Day River Flow		cfs	Daily	Continuous	Monitoring is required May through October only.
WLA Previous Day River Temp		deg F	Daily	Continuous	Monitoring is required May through October only.
WLA BOD ₅ Value		lbs/day	Daily	Calculated	Monitoring is required May through October only.
WLA BOD ₅ Discharged	Daily Max - Variable	lbs/day	Daily	Calculated	Monitoring is required May through October only.

3.2.6.1 BOD5 Waste Load Allocation Requirements

Each year during the months of May through October inclusive the total daily discharge of BOD5 from Outfalls 001 and 001A 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 BOD5 and the daily maximum technology-based effluent limitation of 6,534 lbs/day of BOD5 must be met.

Definitions:

- Point source wasteload allocation values (lbs per day BOD5) in the following tables represent water quality-based effluent limitations. Wisconsin River flow and temperature conditions used to determine a point source wasteload allocation value for a given day shall be the representative measurements of the flow and temperature of the previous day.
- A representative measurement of flow shall be defined as the daily average flow value derived from continuous river flow monitoring data for the Wisconsin River collected at the USGS gauging station at Rothschild (USGS 05398000). If such flow data is unavailable for any day, flow shall be calculated by multiplying by 1.3 the daily average flow value derived from continuous stream flow monitoring data for the Wisconsin River collected at the Merrill Dam (USGS 05395000). Daily average flow values reported by the Wisconsin Valley Improvement Company for the Rothschild and Merrill Dam locations are acceptable for use with the following tables of point source wasteload allocation values.

- A representative measurement of temperature shall be defined as the daily average temperature value derived from continuous river temperature monitoring data for the Wisconsin River collected at the Wisconsin Public Service Corporation, Weston Generating Station. If such temperature data is unavailable for any day, a single grab sample for river temperature collected at the Domtar raw river-water intake may be substituted for continuous river temperature monitoring. Daily average temperature values, or alternately, daily temperatures reported by the Wisconsin Valley Improvement Company for the Weston Generating Station and Domtar locations are acceptable for use with the following tables of point source wasteload allocation values.

Compliance: For purposes of determining compliance with wasteload allocated water quality related effluent limitations, the daily discharge of BOD5 shall not exceed the point source wasteload allocation value for that day.

Monitoring Requirements: The same 24-hour period shall be utilized for the collection of composite and continuous samples for river flow and temperature and all effluent characteristics including effluent flow and BOD5. Presently, the Wisconsin Valley Improvement Company utilizes the 24-hour monitoring period ending at 7:00 a.m. for river flow and temperature.

3.2.6.1.1 Reallocation of BOD5

In accordance with ch. NR 212.11 (2) (a), Wis. Adm. Code, the reallocation of BOD5 shall expire at the end of this permit term. As required by ch. NR 212.11 (4), the Permittee waives all rights under s. 227.51 Stats., to retain any reallocation beyond the expiration date of this permit. Upon permit expiration, the tables located in ch. NR 212 5-m, Wis. Adm. Code will apply. Should the permittee wish to continue the reallocation beyond March 31, 2029, the permittee may again request a reallocation.

3.2.6.1.2 Point Source Wasteload Allocation Values (pounds per day of BOD₅) for MAY-JUNE

Temperature (previous day average in °F)	Flow at Rothschild Dam (previous day average in cfs)																	
	980	981	1221	1471	1731	1991	2261	2541	2831	3131	3431	3781	4231	4731	5251	5781	6341	6911
	or Less	to 1220	to 1470	to 1730	to 1990	to 2260	to 2540	to 2830	to 3130	to 3430	to 3780	to 4230	to 4730	to 5250	to 5780	to 6340	to 6910	or More
≥78	6534	6534	6534	6534	6227	6331	6288	6363	6513	6534	6534	6534	6534	6534	6534	6534	6534	6534
74 to 77	6534	6534	6534	5944	4802	6326	6490	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
70 to 73	6534	6534	6534	5888	6520	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
66 to 69	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
62 to 65	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
58 to 61	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
54 to 57	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
50 to 53	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
46 to 49	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
42 to 45	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
≤41	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534

3.2.6.1.3 Point Source Wasteload Allocation Values (pounds per day of BOD₅) for JULY-AUGUST

Temperature (previous day average in °F)	Flow at Rothschild Dam (previous day average in cfs)																	
	980	981	1221	1471	1731	1991	2261	2541	2831	3131	3431	3781	4231	4731	5251	5781	6341	6911
	or	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	or

	Less	1220	1470	1730	1990	2260	2540	2830	3130	3430	3780	4230	4730	5250	5780	6340	6910	More
≥78	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
74 to 77	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
70 to 73	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
66 to 69	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
62 to 65	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
58 to 61	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
54 to 57	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
50 to 53	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
46 to 49	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
42 to 45	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534
≤41	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534

3.2.6.1.4 Point Source Wasteload Allocation Values (pounds per day of BOD₅) for SEPTEMBER

Temperature (previous day average in °F)	Flow at Rothschild Dam (previous day average in cfs)																		
	980	981	1221	1471	1731	1991	2261	2541	2831	3131	3431	3781	4231	4731	5251	5781	6341	6911	
	or Less	to 1220	to 1470	to 1730	to 1990	to 2260	to 2540	to 2830	to 3130	to 3430	to 3780	to 4230	to 4730	to 5250	to 5780	to 6340	to 6910	or More	
≥78	6117	6130	5516	4548	4279	4646	4753	5080	5460	5840	6240	6534	6534	6534	6534	6534	6534	6534	
74 to 77	6028	6001	4673	4165	6534	4738	5144	5568	6031	6502	6534	6534	6534	6534	6534	6534	6534	6534	
70 to 73	5821	5356	4894	4880	5229	5317	5620	6111	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
66 to 69	5360	5261	4859	5699	5878	6314	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
62 to 65	5981	5092	5896	6194	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
58 to 61	5096	5989	6410	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
54 to 57	6221	6522	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
50 to 53	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
46 to 49	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
42 to 45	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	
≤41	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	6534	

3.2.6.2 Total Maximum Daily Load (TMDL) Limitations for Total Phosphorus

The Wisconsin River Basin TMDL for total phosphorus was approved by the U.S. Environmental Protection Agency on April 26, 2019. Additional Site-Specific Criteria (SSC) for Lakes Petenwell, Castle Rock, and Wisconsin and the related Waste Load Allocation (WLA) included in Appendix K of the TMDL report were adopted by rule in s. NR 102.06 (7), Wis. Adm. Code, on June 1, 2020, and approved by the U.S. Environmental Protection Agency on July 9, 2020. The permittee’s approved SSC-based WLA is **12,043 lbs/year**, and results in a calculated phosphorus mass limit of **90 lbs/day as a monthly average**. The 12-month rolling sum of total monthly phosphorus (lbs/yr) shall be reported each month for direct comparison to the facility’s WLA.

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.

3.2.7 Sampling Point 602 - RECEIVING WATER TRANSLATOR

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Suspended Solids, Total		mg/L	Annual	Grab	
Copper, Total Recoverable		µg/L	Annual	Grab	
Copper Dissolved		µg/L	Annual	Grab	
Hardness, Total as CaCO ₃		µg/L	Annual	Grab	

3.2.7.1 In Stream Sampling

The permittee shall collect in stream samples using appropriate methods. These include US EPA Method 1669 or the Department's equivalent *Low-Level Metals Methods for Clean Sampling Version 2.4*.

4 Groundwater Requirements

4.1 Monitoring Requirements and Limitations

4.1.1 Groundwater Monitoring System for Holding Pond

Location of Monitoring System: No Location

Wells to be Monitored: OW-14 (801), WP-14 (802), OW-101 (803), OW-101A (804), OW-104 (805), OW-107 (806), OW-102 (807), OW-102A (808)

Well Used To Calculate Preventive Action Limits (PALs): OW-14 (801)

PALs listed in the table below have been calculated based on background groundwater quality data from this designated well. Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

Point of Standards Application Well(s): OW-102A (808), OW-102 (807), OW-107 (806)

Enforcement standards are to be met in groundwater located beyond the 250 foot design management zone, or beyond the property boundary, whichever is closer to the land treatment system. See the Standard Requirements section of this permit for additional conditions related to exceedance of groundwater standards.

Required Monitoring: Grab samples shall be collected from each well to be monitored per the frequency shown in the table below, except that monthly grab samples shall be collected from each new well during the first 3 months after well installation. The grab samples shall be analyzed for the parameters specified in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Depth To Groundwater	feet	*****	N/A	1/ 6 Months
Groundwater Elevation	feet MSL	*****	N/A	1/ 6 Months
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	1/ 6 Months
Chloride Dissolved	mg/L	125	250	1/ 6 Months
pH Field	su	8.0	N/A	1/ 6 Months
COD, Filtered	mg/L	35	N/A	1/ 6 Months
Nitrogen, Total Kjeldahl Dissolved	mg/L	*****	N/A	1/ 6 Months
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	1/ 6 Months
Nitrogen, Organic Dissolved	mg/L	2.1	N/A	1/ 6 Months
Solids, Total Dissolved	mg/L	450	N/A	1/ 6 Months
Manganese Dissolved	µg/L	0.06	0.3	1/ 6 Months
BOD ₅ , Total	mg/L	*****	N/A	1/ 6 Months
Iron Dissolved	mg/L	0.15	0.3	1/ 6 Months

4.1.1.1 pH Preventive Action Limits

A pH monitoring result is considered to have exceeded the pH preventive action limit (PAL) for this site if the result is less than **6.0** s.u. or greater than **8.0** s.u.

4.1.1.2 Preventive Action Limits for Indicator Parameters

Preventive Action Limits (PALs) for NR 140 Indicator Parameters have been established for this site. For more information see “Indicator Parameter – Preventive Action Limits” in the Standard Requirements section.

*****PALs are not calculated for Depth to Groundwater, Groundwater Elevation, nor Total Kjeldahl Nitrogen.

4.1.1.3 Volatile Organic Compounds

The permittee shall complete a volatile organic compounds (VOC) scan on semi-annual basis. The individual VOCs required for a VOC scan are in ch. NR 507 Appendix III, Wis. Adm. Code.

4.1.1.4 Semivolatile Organic Compounds

The permittee shall complete a semivolatile organic compound (SVOC) scan on an annual basis. The individual SVOCs required for a SVOC scan are in ch. NR 507 Appendix IV, Wis. Adm. Code.

4.1.1.5 Reporting

The permittee shall report groundwater monitoring results on the Discharge Monitoring Report or to the Groundwater and Environmental Monitoring System (GEMS) database.

5 Land Application Requirements

5.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for 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, WasteType/Sample Contents and Treatment Description (as applicable)
009	Land application of paper mill sludge from Ahlstrom Mosinee on department-approved fields.

5.2 Monitoring Requirements and Limitations

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

5.2.1 Sampling Point (Outfall) 009 - PAPER MILL SLUDGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	Quarterly	Grab Comp	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab Comp	
Chloride		Percent	Quarterly	Grab Comp	
pH Field		su	Quarterly	Grab	
Nitrogen, Ammonia (NH ₃ -N) Total		Percent	Annual	Grab Comp	
Phosphorus, Total		Percent	Annual	Grab Comp	
Phosphorus, Water Extractable		% of Tot P	Annual	Calculated	
Potassium, Total Recoverable		Percent	Annual	Grab Comp	
Dioxin, 2,3,7,8-TCDD Dry Wt		ng/kg	Annual	Grab Comp	See s. 5.3.1
Dioxin, 2,3,7,8-TCDD TE		ng/kg	Annual	Calculated	See s. 5.3.1
Furan, 2,3,7,8-TCDF Dry Wt		ng/kg	Annual	Grab Comp	See s. 5.3.1
Lead Dry Wt		mg/kg	Annual	Grab Comp	
Zinc Dry Wt		mg/kg	Annual	Grab Comp	
Copper Dry Wt		mg/kg	Annual	Grab Comp	
Cadmium Dry Wt		mg/kg	Annual	Grab Comp	
Nickel Dry Wt		mg/kg	Annual	Grab Comp	
PCB Total Dry Wt		mg/kg	Once	Grab Comp	Sampling required once in 2026, regardless of whether land application occurs.

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
PFOA + PFOS		ug/kg	Annual	Calculated	Sampling required every year, regardless of whether land application occurs.
Priority Pollutant Scan			Once	Grab Comp	Sampling required once in 2026, regardless of whether land application occurs. As specified in ch. NR 215.03 (1-6), Wis. Adm. Code (excluding asbestos). Use grab samples for mercury, cyanide and VOCs. Use composited grab samples for all other parameters.
Dioxins & Furans (all congeners)			Once	Grab Comp	Sampling required once in 2026, regardless of whether land application occurs. As specified in ch. NR 106.115, Wis. Adm. Code.
PFAS Dry Wt			Annual	Grab Comp	Sampling required every year, regardless of whether land application occurs. Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Section below for more information.

Daily Log – Monitoring Requirements and Limitations				
All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under “Records Retention” in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	Limit	Units	Sample Frequency	Sample Type
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Application Rate	-	Tons/Acre/Day	Daily	Calculated

Annual Report – Summary of Monitoring Requirements and Limitations				
The Annual Report is due by January 31 st of each year for the previous calendar year. See the ‘Annual Land Application Report’ subsection in Standard Requirements.				
Parameters	Limit	Units	Reporting Frequency	Sample Type
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Amount Per Site	-	Tons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

5.2.1.1 Monitoring Frequencies

Monitoring is only required if land application occurs in a given time period, with the exception of ‘*PFAS Dry Wt*’, where a sample must be taken annually, and ‘*PCB – Dry Wt*,’ ‘*Dioxins & Furans (all congeners)*,’ and the ‘*Priority Pollutant Scan*,’ where a sample must be taken in 2026 regardless of whether land application occurs.

5.2.1.2 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the “Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges” paragraph in the Standard Requirements section of this permit.

5.2.1.3 Biennial Site Chloride Loading

For details on chloride requirements see the “Chloride Requirements for Liquid Wastes and By-Product Solids” paragraph in the Standard Requirements section of this permit.

5.2.1.4 Dry Weight Basis

Report all monitoring results, except for total solids and pH, on a dry weight basis.

5.2.1.5 Test Methods

Test methods are provided in ch. NR 219, Wis. Adm. Code. For those parameters not listed in Table EM of ch. NR 219, Wis. Adm. Code, the permittee may use SW-846 methods listed in Tables B, C, and D of ch. NR 219. The permittee may use EPA Method 7780 for strontium. The permittee may also use any other test method that is approved by the Department before use.

5.2.1.6 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 when sludge is generated regardless of the end use (i.e. land applied, hauled to another facility, landfilled).

PERFLUOROALKYLCARBOXYLIC 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
PERFLUOROOCETANCESULFONAMIDES (FOSAs)	
PFOSA	Perflurorooctane sulfonamide
N-MeFOSA	N-Methyl perfluorooctane sulfonamide
N-EtFOSA	N-Ethyl perfluorooctane sulfonamide
PERFLUOROOCETANCESULFONAMIDOACETIC Acids	
N-MeFOSAA	N-Methyl perfluorooctane sulfonamidoacetic acid
N-EtFOSAA	N-Ethyl perfluorooctane sulfonamidoacetic acid
NATIVE PERFLUOROOCETANCESULFONAMIDOETHANOLS (FOSEs)	
N-MeFOSE	N-Methyl perfluorooctane sulfonamidoethanol
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-chloroheptadecafluoro-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.

5.2.1.7 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.

5.2.1.8 PFAS Land Application Requirements

The department recommends the landspreading and/or land application of sludge be done in a manner consistent with the most recent version of the “Interim Strategy for Land Application of Biosolids and Industrial Sludges containing PFAS”

5.2.1.9 Dioxins and Furans

The permittee shall monitor for all seventeen 2,3,7,8-substituted dioxin and furan congeners including 2,3,7,8-TCDD; 1,2,3,7,8-PeCDD; 1,2,3,4,7,8-HxCDD; 1,2,3,6,7,8-HxCDD; 1,2,3,7,8,9-HxCDD; 1,2,3,4,6,7,8-HpCDD; OCDD; 2,3,7,8-TCDF; 1,2,3,7,8-PeCDF; 2,3,4,7,8-PeCDF; 1,2,3,4,7,8-HxCDF; 1,2,3,6,7,8-HxCDF; 1,2,3,7,8,9-HxCDF; 2,3,4,6,7,8-HxCDF; 1,2,3,4,6,7,8-HpCDF; 1,2,3,4,7,8,9-HpCDF and OCDF.

5.2.1.10 Monitoring and Calculating Total PCB Concentrations in Sludge

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

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

EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other

additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A).

If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil 3611B - Alumina

3640A - Gel Permeation 3660B - Sulfur Clean Up (using copper shot instead of powder)

3630C - Silica Gel 3665A - Sulfuric Acid Clean Up

Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs.

5.2.1.11 Monitoring Frequency for Priority Pollutants and Dioxins & Furans

Monitoring for dioxins and furans and the priority pollutant scan should be completed once during the permit term during the year 2026.

5.3 Sludge Application Rate Limitations

The permittee shall comply with the following sludge application rate limitations. Additional land application rate limitations are provided in the Standard Requirements section of this permit.

5.3.1 Total Dioxin Equivalents Limitations

- Total dioxin equivalents shall not exceed 1.2 ppt in the soil profile after application and incorporation of sludge on agricultural sites. The soil profile shall include the sludge plus underlying litter and soil to a depth of 15 centimeters below the litter-soil interface. Total dioxin equivalents for agricultural sites shall be calculated as follows:
$$\text{TDE} = 2,3,7,8\text{-TCDD (ppt)} + 0.1 \times 2,3,7,8\text{-TCDF (ppt)}$$
 - Land application sites that will exceed a calculated total dioxin equivalents of 0.8 ppt in the soil profile after application of sludge shall be tested for 2,3,7,8-TCDD and 2,3,7,8-TCDF prior to the application of sludge.
 - By **February 28th of each year**, the permittee shall report the cumulative loadings of total dioxin equivalents for each land application site that received sludge from the mill during the previous year. If no land application occurred during the previous year, then no cumulative loading report is required.
- Sludge may be applied on sites where livestock will graze only if the resulting soil concentration does not exceed 0.5 ppt total dioxin equivalents.
- Sludge with a total dioxin equivalents greater than 10 ppt shall not be applied within the range of Prairie Chickens (*Tympanuchus cupido*), or any other threatened or endangered wildlife species, unless soil incorporation occurs within 21 days of application.
- Sludge shall not be applied within 1,200 feet of a public water supply when the sludge contains detectable concentrations of either 2,3,7,8-TCDD or 2,3,7,8-TCDF.

5.3.2 Nitrogen Requirements for Sludges

NR 214.18(4) Wis. Adm. Code specifies 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 (see Section 1.3.2. Alternative Nitrogen Loading Limits). 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 section of NR 214 and Section 1.3.2 below) are approved in writing via the Department's land application management plan approval. Calculate Total Kjeldahl Nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

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

5.3.3 Alternative Nitrogen Loading Requirements

Alternative nitrogen loading rates may be used for industrial sludge when the department approves a mineralization rate study that appropriately shows the amount of nitrogen available in the first and subsequent years of the industrial sludge. This approval shall be incorporated into the land application management plan and approved by the department in writing.

This alternative nitrogen application rate must not exceed the crop nitrogen requirement and shall not exceed 165 lbs of plant available nitrogen without receiving written department approval prior to land application.

The alternative nitrogen application rate shall be calculated on a dry weight basis and shall incorporate the predicted mineralization rates in determining first year nitrogen availability and subsequent year(s) nitrogen availability, commonly known as carryover. Using the mineralization rates and 20 ton/acre annual application rates in the approved management plan, First Year and Second Year Plant Available N values can be calculated as follows:

- **First Year Plant Available N (lbs/acre)** = $[N_{\text{NH}_3} \text{ (lb/ton)} + N_{\text{ORG}} \text{ (lb/ton)} \times 0.12 \text{ 1}^{\text{st}} \text{ Yr Mineralization Rate}] \times 20 \text{ tons/acre}$
- **Second Year Plant Available N (lbs/acre)** = $[N_{\text{ORG}} \text{ (lbs/ton)} \times (1.00 - 0.12 \text{ 1}^{\text{st}} \text{ yr min rate}\%) \times 0.02 \text{ 2}^{\text{nd}} \text{ yr min rate}] \times 20 \text{ tons/acre}$

(Note: in the second year calculation, use TKN, N_{NH_3} & N_{ORG} values from the previous year.)

The inputs for the above equations can be calculated using the equations below:

- $\text{TKN (lbs/ton)} = (\text{TKN \% dry weight from average of four most recent samples}) \times 10,000 \text{ mg/kg} \times 0.0020 \text{ lbs*kg/(mg*ton)}$
- $\text{N}_{\text{NH}_3} \text{ (Ammonia Nitrogen) (lbs/ton)} = (\text{N}_{\text{NH}_3} \% \text{ dry weight from average of four most recent samples}) \times 10,000 \text{ mg/kg} \times 0.0020 \text{ lbs*kg/(mg*ton)}$
- $\text{N}_{\text{ORG}} \text{ (Organic Nitrogen) (lbs/ton)} = \text{TKN (lbs/ton)} - \text{N}_{\text{NH}_3} \text{ (lbs/ton)}$

6 Schedules

6.1 Cooling Water Intake Structure - General

Required Action	Due Date
Annual Certification Statement: The permittee shall submit an Annual Certification on the intake structure, as required by s. 1.3.3.1 of this WPDES permit.	01/31/2025
Annual Certification Statement: The permittee shall submit an Annual Certification on the intake structure, as required by s. 1.3.3.1 of this WPDES permit.	01/31/2026
Annual Certification Statement: The permittee shall submit an Annual Certification on the intake structure, as required by s. 1.3.3.1 of this WPDES permit.	01/31/2027
Annual Certification Statement: The permittee shall submit an Annual Certification on the intake structure, as required by s. 1.3.3.1 of this WPDES permit.	01/31/2028
CWIS Application Materials Due: Unless an exemption has been authorized, the permittee shall submit the application materials required in s. NR 111.40(2)(c), Wis. Adm. Code by the Due Date.	09/30/2028
Annual Certification Statement: The permittee shall submit an Annual Certification on the intake structure, as required by s. 1.3.3.1 of this WPDES permit.	01/31/2029
Ongoing Annual Certification Statements: In the event this permit is not reissued by the expiration date and is administratively continued, the permittee shall continue to submit annual certification statements by January 31st of each year.	

6.2 Cooling Water Intake Structure - Modifications

The permittee shall take necessary steps to modify the intake structure to ensure that it is considered BTA for both impingement and entrainment mortality.

Required Action	Due Date
Preliminary Intake Evaluation: The permittee shall submit a preliminary evaluation of the intake structure, outlining the various compliance alternatives that are feasibly implemented during the permit term.	03/31/2025
Final Compliance Report: The permittee shall submit a report outlining the chosen impingement and entrainment compliance options for the intake structure.	03/31/2026
Begin Implementation: The permittee shall begin the necessary intake modifications to come into compliance with BTA requirements.	03/31/2027
Complete Intake Structure Modifications: The permittee shall complete the necessary modifications to the intake structure.	03/31/2028

6.3 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This	03/31/2025

<p>analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p>	
<p>Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan.</p> <p>This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.</p> <p>The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan.</p> <p>If the Department determines a PFOS/PFOA minimization plan is needed based on a reasonable potential evaluation, the permittee will be required to develop a minimization plan for Department approval no later than 90 days after written notification was sent from the Department. The Department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued.</p> <p>If, however, the Department determines there is no reasonable potential for the facility to discharge PFOS or PFOA above the narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code, no further action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.</p>	03/31/2026

6.4 Holding Pond Response Actions

The permittee shall implement the actions identified below in accordance with s. NR 140.26, Wis. Adm. Code.

Required Action	Due Date
<p>Preliminary Evaluation of Interim Actions: The permittee shall submit a report outlining all interim actions they plan to take in response to enforcement standard exceedances present in downgradient wells.</p>	12/31/2024
<p>Commence Interim Actions: The permittee shall commence interim actions by the Due Date.</p>	03/31/2025
<p>Engineering Evaluation of Abandonment and/or Dredging the Pond: The permittee shall provide an engineering evaluation on the future of the holding pond. This evaluation shall provide all of the following: a summary for the work necessary to complete dredging of the holding pond, a summary of the work necessary to fully abandon the holding pond in accordance with s. NR 213.07, Wis. Adm. Code, conclusions as to which action is preferable to the facility, and barriers to implementing either action. This evaluation must provide a conclusion as to which action the facility will begin to implement.</p>	03/31/2026
<p>Submit Abandonment Plan: If abandonment is chosen, the permittee shall submit an abandonment plan for department approval in accordance with s. NR 213.07, Wis. Adm. Code, by the Due Date.</p>	09/30/2026
<p>Dredging Report #1: If abandonment is not chosen, the permittee shall submit a report outlining the timeline for removing accumulated sludge from the holding pond.</p>	03/31/2027
<p>Submit New Holding Tank Plans & Specifications: If abandonment is chosen, the permittee shall submit for department review and approval the plans and specifications for the construction of a</p>	03/31/2027

holding tank to aid in the abandonment of the existing holding pond in accordance with the requirements of chs. NR 108 and NR 213, Wis. Adm. Code.	
Commence Construction of New Holding Tank: If abandonment is chosen, the permittee shall commence construction of the new holding tank by the Due Date.	09/30/2027
Dredging Report #2: If abandonment is not chosen, the permittee shall provide an update on completing dredging activities.	03/31/2028
Abandonment Report #1: If abandonment is chosen, the permittee shall provide a status update on the abandonment of the holding pond.	03/31/2028
Interim Actions Report: The permittee shall submit a summary of the effectiveness of the interim actions that have been done during the permit term.	03/31/2029
Dredging Report #3: If abandonment is not chosen, the permittee shall provide an update on completing dredging activities.	03/31/2029
Abandonment Report #2: If abandonment is chosen, the permittee shall provide a status update on the abandonment of the holding pond.	03/31/2029
Dredging Report #4: If abandonment is not chosen, the permittee shall provide an update on completing dredging activities.	03/31/2030
Abandonment Report #3: If abandonment is chosen, the permittee shall provide a status update on the abandonment of the holding pond.	03/31/2030
Complete Dredging: If abandonment is not chosen, the permittee shall complete dredging by the Due Date.	03/31/2031
Complete Abandonment: If abandonment is chosen, the permittee shall complete abandonment by the Due Date.	03/31/2031

6.5 Total Dioxin Equivalents Loadings Report

By February 28th of each year, the permittee shall report the cumulative loading of total dioxin equivalents for each site that received sludge during the previous calendar year.

Required Action	Due Date
Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received sludge during 2024. If no land application occurred, then this report is not required.	02/28/2025
Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received sludge during 2025. If no land application occurred, then this report is not required.	02/28/2026
Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received sludge during 2026. If no land application occurred, then this report is not required.	02/28/2027
Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received sludge during 2027. If no land application occurred, then this report is not required.	02/28/2028
Ongoing Annual Total Dioxin Equivalents Loading Report: In the event that this permit is not reissued by the expiration date and is administratively continued, the permittee shall report the	

cumulative loading of total dioxin equivalents for each site that received sludge during the previous year. If no land application occurred, then this report is not required.	
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6.6 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	06/30/2024
Ongoing Management Plan Updates: The permittee shall submit updates to the department whenever there are changes in landspreading practices.	

7 Standard Requirements

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

7.1 Reporting and Monitoring Requirements

7.1.1 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.

7.1.2 Sampling and Testing Procedures

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

7.1.3 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.

7.1.4 Reporting of Monitoring Results

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

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

7.1.5 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.

7.1.6 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.

7.1.7 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.

7.2 System Operating Requirements

7.2.1 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.**

7.2.2 Bypass

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

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

7.2.3 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.

7.2.4 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.

7.2.5 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.

7.2.6 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).

7.2.7 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.

7.2.8 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.

7.2.9 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.

7.3 Surface Water Requirements

7.3.1 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.

7.3.2 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.

7.3.3 Appropriate Formulas for Effluent Calculations

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

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

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

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

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

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

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

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

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

7.3.4 Effluent Temperature Requirements

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.

7.3.5 Visible Foam or Floating Solids

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

7.3.6 Surface Water Uses and Criteria

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

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

7.3.7 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.

7.3.8 Additives

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

7.3.9 Whole Effluent Toxicity (WET) Monitoring Requirements

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

7.3.10 Whole Effluent Toxicity (WET) Identification and Reduction

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

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

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

7.4 Groundwater Standard Requirements

7.4.1 Application of NR 140 to Substances Discharged

This permit does not authorize the permittee to discharge any substance in a concentration which would cause an applicable groundwater standard of ch. NR 140, Wis. Adm. Code, to be exceeded. The Department may seek a response under NR 140 if the permittee's discharge causes exceedance of an applicable groundwater standard for any substance, including substances not specifically limited or monitored under this permit.

7.4.2 Groundwater Sampling

Groundwater sampling shall be performed in accordance with procedures contained in the WDNR publications, Groundwater Sampling Desk Reference (PUBL-DG-037-96) and Groundwater Sampling Field Manual (PUBL-DG-038-96).

7.4.3 Indicator Parameter - Preventive Action Limits

Preventive action limits for indicator parameters are calculated using a minimum of eight sample analysis results available from a representative background well in accordance with the procedures in s. NR 140.20, Wis. Adm. Code.

7.4.4 Groundwater Monitoring Forms

Results of the groundwater analyses shall be summarized and reported on Groundwater Monitoring Forms. This report form is to be returned to the Department no later than the date indicated on the form. A copy of the groundwater monitoring form or an electronic file of the form shall be retained by the permittee. Groundwater monitoring results shall be reported on an electronic groundwater monitoring form and certified electronically via the 'eReport Certify' page by a responsible executive or municipal 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.

7.4.5 Appropriate Formulas for Groundwater

Total Nitrogen = Total Kjeldahl Nitrogen (mg/L) + [NO₂ + NO₃] Nitrogen (mg/L)

Organic Nitrogen (mg/L) = Total Kjeldahl Nitrogen (mg/L) - Ammonia Nitrogen (mg/L)

7.4.6 Reporting Depth to Groundwater

Depth to groundwater shall be reported in feet, to the nearest 0.01 foot, below the top of the well casing. A report shall be on file with the Department stating the well casing top elevation in feet above mean sea level (MSL), to the nearest 0.01 foot, for each groundwater monitoring well.

7.4.7 Groundwater Elevation

Groundwater elevations shall be calculated by subtracting the depth to groundwater measurement from the well casing top elevation and shall be reported in feet above mean sea level (MSL) to the nearest 0.01 foot.

7.4.8 Groundwater Grab Samples

Grab samples shall be taken of the groundwater only after adequate removal or purging of standing water within the well casing has been performed. For those wells which will refill with water as fast as the water can be removed by bailing or pumping, four well volumes shall be removed prior to sample collection and analysis. For those wells which will not refill with water as fast as the water can be removed by bailing or pumping, the existing volume of water inside the well casing shall be removed and samples collected after the well has refilled to at least half the original volume in the well.

7.4.9 Filtering of Groundwater Samples

All groundwater monitoring well samples shall be filtered prior to analysis, except for the portion used to measure pH or field specific conductance, which shall be done using an unfiltered sample. While in-field analysis is preferred for these two tests, laboratory analysis done within two hours of sample collection is acceptable. For the portion to be filtered, it is preferred that filtering be performed in the field immediately following sample collection. However, laboratory filtering is acceptable. Filtering shall be performed through a standard 0.45 micron filter.

7.4.10 Groundwater Data Log

A data log shall be used to record the results of all field sampling and analysis events. This log shall include date of sampling event, groundwater sampler's name, well identification, depth from pipe top to water, depth from pipe top to well bottom, time of purging (start to end), volume of water purged, indication of whether the well was purged dry, time of sample withdrawal, and the following applicable field observations: pH, field conductivity, temperature, color, odor and turbidity, indication of whether field filtering was performed and time of filtering, indication of cap and lock replaced, and comments.

7.4.11 Notification of Attaining or Exceeding Groundwater Quality Standards

The permittee shall notify the Department when monitoring results indicate that a Preventive Action Limit or Enforcement Standard has been attained or exceeded. This notification may be provided in the general remarks section of the groundwater monitoring form or by letter attached to the groundwater monitoring form. Any values reported as exceeding a groundwater standard shall be confirmed as being from a representative sample and as a correct laboratory analysis result.

7.4.12 Preventive Action Limit (PAL) Exceedance

Analysis results (from the land treatment monitoring wells) that are less than this permit's PALs indicate that operation of the land treatment system is protective of groundwater quality. Substance concentrations that exhibit a trend over time of being greater than the PAL may indicate that additional technically and economically feasible actions are needed to reduce the discharge of the substance to the groundwater. In such a case, the Department may request an evaluation and response or propose a permit modification to require submittal of a groundwater evaluation report and implementation of a feasible response as specified in NR 140.24(1)(b), Wis. Adm. Code.

7.4.13 Enforcement Standard Exceedance Within the Design Management Zone

Substance concentrations greater than this permit's enforcement standard (ES) in a permittee's monitoring well located within the property boundary and within the design management zone of the land treatment system may indicate that the groundwater concentration exceeds an ES outside of these boundaries. If the Department determines there is reasonable evidence that an ES is being attained or exceeded beyond the property boundary or beyond the design management zone, the Department may request an evaluation and response or propose a permit modification to require an evaluation report and appropriate response as specified in s. NR 140.27, Wis. Adm. Code.

7.4.14 Enforcement Standard Exceedance Outside the Design Management Zone

The permittee's land treatment system shall not cause the concentration of a substance in groundwater to attain or exceed this permit's enforcement standard at any point of present groundwater use, at any point beyond the property boundary, or at any point beyond the design management zone established under s. NR 140.22, Wis. Adm. Code. When this condition is not met, **the permittee shall, within 120 days following notification by the Department of the attainment or exceedance of an ES beyond the compliance boundary, submit a groundwater quality evaluation and response report** as specified in NR 140.26(1)(b), Wis. Adm. Code. The Department may propose modification of this permit to require the permittee to implement additional treatment or other actions as specified in s. NR 140.26, Wis. Adm. Code.

7.5 Land Application Requirements

7.5.1 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

7.5.2 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for “PCB, Total Dry Wt” is required by this permit, the PCB concentration in the sludge shall be determined using either congener-specific analysis or Aroclor analysis. The permittee may decide which of these analyses is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code:

- If congener-specific analysis is employed: All PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection (LOD) and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported.
- If Aroclor analysis is employed, reporting protocols, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected, then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If the LOD cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference.

7.5.3 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.

7.5.4 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for “PCB, Total Dry Wt” is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. Note: It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.
- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method

3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

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

7.5.5 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.

7.5.6 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.

7.5.7 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.

7.5.8 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.

7.5.9 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:

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

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

7.5.10 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"):

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

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

7.5.11 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.

7.5.12 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.

7.5.13 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.

7.5.14 Field Stockpiles

The permittee is encouraged to landspread the by-product solids or sludges as they are transported to the fields; but if it becomes necessary to stockpile solids in the fields, the stockpiles shall be spread within 72 hours or as specified in the approved management plan.

7.5.15 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.

8 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Cooling Water Intake Structure - General -Annual Certification Statement	January 31, 2025	26
Cooling Water Intake Structure - General -Annual Certification Statement	January 31, 2026	26
Cooling Water Intake Structure - General -Annual Certification Statement	January 31, 2027	26
Cooling Water Intake Structure - General -Annual Certification Statement	January 31, 2028	26
Cooling Water Intake Structure - General -CWIS Application Materials Due	September 30, 2028	26
Cooling Water Intake Structure - General -Annual Certification Statement	January 31, 2029	26
Cooling Water Intake Structure - General -Ongoing Annual Certification Statements	See Permit	26
Cooling Water Intake Structure - Modifications -Preliminary Intake Evaluation	March 31, 2025	26
Cooling Water Intake Structure - Modifications -Final Compliance Report	March 31, 2026	26
Cooling Water Intake Structure - Modifications -Begin Implementation	March 31, 2027	26
Cooling Water Intake Structure - Modifications -Complete Intake Structure Modifications	March 31, 2028	26
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge	March 31, 2025	27
PFOS/PFOA Minimization Plan Determination of Need -Report on Effluent Discharge and Evaluation of Need	March 31, 2026	27
Holding Pond Response Actions -Preliminary Evaluation of Interim Actions	December 31, 2024	27
Holding Pond Response Actions -Commence Interim Actions	March 31, 2025	27
Holding Pond Response Actions -Engineering Evaluation of Abandonment and/or Dredging the Pond	March 31, 2026	27
Holding Pond Response Actions -Submit Abandonment Plan	September 30, 2026	27
Holding Pond Response Actions -Dredging Report #1	March 31, 2027	27
Holding Pond Response Actions -Submit New Holding Tank Plans & Specifications	March 31, 2027	28
Holding Pond Response Actions -Commence Construction of New Holding Tank	September 30, 2027	28
Holding Pond Response Actions -Dredging Report #2	March 31, 2028	28
Holding Pond Response Actions -Abandonment Report #1	March 31, 2028	28
Holding Pond Response Actions -Interim Actions Report	March 31, 2029	28
Holding Pond Response Actions -Dredging Report #3	March 31, 2029	28
Holding Pond Response Actions -Abandonment Report #2	March 31, 2029	28
Holding Pond Response Actions -Dredging Report #4	March 31, 2030	28

Holding Pond Response Actions -Abandonment Report #3	March 31, 2030	28
Holding Pond Response Actions -Complete Dredging	March 31, 2031	28
Holding Pond Response Actions -Complete Abandonment	March 31, 2031	28
Total Dioxin Equivalents Loadings Report -Annual Total Dioxin Equivalents Loading Report	February 28, 2025	28
Total Dioxin Equivalents Loadings Report -Annual Total Dioxin Equivalents Loading Report	February 28, 2026	28
Total Dioxin Equivalents Loadings Report -Annual Total Dioxin Equivalents Loading Report	February 28, 2027	28
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Total Dioxin Equivalents Loadings Report -Ongoing Annual Total Dioxin Equivalents Loading Report	See Permit	29
Land Application Management Plan -Land Application Management Plan	June 30, 2024	29
Land Application Management Plan -Ongoing Management Plan Updates	See Permit	29
General Sludge Management Form 3400-48	prior to any significant sludge management changes	39
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	40
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	40
Groundwater Monitoring Forms.	no later than the date indicated on the form	37
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	30

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:
West Central Region, 1300 W. Clairemont Ave, Eau Claire, WI 54701