Permit Modification Fact Sheet

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

General Information

Permit Number:	WI-0037702-11-1
Permittee Name:	Pickles Manufacturing LLC
Address:	857 School Place
City/State/Zip:	Green Bay WI 54303
Discharge Location:	857-897 School Place, Green Bay, WI (Brown County)
Receiving Water:	Fox River via storm sewer
Stream Flow ($Q_{7,10}$):	660 cfs
Stream Classification:	Warm water sport fish community, non-public water supply

Facility Description

This facility produces fresh pickles, process pickles, and sweet relish. The facility operates year-round, although the busiest months are during the fresh-pack season, July through September, as a fresh harvested cucumber stock is received. Leading up to the fresh-pack season, production starts to ramp up in April – June and tapers off after October. During the fresh-pack season, the facility operates two nine-hour production shifts, followed by a sanitation shift. This production period also produces the greatest volume of cooling water and process wastewater discharges. During the non-fresh-pack season, the facility operates two eight-hour production shifts, followed by a sanitation shift. From June through September, fresh cucumbers are received at the facility and either processed as fresh pickles or transferred into fermentation tanks for subsequent processing throughout the remainder of the year. Specific processes involved in pickle production which generate wastewater include: washing raw product, brine preparation, desalting process pickles, container filling, pasteurization, and plant sanitation. Cooling water (contact and non-contact) is discharged to the municipal storm sewer system, while all other wastewaters generated are discharged to the sanitary sewer for treatment at NEW Water. Pasteurizers at the facility do not use any chemical additives as part of normal operation. The pasteurizers are cleaned with a clean-in-place system on a regular basis. Frequency of cleaning varies from daily to weekly, depending on the volume of production through each pasteurizer. Chemical cleaning agents are used during the pasteurizer cleaning process, but all the cleaning water, including any chemical cleaning agents, is discharged to the sanitary sewer.

Substantial Compliance Determination

Enforcement During Last Permit: During the last permit term, there have been several minor violations of effluent limits for Biochemical Oxygen Demand, BOD. However, the facility has taken the necessary steps to correct their actions and nothing further is required. The facility has completed all previously required actions as part of the enforcement process.

After a desk top review of all discharge monitoring reports, compliance schedule items, and a site visit on 02/01/2023, Pickles Manufacturing has been found to be in substantial compliance with their current permit.

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
001	Annual Avg = 0.683 MGD (7/1/2019 – 1/31/2024)	Effluent: Contact cooling, non-contact cooling and pasteurization water. 24-Hr composite sampler located at the discharge of the cooling water collection tank, prior to the storm sewer. Total residual chlorine monitoring only may be sampled in the storm sewer prior to discharge to the Fox River and shall not occur during major rain events.

1 Surface Water - Monitoring and Limitations

Sample Point Number: 001- COOLING WATER SAMPLE TANK

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD5, Total	Daily Max	20 mg/L	Monthly	24-Hr Comp	
BOD5, Total	Monthly Avg	10 mg/L	Monthly	24-Hr Comp	
pH Field	Daily Max	9.0 su	Monthly	Grab	
pH Field	Daily Min	6.0 su	Monthly	Grab	
Chlorine, Total Residual	Daily Max	38 ug/L	Monthly	Grab	
Chlorine, Total Residual	Monthly Avg	38 ug/L	Monthly	Grab	
Temperature	Daily Max	120 deg F	Monthly	Grab	
Suspended Solids, Total		mg/L	Monthly	24-Hr Comp	Monitoring in 2028.
Copper, Total Recoverable		ug/L	Monthly	24-Hr Comp	Monitoring in 2028.
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	24-Hr Comp	Monitoring in 2028.
Phosphorus, Total		mg/L	Monthly	24-Hr Comp	
PFOS		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
PFOA		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.

Changes from Previous Permit

Total Suspended Solids: Monthly monitoring in 2028 has been added to the permit.

Nitrogen, Ammonia (NH3-N) Total: Monthly monitoring in 2028 has been added to the permit.

Total Phosphorus: Monthly monitoring has been added to the permit.

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 has been reduced from Monthly to 1/ 2 Months.

Explanation of Limits and Monitoring Requirements

Refer to the WQBEL memo for the detailed calculations, prepared by the Water Quality Bureau prepared by Michael Polkinghorn dated March 29, 2024, used for this reissuance.

Total Suspended Solids: The previous permit did not require monitoring for Outfall 001, but one non-detectable sample of <2.2 mg/L (10/03/2023) was provided in the permit application. The previous limit evaluation (April 2019) stated TSS sampling during January 2019 were below quantifiable levels and similar nondetectable values from historic monitoring. This limited dataset implies Outfall 001 is likely not a source of TSS so the need for a TSS WLA or WQT is not required at this time. Monthly monitoring for 1 year is recommended during the reissued permit term to better determine if Outfall 001 is a TSS source.

Nitrogen, Ammonia (NH3-N) Total: Based on the effluent data, there is no reasonable potential for the discharge to exceed the most stringent ammonia nitrogen limits that would be calculated. Therefore, ammonia nitrogen limits are not recommended during the reissued permit term. The sample result of 1.5 mg/L (10/24/2023) is somewhat high for a cooling water discharge with no apparent sources of nutrients. A review of historic effluent ammonia nitrogen data (n = 4, January 2019) for Outfall 001 from the previous limit evaluation (April 2019) were nondetectable at <0.23 mg/L. This would indicate the 1.5 mg/L is most likely unrepresentative of the discharge but continued discharge at this level would most likely result in reasonable potential for daily maximum limits in the future. Therefore, monthly ammonia nitrogen monitoring for 1 year is recommended during the reissued permit term to determine the need for ammonia nitrogen limits at the next permit reissuance.

Total Phosphorus: The previous permit did not require monitoring for Outfall 001 but data is available from the permit application (October 2023 – December 2023). Eight of the samples were nondetectable at <0.03 mg/L and the other two samples were 0.03 and 1.1 mg/L. Historic sampling (n = 6, January 2019) were all nondetectable at <0.07 mg/L. This limited dataset implies Outfall 001 is likely not a source of phosphorus so the need for a phosphorus WLA or WQT is not required at this time. Monthly phosphorus monitoring is recommended to better determine the need for the technology-based limit so the dataset will also provide better information to determine if Outfall 001 is a phosphorus source.

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 source water has known levels of PFOS/PFOA.

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.

Monitoring Frequency: 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 been revisiting the sampling frequencies at every facility to evaluate whether current frequencies are appropriate of if an increase is warranted. The frequencies for pH and phosphorus were increased to align Princeton with other facilities of similar size to ensure fairness and in consideration of department guidance of sample frequencies.

Requirements in administrative code (NR 108, 205, 210 and 214 Wis. Adm. Code) and Section 283.55, Wis. Stats., were considered, where applicable, 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 the aforementioned changes in monitoring frequency are warranted based on the size and type of the facility.

2 Schedules

2.1 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code. This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results.	09/30/2025
Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan. This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results. The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan. If the Department determines a PFOS/PFOA minimization plan is needed based on a reasonable potential evaluation, the permittee will be required to develop a minimization plan for Department approval no later than 90 days after written notification was sent from the Department. The Department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued. If, however, the Department determines there is no reasonable potential for the facility to discharge	09/30/2026

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.	

2.2 Disinfection Certification

Required Action	Due Date
Wastewater Operator Certification for Disinfection: The permittee shall have at least one person obtain certification for the Disinfection Subclass by the due date.	09/30/2025

Explanation of Schedules

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.

Attachments:

PFOS and PFOA Water Quality-Based Effluent Limitations for Pickles Manufacturing LLC -WPDES Permit No. (WI-0037702) in Brown County, by Amy Garbe, PE, Wastewater Engineer, dated October 22, 2026

Expiration Date:

September 30, 2029

Justification Of Any Waivers From Permit Application Requirements

No waivers from permit application requirements granted.

Prepared By: Sarah Adkins, Wastewater Specialist

Date: July 11, 2024

Revised By: Sarah Donoughe, Wastewater Specialist-Adv

Date: October 26, 2026

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: October 22, 2026

TO: Sarah Donoughe – NER

FROM: Kari Fleming – WY/3

SUBJECT: PFOS and PFOA Water Quality-Based Effluent Limitations for Pickles Manufacturing LLC -WPDES Permit No. (WI-0037702) in Brown County

This is in response to your request for an evaluation of the need for PFOS and PFOA limitations for Pickles Manufacturing LLC. This secondary industrial facility discharges to the Fox River, located in the East River Watershed in the Lower Fox River Basin.

The current permit, effective since October 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: Fox River
- Classification: Warm Water Sport Fish (WWSF) community, non-public water supply. Cold Water and Public Water Supply criteria are used for bioaccumulating compounds of concern, because the discharge is within the Great Lakes basin.
- Flow: The following 7-Q_{10} and 7-Q_2 values are from USGS Station 040851385 (Fox River at Oil Tank Depot in Green Bay, WI), approx. 1.2 mi downstream of where the discharge meets the Fox River:

  7-Q_{10} = 660 cfs (cubic feet per second)
  7-Q_2 = 1,400 cfs
  Harmonic Mean Flow = 2,052 cfs using a drainage area of 739 mi^2

The Harmonic Mean has been estimated based on average flow and the 7-Q_{10} using an equation from U.S. EPA's *Technical Support Document for Water Quality-Based Toxics Control* (March 1991, EPA/505/2-90-001, pgs. 88-89).

- % of Flow used to calculate limits: 25%

Effluent Information

- Flow: Maximum Annual Average Flow = 0.683 MGD (million gallons per day)
  For reference, the actual average flow from January 2024 to July 2026 was 0.384 MGD.
- Effluent characterization: This facility is categorized as a secondary industry.

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

	PFOS ng/L	PFOA ng/L
1-day P_{99}	7.14	6.13
4-day P_{99}	4.34	4.05
30-day P_{99}	2.81	2.84

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Mean*	2.12	2.27
Std	1.40	1.14
Sample Size	22	22
Range	<1.1-6.43	<0.422-7.11

*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 the Fox River
Qs = 25% of the harmonic mean pursuant s. NR 106.06(4)(c)10., Wis. Adm. Code = 513 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 = 0.683 MGD = 1.06 cfs
f = the fraction of effluent withdrawn from the receiving water = 0

After substituting the appropriate variables, the calculated PFOA limit is 46,000 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 30-day P99 of reported effluent PFOS data is less than the calculated WQBEL (8 ng/L). Therefore, **a WQBEL is not required.**

In accordance with s. NR 106.98(4)(a), Wis. Adm. Code, **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 (46,000 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 in this case 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 and PFOA P99 Calculations

PREPARED BY: _____ date: 10/22/26
Amy Garbe, P.E., Wastewater Engineer

cc: Teresa Hall, Compliance Staff – NER/Appleton
Nate Willis, P.E., PFAS Implementation Coordinator – CO

Attachment 1 – PFOS P99 Calculation

EFFLUENT VARIABILITY ANALYSIS -			
=	= =	=	=
SUBSTANCE:			
NUMBER OF VALUES:			
TOTAL	22		
DETECTED	21		
NON-DETECTED	1		
d	0.045455		
m	2.220476		
mean of all data	2.119545		
s	1.39998		
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n	1	4	30
d^n	0.045455	4.27E-06	5.34E-41
p	0.989524	0.99	0.99
Z_p	2.30928	2.326784	2.326785
1+(s/m)^2	1.397513	1.397513	1.397513
(sigma_d)^2	0.334694	0.334694	0.334694
mu_d	0.630374	0.630374	0.630374
(sigma_dn)^2	0.334694	0.10976	0.01535
mu_dn	0.630374	0.696326	0.743527
P_99 exponent	1.966357	1.467192	1.031807
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P_99	7.14	4.34	2.81
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Data Summary	
Oct-24	2.2
Nov-24	1.9
Dec-24	6.29
Jan-25	1.33
Feb-25	1.76
Mar-25	1.79
Apr-25	1.8
May-25	1.88
Jun-25	1.72
Jul-25	1.93
Aug-25	6.43
Sep-25	2.17
Oct-25	2.03
Nov-25	2
Dec-25	1.52
Jan-26	1.38
Feb-26	<1.1
Mar-26	1.59
Apr-26	1.84
May-26	1.36
Jun-26	1.57
Jul-26	2.14

Attachment 2 – PFOA P99 Calculation

EFFLUENT VARIABILITY ANALYSIS -			
=	= =	=	=
SUBSTANCE:			
NUMBER OF VALUES:	------		
TOTAL	22		
DETECTED	21		
NON-DETECTED	1		
d	0.045455		
m	2.378095		
mean of all data	2.27		
s	1.139652		
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n	1	4	30
d^n	0.045455	4.27E-06	5.34E-41
p	0.989524	0.99	0.99
Z_p	2.30928	2.326784	2.326785
1+(s/m)^2	1.22966	1.22966	1.22966
(sigma_d)^2	0.206738	0.206738	0.206738
mu_d	0.762931	0.762931	0.762931
(sigma_dn)^2	0.206738	0.069572	0.009561
mu_dn	0.762931	0.784998	0.814999
P_99 exponent	1.812925	1.398723	1.042517
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P_99	6.13	4.05	2.84
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Data Summary	
Oct-24	2.4
Nov-24	1.9
Dec-24	7.11
Jan-25	1.88
Feb-25	2.22
Mar-25	2.15
Apr-25	2.3
May-25	2.6
Jun-25	2.5
Jul-25	1.98
Aug-25	3.04
Sep-25	2.44
Oct-25	2.18
Nov-25	2.34
Dec-25	2.03
Jan-26	1.83
Feb-26	<0.422
Mar-26	1.82
Apr-26	1.62
May-26	1.97
Jun-26	1.49
Jul-26	2.14