Permit Modification Fact Sheet

Changes from the previous permit fact sheet are highlighted in grey.

General Information

Permit Number:	WI-0003468-10-1	
Permittee Name:	Ahlstrom Stevens Point LLC	
Address:	**Stevens Point Mill** 707 Arlington Place Stevens Point, Wisconsin 54481	**Water Renewal Center** 2690 West River Drive Stevens Point, Wisconsin 54481
City/State/Zip:	STEVENS POINT WI 54481	
Discharge Location:	The Wisconsin River in Portage County, and the groundwaters of primarily Adams, Clark, Jackson, Juneau, Marathon, Portage, Waushara, and Wood Counties via approved landspreading sites.	
Receiving Water:	Wisconsin River	
StreamFlow ($Q_{7,10}$):	7-Q10 = 1110 cfs	
Stream Classification:	Warm Water Sport Fish (WWSF) community and non-public water supply	
Discharge Type:	Continuous	

Facility Description

Ahlstrom Stevens Point LLC continues to operate the Stevens Point Mill and the Water Renewal Center under WPDES permit no. WI-0003468-10-0.

The Stevens Point Mill is a non-integrated paper mill that has two specialty paper machines with an annual capacity of approximately 210,000 tons per year. In addition, the facility operations include an off-machine hot soft calender, two finishing winders and four salvage winders. The mill has a stock preparation area that processes market pulp as raw material stock for the paper machines and there are two independent coating departments that provide surface coatings to the respective paper machines. There are two gas-fired boilers that provide steam to the mill and one turbine generator associated with one of the boilers. Some of the specialty products include flexible packaging papers for pouches, spiral canisters, bags and various types of wrapping paper; label papers for bottles, jars and cans; high-gloss papers that are metalized; and technical papers for sales receipts, address labels, postage stamps and release liners. The mill's acid papermaking process is elemental chlorine-free. The mill holds the following certifications for its operations and products: FSC, SFI, PEFC, ISO 9001-2015 and Green Matters.

Ahlstrom Stevens Point LLC draws 2.95 MGD of municipal water for the processing operations at the Stevens Point Mill and 5,651 GPD from the Village of Whiting for Water Renewal Center. Of this, 0.060 MGD is returned to the municipal wastewater treatment plant from the Mill's sanitary usage and 0.030 MGD is returned to the atmosphere from the paper drying process.

The Mill does not use additives to treat the seal water prior to use nor does it treat the seal water prior to discharge.
The Water Renewal Center discharges treated process wastewater to the Wisconsin River by way of outfall 003 during normal operations. The Water Renewal Center provides pH neutralization, primary clarification, activated sludge secondary treatment and sludge dewatering. In addition to treating process wastewaters from the Stevens Point Mill, the Water Renewal Center treats leachate from the Water Renewal Center landfill, which is adjacent to the Water Renewal Center.

Substantial Compliance Determination

Enforcement During Last Permit: None

After a desk top review of all discharge monitoring reports, land app reports, compliance schedule items, and a site visit on 11/30/2022, the Pixelle Androscoggin LLC- Water Renewal Center (now Ahlstrom Stevens Point LLC) has been found to be in substantial compliance with their current permit.

Compliance determination entered by Nicholas Lindstrom on March 12, 2024.

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)**
003	Maximum Day[1]: 5.87 MGD [April, 2022] Maximum Annual Average[1]: 4.27 MGD [2022]	OUTFALL: At Sampling Point 003, which is located in the sample house east of the Water Renewal Center's secondary clarifiers, final effluent from the Water Renewal Center shall be monitored prior to discharge to the Wisconsin River, which is located in the tailrace of the Whiting Mill dam on the east, downstream side of the dam. Effluent discharged through Outfall 003 can also be diverted to serve as gate deicing water for the Whiting Mill dam.
012	Maximum Annual Average[1]: 3,042 GPD [2021]	OUTFALL: At Sampling Point 012 (formerly 112), which is located in a manhole southwest of the Water Renewal Center's aeration basins, landfill groundwater shall be monitored prior to discharge to an unnamed drainage ditch that empties to the Wisconsin River on the west bank downstream from the Whiting Mill dam.
013	Waste Volume Annual Average[1]: 5,235 tons (dry weight basis)	SLUDGE: Wastewater treatment system sludge from the Water Renewal Center (ConsoGro2) shall be sampled prior to land application via Outfall 013.
117	N/A	FIELD BLANK: Mercury field blank to accompany mercury sampling at Sampling Point 003, Water Renewal Center effluent.

[1]: As reported in submitted application.

1 Inplant - Monitoring and Limitations

Sample Point Number: 117- WRC 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	Effective through 2025, 2026 and 2027.

Changes from Previous Permit:

Sample Point 117 monitoring requirements were re-evaluated for the proposed permit term and no changes were made from the previous permit.

Explanation of Limits and Monitoring Requirements

Mercury: Quarterly mercury sample collection is required for 3 of the permit term's 5 years to satisfy the data requirements of s. NR 106.145(2)(b), Wis. Adm. Code.

2 Surface Water - Monitoring and Limitations

Sample Point Number: 003- WRC EFFLUENT(tailrace outfall)

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD5, Total		mg/L	5/Week	24-Hr Flow Prop Comp	See permit subsection 2.2.1.1
BOD5, Total	Daily Max	3,958 lbs/day	5/Week	Calculated	
BOD5, Total	Monthly Avg	2,149 lbs/day	5/Week	Calculated	
Suspended Solids, Total		mg/L	5/Week	24-Hr Flow Prop Comp	See permit subsection 2.2.1.1
Suspended Solids, Total	Daily Max	4,976 lbs/day	5/Week	Calculated	
Suspended Solids, Total	Monthly Avg	2,601 lbs/day	5/Week	Calculated	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	Effective through 2025, 2026 and 2027.
Phosphorus, Total	Monthly Avg	0.93 mg/L	Weekly	24-Hr Flow Prop Comp	Existing concentration limits that are already in effect (Interim, TBEL, WQBELs dictated by s. NR 217.13, Wis. Adm. Code) will be maintained to prevent backsliding.
Phosphorus, Total	6-Month Avg	13 lbs/day	Monthly	Calculated	See TMDL section below.
Phosphorus, Total	Monthly Avg	40 lbs/day	Monthly	Calculated	See TMDL section below.
Phosphorus, Total		lbs/month	Monthly	Calculated	Calculate the Total Monthly Discharge of phosphorus and report on the last day of the month on the DMR. See TMDL section below.
Phosphorus, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					rolling sum of total monthly mass of phosphorus discharged and report on the last day of the month on the DMR. See TMDL section below.
PFOS		ng/L	1/ 2 Months	24-Hr Flow Prop Comp	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
PFOA		ng/L	1/ 2 Months	24-Hr Flow Prop Comp	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
Temperature		deg F	Daily	Continuous	
pH (Minimum)	Daily Min	5.0 su	Daily	Continuous	See permit subsection 2.2.1.7
pH (Maximum)	Daily Max	9.0 su	Daily	Continuous	See permit subsection 2.2.1.7
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Continuous	See permit subsection 2.2.1.7
pH Exceedances Greater Than 60 Minutes	Daily Max	0 Number	Daily	Continuous	See permit subsection 2.2.1.7
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See permit subsection 2.2.1.8

Changes from Previous Permit

Sample Point 003 monitoring requirements were re-evaluated for the proposed permit term and the following changes were made from the previous permit;

Limits: Limits from theoretical Outfall 011 have been added under Outfall 003 now that Outfall 011 has been deleted. The last emergency bypass discharges through Outfalls 009 and 010 occurred in 2009. Since Outfall 011 accounted for the combined discharge of Outfall 003 and bypass Outfalls 009 and 010, it is no longer necessary.

BOD_5: Daily max of 3,958 lbs/day and monthly average of 2,149 lbs/day limits added at the frequencies of five times per week. These limits were previously part of theoretical outfall 011 limits, although the frequency has now changed from three times per week to five times per week to better track the significant variability of the data and per the Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021). Standard monitoring frequency of daily is not deemed necessary as the facility has demonstrated excelled performance levels that will allow for limit compliance to be met. BOD_5 concentration parameter also added as standard set-up as this helps the Department verify the mass conversions.

Suspended Solids: Daily max of 4,976 lbs/day and monthly average of 2,601 lbs/day limits added at the frequencies of five times per week. These limits were previously part of theoretical outfall 011 limits, although the frequency has now changed from three times per week to five times per week to better track the significant variability of the data and per the Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021). Standard monitoring frequency of daily is not deemed necessary as the facility has demonstrated excelled performance levels that will allow for limit compliance to be met. Suspended solids concentration parameter also added as standard set-up as this helps the Department verify the mass conversions.

Phosphorus: Mass based phosphorus TMDL limits of 13 lbs/day as a six-month average and 40 lbs/day as a monthly average have been added to the permit to comply with requirements of the Wisconsin River TMDL. Effluent concentration limit of 0.93 mg/L remains to prevent backsliding but frequency of sampling changed from one time per month to one time per week as current data shows significant variability and because weekly sampling has been the minimum sampling frequency for similar facilities. Upon permit reissuance, concentrations will be used to calculate amounts reported for mass-based limits. An additional reporting requirement for lbs/month will be used to calculate the facility's 12-month rolling sum of total monthly discharge, which can be compared directly to the facility's designated WLA.

PFOS and PFOA: Monthly monitoring is included in the permit in accordance with s. NR 106.98(2)(d), Wis. Adm. Code. The monitoring frequency for PFOS and PFOA has been reduced from Monthly to 1/ 2 Months.

Temperature: Daily temperature monitoring added.

pH: The limits have remained the same but they are now expanded in the table.

Narrative Requirements:

- "Sample Frequency for BOD_5 and Total Suspended Solids (TSS)" subsection replaced by "Sample Frequency for BOD5, Total Suspended Solids (TSS) and Phosphorus" to include phosphorus information too and update sample frequency information.
- To explain the new Phosphorus requirements, subsection "Total Maximum Daily Load (TMDL) Limitations for Total Phosphorus" was added.
- "PFOS/PFOA Sampling and Reporting Requirements" and "PFOS/PFOA Minimization Plan Determination of Need" subsections were added to discuss PFOS/PFOA requirements.
- "Effluent Temperature Monitoring" subsection added to explain how continuous temperature samples shall be collected.

Explanation of Limits and Monitoring Requirements

Refer to the WQBEL memo for the detailed calculations, prepared by the Water Quality Bureau dated March 09, 2023 used for this reissuance.

BOD_5 and Suspended Solids: Technology based effluent limits. See fact sheet attachment Appendix A: Technology Based Effluent Limitations for more information.

Wisconsin River Total Maximum Daily Load (TMDL): The permitted facility is included within the Wisconsin River Basin Total Maximum Daily Load (TMDL), which was approved by EPA April 26, 2019. The TMDL establishes Waste Load Allocations (WLAs) for point source dischargers and determines the maximum amounts of phosphorus that can be discharged and still protect water quality. The final effluent limits and monitoring expressed in the permit were derived from Site-Specific Criteria (SSC) for Lakes Petenwell, Castle Rock, and Wisconsin originally included in Appendix K of the TMDL report and approved by the U.S. Environmental Protection Agency on July 9, 2020. The permittee's approved SSC-based limits are consistent with the assumptions and requirements of the EPA-approved WLA in the TMDL.

The approved TMDL expresses WLAs as 3,197 lbs/year and 8.76 lbs/day (maximum annual load divided by 365 days). As outlined in Section 4.6 of the department's *TMDL Development and Implementation Guidance: Integrating the*

WPDES and Impaired Waters Program, mass limits must be given in the permit that are consistent with the TMDL WLA and the phosphorus impracticability agreement that was approved by USEPA in 2012 (see NPDES MOA Addendum dated July 12, 2012 at https://prodoasint.dnr.wi.gov/swims/downloadDocument.do?id=167886175). Continuously discharging facilities covered by the WRB TMDL are given monthly average mass limits. If the equivalent effluent concentration is less than or equal to 0.3 mg/L, six-month average mass limits (averaging period of May through October and November through April) are also included. The equivalent effluent concentration of 0.246 mg/L was calculated for the facility, thus, TMDL based mass limits are expressed as a six-month average and a monthly average equal to three times the six-month average limits.

Facilities with WRB TMDL based effluent limits for phosphorus must report the 12-month rolling sum of total monthly discharge (lbs/yr). If reported 12-month rolling sums exceed the facility's max annual WLA, the facility's mass limits (monthly average and six-month average) may be recalculated using more appropriate CVs or monitoring frequencies when the permit is reissued to bring discharge levels into compliance with the facility's given WLA.

PFOS and PFOA: NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. At the first reissuance of a WPDES permit after August 1, 2022, the new rule requires WPDES permits for industrial dischargers to be evaluated on a case-by-case basis to determine if monitoring is required pursuant to s. NR 106.98(2)(d), Wis. Adm. Code. The department evaluated the need for PFOS and PFOA monitoring taking into consideration industry type and other potential sources of PFOS or PFOA. Based on information available at the time the proposed permit was drafted, it was identified that the industrial discharger category may be a potential source of PFOS/PFOA. Therefore, monthly monitoring is included. The initial determination of need sampling shall be conducted for up to two years in order to determine if the permitted discharge has the reasonable potential to cause or contribute to an exceedance of the PFOS or PFOA standards under s. NR 102.04(8)(d)1, Wis. Adm. Code.

Pursuant to s. NR 205.066, Wis. Adm. Code, the department may specify the monitoring frequency for PFOS and PFOA on a case-by-case basis after the initial 24 months of sampling.

After a review of the data submitted with the Year 2 Report on Effluent Discharges, the department has determined that it is warranted to reduce the sampling frequency in this case. The department is requiring continued monitoring of these compounds to complete the permit term to ensure that the current effluent quality is maintained. At the next permit reissuance, the department will make another determination as to whether further reduction or removal of monitoring is warranted, based on the continued sampling results.

Temperature: Temperature data for this outfall is necessary to perform a reasonable potential analysis. Currently, no temperature data is available for Outfall 003. Temperature data was collected at Outfalls 021 and 022 which discharged seal water and noncontact cooling water. Outfalls 021 and 022 have been closed off and the discharge has been rerouted to Outfall 003. These discharges are expected to contribute the majority of the heat load at Outfall 003.

pH: Limits for pH remain unchanged. Both current and proposed permits specify pH limits of 5.0 minimum and 9.0 maximum pursuant to s. NR 284.12, Wis. Adm. Code, while allowing occasional excursions.

Monitoring Frequencies: The **Monitoring Frequencies for Individual Wastewater Permits** guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure fairness and consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term.

The department has determined at this time that an increase in monitoring frequency is warranted because of data variability.

Expression of Limits: In accordance with the federal regulation 40 CFR 122.45(d) and s. NR 205.065, Wis. Adm. Code. limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable.

Whole effluent toxicity: Whole effluent toxicity (WET) testing requirements and limits (if applicable) are determined in accordance with ss. NR 106.08 and NR 106.09, Wis. Adm. Code, as revised August 2016. (See the current version of the Whole Effluent Toxicity Program Guidance Document and checklist and WET information, guidance and test methods at http://dnr.wi.gov/topic/wastewater/wet.html).

Sample Point Number: 012- WRC LANDFILL GROUNDWATER

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	1/ 6 Months	Estimated	
COD, Filtered		mg/L	1/ 6 Months	Grab	

Changes from Previous Permit

Sample Point 012 monitoring requirements were re-evaluated for the proposed permit term and no changes were made from the previous permit.

3 Land Application - Sludge/By-Product Solids (industrial only)

Sample Point Number: 013- WRC 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	
Cadmium Dry Wt		mg/kg	Annual	Grab Comp	
Copper Dry Wt		mg/kg	Annual	Grab Comp	
Dioxin, 2,3,7,8-TCDD Dry Wt		ng/kg	Annual	Grab Comp	
Dioxin, 2,3,7,8-TCDD TE		ng/kg	Annual	Calculated	
Furan, 2,3,7,8-TCDF Dry Wt		ng/kg	Annual	Grab Comp	
Lead Dry Wt		mg/kg	Annual	Grab Comp	
Nickel Dry Wt		mg/kg	Annual	Grab Comp	
Nitrogen, Ammonia (NH3-N) Total		Percent	Annual	Grab Comp	
pH Field		su	Annual	Grab	
Phosphorus, Total		Percent	Annual	Grab Comp	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Water Extractable		% of Tot P	Annual	Calculated	
Potassium, Total Recoverable		Percent	Annual	Grab Comp	
Zinc Dry Wt		mg/kg	Annual	Grab Comp	
Aluminum Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Barium, Total Recoverable		mg/kg	Once	Grab Comp	Sample in 2025.
Boron Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Calcium Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Chloride		Percent	Once	Grab Comp	Sample in 2025.
Fluoride		mg/kg	Once	Grab Comp	Sample in 2025.
Iron Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Magnesium Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Manganese Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Molybdenum Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Nitrogen, Nitrite + Nitrate Total		Percent	Once	Grab Comp	Sample in 2025.
Sodium Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
Strontium, Total Recoverable		mg/kg	Once	Grab Comp	Sample in 2025.
Sulfate, Total		mg/kg	Once	Grab Comp	Sample in 2025.
PCB Total Dry Wt		mg/kg	Once	Grab Comp	Sample in 2025.
PFOA + PFOS		µg/kg	Annual	Calculated	Report the sum of PFOA and PFOS. See PFAS Permit Sections for more information.
Priority Pollutant Scan			Once	Grab Comp	As specified in ch. NR 215.03 (1-6), Wis. Adm. Code (excluding asbestos). Use grab samples for mercury, cyanide and VOCs. Use 24-hr flow proportional samples for all other parameters.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Dioxins & Furans (all congeners)			Once	Grab Comp	As specified in ch. NR 106.115, Wis. Adm. Code.
PFAS Dry Wt			Annual	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

Changes from Previous Permit:

Sample Point 013 monitoring requirements were re-evaluated for the proposed permit term and the following changes were made from the previous permit;

PCB Total Dry Wt: This parameter is part of a picklist in the Department's coding system and the default has changed from ug/kg to mg/kg.

PFOA + PFOS and PFAS Dry Wt: Annual monitoring is included in the permit pursuant s. NR 214.18(5)(b), Wis. Adm. Code.

Narrative Requirements:

- "Total Dioxin Equivalents (TDE) Limitations" and "Calculation of Dioxin Toxicity Equivalence (TEQ)" language updated to align this permit's monitoring requirements with those of similar facilities. As part of this update, Dioxin Toxicity Equivalence (TEQ) calculations were added to the permit, outlining the Toxicity Equivalency Factors to be used for each specific congener.
- "Prediction of TDE Loading Prior to Application" section added to predict the TDE loading prior to application to prevent potential overloading of the site.
- "Daily Log" subsection added to add important information pertaining to daily log requirements.
- "Sludge Monitoring for PFAS" subsection added to further explain which PFAS compounds shall be sampled.
- "Sampling and Reporting Sludge Samples for PFAS" subsection added to explain sampling and reporting procedures.
- "PFAS Land Application Requirements" subsection added as additional information.

Explanation of Limits and Monitoring Requirements

s. NR 214.18(5), Wis. Adm. Code, states: "*The department may require in a WPDES permit that the sludge spreading-discharge be monitored for total suspended solids, forms of nitrogen, chloride, metals or any other pollutant that may be present. The department shall select the pollutants to be monitored and the required frequency of monitoring on a case−by−case basis by considering the potential public health impacts, probable environmental impact, soil and geologic conditions, past operating performance, concentrations and characteristics of pollutants in the discharge and other relevant information.*" This forms the basis for the following monitoring requirements.

Total Solids: 'Total Solids' monitoring is important for waste characterization. This also ensures the permittee is reporting the solids results already obtained from the lab.

TKN: 'TKN (Total Kjeldahl Nitrogen)' monitoring is required for calculation of application rates for nutrient tracking purposes.

Chloride: 'Chloride' monitoring is required to ensure the NR 214 chloride loading limit of 170 lbs/acre/year (or 340 lbs/acre/2 years) is not exceeded.

Ammonia: Ammonia monitoring on an annual basis allows further tracking of nitrogen and characterization of the waste type.

Metals: Metals (Lead, Zinc, Copper, Cadmium, Nickel) monitoring is proposed to track the specific metal loading rates on approved landspreading sites in accordance with the requirements of s. NR 214.18, Table 4, Wis. Adm. Code.

Table 4
Maximum Cumulative Cadmium, Copper, Lead, Nickel and Zinc Application for a Landspreading Site

Soil Cation Exchange Capacity (meq/100g)	Less than 5 lbs/ac	5–10 lbs/ac	10–15 lbs/ac	Greater than 15 lbs/ac
Lead	445	890	1,335	1,750
Zinc	225	445	670	890
Copper	110	220	335	445
Nickel	45	90	135	180
Cadmium				
Soil pH < 6.5	4.5	4.5	4.5	4.5
Soil pH ≥ 6.5	4.5	9.0	13.5	18

PCBs: Total PCBs is required as pulp/paper manufacturers are historical users of these compounds. This will allow the department to determine the health risks associated with this landspreading activity.

Dioxins & Furans: Monitoring for all 17 congeners of Dioxins and Furans is required as pulp/paper manufacturers are historical users of these compounds. They're listed here:

- 2,3,7,8−TCDD
- 1,2,3,7,8−PeCDD
- 1,2,3,4,7,8−HxCDD
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- 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
- 2,3,4,6,7,8−HxCDF
- 1,2,3,7,8,9−HxCDF
- 1,2,3,4,6,7,8−HpCDF
- 1,2,3,4,7,8,9−HpCDF
- OCDF

Priority Pollutant Scan: A priority pollutant scan is required to adequately characterize this waste and assess potential health risks.

PFAS: The presence and fate of PFAS in municipal and industrial sludges is an emerging public health concern. EPA is currently developing a risk assessment to determine future land application rates and expects to release this risk

assessment by the end of 2024. In the interim, the department has developed the "Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS".

Collecting sludge data on PFAS concentrations from a wide range of wastewater treatment facilities will help protect public health from exposure to elevated levels of PFAS and determine the department's implementation of EPA's recommendations. To quantitate this risk, PFAS sampling has been included in the proposed WPDES permit pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9., Wis. Adm. Code

Water Extractable Phosphorus- Water extractable phosphorus (WEP) is the coefficient for determining plant available phosphorus from measured total phosphorus. In Wisconsin, the Penn State Method is utilized and is expressed in percent. While a total P may be significant, the WEP may show that only a small percentage of the P is available to plants because of factors such as treatment processes and chemical addition that "tie-up" phosphorus limiting the amount of phosphorus that is plant available. As part of the Wisconsin's nutrient management plan (NMP) requirements, the accounting of all fertilizers must be included over the NMP cycle. The fertilizer value of the waste needs to be communicated to the farmer and accounted for in the NMP.

Total Dioxin Equivalent: The maximum concentration of 1.2 ng/kg TDE in the soil profile for agricultural sites is based on a human health risk assessment that was undertaken in 1992 by Jay Goldring, Ph.D., Toxicology of the Wisconsin Department of Health and Social Service's Division of Health. In a May 4, 1994 update of the risk assessment, Dr. Goldring established the maximum concentration of 0.5 ng/kg of total dioxin equivalence in the soil profile for sites with grazing livestock. The definitions of agricultural and livestock grazing sites were based on language in these risk assessments. Monitoring for Dioxin, 2,3,7,8-TCDD TE will allow Cascades Tissue to track TDE concentrations to agricultural and livestock grazing sites so that the above limits are exceeded. Therefore, monitoring for Dioxin 2,3,7,8-TCDD TE is retained in the permit.

The addition to the definition of soil profile for sites where livestock will graze, 2 centimeters below the litter soil interface when sludge or sludge mixed with ash are not incorporated, was taken from "Exposure Analysis for Dioxins, Dibenzofurans, and CoPlanar Polychlorinated Biphenyls in Sewage Sludge: Technical Background Document", October 17, 2003, Center for Environmental Analysis, RTI International.

The cumulative loading limit of 0.53 mg TDE per acre for silvicultural sites and the toxicity equivalency factors of 1 and 0.0013 for 2,3,7,8-TCDD and 2,3,7,8-TCDF are taken from a wildlife exposure case study performed by the Department and Nekoosa Paper Company in 1992 ("Establishing Safe Dioxin Criteria for Land Application of sludge (or Other Products): A Wildlife Exposure Case Study," Wisconsin Department of Natural Resources, October 1992). The definition of silvicultural sites was based on language in these studies. Monitoring for 2,3,7,8-TCDD and 2,3,7,8-TCDF will allow Cascades Tissue to calculate and track TDE loadings to silvicultural sites. Therefore, monitoring for 2,3,7,8-TCDD and 2,3,7,8-TCDF is retained in the permit.

The department has the regulatory authority to impose limits on the land application of sludges that contain bioaccumulative organics in s. NR 214.18(4)(i), Wis. Adm. Code.

Pre-application prediction of TDE loading to land application sites is added. The permit requires Ahlstrom Stevens Point LLC to assume that TDE from previous applications of sludge are still present in the soil profile unless soil from the application site has been tested for 2,3,7,8-TCDD and 2,3,7,8-TCDF. The pre-application predication allows for a more accurate estimate of post-application TDE concentrations in the soil profile and, therefore, helps prevent exceedances of cumulative TDE limits at land application sites.

When monitoring is required for the seventeen 2,3,7,8-substituted dioxins and furans, the results shall be calculated and converted to TCDD TEQ. The permittee should use the provided toxic equivalency factors (TEF) to express dioxins and furans in terms of the most toxic form of dioxin, 2,3,7,8 TCDD. The permittee shall report the TCDD TEQ as 2,3,7,8-TCDD TE for the results of the seventeen 2,3,7,8-substitued dioxin and furan congeners. This calculation and TEFs are based a system developed by the World Health Organization in 2005. The sludge concentration, recommended by the Wisconsin Division of Health (1989), shall not exceed 80 ng/kg TCDD TEQ. This calculation allows for a more thorough evaluation of the potential toxicity of the sludge. The calculated 2,3,7,8-TCDD TE monitoring is used for reporting the dioxin TEQ calculated from the results of the scan of the seventeen 2,3,7,8-substitued dioxin and furan congeners.

4 Schedules

4.1 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 ConsoGro2 during the previous calendar year.

Required Action	Due Date
First Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received ConsoGro2 during 2024	02/28/2025
Second Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received ConsoGro2 during 2025	02/28/2026
Third Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received ConsoGro2 during 2026	02/28/2027
Fourth Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received ConsoGro2 during 2027	02/28/2028
Fifth Annual Total Dioxin Equivalents Loading Report: The permittee shall report the cumulative loading of total dioxin equivalents for each site that received ConsoGro2 during 2028	02/28/2029

Explanation of Schedules

2,3,7,8-TCDD Total Dioxin Equivalents Cumulative Loading Limits

The cumulative loading limits for total dioxin equivalents are based on a human health risk assessment that was undertaken in 1992 by the Wisconsin Department of Health and Social Services and Wisconsin Department of Natural Resources.

Consistent with the current permit, the proposed permit requires the permittee to test sites for 2,3,7,8-TCDD and 2,3,7,8-TCDF prior to sludge application when calculated total dioxin equivalents will exceed 0.8 ng/kg in the soil profile after application of the sludge. The proposed requirement should ensure that accurate background information for dioxin and furan is available at application sites that are approaching the 1.2-ng/kg limit for total dioxin equivalents.

Also consistent with the current permit, the proposed permit reissuance requires the permittee to report cumulative loadings of total dioxin equivalents. While SWAMP verifies compliance with nitrogen and metals loading limits, it currently does not automatically verify compliance with total dioxin equivalents loading limits. Therefore, the proposed permit requires the permittee to report by **February 28th** of each year the cumulative loading of total dioxin equivalents for each site that has received Water Renewal Center sludge during the previous calendar year. The permittee should submit the cumulative loadings of total dioxin equivalents in a separate document from the sludge characteristic report (Form 3400-49) and the annual land application report (Form 3400-55).

4.2 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code.	06/30/2025

This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.	
Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan. This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results. The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan. If the department determines a PFOS/PFOA minimization plan is needed based on a reasonable potential evaluation, the permittee will be required to develop a minimization plan for department approval no later than 90 days after written notification was sent from the department. The department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued. If, however, the department determines there is no reasonable potential for the facility to discharge PFOS or PFOA above the narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code, no further action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.	06/30/2026

Explanation of Schedules

PFOS/PFOA Minimization Plan Determination of Need

As stated above, NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. S. NR 106.98, Wis. Adm. Code, specifies steps to generate data in order to determine the need for reducing PFOS and PFOA in the discharge. Data generated per the effluent monitoring requirements will be used to determine the need for developing a PFOS/PFOA minimization plan. As part of the schedule, the permittee is required to submit two annual Reports on Effluent Discharge.

If the Department determines that a minimization plan is needed, the permit will be modified or revoked/reissued to include additional requirements.

Special Reporting Requirements

No special requirements.

Other Comments:

No comments.

Attachments:

PFOS and PFOA Water Quality-Based Effluent Limitations for Ahlstrom Stevens Point LLC WPDES Permit No. (WI-0003468) in Portage County, by Amy Garbe, PE, Wastewater Engineer, dated July 27, 2026

Expiration Date: June 30, 2029

Justification Of Any Waivers From Permit Application Requirements

No waivers were given from permit application monitoring and reporting requirements

Prepared By: Laura Rodriguez Alvarez Wastewater Engineer Date: 04/10/2024

Revised By: Sarah Donoughe, Wastewater Specialist-Adv

Date: July 31, 2026

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: July 27, 2026

TO: Sarah Donoughe – NER

FROM: Kari Fleming – WY/3

SUBJECT: PFOS and PFOA Water Quality-Based Effluent Limitations for Ahlstrom Stevens Point LLC WPDES Permit No. (WI-0003468) in Portage County

This is in response to your request for an evaluation of the need for PFOS and PFOA limitations for the discharge from Ahlstrom Stevens Point LLC (previously Pixelle Androscoggin LLC Water Renewal Center). This industrial facility discharges to the Wisconsin River, located in the Wisconsin River Watershed in the Upper Wisconsin River Basin.

The current permit, effective since July 2024, has monitoring only for PFOS and PFOA. The following review is based on new regulations which are now in effect throughout the state of Wisconsin and recommendations are made in accordance with chapters NR 102, 104, 105, 106, 207, and 217 of the Wisconsin Administrative Code, where applicable.

Receiving Water Information

- Name: Wisconsin River
- Classification: Warm Water Sport Fish (WWSF) community, non-public water supply.
- Flow: The following 7-Q10 and 7-Q2 values are from USGS for the Wisconsin River at Stevens Point, where Outfall 003 is located.
  7-Q10 = 1110 cfs (cubic feet per second)
  7-Q2 = 1740 cfs
  Harmonic Mean Flow = 2697 cfs
  The Harmonic Mean has been estimated based on average flow and the $7\text{-}Q_{10}$ using an equation from U.S. EPA's *Technical Support Document for Water Quality-Based Toxics Control* (March 1991, EPA/505/2-90-003, pgs. 88-89).
- % of Flow used to calculate limits: 25%

Effluent Information

- Flow: Max Annual Average Flow = 4.28 MGD (million gallons per day)
  For reference, the actual average flow from January 2024 to May 2026 was 3.42 MGD.
- Water source: The water renewal center uses water from the Village of Whiting. The process wastewater from the Stevens Point Mill is sourced from the City of Stevens Point. Intake of river water has been permanently discontinued.
- Effluent characterization: This facility is categorized as a primary industrial discharger.

The following table lists the statistics for effluent PFOS and PFOA levels from August 2024 through June 2026.

Outfall 003	PFOS ng/L	PFOA ng/L
1-day P_{99}	N/A	3.18
4-day P_{99}	N/A	2.50
30-day P_{99}	N/A	1.46

Mean*	0.475	0.95
Std	0.36	0.52
Sample Size	24	24
Range	<0.32-2.3	<1.3-3

*Results below the level of detection (LOD) were included as zeroes in calculation of average.

Water Quality Based Limit – PFOS and PFOA

Administrative rules for PFOS and PFOA took effect on August 1, 2022. These rule revisions include additions to ch. NR 102 (s. NR 102.05), Wis. Adm. Code, which establish PFOS and PFOA standards for surface waters. Revisions to ch. NR 106 (s. NR 106, Subchapter VIII), Wis. Adm. Code, establish procedures for determining water quality based effluent limits for PFOS and PFOA, based on the applicable standards in ch. NR 102, Wis. Adm. Code.

PFOS

Due to PFOS being a bioaccumulating compound of concern (BCC), no mixing zone is allowed pursuant to s. NR 106.98(4), Wis. Adm. Code. Therefore, the effluent limit for PFOS is set equal to criterion (8 ng/L).

PFOA

The conservation of mass equation is described in s. NR 106.06(4)(b)1., Wis. Adm. Code, and includes variables of water quality criterion (WQC), receiving water flow rate (Qs), effluent flow rate (Qe), and upstream PFOA concentrations (Cs) provided below.

$$\text{Limitation} = [(WQC)(Qs+(1-f)\ Qe) - (Qs-f\ Qe)\ (Cs)]/Qe$$

Where:

WQC = 95 ng/L for Wisconsin River
Qs = 25% of the harmonic mean pursuant s. NR 106.06(4)(c)10., Wis. Adm. Code = 674 cfs
Cs = background concentration of PFOA in the receiving water pursuant to s. NR 106.06(4)(e), Wis. Adm. Code
Qe = effluent flow rate = 4.28 MGD = 6.62 cfs
f = the fraction of effluent withdrawn from the receiving water = 0

After substituting the appropriate variables, the calculated PFOA limit 9,371 ng/L.

Reasonable Potential Determination

In accordance with s. NR 106.98(4)(b), Wis. Adm. Code, **the discharge does not have reasonable potential to cause or contribute to an exceedance of the water quality criterion for PFOS** because the arithmetic average of reported effluent PFOS data is less than 1/5th the calculated WQBEL (8 ng/L). Therefore, **a WQBEL is not required.**

The discharge does not have reasonable potential to cause or contribute to an exceedance of the water quality criterion for PFOA because the 30-day P_{99} of reported effluent PFOA data is less than the calculated WQBEL (9,371 ng/L). Therefore, **a WQBEL is not required.**

Conclusions

The discharge has no reasonable potential to cause or contribute to an exceedance of the water quality criterion for PFOS nor PFOA. Therefore, no WQBELs are required.

Pursuant to s. NR 205.066, Wis. Adm. Code, the department may specify the monitoring frequency for PFOS and PFOA on a case-by-case basis after the initial 24 months of sampling. **After a review of the available data, the department has determined that it is warranted to reduce the sampling frequency to every other month.**

If there are any questions or comments on these recommendations, please contact Amy Garbe by telephone at (608) 716-9968 or by email at Amy.Garbe@wisconsin.gov.

Attachments (2) – PFOS Data and PFOA P99 Calculation

PREPARED BY: _____ date: 7/27/26
Amy Garbe, P.E., Wastewater Engineer

cc: Nicholas Lindstrom, Basin Engineer – WCR/Eau Claire
Nate Willis, P.E., PFAS Implementation Coordinator – CO

Attachment 1 – PFOS Data

Sample Date	PFOS Effluent Result [ng/L]
Aug-24	<1.6
Sep-24	<1.6
Oct-24	<7.8
Nov-24	<7.8
Dec-24	<7.8
Jan-25	<0.32
Feb-25	1.7
Mar-25	<1.4
Apr-25	<1.4
May-25	<1.5
May-25	2.3
Jun-25	2
Jul-25	2.3
Aug-25	1.4
Sep-25	<1.5
Oct-25	<1.4
Nov-25	1.7
Dec-25	<1.4
Jan-26	<1.4
Feb-26	<1.4
Mar-26	<1.4
Apr-26	<1.4
May-26	<1.4
Jun-26	<1.4

Attachment 2 – PFOA P99 Calculation

EFFLUENT VARIABILITY ANALYSIS -			
=	= =	=	=
SUBSTANCE:			
NUMBER OF VALUES:	------		
TOTAL	24		
DETECTED	12		
NON-DETECTED	12		
d	0.5		
m	1.9		
mean of all data	0.95		
s	0.51874		
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n	1	4	30
d^n	0.5	0.0625	9.31E-10
p	0.98	0.989333	0.99
Z_p	2.054189	2.302472	2.326785
1+(s/m)^2	1.07454	1.07454	1.07454
(sigma_d)^2	0.071893	0.071893	0.071893
mu_d	0.605907	0.605907	0.605907
(sigma_dn)^2	0.071893	0.187985	0.037587
mu_dn	0.605907	-0.08075	-0.07009
P_99 exponent	1.156694	0.917542	0.381018
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P_99	3.18	2.50	1.46
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Data Summary	
Aug-24	<2.6
Sep-24	<2.6
Oct-24	<13
Nov-24	<13
Dec-24	<13
Jan-25	1.1
Feb-25	1.9
Mar-25	1.5
Apr-25	1.9
May-25	<1.4
May-25	2.6
Jun-25	<1.4
Jul-25	1.9
Aug-25	<1.3
Sep-25	<1.4
Oct-25	2
Nov-25	2.1
Dec-25	<1.3
Jan-26	<1.3
Feb-26	1.7
Mar-26	3
Apr-26	1.3
May-26	1.8
Jun-26	<1.3