

# Permit Modification Fact Sheet

Changes from the previous permit are highlighted in grey.

## General Information

Permit Number:	WI-0023094-08-1
Permittee Name:	Hillshire Brands Co.
Address:	N3620 County Road D
City/State/Zip:	New London WI 54961
Discharge Location:	West bank of the Wolf River (latitude: 44° 22' 47.6", longitude: 88° 43' 5.3")
Receiving Water:	Wolf River
Stream Flow (Q <sub>7,10</sub> ):	346 cfs
Stream Classification:	Warm Water Sport Fish (WWSF) community, non-public water supply

## Facility Description

Hillshire Brands Co. (Hillshire) is a meat processing facility which produces hot dogs, smoked sausage, hams, lunchmeats and other meat products. Meat processing wastewater and sanitary wastewater generated at the production facility is treated on-site and discharged to surface water via the Wolf River. Treatment processes at the wastewater treatment plant (WWTP) include the following: influent fine screening, influent pumping, pH control using carbon dioxide, dissolved air floatation for primary treatment, activated sludge with biological phosphorus removal for secondary treatment, belt press dewatering of dissolved air floatation solids and waste activated sludge, and dewatered cake disposal by contractor. Solids may be hauled by contractors and spread on agricultural sites; however, Hillshire rarely landspreads solids and typically disposes of solids via landfill.

Facility upgrades over the current permit term include tertiary phosphorus treatment, chlorination/dechlorination, and a new discharge directly to the Wolf River. Effluent is currently discharged on a continuous basis via Outfall 001 to an unnamed tributary to the Wolf River. Outfall 001 is located on the west side of the facility's fence perimeter (lat: 44° 22' 13", long: 88° 44' 6"). Effluent will primarily be discharged via force main (Outfall 006) starting at permit reissuance directly to the west bank of the Wolf River (lat: 44° 22' 47.6", long: 88° 43' 5.3"). The facility requests Outfall 001 remain in the permit as an emergency discharge option.

## Substantial Compliance Determination

**Enforcement During Last Permit:** There were no formal enforcement actions taken during the previous permit term.

**After a desk top review of all discharge monitoring reports, land application reports, compliance schedule items, and a site visit on 1/13/23, this facility 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 Average: 0.535 MGD (October 2018 – February 2023)	Wastewater treatment plant effluent discharged to an unnamed tributary of the Wolf River, in the event of an emergency. Sampling is only required when this outfall is in use.

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
002	Did not Land Apply in 2022; 1,757 tons were disposed of via landfill.	Land application of sludge. The sample shall be collected from a truck load of sludge or a composite of truck loads that is representative of all the sludge being discharged. Sampling is only required when landspreading occurs.
006	N/A – this is a new outfall	Wastewater treatment plant effluent discharged to the Wolf River.

## 1 Surface Water - Proposed Monitoring and Limitations

### Sample Point Number: 006- WWTP Effluent

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD5, Total	Daily Max	40 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD5, Total	Weekly Avg	45 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD5, Total	Monthly Avg	20 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD5, Total	Daily Max	339 lbs/day	Weekly	Calculated	
BOD5, Total	Monthly Avg	170 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Daily Max	40 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	20 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	220 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Monthly Avg	140 lbs/day	Weekly	Calculated	
Suspended Solids, Total		lbs/month	Monthly	Calculated	Calculate the Total Monthly Discharge of TSS and report on the last day of the month on the DMR. See TMDL Calculations section

**Monitoring Requirements and Limitations**

<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
					of the permit.
Suspended Solids, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of TSS discharged and report on the last day of the month on the DMR. See TMDL Calculations section of the permit.
pH Field	Daily Max	9.0 su	3/Week	Grab	
pH Field	Daily Min	6.0 su	3/Week	Grab	
Dissolved Oxygen	Daily Min	4.0 mg/L	3/Week	Grab	
Chlorine, Total Residual	Daily Max	38 ug/L	3/Week	Grab	
Chlorine, Total Residual	Weekly Avg	38 ug/L	3/Week	Grab	
Chlorine, Total Residual	Monthly Avg	38 ug/L	3/Week	Grab	
Fecal Coliform	Daily Max	400 #/100 ml	Weekly	Grab	
E. coli	Geometric Mean - Monthly	126 #/100 ml	Weekly	Grab	Monitoring and limits apply May through September only.
E. coli	Daily Max	10 Percent	Monthly	Calculated	Monitoring and limits apply May through September only. See the E. coli Percent Limit section of the permit. Enter the result on the DMR on the last day of the month.
Oil & Grease (Hexane)	Daily Max	15 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Monthly Avg	10 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Daily Max	121 lbs/day	Quarterly	Calculated	
Oil & Grease (Hexane)	Monthly Avg	60.5 lbs/day	Quarterly	Calculated	
Nitrogen, Total	Daily Max	194 mg/L	Monthly	24-Hr Flow Prop Comp	

<b>Monitoring Requirements and Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Nitrogen, Total	Monthly Avg	134 mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH3-N) Total	Daily Max	8.0 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies year-round.
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	7.7 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies May through September.
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	4.0 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies October through April.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	3.1 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies May through September.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	4.0 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies October through April.
Phosphorus, Total		mg/L	2/Week	24-Hr Flow Prop Comp	
Phosphorus, Total	Monthly Avg	4.1 lbs/day	Monthly	Calculated	
Phosphorus, Total	6-Month Avg	1.4 lbs/day	Monthly	Calculated	
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 Calculations section of the permit.
Phosphorus, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of phosphorus discharged and report on the last day of the month on the DMR. See TMDL Calculations section of the permit.
Chloride		mg/L	3/Week	24-Hr Flow Prop Comp	
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	

### Changes from Previous Permit:

- Outfall 006 is a new outfall. Outfall 006 replaces Outfall 001. Outfall 001 is retained in the proposed permit for use on an emergency basis. All monitoring requirements and limitations for Sample Point 006 are new.

- Chloride limits have been removed; monitoring only remains year-round. This proposed permit modification is in response to a Wis. Stat. s. 283.63 contested case hearing petition filed by Hillshire Brands Co. on November 17, 2023.
- Table Notes have been added to clarify that *E. coli* monitoring and limits only apply May-September, each year.

## Explanation of Limits and Monitoring Requirements

### Water Quality-Based Limits and WET Requirements

Refer to the WQBEL memo for the detailed calculations, Water Quality-Based Effluent Limitations for the Hillshire Brands Co. WPDES Permit No. WI-0023094-08-0, prepared by the Water Quality Bureau, Michael Polkinghorn, Water Resources Engineer, dated June 2, 2023, used for this reissuance.

***E. coli*** – Revisions to bacteria surface water quality criteria to protect recreational uses and accompanying *E. coli* WPDES permit implementation procedures became effective May 1, 2020. The new rule requires that WPDES permits for facilities with required disinfection include monitoring for *E. coli* while facilities are disinfecting during the recreation period, and establish effluent limitations for *E. coli* established in s. NR 210.06 (2), Wis. Adm. Code. The administrative code rule changes included the following actions: revised the bacteria water quality criteria from fecal coliform to *E. coli* to protect recreation in ch. NR 102, Wis. Adm. Code.; removed fecal coliform criteria for certain individual waters from ch. NR 104, Wis. Adm. Code.; revised permit requirements for publicly and privately owned sewage treatment works in ch. NR 210, Wis. Adm. Code.; and, updated approved analytical methods for bacteria in ch. NR 219, Wis. Adm. Code.

**Phosphorus** – Phosphorus Rules became effective 12/1/2010 and are detailed in NR 102 – Water Quality Standards for Wisconsin Surface Waters and NR 217 – Effluent Standards and Limitations for Phosphorus, Wis. Adm. Code.

**Total Maximum Daily Load (TMDL) Derived Limits for TSS and Phosphorus** – TMDL Approved - Waste load allocations (WLAs) specified in TMDLs are expressed as WQBELs (water quality-based effluent limits). The WLA-derived WQBELs are consistent with the assumptions and requirements of the approved Upper Fox and Wolf River Basin (UFWRB) TMDL. WLA-derived limits must be included in WPDES permits once the TMDL has been approved by US EPA. If discharges occur from both Outfall 006 and Outfall 001 (emergency) at the same time, then the effluent limits and the rolling 12-month sum reporting for phosphorus and TSS applies to the sum of the mass of both discharges.

**Industrial Effluent Limits** – There has been a change in the expression of limits per the 2016 revisions to NR 205.065, Wis. Adm. Code. In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable. Minor changes have been made to the BOD<sub>5</sub>, TSS, chlorine, ammonia nitrogen, and chloride limits.

**PFOS and PFOA** – NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. Pursuant to s. NR 106.98(3)(b), Wis. Adm. Code, the Department evaluated the need for PFOS and PFOA monitoring. Based on information available at the time the proposed permit was drafted, the Department has determined the permittee does not need to sample for PFOS or PFOA as part of this permit reissuance. The Department may re-evaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge.

**Whole Effluent Toxicity (WET)** – WET testing requirements 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>)

**Ammonia** – Current acute and chronic ammonia toxicity criteria for the protection of aquatic life are included in Tables 2C and 4B of ch. NR 105, Wis. Adm. Code. Subchapter IV of ch. NR 106, Wis. Adm. Code, establishes the procedure for calculating WQBELs for ammonia.

**Chloride** – Acute and chronic chloride toxicity criteria for the protection of aquatic life are included in Tables 1 and 5 of ch. NR 105, Wis. Adm. Code. Subchapter VII of ch. NR 106, Wis. Adm. Code, establishes the procedure for calculating

WQBELs for chloride. If the permittee's effluent data shows that a calculated WQBEL for chloride cannot be met, then the permit **may** include a chloride effluent limitation **at the next permit term**.

**Categorical Limits**

Refer to the TBEL memo for the detailed calculations, Technology-Based Effluent Limitations for the Hillshire Brands Co. WPDES Permit No. WI-0023094-08-0, prepared by the Water Quality Bureau, Michael Polkinghorn, Water Resources Engineer, dated June 2, 2023, used for this reissuance.

Effluent monitoring is needed to assess the quantity and quality of the discharge pursuant to s. NR 258.06, Wis. Adm. Code. Effluent limitations are imposed where needed for the protection of public health and water quality. The existing limits for BOD<sub>5</sub>, total suspended solids, fecal coliform, pH, oil & grease, ammonia nitrogen, and total nitrogen are continued in the proposed permit unchanged from the previous permit. The effluent sample frequencies are appropriate for this facility in consideration of the treatment processes employed and the final effluent limitations.

**Phosphorus** – Phosphorus requirements are based on the Phosphorus Rules that became effective 12/1/2010 as detailed in NR 102 Water Quality Standards and NR 217 Effluent Standards and Limitations for Phosphorus, Wis. Adm. Code. Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. The code categorically limits industrial dischargers of more than 60 pounds of phosphorus per month to 1.0 mg/L unless an alternative limit is approved. The current permit contains an interim monthly average phosphorus limit of 0.7 mg/L (at Outfall 001). The permittee is in compliance with this limit; therefore, a TBEL for phosphorus is not required.

**Sample Point Number: 001- WWTP Effluent Emergency**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD <sub>5</sub> , Total	Daily Max	40 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD <sub>5</sub> , Total	Monthly Avg	20 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD <sub>5</sub> , Total	Daily Max	339 lbs/day	Weekly	Calculated	
BOD <sub>5</sub> , Total	Monthly Avg	170 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Daily Max	40 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	20 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	220 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Monthly Avg	140 lbs/day	Weekly	Calculated	
Suspended Solids, Total		lbs/month	Monthly	Calculated	Calculate the Total Monthly Discharge of TSS and report on the last day of the month on the DMR. See TMDL Calculations section

<b>Monitoring Requirements and Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
					of the permit.
Suspended Solids, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of TSS discharged and report on the last day of the month on the DMR. See TMDL Calculations section of the permit.
pH Field	Daily Max	9.0 su	3/Week	Grab	
pH Field	Daily Min	6.0 su	3/Week	Grab	
Dissolved Oxygen	Daily Min	4.0 mg/L	3/Week	Grab	
Chlorine, Total Residual	Daily Max	19 ug/L	3/Week	Grab	
Chlorine, Total Residual	Weekly Avg	7.3 ug/L	3/Week	Grab	
Chlorine, Total Residual	Monthly Avg	7.3 ug/L	3/Week	Grab	
Fecal Coliform	Daily Max	400 #/100 ml	Weekly	Grab	
Oil & Grease (Hexane)	Daily Max	15 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Monthly Avg	10 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Daily Max	121 lbs/day	Quarterly	Calculated	
Oil & Grease (Hexane)	Monthly Avg	60.5 lbs/day	Quarterly	Calculated	
Nitrogen, Total	Daily Max	194 mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Total	Monthly Avg	134 mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH3-N) Total	Daily Max	8.0 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies year-round.
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	7.7 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies May through September.
Nitrogen, Ammonia (NH3-N) Total	Weekly Avg	4.0 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies October through April.

<b>Monitoring Requirements and Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	3.1 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies May through September.
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	4.0 mg/L	Monthly	24-Hr Flow Prop Comp	Limit applies October through April.
Phosphorus, Total		mg/L	2/Week	24-Hr Flow Prop Comp	
Phosphorus, Total	Monthly Avg	4.1 lbs/day	Monthly	Calculated	
Phosphorus, Total	6-Month Avg	1.4 lbs/day	Monthly	Calculated	
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 Calculations section of the permit.
Phosphorus, Total		lbs/yr	Monthly	Calculated	Calculate the 12-month rolling sum of total monthly mass of phosphorus discharged and report on the last day of the month on the DMR. See TMDL Calculations section of the permit.
Temperature	Weekly Avg	70 deg F	3/Week	Multiple Grab	Limit applies in October.
Temperature	Weekly Avg	61 deg F	3/Week	Multiple Grab	Limit applies in November.
Chloride	Daily Max	760 mg/L	3/Week	24-Hr Flow Prop Comp	
Chloride	Weekly Avg	400 mg/L	3/Week	24-Hr Flow Prop Comp	
Chloride	Monthly Avg	400 mg/L	3/Week	24-Hr Flow Prop Comp	
Chloride	Daily Max	8,300 lbs/day	3/Week	Calculated	
Chloride	Weekly Avg - Variable	lbs/day	3/Week	Calculated	Report the chloride mass result in the Chloride Weekly Average Mass column on the DMR. Compare to the Variable Chloride Mass Limitation



Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					chart in the permit to determine compliance.
Chloride, Variable Limit		lbs/day	3/Week	Calculated	Look up the variable chloride mass limit from the Variable Chloride Mass Limitation table in the permit. Report the variable limit in the Chloride Variable Limit column on the DMR.
Copper, Total Recoverable		ug/L	3/Week	24-Hr Flow Prop Comp	

### Changes from Previous Permit:

- Outfall 006 replaces Outfall 001. Outfall 001 is retained in the proposed permit for use on an emergency basis.
- Decreased effluent mass limits for total suspended solids.
- Addition of a weekly average effluent limit for ammonia nitrogen during October – April.
- Addition of a monthly average effluent limit for chloride, decreased daily maximum and weekly average effluent limits for chloride, and the addition of mass limits for chloride during both wet and dry weather.
- Updated WQBELs and TMDL limits for phosphorus.
- Addition of total residual chlorine monitoring and effluent limits.
- Addition of temperature effluent limits for October and November.
- Removal of acute and chronic WET testing.

### Explanation of Limits and Monitoring Requirements

#### Water Quality-Based Limits

Refer to the WQBEL memo for the detailed calculations, Water Quality-Based Effluent Limitations for the Hillshire Brands Co. WPDES Permit No. WI-0023094-08-0, prepared by the Water Quality Bureau, Michael Polkinghorn, Water Resources Engineer, dated June 2, 2023, used for this reissuance.

**Phosphorus** – Phosphorus Rules became effective 12/1/2010 and are detailed in NR 102 – Water Quality Standards for Wisconsin Surface Waters and NR 217 – Effluent Standards and Limitations for Phosphorus, Wis. Adm. Code.

**Total Maximum Daily Load (TMDL) Derived Limits for TSS and Phosphorus** – TMDL Approved - Waste load allocations (WLAs) specified in TMDLs are expressed as WQBELs (water quality-based effluent limits). The WLA-derived WQBELs are consistent with the assumptions and requirements of the approved Upper Fox and Wolf River Basin (UFWRB) TMDL. WLA-derived limits must be included in WPDES permits once the TMDL has been approved by US EPA. If discharges occur from both Outfall 006 and Outfall 001 (emergency) at the same time, then the effluent limits and the rolling 12-month sum reporting for phosphorus and TSS applies to the sum of the mass of both discharges.

**Industrial Effluent Limits** – There has been a change in the expression of limits per the 2016 revisions to NR 205.065, Wis. Adm. Code. In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as

daily maximum and monthly average limits whenever practicable. Minor changes have been made to the BOD<sub>5</sub>, TSS, chlorine, ammonia nitrogen, and chloride limits.

**PFOS and PFOA** – NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. Pursuant to s. NR 106.98(3)(b), Wis. Adm. Code, the Department evaluated the need for PFOS and PFOA monitoring. Based on information available at the time the proposed permit was drafted, the Department has determined the permittee does not need to sample for PFOS or PFOA as part of this permit reissuance. The Department may re-evaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge.

**Ammonia** – Current acute and chronic ammonia toxicity criteria for the protection of aquatic life are included in Tables 2C and 4B of ch. NR 105, Wis. Adm. Code. Subchapter IV of ch. NR 106, Wis. Adm. Code, establishes the procedure for calculating WQBELs for ammonia.

**Chloride** – Acute and chronic chloride toxicity criteria for the protection of aquatic life are included in Tables 1 and 5 of ch. NR 105, Wis. Adm. Code. Subchapter VII of ch. NR 106, Wis. Adm. Code, establishes the procedure for calculating WQBELs for chloride. If the permittee's effluent data shows that a calculated WQBEL for chloride cannot be met, then the permit will include a chloride effluent limitation.

**Categorical Limits**

Refer to the TBEL memo for the detailed calculations, Technology-Based Effluent Limitations for the Hillshire Brands Co. WPDES Permit No. WI-0023094-08-0, prepared by the Water Quality Bureau, Michael Polkinghorn, Water Resources Engineer, dated June 2, 2023, used for this reissuance.

Effluent monitoring is needed to assess the quantity and quality of the discharge pursuant to s. NR 258.06, Wis. Adm. Code. Effluent limitations are imposed where needed for the protection of public health and water quality. The existing limits for BOD<sub>5</sub>, total suspended solids, fecal coliform, pH, oil & grease, ammonia nitrogen, and total nitrogen are continued in the proposed permit unchanged from the previous permit. The effluent sample frequencies are appropriate for this facility in consideration of the treatment processes employed and the final effluent limitations.

**Phosphorus** – Phosphorus requirements are based on the Phosphorus Rules that became effective 12/1/2010 as detailed in NR 102 Water Quality Standards and NR 217 Effluent Standards and Limitations for Phosphorus, Wis. Adm. Code. Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. The code categorically limits industrial dischargers of more than 60 pounds of phosphorus per month to 1.0 mg/L unless an alternative limit is approved. The current permit contains an interim monthly average phosphorus limit of 0.7 mg/L (at Outfall 001). The permittee is in compliance with this limit; therefore, a TBEL for phosphorus is not required.

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

**Sample Point Number: 002- Sludge Spreading**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	Quarterly	Grab	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab	
Chloride		Percent	Quarterly	Grab	
pH Field		su	Annual	Grab	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Ammonium (NH4-N) Total		Percent	Annual	Grab	
Phosphorus, Total		Percent	Annual	Grab	
Phosphorus, Water Extractable		% of Tot P	Annual	Grab	
Potassium, Total Recoverable		Percent	Annual	Grab	

### Changes from Previous Permit:

- The sample point description has been updated to include, “Sampling is only required when landspreading occurs.” No other changes from the previous permit are proposed.

### Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214, Wis. Adm. Code. After review, no changes from the requirements of the current permit are proposed.

**Water Extractable Phosphorus (WEP)** – 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.

### Attachments:

~~WQBEL Memo: Water Quality Based Effluent Limitations for the Hillshire Brands Co. WPDES Permit No. WI-0023094-08-0, by Michael Polkinghorn, Water Resources Engineer, dated June 2, 2023~~

~~TBEL Memo: Technology Based Effluent Limitations for the Hillshire Brands Co. WPDES Permit No. WI-0023094-08-0, by Michael Polkinghorn, Water Resources Engineer, dated June 2, 2023~~

### Proposed Expiration Date:

September 30, 2028

### Justification Of Any Waivers From Permit Application Requirements:

No waivers from permit application requirements were granted.

**Prepared By:** Sarah Donoughe, Wastewater Specialist-Sen

**Date:** July 26, 2023; **Revised:** April 1, 2024