



WPDES PERMIT

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

Grande Cheese Company, Custom Ingredient Division

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at

NE 1/4, SW 1/4, Section 6, T17N, R6E, Town of Adams, Adams County, WI
to

**Little Roche A Cri Creek and the groundwaters the Little Roche-A-Cri Creek Watershed of the Central
Wisconsin River Basin in Adams County**

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 _____
Geisa Thielen
Wastewater Field Supervisor

Date Permit Signed/Issued for Modification

PERMIT TERM: EFFECTIVE DATE - July 01, 2023
EFFECTIVE DATE OF MODIFICATION: September 01, 2023
EFFECTIVE DATE OF MODIFICATION: March 01, 2025

EXPIRATION DATE - June 30, 2028

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1 Surface Water Requirements

1.1 Sampling Point(s)

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

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
003	Representative effluent samples shall be collected prior to discharging to Little Roche A Cri Creek. Discharge is limited to noncontact cooling water (NCCW), low strength process wastewater and reverse osmosis (R/O) water.

1.2 Monitoring Requirements and Effluent Limitations

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

1.2.1 Sampling Point (Outfall) 003 - EFFLUENT TO LITTLE ROCHE A CRI CREEK

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
BOD ₅ , Total		mg/L	3/Week	24-Hr Flow Prop Comp	
BOD ₅ , Total	Daily Max	34.9 lbs/day	3/Week	Calculated	
BOD ₅ , Total	Monthly Avg	17.4 lbs/day	3/Week	Calculated	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	43.8 lbs/day	3/Week	Calculated	
Suspended Solids, Total	Monthly Avg	21.9 lbs/day	3/Week	Calculated	
pH Field	Daily Max	9.0 su	5/Week	Grab	
pH Field	Daily Min	6.0 su	5/Week	Grab	
Phosphorus, Total	Monthly Avg	0.57 mg/L	3/Week	24-Hr Flow Prop Comp	Limit effective throughout the permit term, as it represents a minimum control level.
Phosphorus, Total		lbs/day	3/Week	Calculated	Report daily mass discharged using Equation 1a. in the Water Quality Trading (WQT) section.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
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.
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 section.
WQT Credits Used (TP)		lbs/month	Monthly	Calculated	Report WQT TP Credits used per month using Equation 2b. in the Water Quality Trading (WQT) section. Available TP Credits are specified in Table 2.
WQT Computed Compliance (TP)	Monthly Avg	0.11 lbs/day	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 3a. in the Water Quality Trading (WQT) section. Value entered on the last day of the month.
WQT Computed Compliance (TP)	6-Month Avg	0.04 lbs/day	Monthly	Calculated	Compliance with the six-month average limit is evaluated at the end of the six-month period on June 30 and Dec 31.
WQT Credits Used (TP)	Annual Total	15 lbs/yr	Annual	Calculated	The sum of total monthly credits used may not exceed Table 2 values listed below.
Copper, Total Recoverable		µg/L	Quarterly	24-Hr Flow Prop Comp	Monitoring only.
Hardness, Total as CaCO ₃		mg/L	Quarterly	24-Hr Flow Prop Comp	Sample concurrently with a quarterly copper sample.
Temperature		deg F	Monthly	Multiple Grab	See temperature section below.
Acute WET	Daily Max	1.0 TU _a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET testing section below. Sample shall be collected concurrently with a monthly copper sample.
Nitrogen, Total Kjeldahl		mg/L	Quarterly	24-Hr Flow Prop Comp	See Nitrogen Series Monitoring section below.

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	24-Hr Flow Prop Comp	Total Nitrogen = (Total Kjeldahl Nitrogen) + (Total Nitrite + Nitrate Nitrogen).
Nitrogen, Total		mg/L	Quarterly	Calculated	

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

Approved TMDL: 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 for this permittee is 10 lbs/yr and results in calculated phosphorus mass limits of 0.11 lbs/day monthly average and 0.04 lbs/day 6-month average which go into effect 07/01/2024 pursuant to Compliance Schedule. The 6-month average limit is expressed as a seasonal average with averaging periods occurring from July through December and January through June. Compliance with the 6-month average limit is evaluated at the end of each 6-month period on June 30th and December 31st annually. 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.

1.2.1.2 Phosphorus Water Quality Trading (WQT)

The permittee may use water quality trading to demonstrate compliance with WQBELs for total phosphorus (TP) of 0.11 lbs/day monthly average and 0.04 lbs/day 6-month average. Pollutant reduction credits for TP are available as specified in credit verification package CVP-2023-01 and applicable credit sales agreement.

Table 2. Available Phosphorus Credits per CVP-2023-01

Year*	Available TP Credits (lbs/yr) – Long Term	Available TP Credits (lbs/yr) – Interim	Available TP Credits (lbs/yr) – Total
2025	0	15	15
2026	0	15	15
2027	0	15	15
2028	0	15	15

*In the event that this permit expires and is administratively continued beyond the year(s) specified in the above table, 15 lbs/yr of credit will be available in subsequent years until the permit is reissued, modified, or revoked.

Only those pollutant reduction credits verified by the Department under CVP-2023-01 and purchased pursuant to s. 283.84(1)(f), Wis. Stats. may be used by the permittee to demonstrate compliance with the WQBELs identified in this subsection. If the permittee wishes to use pollutant reduction credits not identified in CVP-2023-01, the permittee must purchase additional verified credits or develop a water quality trading plan and obtain Department approval of the new plan prior to use of the new pollutant reduction credits. Prior to the permittee’s use of additional credits, the credit verification package or new water quality trading plan will be subject to notice and opportunity for public comment. Any change in the number of available credits requires a permit modification.

In the event pollutant reduction credits as defined in the credit verification package are no longer generated, the permittee shall comply with the WQBELs for TP contained in this subsection. The sum of available interim and long-

term credits shown in Table 2 may be used to demonstrate compliance for a given year. Interim credits are subject to duration limits and may not be used past the duration defined in Credit Verification Package CVP-2023-01.

1.2.1.3 Demonstrating Compliance with TP WQBELs Using Water Quality Trading

Use the following methods to demonstrate compliance with the TP WQBELs contained in the Water Quality Trading subsection above.

TOTAL POLLUTANT DISCHARGED (TP)

Use the following equations to calculate the amount of pollutant discharged for Monthly Avg TP [lbs/day].

$$\text{TP Discharged [lbs/day]} = \text{TP Discharged [mg/L]} \times \text{Daily Flow [MGD]} \times 8.34 \quad (\text{Eq. 1a.})$$

$$\text{Monthly or Weekly Avg} = \Sigma \text{ daily results} \div \# \text{ of results} \quad (\text{Eq. 1b.})$$

WQT CREDITS USED (TOTAL PHOSPHORUS)

Use the following method to calculate the credits to be used expressed as a mass in lbs/month:

$$\text{WQT TP Credits Needed [lbs/day]} = \text{Monthly Avg TP [lbs/day]} - 0.04 \text{ lbs/day} \quad (\text{Eq. 2a.})$$

Note: When the TP discharge is less than 0.04 lbs/day as a monthly avg, report 0 (zero) as the “WQT Credits Used (TP)”.

$$\text{WQT TP Credits Used [lbs/month]} = \text{WQT TP Credits Needed [lbs/day]} \times \# \text{ of days of discharge/month} \quad (\text{Eq. 2b.})$$

WQT COMPUTED COMPLIANCE (TOTAL PHOSPHORUS)

Use the following method to demonstrate compliance with TP WQBELs expressed as a mass in lbs/day:

$$\text{WQT TP Computed Compliance [lbs/day]} = \text{Monthly Avg TP [lbs/day]} - [\text{WQT TP Credits Needed [lbs/day]}]$$

(Eq. 3a.)

Negative computed compliance values should be entered as zero - “0”.

1.2.1.4 Additional Water Quality Trading Requirements

When using water quality trading to demonstrate compliance with WQBELs for TP, the permittee shall comply with the following:

- Failure to implement any of the terms or conditions of the credit verification package is a violation of this permit.
- Each month the permittee shall certify that the nonpoint source management practices installed to generate pollutant reduction credits are operated and maintained in a manner consistent with that specified in the credit verification package. Such a certification may be made by including the following statement as a comment on the monthly discharge monitoring report:

I certify that management practices identified in the credit verification package as the source of pollutant reduction credits are installed, established and properly maintained.

- At least once a year the permittee or the permittee’s agent shall inspect each nonpoint source management practice that generates pollutant reduction credits to confirm the implementation of the management practice and their appropriate operation and adequate maintenance.
- The permittee shall notify WDNR by telephone within 24 hours or next business day of becoming aware that pollutant reduction credits used or intended for use by the permittee are not being implemented or generated as defined in the approved trading plan. A written notification shall be submitted to the Department within 5 days regarding the status of the permittee’s pollutant reduction credits.

- The permittee shall provide WDNR written notice within 7 days of the trade agreement upon which the credit verification package is based being amended, modified, or revoked. This notification shall include the details of any amendment or modification in addition to the justification for the changes.
- The permittee shall not use pollutant reduction credits for the demonstration of compliance when pollutant reduction credits are not being generated.

1.2.1.5 Water Quality Trading Reopener Clause

Under any of the following conditions as provided by s. 283.53(2), Wis. Stats. and ss. NR 203.135 and 203.136, Wis. Adm. Code, the Department may modify or revoke and reissue this permit to modify or eliminate permit terms and conditions related to water quality trading:

- The permittee fails to implement the credit verification package as approved;
- The permittee fails to comply with permit terms and conditions related to water quality trading;
- New information becomes available that would change the number of credits available for the water quality trade or would change the Department's determinations that water quality trading is an acceptable option.

1.2.1.6 Submittal of Permit Application for Next Reissuance and Pollutant Trading Plan

The permittee shall submit the permit application for the next reissuance at least 6 months prior to expiration of this permit.

The permittee purchased credits that were verified by WDNR on September 6th, 2024. If the permittee intends to pursue pollutant trading to achieve compliance in a future permit term, a valid credit purchase agreement or water quality trading plan is due with the application for the next reissuance. If system upgrades will be used in combination with pollutant trading the permittee shall submit plans for any system upgrade.

1.2.1.7 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. 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. In either case, report the maximum temperature measured during the day on the DMR. For seasonal discharges collect measurements either manually or continuously during the period of operation and report the daily maximum effluent temperature on the DMR.

1.2.1.8 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Synthetic lab water or other dilution water approved by the Department

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.

WET Testing Frequency:

Acute tests are required during the following quarters:

- **4th quarter (Oct – Dec) 2023**
- **3rd quarter (July – Sept) 2024**
- **2nd quarter (April – June) 2025**
- **1st quarter (Jan – March) 2026**
- **3rd quarter (July – Sept) 2027**

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 **3rd quarter (July – Sept) 2028**.

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: $TU_a = 100 \div LC_{50}$.

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).

1.2.1.9 Nitrogen Series Monitoring

Monitoring for Total Kjeldahl Nitrogen (TKN), Nitrite + Nitrate Nitrogen, and Total Nitrogen shall be conducted quarterly.

Testing: Monitoring 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 testing.

1.2.1.10 Additives

The permittee shall maintain a record of the dosage rate of all additives used on a monthly basis. The additives may be changed during the term of the permit following procedures in the 'Additives' subsection of the Standard Requirements

2 Land Treatment Requirements

2.1 Sampling Point(s)

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

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Description/Sample Contents and Treatment Description (as applicable)
001	Representative samples shall be collected prior to discharging to the ridge and furrow system. Discharge is limited to noncontact cooling water, medium strength process wastewater & cleanup water, retenate and R/O cooling tower blow-down.

2.2 Monitoring Requirements and Limitations

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

2.2.1 Sampling Point (Outfall) 001 - EFFLUENT TO RIDGE & FURROW, Ridge and Furrow

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Daily	Total Daily	
Hydraulic Application Rate	Monthly Avg	7,500 gal/ac/day	Monthly	Calculated	
Chloride		mg/L	2/Month	24-Hr Flow Prop Comp	
Chloride		lbs/ac/yr	Annual	Calculated	
Nitrogen, Total Kjeldahl		mg/L	2/Month	24-Hr Flow Prop Comp	
Nitrogen, Total		mg/L	2/Month	24-Hr Flow Prop Comp	
Nitrogen, Max Applied On Any Zone	Annual Total	800 lbs/ac/yr	Annual	Calculated	
BOD ₅ , Total		mg/L	2/Month	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH ₃ -N) Total		mg/L	2/Month	24-Hr Flow Prop Comp	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Nitrite + Nitrate Total		mg/L	2/Month	24-Hr Flow Prop Comp	
Nitrogen, Organic Total		mg/L	2/Month	24-Hr Flow Prop Comp	

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
Cells Being Loaded	-	Cell Number	Daily	Log
Start to End Time	-	Date, Hour	Daily	Log

Annual Report – Monitoring Requirements and Limitations				
The Annual Report is due by January 31 st of each year for the previous calendar year.				
Parameters	Limit	Units	Sample Frequency	Sample Type
Total Volume Per Cell	-	Gallons	Annual	Total Annual
Total Nitrogen per Cell	800	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Cell	-	Pounds/Acre/Year	Annual	Calculated

2.2.1.1 Monthly Recording of Year-to-Date Hydraulic Loading

Record the calendar year cumulative hydraulic loading monthly on the facility log by adding the current month’s hydraulic loading to the loading total (gallons/acre) from the previous months in the calendar year. The following method shall be used to calculate the loading for the month:

$$\frac{\text{(monthly total water to LT (land treatment) Outfall, gallons)}}{\text{Outfall Acres}} = \text{month gal/ac}$$

2.2.1.2 Year to Date Nitrogen and Chloride Loading Calculations and Recording

Record the calendar year cumulative nitrogen and chloride loadings monthly on the facility log by adding the current month’s loading to the loading total from the previous months in the calendar year. The following method shall be used to calculate the loading for the month, or alternative calculation method in a Department approved Land Treatment Management Plan:

(Monthly average*, mg/L) (monthly total water to LT Outfall, million gallons) (8.34) = month lbs/ac
Outfall Acres

2.2.1.3 Annual Cumulative Wastewater Loading Calculations and Reporting

Report the annual nitrogen and chloride loadings per zone using the calculations provided in Section 6.4.1.2 and 6.4.1.3.

2.2.1.4 Annual Cumulative Hydraulic Loading Reporting

Report the annual hydraulic loading to the ridge and furrow Outfall on the December eDMR. Use the value from the December log form for the cumulative annual hydraulic loading to report on the eDMR.

2.2.1.5 Land Treatment Management Plan

See the section titled “Land Treatment Management Plan” in the Schedules section of this permit for more information.

3 Groundwater Requirements

3.1 Monitoring Requirements and Limitations

3.1.1 Groundwater Monitoring System for Ridge & Furrow

Location of Monitoring System: NE 1/4, of the SW 1/4, section 6, T17N R06E, Town of Adams, Adams County, WI

Wells to be Monitored upon permit reissuance: 801 (MW1), 814 (MW10A), 815 (MW10B), 816 (MW11), 817 (MW12), 818 (MW13), 827 (MW-22A) and 828 (MW-22B)

New Wells to also be Monitored After Installation per the Compliance Schedule: 829 (MW23A) and 830 (MW23B)

Well Used To Calculate Preventive Action Limits (PALs): 814 (MW10A) and 815 (MW10B)

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): 801 (MW1), 829 (MW23A) and 830 (MW23B)

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	Quarterly
Groundwater Elevation	feet MSL	*****	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	4.7	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.3	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Total Kjeldahl	mg/L	*****	N/A	Quarterly
Solids, Total Dissolved	mg/L	350	N/A	Quarterly
pH Field	su	9.0	N/A	Quarterly
Manganese Dissolved	mg/L	0.06	0.3	Quarterly
Iron Dissolved	mg/L	0.15	0.3	Quarterly

3.1.1.1 Alternative Concentration Limit

An alternative concentration limit (ACL) of **4.7** has been established for the nitrite + nitrate nitrogen preventative action limit at this site. This ACL is authorized in conjunction with an exemption granted under s. NR 140.28, Wis. Adm. Code.

3.1.1.2 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 **7.0** s.u. or greater than **9.0** s.u.

3.1.1.3 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.

3.1.1.4 New Well Installation Requirement

The permittee shall install two new wells [829 (MW23A) and 830 (MW23B)]. Monitoring shall be monthly at each new well during the first three months after well installation. Permittee shall notify the department within 14 days of installation so that proper monitoring forms can be provided. See the associated schedule for more information.

4 Land Application Requirements

4.1 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)
002	Representative liquid high strength wastewater samples shall be collected prior to land application. Discharge shall be limited to the land application of mainly high strength wastewater (milk solids and cheesemaking/food ingredient process residuals) and boiler blowdown on Department approved sites.

4.2 Monitoring Requirements and Limitations

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

4.2.1 Sampling Point (Outfall) 002 - LIQUID WASTES

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Chloride		mg/L	Monthly	Grab	
Phosphorus, Total		mg/L	Monthly	Grab	
Phosphorus, Water Extractable		Percent	Monthly	Calculated	
Potassium, Total Recoverable		mg/L	Monthly	Grab	

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
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated

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
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day	Daily	Calculated
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week	Weekly	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 Volume Per Site	-	Gallons	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

4.2.1.1 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.

4.2.1.2 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.

4.2.1.3 Land Application Management Plan

See the section titled “Land Application Management Plan” in the Schedules section of this permit for more information.

5 Schedules

5.1 Annual Water Quality Trading (WQT) Report

Required Action	Due Date
<p>Annual WQT Report: Submit an annual WQT report that shall cover the first year of the permit term. The WQT Report shall include:</p> <p>The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance;</p> <p>The source of each month’s pollutant reduction credits by identifying the approved water quality trading plan that details the source;</p> <p>A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and</p> <p>Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.</p>	01/31/2026
<p>Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.</p>	01/31/2027
<p>Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.</p>	01/31/2028
<p>Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued by the expiration date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification of noncompliance or failure to implement any terms or conditions of the approved water quality trading plan for the previous calendar year.</p>	

5.2 Copper Compliance Schedule

Required Action	Due Date
<p>Report on Effluent Discharges: Submit a report on effluent discharges of copper with conclusions regarding compliance.</p>	06/30/2024
<p>Action Plan: Submit an action plan for complying with the effluent limitation. If construction is required, include plans and specifications with the submittal.</p>	12/31/2024

5.3 Land Treatment Management Plan

Required Action	Due Date
<p>Update Land Treatment Management Plan: Submit an update to the management plan to optimize the land treatment system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.</p> <p>The plan shall also include a map of the land treatment system per s. NR 141.065 Wis. Adm. Code. All monitoring well locations shall be reported to the department on a plan map drawn to a specific scale. The map shall indicate structure boundaries, property boundaries, any nearby surface waters and a north arrow. The plan shall show the wells in relation to each other, to property and structure boundaries and to a common reference point on a horizontal grid system. The origin of the grid system shall be located according to latitude and longitude or according to the state plane coordinate system. The exact vertical location of the top of the well casing shall be referenced to the nearest benchmark for the national geodetic survey datum to an accuracy of 0.01 feet. This plan map shall show the exact location of the installed well on a horizontal grid system which is accurate to within one foot. The DMZ should be clearly marked on the map.</p> <p>The land treatment system shall be operated in accordance with the approved management plan.</p>	09/30/2023

5.4 Groundwater Monitoring Well Location Submittal

Required Action	Due Date
<p>Submit Latitude/Longitude of GW Monitoring Well: The permittee shall submit to the department the latitude/longitude of the groundwater monitoring wells, in decimal degrees.</p>	09/30/2023

5.5 Groundwater Well Installation- 829 (MW23A) & 830 (MW23B)

Required Action	Due Date
<p>Plans and Specifications: Submit plans and specifications for installation of monitoring wells 829 (MW23A) and 830 (MW23B) to be installed.</p>	09/30/2023
<p>Installation: Complete well installation in accordance with ch NR 141, Wisconsin Administrative Code. Permittee shall notify the department within 14 days of installation so that proper monitoring forms can be provided. The wells shall be monitored monthly for the three consecutive months following installation. (Note: Documentation of well construction must be submitted to the Department within 60 days of well installation.)</p>	05/31/2024

5.6 Land Application Management Plan

Required Action	Due Date
<p>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.</p>	09/30/2023

6 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).

6.1 Reporting and Monitoring Requirements

6.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

6.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and 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.

6.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

6.1.4 Reporting of Monitoring Results

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

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating 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.

6.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

6.1.6 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

6.1.7 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

6.2 System Operating Requirements

6.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

6.2.2 Bypass

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

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or 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.

6.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

6.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

6.2.5 Ammonia Limit Not Needed - Continue to Optimize Removal of Ammonia

Applying the procedures in s. NR 106.05, Wis. Adm. Code, to ammonia data that is representative of the current operations of the wastewater treatment plant resulted in a determination that ammonia effluent limits are not necessary in this permit. Pursuant to NR 106.33, throughout the term of this permit, the wastewater treatment plant shall continue to be operated in a manner that optimizes the removal of ammonia within the design capabilities of the wastewater treatment plant.

6.2.6 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

6.2.7 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

6.2.8 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

6.2.9 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of

pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

6.2.10 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

6.3 Surface Water Requirements

6.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

6.3.2 Appropriate Formulas for Effluent Calculations

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

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

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

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

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

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

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

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

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

6.3.3 Effluent Temperature Requirements

Weekly Average Temperature – If temperature limits are included in this permit, Weekly Average Temperature shall be calculated as the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock pursuant to Wis. Adm. Code, s. NR 102.28. ‘Cold Shock’ means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state pursuant to Wis. Adm. Code, s. NR 102.29.

6.3.4 Visible Foam or Floating Solids

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

6.3.5 Surface Water Uses and Criteria

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

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

6.3.6 Chloride Notification

The permittee shall notify the Department in writing of any proposed changes which may affect the characteristics of the wastewater, which results in an increase in the concentration of chloride, under the authority of sections 283.31(4)(b) and 283.59(1), Stats. This notification shall include a description of the proposed source of chlorides and the anticipated increase in concentration. Following receipt of the notification, the Department may propose a modification to the permit.

6.3.7 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.

6.3.8 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the *"State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition"* (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the

Ceriodaphnia dubia and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

6.3.9 Whole Effluent Toxicity (WET) Identification and Reduction

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

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

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

6.4 Land Treatment Requirements for Industrial Discharges

NR 214, Wisconsin Administrative Code: The requirements of this section are based on ss. NR 214.12-16, Wis. Adm. Code, and apply to wastewater discharges to designed and constructed absorption pond, ridge & furrow, spray irrigation, overland flow and subsurface absorption treatment systems.

6.4.1 Formulas for Land Treatment Calculations

The permittee shall use the following formulas for land treatment calculations, unless an alternate calculation method is approved by the Department in the Land Treatment Management Plan.

6.4.1.1 Monthly Average Hydraulic Application Rate

Determine the monthly average hydraulic application rate (in gal/acre/day) for each outfall by calculating the total gallons of wastewater applied onto the site for the month, dividing that total by the number of wetted acres loaded during the month, and then dividing this resulting value by the number of days in the month. Enter this calculated monthly value on the Discharge Monitoring Report form in the box for the last day of the month, in the "Hydraulic Application Rate" column.

6.4.1.2 Annual Total Nitrogen per Cell or per Zone

$$\frac{(\text{annual ave. concentration in mg/L}) (\text{tot. annual flow in million gallons per cell or zone}) (8.34)}{\text{acreage of cell or zone}} = \text{lbs/ac/yr}$$

6.4.1.3 Annual Total Chloride per Cell or per Zone

$$\frac{(\text{annual ave. concentration in mg/L}) (\text{tot. annual flow in million gallons per cell or zone}) (8.34)}{\text{acreage of cell or zone}} = \text{lbs/ac/yr}$$

6.4.2 Land Treatment Annual Report

Annual Land Treatment Reports are due by January 31st of each year for the previous calendar year.

6.4.3 Chloride Requirements for Land Treatment Systems

Since chloride is not significantly treated by the soil, the chloride level of the wastewater treated on land shall be minimized to the extent that is technically and economically feasible. The goal is to protect groundwater quality and prevent exceedance of the 125 mg/L groundwater preventive action limit.

6.4.4 Nitrogen Loading Requirements for Ridge and Furrow

The total annual nitrogen loading (pounds/acre/year) to the wastewater land treatment acreage shall not exceed the limitation contained in the land treatment annual report table of this permit, except that the Department may approve (in writing) an alternative nitrogen loading limit in a ridge and furrow management plan based on the annual nitrogen needs of the cover crop and the permittee's demonstration of nitrogen losses for the site as specified in s. NR 214.13(3)(c), Wis. Adm. Code.

6.4.5 Ridge and Furrow Flooding and Overflow Prohibited

The volume of discharge to the ridge and furrow system shall be limited to prevent inundation of the ridges except for temporary conditions following precipitation events. Discharge to the ridge and furrow system shall be also limited so that the discharge volume combined with the precipitation from a 10-year frequency, 24-hour duration rainfall event does not overflow the boundary of the system.

6.4.6 Ridge and Furrow Management Plan

The ridge and furrow system shall be operated and managed in accordance with a Department approved management plan. The management plan shall be consistent with the conditions listed in this permit and s. NR 214.13(5), Wis. Adm. Code, which requires a load/rest schedule, vegetative cover control and removal, etc. If operational changes are needed, the management plan shall be amended by submitting a written request to the Department for approval.

6.5 Groundwater Standard Requirements

6.5.1 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.

6.5.2 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).

6.5.3 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.

6.5.4 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.

6.5.5 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)

6.5.6 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.

6.5.7 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.

6.5.8 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.

6.5.9 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.

6.5.10 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 pipetop to water, depth from pipetop 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.

6.5.11 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.

6.5.12 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.

6.5.13 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.

6.5.14 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.

6.6 Land Application Requirements

6.6.1 General Sludge Management Information

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

6.6.2 Land Application Characteristic Report

The analytical results from testing of liquid wastes, by-product solids and sludges that are land applied shall be reported annually on the Characteristic Report Form 3400 49. The report form shall be submitted electronically no later than the date indicated on the form. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the ‘eReport Certify’ page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The ‘eReport Certify’ page certifies that the electronic report form is true, accurate and complete.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All sludge results shall be reported on a dry weight basis.

6.6.3 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

6.6.4 Annual Land Application Report

The annual totals for the land application loadings of liquid wastes, by-product solids and sludges to field spreading sites shall be submitted electronically on the Annual Land Application Report Form 3400-55 by January 31, each year whether or not waste is land applied. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the ‘eReport Certify’ page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the

officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.5 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

6.6.6 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

6.6.7 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

6.6.8 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

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

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

6.6.9 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"):

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

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

6.6.10 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

6.6.11 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

6.6.12 Soil Incorporation Requirements

- **Liquid Sludge Requirements:** The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- **Cake Sludge Requirements:** After land application, cake sludge shall be incorporated into the soil. The timing of such incorporation and other related requirements and procedures shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- **Liquid Wastewater Requirements:** The Department may require that liquid wastewater be incorporated or injected into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater, when such injection or incorporation is necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- **By-Product Solids Requirements:** The Department may limit the volume of by-products solids that are landspread on a specific site when necessary to prevent surface runoff or leaching of contaminants to groundwater and objectionable odors. By-product solids shall, after application, be plowed, disced, or otherwise incorporated into the soil. Requirements and procedures for the incorporation of byproduct solids into the soil shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

6.6.13 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.

6.6.14 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

7 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Annual Water Quality Trading (WQT) Report -Annual WQT Report	January 31, 2026	14
Annual Water Quality Trading (WQT) Report -Annual WQT Report #2	January 31, 2027	14
Annual Water Quality Trading (WQT) Report -Annual WQT Report #3	January 31, 2028	14
Annual Water Quality Trading (WQT) Report -Annual WQT Report Required After Permit Expiration	See Permit	14
Copper Compliance Schedule -Report on Effluent Discharges	June 30, 2024	14
Copper Compliance Schedule -Action Plan	December 31, 2024	14
Land Treatment Management Plan -Update Land Treatment Management Plan	September 30, 2023	15
Groundwater Monitoring Well Location Submittal -Submit Latitude/Longitude of GW Monitoring Well	September 30, 2023	15
Groundwater Well Installation- 829 (MW23A) & 830 (MW23B) -Plans and Specifications	September 30, 2023	15
Groundwater Well Installation- 829 (MW23A) & 830 (MW23B) - Installation	May 31, 2024	15
Land Application Management Plan -Land Application Management Plan	September 30, 2023	15
General Sludge Management Form 3400-48	prior to any significant sludge management changes	26
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	27
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	28
Groundwater Monitoring Forms.	no later than the date indicated on the form	25
Annual Land Treatment Reports	by January 31st of each year for the previous calendar year	24
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	17

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

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Grande Cheese Company, Custom Ingredient Div

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.