



# WPDES PERMIT

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

**SENECA FOODS CORPORATION - Clyman**

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

640 CAUGHLIN ROAD

to

**Clyman Creek & Groundwaters of the Upper Rock River Basin (Sinissippi Lake Watershed, UR08)  
via Land Application and Spray Irrigation on Approved Sites in Dodge 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 \_\_\_\_\_  
Lisa Creegan  
Wastewater Field Supervisor

\_\_\_\_\_  
Date Permit Signed/Issued

**PERMIT TERM: EFFECTIVE DATE - May 01, 2026**

**EXPIRATION DATE - March 31, 2031**

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# 1 In-Plant Requirements

## 1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
101	In-Plant: 24-hr flow proportional composite samples shall be collected from the line between the wastewater screens and storage tanks prior to spray irrigation fields. Magnetic flow meter is in the same location. Process wastewater may include waters from the washing and blanching of vegetables, including can-line and other clean-up wash waters.
102	In-Plant: Representative 3-grab composite samples shall be collected from the discharge from Mud Pond 1 to Spray Irrigation. Waters used to wash raw vegetables (outside) are directed to Mud Pond 2. Mud Pond 2 drains to the interconnected Mud Pond 1. Flow is measured using propeller inline flow meter.
103	In-Plant: Representative 3-grab composite samples shall be collected from the discharge from Lagoon 4 to Spray Irrigation. Lagoon 4 serves as a contingency storage location for summer and winter processing waters. Flow is measured using propeller inline flow meter.
106	In-Plant: Representative 3-grab composite samples of can cooling water shall be collected from the discharge from Lagoon 1 to Spray Irrigation. Flow is measured using propeller inline flow meter.
107	In-Plant: Representative 3-grab composite samples of can cooling water shall be collected from the discharge from Lagoon 2 to Spray Irrigation. Flow is measured using propeller inline flow meter.
108	In-Plant: Representative 3-grab composite samples of can cooling water shall be collected from the discharge from Lagoon 3 to Spray Irrigation. Flow is measured using propeller inline flow meter.
109	In-Plant: Representative 3-grab composite samples of process wastewater shall be collected from the discharge from Lagoon 5 to Spray Irrigation. Flow is measured using propeller inline flow meter.

## 1.2 Monitoring Requirements and Limitations

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

### 1.2.1 Sampling Point 101 - Process Wastewater to SI

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Daily	Continuous	
BOD <sub>5</sub> , Total		mg/L	Weekly	24-Hr Flow Prop Comp	
Chloride		mg/L	Weekly	24-Hr Flow Prop Comp	
Nitrogen, Nitrite + Nitrate Total		mg/L	Weekly	24-Hr Flow Prop Comp	
Nitrogen, Total Kjeldahl		mg/L	Weekly	24-Hr Flow Prop Comp	

**1.2.2 Sampling Point 102 - Discharge from Mud Pond to SI; 106- Discharge from Lagoon 1 to SI; 107- Discharge from Lagoon 2 to SI; 108- Discharge from Lagoon 3 to SI**

<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>
Flow Rate		gpd	Daily	Measure	
Chloride		mg/L	Weekly	3-Grab Comp	
Nitrogen, Total Kjeldahl		mg/L	Weekly	3-Grab Comp	

**1.2.3 Sampling Point 103 - Discharge from Lagoon 4 to SI and 109- Discharge from Lagoon 5 to SI**

<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>
Flow Rate		gpd	Daily	Measure	
Chloride		mg/L	Weekly	3-Grab Comp	
Nitrogen, Nitrite + Nitrate Total		mg/L	Weekly	3-Grab Comp	
Nitrogen, Total Kjeldahl		mg/L	Weekly	3-Grab Comp	

## 2 Surface Water 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 Type/Sample Contents and Treatment Description (as applicable)
001	Effluent: 24-hr composite samples of can cooling water shall be collected from the manhole in the discharge pipe at the southeast corner of Lagoon 3 prior to discharge to a ditch which flows to Clyman Creek. A magnetic flow meter is in the same location.

### 2.2 Monitoring Requirements and Effluent Limitations

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

#### 2.2.1 Sampling Point (Outfall) 001 - Discharge to Clyman Creek

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD <sub>5</sub> , Total	Daily Max	20 mg/L	Weekly	24-Hr Comp	
BOD <sub>5</sub> , Total	Monthly Avg	10 mg/L	Weekly	24-Hr Comp	
BOD <sub>5</sub> , Total	Daily Max	380 lbs/day	Weekly	Calculated	
BOD <sub>5</sub> , Total	Monthly Avg	246 lbs/day	Weekly	Calculated	
BOD <sub>5</sub> , Total	Annual Avg	184 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Daily Max	20 mg/L	Weekly	24-Hr Comp	
Suspended Solids, Total	Monthly Avg	10 mg/L	Weekly	24-Hr Comp	
Suspended Solids, Total	Daily Max	609 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Monthly Avg	451 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Annual Avg	313 lbs/day	Weekly	Calculated	
pH Field	Daily Min	6.0 su	5/Week	Grab	
pH Field	Daily Max	9.0 su	5/Week	Grab	
Dissolved Oxygen	Daily Min	4.0 mg/L	5/Week	Grab	
Halogen, Total Residual as Cl <sub>2</sub>	Daily Max	19 µg/L	Weekly	Grab	
Halogen, Total Residual as Cl <sub>2</sub>	Weekly Avg	7.3 µg/L	Weekly	Grab	
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total		mg/L	Weekly	24-Hr Comp	

<b>Monitoring Requirements and Effluent 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>
Chloride		mg/L	5/Week	24-Hr Comp	Monitoring to obtain a minimum of 11 samples during the permit term.
Arsenic, Total Recoverable		µg/L	Once	24-Hr Comp	Monitoring to obtain a minimum of one sample during the permit term.
Cadmium, Total Recoverable		µg/L	Once	24-Hr Comp	Monitoring to obtain a minimum of one sample during the permit term.
Chromium, Total Recoverable		µg/L	Once	24-Hr Comp	Monitoring to obtain a minimum of one sample during the permit term.
Copper, Total Recoverable		µg/L	5/Week	24-Hr Comp	Monitoring to obtain a minimum of four samples during the permit term.
Lead, Total Recoverable		µg/L	Once	24-Hr Comp	Monitoring to obtain a minimum of one sample during the permit term.
Nickel, Total Recoverable		µg/L	Once	24-Hr Comp	Monitoring to obtain a minimum of one sample during the permit term.
Zinc, Total Recoverable		µg/L	Once	24-Hr Comp	Monitoring to obtain a minimum of one sample during the permit term.
Hardness, Total as CaCO <sub>3</sub>		mg/L	5/Week	24-Hr Comp	Monitoring to obtain a minimum of four samples during the permit term. Collect sample on the same day copper samples are collected.
Phosphorus, Total	Monthly Avg	1.6 mg/L	Weekly	24-Hr Comp	This is an interim MDV limit effective through March 31, 2028. See the MDV/Phosphorus permit sections and phosphorus schedules.
Phosphorus, Total	Monthly Avg	0.8 mg/L	Weekly	24-Hr Comp	This is an interim MDV limit effective on April 1, 2028. See the MDV/Phosphorus permit sections and phosphorus schedules.

<b>Monitoring Requirements and Effluent 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>
Phosphorus, Total		lbs/month	Monthly	Calculated	Report the total monthly phosphorus discharged in lbs/month on the last day of the month on the DMR. See Standard Requirements for 'Appropriate Formulas' to calculate the Total Monthly Discharge in lbs/month.
Phosphorus, Total		lbs/yr	Annual	Calculated	Report the sum of the total monthly discharges (for the months that the MDV is in effect) for the calendar year on the Annual report form.
Temperature Maximum		deg F	Daily	Grab	Monitoring to obtain a minimum of 11 samples during the permit term.
Acute WET		TU <sub>a</sub>	See Listed Qtr(s)	24-Hr Comp	2 tests required during the permit term. See Whole Effluent Toxicity (WET) Testing permit section.
Chronic WET		TU <sub>c</sub>	See Listed Qtr(s)	24-Hr Comp	Annual tests required during the permit term. See Whole Effluent Toxicity (WET) Testing permit section.

**2.2.1.1 Halogen, Total Residual as Chlorine**

Acceptable test methods for determining Halogens, Total Residual as Cl<sub>2</sub> are the same as those for measuring Chlorine, Total Residual. These methods are listed for Chlorine, Total Residual in chapter NR 219, Table B, Wisconsin Administrative Code. The preferred test methods are the Spectrophotometric, DPD; the Electrode; and the Back Titration with amperometric endpoint.

**2.2.1.2 Total Metals Analyses**

Measurements of total metals and total recoverable metals shall be considered as equivalent. Appropriately sensitive approved analytical methods are required such that the limit of detection is less than or equal to one-fifth of the most restrictive calculated limits, shown in the table below, to better determine the need for limits at the next permit reissuance per s. NR 200.027(1), Wis. Adm. Code.

Parameter	Limit of Detection (LOD)
Arsenic	2.66 µg/L
Cadmium	0.70 µg/L
Chromium	39.1 µg/L
Copper	3.12 µg/L
Lead	8.9 µg/L
Nickel	15.7 µg/L
Zinc	36.6 µg/L

### 2.2.1.3 MDV (Multi-Discharger Variance) Requirements

**Optimization:** The permittee shall continue to optimize performance to control phosphorus discharges in accordance with s. 283.16(6), Wis. Stats. See the Schedules section for optimization requirements.

**Compliance Planning:** The permittee shall continue to evaluate alternative phosphorus compliance options such as water quality trading and adaptive management. Should the permittee request a future permit term of variance coverage, a financial alternatives analysis shall be completed. The financial alternatives analysis shall evaluate financial mechanisms that have the potential to make compliance with phosphorus WQBELs economically feasible.

**Watershed Provisions:** The permittee is required to implement watershed measures to reduce the amount of phosphorus entering the receiving water. The permittee has chosen to make payments to the county for phosphorus reductions to meet this requirement.

**Payment to County for Phosphorus Reduction:** The permittee shall make payments for phosphorus reduction to the county or counties approved by the Department per s. 283.16(8), Wis. Stats. The permittee shall make a total payment by March 1 of each year in the amount equal to the per pound amount of **\$68.40** times the number of pounds by which the effluent phosphorus discharged during the previous year exceeded the permittee's target value or \$640,000, whichever is less. The target value is **0.2 mg/L** per s. 283.16(1)(h), Wis. Stats., and is applicable during the months that the MDV is in effect. The MDV is in effect year-round. Refer to the Schedules section for the scheduled annual requirements.

Annual Payment Calculation: The annual payment is equal to the phosphorus load that exceeds the target value multiplied by **\$68.40** per pound. Use the steps shown below to calculate the annual payment. In addition, the Department shall send a statement to the permittee specifying total payment due to the participating counties each year in accordance with the Schedules section.

Annual Payment = [Annual Phosphorus Load – Annual Target Load] × Price Per Pound

Calculation Steps:

- Calculate pounds of phosphorus discharged for each month that the MDV is in effect:

Monthly Phosphorus Load (lbs/month) = Total Monthly Flow (MG) × Monthly Avg. TP effluent conc. (mg/L) × 8.34

- Sum the lbs/month discharged for the months that the MDV is in effect to calculate the annual phosphorus load:

Annual Phosphorus Load (lbs/year) =  $\sum$  [Monthly Phosphorus Load (lbs/month)]

- Calculate the Target Load (lbs/month) for each month that the MDV is in effect.

Monthly Target Load (lbs/month) = Total Monthly Flow (MG) × 0.2 mg/L × 8.34

- Sum the lbs/month for the months that the MDV is in effect to calculate the Annual Target Load:

Annual Target Load (lbs/year) =  $\sum$  [Monthly Target Load (lbs/month)]

- Calculate the annual payment:

Annual Payment (\$) = [Annual Phosphorus Load – Annual Target Load] × Price Per Pound

### 2.2.1.4 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), Wis. Adm. Code. 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.

### 2.2.1.5 Whole Effluent Toxicity (WET) Testing

**Primary Control Water for Acute Tests:** Synthetic (standard) laboratory water

**Primary Control Water for Chronic Tests:** Synthetic (standard) laboratory water

**Instream Waste Concentration (IWC):** 100%

**Dilution Series:** At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 75, 50, 25, 12.5% and any additional selected by the permittee.

#### WET Testing Frequency:

**Acute** tests are required during the following quarters:

- **Acute:** 2 acute tests are required during the permit term. April – July 2027 and April – July 2028
- If no discharge occurs during the scheduled WET test quarters, contact the Department when planning to discharge and conduct acute WET tests.

**Chronic** tests are required during the following quarters:

- **Chronic:** Annual chronic tests are required during the permit term. April – July 2026; April – July 2027; April – July 2028; April – July 2029; and April – July 2030
- If no discharge occurs during the scheduled WET test quarters, contact the Department when planning to discharge and conduct chronic WET tests.

Chronic WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in **April – July 2031**.

**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, 2<sup>nd</sup> 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 (fathead minnow (*Pimephales promelas*) and waterflea (*Ceriodaphnia dubia*)). The  $TU_a$  shall be calculated as follows:  $TU_a = 100 \div LC_{50}$ . A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic ( $TU_c$ ) is greater than **1.0** for either species. The  $TU_c$  shall be calculated as follows:  $TU_c = 100 \div IC_{25}$ .

**Additional Testing Requirements:** Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 1 retest 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).

#### **2.2.1.6 Additives**

The permittee shall report the dosage rate of all additives used on a monthly basis in the General Remarks section of the Discharge Monitoring Report form. The additives may be changed during the term of the permit following procedures in the 'Additives' subsection of the Standard Requirements.

### 3 Land Treatment Requirements

#### 3.1 Sampling Point(s)

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

<b>Sampling Point Designation</b>	
<b>Sampling Point Number</b>	<b>Sampling Point Location, Waste Description/Sample Contents and Treatment Description (as applicable)</b>
020	Land Treatment: Process wastewater, including boiler blowdown discharged to Aunt Nellie's Farm Kitchen spray irrigation site - 34 acres. Located in the E1/2 of Section 28, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
021	Land Treatment: Process wastewater, including boiler blowdown discharged to Hasse Field spray irrigation site - 11.9 acres. Located in the NW1/4 of NW1/4 of Section 34, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
022	Land Treatment: Process wastewater, including boiler blowdown discharged to Krueziger Field spray irrigation site - 30.7 acres. Located in the SE1/4 of Section 34, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
023	Land Treatment: Process wastewater, including boiler blowdown discharged to Seneca Field #15 spray irrigation site - 8 acres. Located in the SE1/4 of NE1/4 of Section 33, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
024	Land Treatment: Process wastewater, including boiler blowdown discharged to Stock Field spray irrigation site - 60.5 acres. Located in the W1/2 of Section 34, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
027	Land Treatment: Process wastewater, including boiler blowdown discharged to Vacek Field 2 spray irrigation site - 13.4 acres. Located in the SW1/4 of SE1/4 of Sec 27, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
032	Land Treatment: Process wastewater, including boiler blowdown discharged to Vacek Field 5 spray irrigation site - 16.1 acres. Located in the NE1/4 of SW1/4 of Sec 27, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
033	Land Treatment: Process wastewater, including boiler blowdown discharged to Vacek Field 6 spray irrigation site - 16 acres. Located in the NW1/4 of SW1/4 of Sec 27, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
051	Land Treatment: Process wastewater, including boiler blowdown discharged to Vacek Fields 1a & 1b spray irrigation site - 18.4 acres. Located in the SW1/4 of SE1/4 of Sec 27, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
052	Land Treatment: Process wastewater, including boiler blowdown discharged to Vacek Fields 3a & 3b spray irrigation site - 19.3 acres. Located in the SW1/4 of SE1/4 & SE1/4 of SW1/4 of Sec 27, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.

053	Land Treatment: Process wastewater, including boiler blowdown discharged to Vacek Fields 7a & 7b spray irrigation site - 18.0 acres. Located in the SW1/4 of SW1/4 of Sec 27, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.
054	Land Treatment: Process wastewater, including boiler blowdown discharged to Vacek Field 4a & 4b spray irrigation site - 19.1 acres. Located in the NW1/4 of the SE1/4 & NE1/4 of SW1/4 of Section 27, T10N, R15E. Grab composite samples collected from Lagoon 4 & 5, Tanks, and Mud Pond. Propeller inline flow meter in the same locations.

### 3.2 Monitoring Requirements and Limitations

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

#### 3.2.1 Sampling Point (Outfall) 020 - ANFK Field SI Site; 021- Haase Field SI Site; 022- Kruzuiger Field SI Site; 023- Seneca Field #15 SI Site; 024- Stock Field SI Site, Spray Irrigation

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	5,600 gal/ac/day	Monthly	Calculated	May - October
Hydraulic Application Rate	Monthly Avg	3,800 gal/ac/day	Monthly	Calculated	April and November
Hydraulic Application Rate	Monthly Avg	0 gal/ac/day	Monthly	Calculated	December - March
Nitrogen, Max Applied On Any Zone	Annual Total	400 lbs/ac/yr	Annual	Calculated	
Chloride, Max Applied to Any Zone		lbs/ac/yr	Annual	Calculated	
Soil - Nitrogen, Available		mg/kg	Annual	Grab	
Soil - Phosphorus, Available		mg/kg	Annual	Grab	
Soil - Potassium, Available		mg/kg	Annual	Grab	
Soil - pH Lab		su	Annual	Grab	
Other Sources of Nitrogen		lbs/ac/yr	Annual	Measure	

<b>Daily Log – Monitoring Requirements and Limitations</b>				
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
Zone or Location Being Sprayed	-	Number	Daily	Log
Volume per Zone	-	Gallons	Daily	Log
Acres Being Sprayed	-	Acres	Daily	Log
Start to End Time	-	Date, Hour	Daily	Log
Maximum Applied Volume	1.1	Inches/Load Cycle	Daily	Calculated

**3.2.1.1 Maximum Applied Chloride/Nitrogen on Any Zone**

Calculate the mass applied annually to each zone\* utilized during the calendar year using the equation below. Record the highest total mass applied to any zone within the treatment system each year on the eDMR with a sample date of December 31.

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

\*A zone can be an entire field, or a portion as defined in the approved Land Treatment Management Plan.

**3.2.1.2 Spray Irrigation Site(s) - Soil Analysis**

The soil at each spray irrigation sample point (outfall) shall be tested annually for available nitrogen, available phosphorus, available potassium and pH. The soil tests shall be conducted by an approved testing facility. The permittee shall report sample results on an annual eDMR. If multiple soil tests are taken at this outfall, report all data on the eDMR and identify the zones sampled in the General Comments section of the report.

**3.2.1.3 Irrigation Months**

Discharge to the spray irrigation sites shall occur only May through October each year up to the full hydraulic application rate limit and up to the reduced hydraulic application rate in April and November.

**3.2.1.4 Rain Events, Ponding, and Runoff**

Spray irrigation activities shall be controlled so that wastewater is absorbed into the soil to prevent ponding and runoff within the sprayfield and to prevent runoff beyond the wastewater treatment property boundary. No discharge may occur during a rainfall event that causes runoff from the site. Load/rest cycles shall be maximized to optimize the treatment of wastewater, especially in areas of shallow groundwater.

**3.2.1.5 Cover Crop Vegetation Management**

The spray irrigation treatment system shall be managed to support a healthy perennial cover crop to optimize wastewater and nutrient uptake. The cover crop shall be cut and harvested at least twice a year to maximize removal of applied nutrients.

### 3.2.2 Sampling Point (Outfall) 027 - Vacek Field 2; 032- Vacek Field 5; 033- Vacek Field 6, Spray Irrigation

<b>Monitoring Requirements and Limitations</b>					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Daily	Total Daily	
Hydraulic Application Rate	Monthly Avg	5,600 gal/ac/day	Monthly	Calculated	June - October
Hydraulic Application Rate	Monthly Avg	3,800 gal/ac/day	Monthly	Calculated	May and November
Hydraulic Application Rate	Monthly Avg	0 gal/ac/day	Monthly	Calculated	December - April
Nitrogen, Max Applied On Any Zone	Annual Total	300 lbs/ac/yr	Annual	Calculated	
Chloride, Max Applied to Any Zone		lbs/ac/yr	Annual	Calculated	
Soil - Nitrogen, Available		mg/kg	Annual	Grab	
Soil - Phosphorus, Available		mg/kg	Annual	Grab	
Soil - Potassium, Available		mg/kg	Annual	Grab	
Soil - pH Lab		su	Annual	Grab	
Other Sources of Nitrogen		lbs/ac/yr	Annual	Measure	

<b>Daily Log – Monitoring Requirements and Limitations</b>				
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
Zone or Location Being Sprayed	-	Number	Daily	Log
Volume per Zone	-	Gallons	Daily	Log
Acres Being Sprayed	-	Acres	Daily	Log
Start to End Time	-	Date, Hour	Daily	Log

<b>Daily Log – Monitoring Requirements and Limitations</b>				
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
Maximum Applied Volume	1.1	Inches/Load Cycle	Daily	Calculated

**3.2.2.1 Maximum Applied Chloride/Nitrogen on Any Zone**

Calculate the mass applied annually to each zone\* utilized during the calendar year using the equation below. Record the highest total mass applied to any zone within the treatment system each year on the eDMR with a sample date of December 31.

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

\*A zone can be an entire field, or a portion as defined in the approved Land Treatment Management Plan.

**3.2.2.2 Spray Irrigation Site(s) - Soil Analysis**

The soil at each spray irrigation sample point (outfall) shall be tested annually for available nitrogen, available phosphorus, available potassium and pH. The soil tests shall be conducted by an approved testing facility. The permittee shall report sample results on an annual eDMR. If multiple soil tests are taken at this outfall, report all data on the eDMR and identify the zones sampled in the General Comments section of the report.

**3.2.2.3 Irrigation Months**

Discharge to the spray irrigation sites shall occur only June through October each year up to the full hydraulic application rate limit. Depth to groundwater at the corresponding groundwater monitoring wells must be five feet or greater to allow for discharge to the sprayfield during the month of May. The permittee shall notify the Department in writing when spray irrigation in May will occur. When allowed in the months of May and November the hydraulic application rate limit allowed for spray irrigation is reduced to 3,800 gal/ac/day.

**3.2.2.4 Rain Events, Ponding, and Runoff**

Spray irrigation activities shall be controlled so that wastewater is absorbed into the soil to prevent ponding and runoff within the sprayfield and to prevent runoff beyond the wastewater treatment property boundary. No discharge may occur during a rainfall event that causes runoff from the site. Load/rest cycles shall be maximized to optimize the treatment of wastewater, especially in areas of shallow groundwater.

**3.2.2.5 Cover Crop Vegetation Management**

The spray irrigation treatment system shall be managed to support a healthy perennial cover crop to optimize wastewater and nutrient uptake. The cover crop shall be cut and harvested at least twice a year to maximize removal of applied nutrients.

**3.2.3 Sampling Point (Outfall) 051 - Vacek Field 1a & 1b; 052- Vacek Fields 3a & 3b; 053- Vacek Fields 7a & 7b; 054- Vacek Fields 4a & 4b, Spray Irrigation**

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	4,000 gal/ac/day	Monthly	Calculated	June - October
Hydraulic Application Rate	Monthly Avg	2,700 gal/ac/day	Monthly	Calculated	May and November
Hydraulic Application Rate	Monthly Avg	0 gal/ac/day	Monthly	Calculated	December - April
Nitrogen, Max Applied On Any Zone	Annual Total	300 lbs/ac/yr	Annual	Calculated	
Chloride, Max Applied to Any Zone		lbs/ac/yr	Annual	Calculated	
Soil - Nitrogen, Available		mg/kg	Annual	Grab	
Soil - Phosphorus, Available		mg/kg	Annual	Grab	
Soil - Potassium, Available		mg/kg	Annual	Grab	
Soil - pH Lab		su	Annual	Grab	
Other Sources of Nitrogen		lbs/ac/yr	Annual	Measure	

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
Zone or Location Being Sprayed	-	Number	Daily	Log
Volume per Zone	-	Gallons	Daily	Log
Acres Being Sprayed	-	Acres	Daily	Log
Start to End Time	-	Date, Hour	Daily	Log

<b>Daily Log – Monitoring Requirements and Limitations</b>				
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
Maximum Applied Volume	1.1	Inches/Load Cycle	Daily	Calculated

**3.2.3.1 Maximum Applied Chloride/Nitrogen on Any Zone**

Calculate the mass applied annually to each zone\* utilized during the calendar year using the equation below. Record the highest total mass applied to any zone within the treatment system each year on the eDMR with a sample date of December 31.

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

\*A zone can be an entire field, or a portion as defined in the approved Land Treatment Management Plan.

**3.2.3.2 Spray Irrigation Site(s) - Soil Analysis**

The soil at each spray irrigation sample point (outfall) shall be tested annually for available nitrogen, available phosphorus, available potassium and pH. The soil tests shall be conducted by an approved testing facility. The permittee shall report sample results on an annual eDMR. If multiple soil tests are taken at this outfall, report all data on the eDMR and identify the zones sampled in the General Comments section of the report.

**3.2.3.3 Irrigation Months**

Discharge to the spray irrigation sites shall occur only June through October each year up to the full hydraulic application rate limit. Depth to groundwater at the corresponding groundwater monitoring wells must be five feet or greater to allow for discharge to the sprayfield during the month of May. The permittee shall notify the Department in writing when spray irrigation in May will occur. When allowed in the months of May and November, the hydraulic application rate limit for spray irrigation is reduced to 2,700 gal/ac/day.

**3.2.3.4 Rain Events, Ponding, and Runoff**

Spray irrigation activities shall be controlled so that wastewater is absorbed into the soil to prevent ponding and runoff within the sprayfield and to prevent runoff beyond the wastewater treatment property boundary. No discharge may occur during a rainfall event that causes runoff from the site. Load/rest cycles shall be maximized to optimize the treatment of wastewater, especially in areas of shallow groundwater.

**3.2.3.5 Cover Crop Vegetation Management**

The spray irrigation treatment system shall be managed to support a healthy perennial cover crop to optimize wastewater and nutrient uptake. The cover crop shall be cut and harvested at least twice a year to maximize removal of applied nutrients.

## 4 Groundwater Requirements

### 4.1 Monitoring Requirements and Limitations

#### 4.1.1 Groundwater Monitoring System for ANFK Fields

**Location of Monitoring System:** Aunt Nellie's Farm Kitchens field

**Groundwater Monitoring Well(s) to be Sampled:** MW-6 (806), MW-7 (807), MW-8 (808), MW-10 (810), MW-46 (851)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-6 (806)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** None

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.4	N/A	Quarterly
pH Field	su	8.5	N/A	Quarterly
Solids, Total Dissolved	mg/L	405	N/A	Quarterly
Iron Dissolved	µg/L	N/A	N/A	Quarterly
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

##### 4.1.1.1 Preventive Action Limits for pH

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.5** s.u. or greater than **8.5** s.u.

**4.1.1.2 Preventive Action Limits for Indicator Parameters**

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

**4.1.2 Groundwater Monitoring System for Haase Fields**

**Location of Monitoring System:** Haase Farm Fields

**Groundwater Monitoring Well(s) to be Sampled:** MW-35 (824), MW-36 (825)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-36 (825)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** None

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	195	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.4	N/A	Quarterly
pH Field	su	8.4	N/A	Quarterly
Solids, Total Dissolved	mg/L	600	N/A	Quarterly
Iron Dissolved	µg/L	N/A	N/A	Quarterly
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

**4.1.2.1 Exemptions and Alternative Concentration Limit**

An alternative concentration limit (ACL) of **195 mg/L** has been established for the **Dissolved Chloride Preventive Action Limit** at this site. This ACL is authorized in conjunction with an exemption granted under s. NR 140.28, Wis. Adm. Code.

**4.1.2.2 Preventive Action Limits for pH**

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.4** s.u. or greater than **8.4** s.u.

**4.1.2.3 Preventive Action Limits for Indicator Parameters**

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

**4.1.3 Groundwater Monitoring System for Krueziger Fields**

**Location of Monitoring System:** Krueziger Property

**Groundwater Monitoring Well(s) to be Sampled:** MW-38 (827), MW-39 (828), MW-40 (829), MW-41 (830), MW-42 (831), MW-43 (832), MW-44 (833)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-38 (827), MW-39 (828)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** MW-44 (833), MW-42 (831), MW-41 (830)

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	7.6	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.4	N/A	Quarterly
pH Field	su	8.5	N/A	Quarterly
Solids, Total Dissolved	mg/L	540	N/A	Quarterly
Iron Dissolved	µg/L	N/A	N/A	Quarterly
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

**4.1.3.1 Exemptions and Alternative Concentration Limit**

An alternative concentration limit (ACL) of **7.6 mg/L** has been established for the **Dissolved Nitrite + Nitrate, Nitrogen Preventive Action Limit** at this site. This ACL is authorized in conjunction with an exemption granted under s. NR 140.28, Wis. Adm. Code.

**4.1.3.2 Preventive Action Limits for pH**

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.5** s.u. or greater than **8.5** s.u.

**4.1.3.3 Preventive Action Limits for Indicator Parameters**

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

**4.1.4 Groundwater Monitoring System for Seneca Field #15**

**Location of Monitoring System:** Field 15 east of lagoons 3 & 4

**Groundwater Monitoring Well(s) to be Sampled:** MW-1 (801), MW-15A (811), MW-45 (850)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-1 (801)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** MW-45 (850), MW-15A (811)

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.4	N/A	Quarterly
pH Field	su	8.3	N/A	Quarterly
Solids, Total Dissolved	mg/L	820	N/A	Quarterly
Iron Dissolved	µg/L	N/A	N/A	Quarterly

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

**4.1.4.1 Preventive Action Limits for pH**

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.3** s.u. or greater than **8.3** s.u.

**4.1.4.2 Preventive Action Limits for Indicator Parameters**

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

**4.1.5 Groundwater Monitoring System for Stock Fields**

**Location of Monitoring System:** Stock Farm Fields NEQ of SEQ, Sec 15, T10N R6E

**Groundwater Monitoring Well(s) to be Sampled:** MW-16A (813), MW-16C (815), MW-17 (816), MW-18B (817), MW-19 (818), MW-20A (819), MW-20B (820), MW-33 (822), MW-37 (826)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-20B (820)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** MW-37 (826), MW-19 (818), MW-18B (817), MW-17 (816), MW-16C (815)

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.4	N/A	Quarterly
pH Field	su	8.4	N/A	Quarterly
Solids, Total Dissolved	mg/L	700	N/A	Quarterly

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Iron Dissolved	µg/L	N/A	N/A	Quarterly
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

**4.1.5.1 Preventive Action Limits for pH**

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.4** s.u. or greater than **8.4** s.u.

**4.1.5.2 Preventive Action Limits for Indicator Parameters**

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

**4.1.6 Groundwater Monitoring System for Vacek Fields**

**Location of Monitoring System:** S 1/2 of Section 27, T10N, R15E, Spray Irrigation

**Groundwater Monitoring Well(s) to be Sampled:** MW-55 (860), MW-47 (852), MW-48 (853), MW-49 (854), MW-50 (855), MW-51 (856), MW-52 (857), MW-53 (858), MW-54 (859)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-52 (857)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** MW-53 (858), MW-50 (855), MW-55 (860)

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.3	N/A	Quarterly
pH Field	su	8.5	N/A	Quarterly

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Solids, Total Dissolved	mg/L	450	N/A	Quarterly
Iron Dissolved	µg/L	N/A	N/A	Quarterly
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

#### 4.1.6.1 Preventive Action Limits for pH

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.5** s.u. or greater than **8.5** s.u.

#### 4.1.6.2 Preventive Action Limits for Indicator Parameters

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

#### 4.1.7 Groundwater Monitoring System for Lagoons 4 & 5

**Location of Monitoring System:** Bordering the active wastewater storage/treatment Lagoon

**Groundwater Monitoring Well(s) to be Sampled:** MW-5 (805), MW-28 (835), MW-29A (836), MW-29B (837), MW-30B (839), MW-31 (840)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-28 (835)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** MW-31 (840), MW-30B (839), MW-30 (838), MW-29B (837), MW-29A (836), MW-5 (805)

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	200	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.5	N/A	Quarterly

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
pH Field	su	8.3	N/A	Quarterly
Solids, Total Dissolved	mg/L	900	N/A	Quarterly
Phosphorus, Total Dissolved	mg/L	N/A	N/A	Quarterly
Iron Dissolved	µg/L	N/A	N/A	Quarterly
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

**4.1.7.1 Exemptions and Alternative Concentration Limit**

An alternative concentration limit (ACL) of **200 mg/L** has been established for the **Dissolved Chloride Preventive Action Limit** at this site. This ACL is authorized in conjunction with an exemption granted under s. NR 140.28, Wis. Adm. Code.

**4.1.7.2 Preventive Action Limits for pH**

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.3** s.u. or greater than **8.3** s.u.

**4.1.7.3 Preventive Action Limits for Indicator Parameters**

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

**4.1.8 Groundwater Monitoring System for Lagoons 1, 2, 3**

**Location of Monitoring System:** Surrounding Lagoons numbered 1, 2 and 3

**Groundwater Monitoring Well(s) to be Sampled:** MW-21A (841), MW-21B (842), MW-11 (843), MW-23A (844), MW-23B (845), MW-25A (846), MW-25B (847), MW-27A (848), MW-27B (849)

**Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality:** MW-21A (841), MW-21B (842)

Preventive Action Limits (PAL) and Enforcement Standards (ES) listed in the table below are from ss. NR 140.10 and NR.140.12, Wis. Adm. Code. PALs for s. NR 140.20 Wis. Adm. Code Indicator Parameters and s. NR 140.28 Wis. Adm. Code Exemptions with Alternative Concentration Limits listed in the table below have been calculated based on background groundwater quality data from this/these designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent it is technically and economically feasible.

**Groundwater Monitoring Well(s) Used for Point of Standards Application:** MW-27B (849), MW-27A (848), MW-25B (847), MW-25A (846), MW-23B (845), MW-23A (844)

“Point of standards application” refers to any point of present groundwater use (i.e., potable well) or a specific groundwater monitoring well that is located beyond the design management zone or the property boundary, whichever is closer to the land treatment/disposal system at which the concentration of a substance in groundwater is measured for purposes of determining whether a PAL or an ES has been attained or exceeded. 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 monitoring well and analyzed for the parameters per the frequency shown in the table below.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
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PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Depth To Groundwater	feet	N/A	N/A	Quarterly
COD	mg/L	52	N/A	Quarterly
Chloride Dissolved	mg/L	245	250	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.0	10	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.3	N/A	Quarterly
pH Field	su	8.4	N/A	Quarterly
Solids, Total Dissolved	mg/L	1,095	N/A	Quarterly
Phosphorus, Total Dissolved	mg/L	N/A	N/A	Quarterly
Iron Dissolved	µg/L	N/A	N/A	Quarterly
Manganese Dissolved	µg/L	N/A	N/A	Quarterly

**4.1.8.1 Exemptions and Alternative Concentration Limit**

An alternative concentration limit (ACL) of **245 mg/L** has been established for the **Dissolved Chloride Preventive Action Limit** at this site. This ACL is authorized in conjunction with an exemption granted under s. NR 140.28, Wis. Adm. Code.

**4.1.8.2 Preventive Action Limits for pH**

A result for pH is considered to have exceeded the pH PAL for this site if the result is less than **6.4** s.u. or greater than **8.4** s.u.

**4.1.8.3 Preventive Action Limits for Indicator Parameters**

PALs for Indicator Parameters have been established for this site. For more information see “Indicator Parameter Preventive Action Limits and Alternative Concentration Limits” in the Standard Requirements section.

## 5 Land Application Requirements

### 5.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
006	Land Application: Landspreading of vegetable by-product solids to landspreading sites. Solids may include peelings, trimmings and sub-standard vegetables. Grab samples collected from the silage stack.
007	Land Application: Discharge of vegetable by-product leachate. Grab samples collected from the silage leachate pit.
013	Land Application: Discharge of vegetable wash wastewaters stored in Mud Ponds 1 and/or 2. Grab samples collected from the Mud Ponds.
015	Land Application: Discharge of wastewaters stored in Tanks 1 and/or 2. Grab samples collected from the Tanks.
019	Land Application: Discharge of process wastewater stored in Lagoons 4 or 5. Grab and composite samples collected from the Lagoons.
041	Land Application: Landspreading of sludge stored in Lagoons 4 or 5. Grab samples are collected from the spreading equipment.
042	Land Application: Landspreading of sludge stored in Tanks 1 or 2. Samples collected by the commercial hauler company.
060	Land Application: Discharge of can cooling water treated in Lagoons 1, 2, and 3. Grab samples collected from the lagoons.
061	Land Application: Landspreading of sludge stored in Lagoons 1, 2 and 3. Grab samples collected from the spreading vehicle.

### 5.2 Monitoring Requirements and Limitations

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

#### 5.2.1 Sampling Point (Outfall) 006 - Vegetable By-product Solids

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	Monthly	Grab Comp	
Nitrogen, Total Kjeldahl		Percent	Monthly	Grab Comp	
Chloride		Percent	Monthly	Grab Comp	
Phosphorus, Total		Percent	Monthly	Grab Comp	

<b>Monitoring Requirements and Limitations</b>					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Phosphorus, Water Extractable		% of Tot P	Monthly	Grab Comp	
Potassium, Total Recoverable		Percent	Monthly	Grab Comp	

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

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

**5.2.1.1 Sample Frequency**

Monitoring is required monthly only if land application occurs during that period.

**5.2.1.2 Annual Site Nitrogen Loading**

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

**5.2.1.3 Biennial Site Chloride Loading**

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

**5.2.1.4 Sampling**

Representative samples shall be collected of the byproduct solids to be land applied. When the byproduct solids are large pieces, a large sample should be collected and ground to a homogenous slurry for analysis.

**5.2.2 Sampling Point (Outfall) 007 – Vegetable By-product Leachate; 013 - Wastewaters from Mud Pond 1&2; 015- Wastewaters from Tanks 1 & 2; 019- Wastewater from Lagoon 4 or 5; 060- Wastewaters - Lagoon 1, 2 & 3**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	Quarterly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Chloride		mg/L	Monthly	Grab	
Phosphorus, Total		mg/L	Quarterly	Grab	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	
Potassium, Total Recoverable		mg/L	Quarterly	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

<b>Daily Log – Monitoring Requirements and Limitations</b>				
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

<b>Annual Report – Summary of Monitoring Requirements and Limitations</b>				
The Annual Report is due by January 31 <sup>st</sup> 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

**5.2.2.1 Sample Frequency**

Monitoring is required monthly and quarterly only if land application occurs during that period.

**5.2.2.2 Annual Site Nitrogen Loading**

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

**5.2.2.3 Biennial Site Chloride Loading**

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

**5.2.2.4 Exemption Notices for Outfall 007**

The permittee is exempt from the specified monitoring and reporting requirements for sites storing less than 150 tons of sweet corn silage. The permittee is also exempt from the monitoring and reporting requirements for sites storing sweet corn silage between 150 tons and 1200 tons if the permittee: 1) has an approved “Stack Inventory and Evaluation” form; 2) provides the site owner a letter describing approved leachate storing and spreading requirements as outlined in chs. NR 213 and 214, Wis. Adm. Code, and provides an aerial photo delineating restricted spreading areas; and 3) the site is included in an annual report submitted by the permittee following the year of silage storage which records the total amount of silage received and stored at the site.

**5.2.3 Sampling Point (Outfall) 041 - Sludge from Lagoon 4 or 5; 042- Sludge from Tanks 1 & 2; 061 - Lagoon 1, 2 & 3 Sludge**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	Quarterly	3-Grab Comp	
Chloride		Percent	Quarterly	3-Grab Comp	
Phosphorus, Total		Percent	Quarterly	3-Grab Comp	
Phosphorus, Water Extractable		% of Tot P	Quarterly	3-Grab Comp	
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total		Percent	Quarterly	3-Grab Comp	
Nitrogen, Organic Total		Percent	Quarterly	3-Grab Comp	
Nitrogen, Nitrate		Percent	Quarterly	3-Grab Comp	
Potassium, Total Recoverable		Percent	Quarterly	3-Grab Comp	
pH Field		su	Quarterly	3-Grab Comp	
Lead Dry Wt		mg/kg	Once	3-Grab Comp	
Zinc Dry Wt		mg/kg	Once	3-Grab Comp	
Copper Dry Wt		mg/kg	Once	3-Grab Comp	
Nickel Dry Wt		mg/kg	Once	3-Grab Comp	
Cadmium Dry Wt		mg/kg	Once	3-Grab Comp	
PCB Total Dry Wt		mg/kg	Once	3-Grab Comp	

<b>Monitoring Requirements and Limitations</b>					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
PFOA + PFOS		µg/kg	Once	Calculated	Report the sum of PFOA and PFOS. See PFAS Permit Sections for more information.
PFAS Dry Wt			Once	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

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

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

**5.2.3.1 Sample Frequency**

Monitoring is required quarterly only if land application occurs during that period.

**5.2.3.2 Annual Site Nitrogen Loading**

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

**5.2.3.3 Biennial Site Chloride Loading**

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

**5.2.3.4 Sludge Monitoring for PFAS**

Sampling shall occur for perfluoroalkyl and polyfluoroalkyl compounds (PFAS) listed in the table below and as indicated in sampling point sections above. Monitoring shall occur at each sample point when sludge is generated regardless of the end use (i.e. land applied, hauled to another facility, landfilled).

<b>PERFLUOROALKYLCARBOXILIC Acids (PFCAs)</b>	
PFBA	Perfluorobutanoic acid
PFPeA	Perfluroropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluroroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTTrDA	Perfluorotridecanoic acid
PFTeDA	Perfluorotetradecanoic acid
<b>PERFLUOROALKYLSULFONIC Acids (PFSAs)</b>	
PFBS	Perfluorobutane sulfonic acid
PFPeS	Perfluroropentane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFHpS	Perfluoroheptane sulfonic acid
PFOS	Perfluorooctane sulfonic acid
PFNS	Perfluorononane sulfonic acid
PFDS	Perfluorodecane sulfonic acid
PFDoS	Perfluorododecane sulfonic acid
<b>TELOMER SULFONIC Acids</b>	
4:2FTSA	<i>1H,1H,2H,2H</i> -Perfluorohexane sulfonic acid
6:2FTSA	<i>1H,1H,2H,2H</i> -Perfluorooctane sulfonic acid
8:2FTSA	<i>1H,1H,2H,2H</i> -Perfluorodecane sulfonic acid
<b>PERFLUOROCTANCESULFONAMIDES (FOSAs)</b>	

PFOSA	Perflurooctane sulfonamide
NMeFOSA	N-Methyl perfluorooctane sulfonamide
NEtFOSA	N-Ethyl perfluorooctane sulfonamide
<b>PERFLUOROOCETANESULFONAMIDOACETIC Acids</b>	
NMeFOSAA	N-Methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-Ethyl perfluorooctane sulfonamidoacetic acid
<b>NATIVE PERFLUOROOCETANESULFONAMIDOETHANOLS (FOSEs)</b>	
NMeFOSE	N-Methyl perfluorooctane sulfonamideoethanol
NEtFOSE	N-Ethyl perfluorooctane sulfonamideoethanol
<b>PERFLUOROALKYLETHERCARBOXYLIC Acids (PFECAs)</b>	
HFPO-DA	Hexafluoropropylene oxide dimer acid
ADONA	4,8-dioxa-3H-perfluorononanoic acid
PFMPA	Perfluoro-3-methoxypropanoic acid
PFMBA	Perfluoro-4-methoxybutanoic acid
NFDHA	Nonafluoro-3,6-dioxaheptaocic acid
<b>CHLORO-PERFLUOROALKYLSULFONATE</b>	
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid
11Cl-PF3OUdS	11-chloroelcosafluoro-3-oxaundecane-1-sulfonic acid
PFEESA	Perfluro(2-ethoxyethane)sulfonic acid
<b>TELOMER SULFONIC Acids</b>	
3:3FTCA	3-Perfluoropropyl propanoic acid
5:3FTCA	2H,2H,3H,3H-Perfluorooctanoic acid
7:3FTCA	3-Perfluoroheptyl propanoic acid

### 5.2.3.5 Sampling and Reporting Sludge Samples for PFAS

Representative sludge samples shall be collected at each sample point as listed. At minimum, liquid sludge storage/digesters should be thoroughly mixed prior to sampling. Cake sludge samples should consist of seven equal size discrete samples and be collected from different areas and depths then composited into one sample for laboratory analysis.

Note: If additional equipment is used for collecting sludge samples (i.e., shovels, compositing buckets, bottles, etc.), then a one-time equipment blank is recommended to be collected with the first sample. An equipment blank sample is collected by passing laboratory verified PFAS-free water over or through field sampling equipment before the collection of a representative sludge sample. The equipment blank result shall be reported on the annual Sludge Characteristics Form (3400-049) in the comment section when reporting PFAS concentrations in the sludge.

The permittee shall report each of the PFAS sludge monitoring results on the annual Sludge Characteristics and Monitoring Form (3400-049) as provided by the department. The permittee shall also report the summation of PFOS and PFOA on this same form. All results shall be reported in dry weight. The annual Sludge Characteristics and Monitoring Form (3400-049) are due January 31, of the year following the collection of the sludge samples.

The laboratory performing the analysis on any samples shall be certified for the applicable PFAS compounds in the solids matrix by the Wisconsin Laboratory Certification Program established under s. 299.11, Wis. Stats., and in accordance with s. NR 149.41, Wis. Adm. Code. The department may reject any sample results if results are produced by a laboratory that is not in compliance with certification requirements under ch. NR 149, Wis. Adm. Code.

### **5.2.3.6 PFAS Land Application**

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

## 6 Schedules

### 6.1 Phosphorus Schedule - Optimization and Compliance Planning

The permittee is required to optimize performance and undertake compliance planning to control phosphorus discharges per the following schedule.

Required Action	Due Date
<p><b>Optimization and Compliance Alternatives:</b> The permittee shall implement a phosphorus discharge optimization plan to control phosphorus discharges to the greatest extent practicable. Submit a progress report that summarizes the approach to phosphorus removal at the facility, the resulting concentration and mass loading for the last 12-month period, and any changes that were or are needed to optimize removal of phosphorus by the due date.</p> <p>The permittee shall also evaluate alternative phosphorus compliance options such as water quality trading and adaptive management. The progress report submitted on the date due shall also detail any outreach activities undertaken to evaluate these options, any communications with credit generators, brokers/clearinghouse, and any potential water quality trading or adaptive management projects that may lead to compliance with phosphorus WQBELs.</p> <p>Financial alternatives evaluation: If the permittee intends to seek a renewed variance at the end of this permit term, the permittee may complete a financial evaluation to support ongoing variance eligibility. The report must evaluate financial mechanisms that have the potential to make compliance with phosphorus WQBELs economically feasible.</p> <p>If the Department determines, based on the information submitted in the report, that groundwater ammonia contamination is not a result of the Lagoons, the Department may waive the remaining actions in this compliance schedule.</p>	03/31/2027
<p><b>Progress Report #2:</b> Submit a progress report per the above for the prior calendar year.</p>	03/31/2028
<p><b>Progress Report #3:</b> Submit a progress report per the above for the prior calendar year.</p>	03/31/2029
<p><b>Progress Report #4:</b> Submit a progress report per the above for the prior calendar year.</p>	03/31/2030
<p><b>Final MDV Optimization and Compliance Alternatives Report:</b> Submit a progress report per the above for the prior calendar year.</p> <p>If water quality trading or adaptive management will be used to comply with phosphorus limitations during the next permit term, submit a draft water quality trading plan, adaptive management plan, or executed clearinghouse credit purchase agreement.</p> <p>The financial alternatives evaluation as described above must be submitted by the date due if the facility chooses to seek renewal of the variance.</p>	09/30/2030

### 6.2 Phosphorus Payment per Pound to County

The permittee is required to make annual payments for phosphorus reductions to the participating county or counties in accordance with s. 283.16(8), Wis. Stats, and the following schedule. The price per pound will be set at the time of permit reissuance and will apply for the duration of the permit.

Required Action	Due Date
<p><b>Annual Verification of Phosphorus Payment to County:</b> The permittee shall make a total payment to the participating county or counties approved by the Department by March 1 of each calendar year. The amount due is equal to the following: [(lbs of phosphorus discharged minus the permittee's target</p>	03/01/2027

<p>value) times (\$68.40 per pound)] or \$640,000, whichever is less. See the payment calculation steps in the Surface Water section.</p> <p>The permittee shall submit Form 3200-151 to the Department by March 1 of each calendar year indicating total amount remitted to the participating counties to verify that the correct payment was made. The first payment verification form is due by the specified Due Date.</p> <p>Note: The applicable Target Value is 0.2 mg/L as defined by s. 283.16(1)(h), Wis. Stats. The "per pound" value is \$50.00 adjusted for CPI.</p>	
<p><b>Annual Verification of Payment #2:</b> Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.</p>	03/01/2028
<p><b>Annual Verification of Payment #3:</b> Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.</p>	03/01/2029
<p><b>Annual Verification of Payment #4:</b> Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.</p>	03/01/2030
<p><b>Annual Verification of Payment #5:</b> Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.</p>	03/01/2031
<p><b>Continued Coverage:</b> If the permittee intends to seek a renewed variance, an application for the MDV (Multi Discharger Variance) shall be submitted as part of the application for permit reissuance in accordance with s. 283.16(4)(b), Wis. Stats.</p>	
<p><b>Annual Verification of Payment After Permit Expiration:</b> In the event that this permit is not reissued prior to the expiration date, the permittee shall continue to submit Form 3200-151 to the Department indicating total amount remitted to the participating counties by March 1 each year.</p>	

### 6.3 Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L)

This compliance schedule requires the permittee to achieve compliance with the specified MDV interim effluent limit in accordance with s. 283.16(6), Wis. Stats., by the due date.

Required Action	Due Date
<p><b>Report on Effluent Discharges:</b> Submit a report on effluent discharges of phosphorus with conclusions regarding compliance.</p>	09/30/2026
<p><b>Action Plan:</b> Submit an action plan for complying with the specified interim effluent limit. If construction is required, include plans and specifications with the submittal.</p>	03/31/2027
<p><b>Initiate Actions:</b> Initiate actions identified in the plan.</p>	09/30/2027
<p><b>Complete Actions:</b> Complete actions identified in the plan and achieve compliance with the specified interim effluent limit.</p>	03/31/2028

### 6.4 Chloride Source Reduction Measures (SRMs) for Groundwater Discharges

Required Action	Due Date
<p><b>Chloride Reduction Plan:</b> The permittee shall submit a chloride reduction plan (CRP) for Department review and approval. The CRP is an initial step toward controlling chloride and ensuring compliance with chloride groundwater standards. The CRP shall evaluate all applicable source reduction measures (SRMs) and establish appropriate implementation activities for the SRMs. The</p>	06/30/2026

CRP shall include a schedule for implementing the selected SRMs.	
<b>Annual Progress Report:</b> Once the chloride reduction plan (CRP) is approved by the Department, the permittee shall submit an annual progress report, under the authority of s. NR 205.07(1)(h), Wis. Adm. Code. If a SRM implementation date of an approved CRP is not met, this may constitute a violation of the permit. Submittal of the first annual progress report is required by the Due Date.	03/31/2027
<b>Second Annual Progress Report:</b> Submit progress report in implementing the chloride reduction plan (CRP).	03/31/2028
<b>Third Annual Progress Report:</b> Submit progress report in implementing the chloride reduction plan (CRP).	03/31/2029
<b>Fourth Annual Progress Report:</b> Submit progress report in implementing the chloride reduction plan (CRP).	03/31/2030
<b>Final Annual Progress Report:</b> Submit progress report in implementing the chloride reduction plan (CRP).	03/31/2031

### 6.5 Groundwater Monitoring Well - Abandonment

Required Action	Due Date
<b>Abandonment:</b> Complete abandonment of monitoring well MW-30 (Sample Point 838). The well shall be abandoned in accordance with s. NR 141.25, Wisconsin Administrative Code. Documentation of well abandonment must be submitted to the Department within 60 days of well abandonment.	03/31/2027

### 6.6 Groundwater Ammonia Contamination Remediation

Required Action	Due Date
<b>Submit Report:</b> The permittee shall remediate the groundwater ammonia contamination surrounding Lagoons 1, 2, and 3 and submit a report outlining the plans for legacy sludge removal from Lagoons 1, 2, and 3.  If the permittee does not believe that removal of legacy sludge is necessary to address ammonia contamination onsite, they shall receive department concurrence on the NR 140.26 PAL exceedance response action to renovate or restore groundwater quality and, upon receiving concurrence, submit a report that identifies the cause(s) for the persistent ammonia contamination and anticipated means for remediation. As part of this investigation, the permittee shall conduct a lagoon leakage assessment and collect a comprehensive set of sludge depth measurements and samples from each lagoon for laboratory analysis of nitrogen (% Solids, Chloride, Phosphorus, Organic Nitrogen, Ammonia Nitrogen and Nitrate Nitrogen).	03/31/2027
<b>Initiate Actions:</b> The permittee shall initiate legacy sludge removal from Lagoons 1, 2, and 3, or, if an alternative method for addressing onsite ammonia exceedances has been identified, the permittee shall initiate work to remediate the groundwater ammonia contamination.	03/31/2028
<b>Progress Report:</b> The permittee shall provide a status update on the progress made so far on remediating the groundwater ammonia contamination associated with Lagoons 1, 2, and 3.	03/31/2029

<b>Complete Actions &amp; Submit Report:</b> The permittee shall complete actions necessary to remediate groundwater ammonia contamination from Lagoons 1, 2, and 3 and submit a documentation report outlining the work conducted.	03/31/2030
<b>Submit Report:</b> The permittee shall submit a final progress report outlining conclusions from the effectiveness of the remediation actions taken to date.	03/31/2031

### 6.7 Desludging Management Plan

If desludging of any storage is proposed, management plans must be approved by the Department.

Required Action	Due Date
<b>Desludging Management Plan Submittal:</b> The permittee shall submit a management plan for approval if removal of sludge/solids from any storage will occur during this permit term. At minimum, the plan shall address how the sludge/solids will be sampled, removed, transported, and disposed of. No desludging may occur unless approval by the Department is obtained. Daily logs shall be kept that record volume of sludge/solids removed and where the sludge/solids has been disposed. An applicable management plan must be submitted for each sample point. The plan is due sixty (60) days prior to desludging.	

### 6.8 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
<b>Land Application Management Plan:</b> Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	03/31/2027

### 6.9 Land Treatment Management Plan

A management plan is required for the land treatment system.

Required Action	Due Date
<b>Land Treatment Management Plan:</b> Submit an update to the management plan to optimize the land treatment system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	03/31/2027

### 6.10 Land Treatment Annual Report

Required Action	Due Date
<p><b>Submit Annual Land Treatment Report #1:</b> Submit the Annual Land Treatment Report by February 28th for the previous calendar year.</p> <p>The Annual Land Treatment Report shall include the following:</p> <p>Total volume per site in gallons/year</p> <p>Total Nitrogen per zone in pounds/acre/year</p>	02/28/2027

Total Chloride per zone in pounds/acre/year Soil Analysis Fertilizer Used in pounds/acre/year	
<b>Submit Annual Land Treatment Report #2:</b> Submit the Annual Land Treatment Report by February 28th for the previous calendar year.	02/28/2028
<b>Submit Annual Land Treatment Report #3:</b> Submit the Annual Land Treatment Report by February 28th for the previous calendar year.	02/28/2029
<b>Submit Annual Land Treatment Report #4:</b> Submit the Annual Land Treatment Report by February 28th for the previous calendar year.	02/28/2030
<b>Submit Annual Land Treatment Report #5:</b> Submit the Annual Land Treatment Report by February 28th for the previous calendar year.	02/28/2031
<b>Annual Land Treatment Report Required After Permit Expiration:</b> In the event this permit is not reissued prior to the expiration date, the permittee shall continue to submit annual land treatment reports by February 28th of each year covering the land treatment activities during the previous calendar year.	

## 7 Standard Requirements

**Chapter 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), Wis. Adm. Code.

### 7.1 Reporting and Monitoring Requirements

#### 7.1.1 Monitoring Results

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

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

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

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

#### 7.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code, and completed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sampling shall be performed in accordance with procedures contained in s. NR 140.16, Wis. Adm. Code, and the WDNR publications, Groundwater Sampling Desk Reference (PUBL-DG-037-96) and Groundwater Sampling Field Manual (PUBL-DG-038-96). The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation and/or groundwater standard. If the required level cannot be met by any of the methods available in ch. NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

#### 7.1.3 Recording of Results

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

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

- The results of the analysis.

#### **7.1.4 Reporting of Monitoring Results**

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

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating fees under ch. NR 101, Wis. Adm. Code, a reporting limit of 2.0 mg/L for BOD<sub>5</sub> and 2.5 mg/L Total Suspended Solids shall be considered to be limits of quantitation.
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a “0” (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.
- If no discharge occurs through an outfall, flow related parameters (e.g. flow rate, hydraulic application rate, volume, etc.) should be reported as “0” (zero) at the required sample frequency specified for the outfall. For example: if the sample frequency is daily, “0” would be reported for any day during the month that no discharge occurred.

#### **7.1.5 Records Retention**

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

#### **7.1.6 Other Information**

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

#### **7.1.7 Reporting Requirements – Alterations or Additions**

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

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

## 7.2 System Operating Requirements

### 7.2.1 Noncompliance Reporting

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

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

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

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

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

### 7.2.2 Bypass

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

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

### 7.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the

bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

#### **7.2.4 Controlled Diversions**

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

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

#### **7.2.5 Proper Operation and Maintenance**

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

#### **7.2.6 Operator Certification**

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

#### **7.2.7 Spill Reporting**

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

#### **7.2.8 Planned Changes**

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a

description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

### 7.2.9 Duty to Halt or Reduce Activity

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

## 7.3 Surface Water Requirements

### 7.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

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

### 7.3.2 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, except in cases of Water Quality Trading, wherein the applicable periods are January through June and July through December.]

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

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

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

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

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

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

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

### 7.3.3 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.

### 7.3.4 Visible Foam or Floating Solids

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

### 7.3.5 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:

- 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.
- 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.
- 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.
- Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

### 7.3.6 Total Residual Chlorine Requirements

When total residual chlorine (TRC) limit(s) or monitoring are included in a permit, the permittee shall comply with the following conditions:

- The permittee shall perform TRC monitoring required in this permit using an approved method from ch. NR 219, Wis. Adm. Code, which produces a detection limit that is less than or equal to the permitted limit or produces the lowest economically feasible detection limit if the approved methods cannot meet the permit limit. If the facility cannot achieve a detection limit less than or equal to the permit limit using the approved methods, contact the laboratory accreditation program for guidance.
- The permittee shall determine the limit of detection (LOD) as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, or the permittee shall contact the laboratory accreditation program for information on how to determine a verified detection limit allowed just for TRC. If the verified detection limit is determined using the special procedure, then the LOD and limit of quantitation (LOQ) shall be set to be equal to the verified detection limit determined from this special procedure.
- The permittee shall determine compliance with the TRC limit(s) as follows:
  - a) If the facility determines a statistical LOD as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, and the measured TRC levels are less than the LOD, the permittee shall report the results as less than the LOD (<LOD). For this situation the LOQ shall be established at 3.33 times the LOD or at the concentration of the lowest standard in the calibration curve. TRC levels that are < LOD are in compliance with the TRC limit.

- b) If the facility determines the verified detection limit using the laboratory accreditation program special procedure, this verified detection limit shall be reported as the LOD and LOQ. If the measured TRC levels are less than the LOD, the permittee shall report the results as < LOD. TRC levels that are < LOD are in compliance with the TRC limit.
- c) If the facility determines the statistical LOD as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, and the measured TRC levels are greater than the statistical LOD but less than the LOQ, TRC levels are in compliance with the TRC limit - except when the measured levels are consistently reported between the LOD and LOQ. When the measured TRC levels are consistently reported between the LOD and LOQ, the facility shall take action to determine the reliability of detected results (such as resampling and/or re-calculating dosages) and shall adjust the chemical feed system if necessary to reduce the chances of detecting levels between the statistical LOD and LOQ.
- d) If the facility determines the statistical LOQ as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, or determines the verified detection limit using the laboratory accreditation program special procedure, TRC measured levels that are greater than the statistical LOQ and the TRC limit, are not in compliance with the TRC limit. The permittee shall report the level as a limit exceedance.
- e) If the facility determines the statistical LOD as specified in s. NR 149.48 (2)(b), Wis. Adm. Code, and the measured level is < LOD, then a "0" (zero) value may be substituted for any test result less than the statistical LOD when calculating the average or mass discharge values. Calculated values shall then be compared directly to the average or mass limits to determine compliance.
- f) If the facility determines the verified detection limit using the laboratory accreditation program special procedure and the measured level is < LOD (set equal to the verified detection limit), then a "0" (zero) value may be substituted for any test result less than the LOD when calculating the average or mass discharge values. Calculated values shall then be compared directly to the average or mass limits to determine compliance.

### **7.3.7 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.

### **7.3.8 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, 2<sup>nd</sup> Edition"* (PUB-WT-797, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

### **7.3.9 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.

### 7.3.10 Reopener Clause

Pursuant to s. 283.15(11), Wis. Stat. and 40 CFR 131.20, the Department may modify or revoke and reissue this permit if, through the triennial standard review process, the Department determines that the terms and conditions of this permit need to be updated to reflect the highest attainable condition of the receiving water.

## 7.4 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.

### 7.4.1 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.

#### 7.4.1.1 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.

#### **7.4.1.2 Annual Total Nitrogen per Cell or per Zone**

(annual ave. concentration in mg/L) (tot. annual flow in million gallons per cell or zone) (8.34) = lbs/ac/yr  
acreaage of cell or zone

#### **7.4.1.3 Annual Total Chloride per Cell or per Zone**

(annual ave. concentration in mg/L) (tot. annual flow in million gallons per cell or zone) (8.34) = lbs/ac/yr  
acreaage of cell or zone

### **7.4.2 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.

### **7.4.3 Nitrogen Loading Requirements for Spray Irrigation**

The total annual nitrogen loading (pounds/acre/year) to the wastewater spray irrigation acreage shall not exceed the limitation contained in the monitoring requirements and limitations for that sampling point. Determination of the annual pounds of nitrogen applied to the land treatment system shall include the nitrogen supplied by the wastewater, organic nitrogen becoming available to plants and any supplemental fertilizers used. The Department may approve (in writing) an alternative nitrogen loading limit in a spray irrigation 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 214.14(3)(c), Wis. Adm. Code.

### **7.4.4 Ponding**

The intensity of wastewater spray shall be limited to prevent ponding, except for temporary conditions following rainfall events.

### **7.4.5 Runoff**

The volume of wastewater sprayed shall be limited to prevent runoff of any wastewater mixed with rainwater as specified in s. NR 214.14(3)(f), Wis. Adm. Code. If wastewater runoff occurs, spray irrigation shall cease immediately.

### **7.4.6 Seasonal Irrigation Restriction**

Discharge to the spray irrigation field shall occur only between April 1 and October 31 each year, unless otherwise specified in the approved Land Treatment Management Plan.

### **7.4.7 Irrigation Management Plan**

The spray irrigation treatment 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 214.14(5), Wis. Adm. Code, which requires a load/rest cycle, cover crop removal, annual soil testing, etc. If operational changes are needed, the management plan shall be amended and such plan shall be submitted to the Department for approval prior to implementing such changes.

## **7.5 Groundwater Standard Requirements**

### **7.5.1 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.

### **7.5.2 Groundwater Sampling**

Groundwater sampling shall be performed in accordance with the procedures contained in s. NR 140.16, Wis. Adm. Code, and the WDNR publications, Groundwater Sampling Desk Reference (PUBL-DG-037-96) and Groundwater Sampling Field Manual (PUBL-DG-038-96).

### **7.5.3 Indicator Parameter Preventive Action Limits and Alternative Concentration Limits**

The methodology for the assessment of background groundwater quality and calculation of indicator PALs and ACLs can be found in "Calculating Preventive Action Limits and Evaluating Groundwater Quality Exemptions for Groundwater Discharges (3400-2024-04).

### **7.5.4 Groundwater Monitoring Forms**

Results of the groundwater analyses shall be summarized and reported on a Groundwater Monitoring Form. This report form is to be returned to the Department no later than the date indicated on the form. A copy of the Groundwater Monitoring Form or an electronic file of the form shall be retained by the permittee. Groundwater monitoring results shall be reported on an electronic Groundwater Monitoring Form and certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

### **7.5.5 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 per ss. NR 140.24 (1)(a) and NR 140.26 (1)(a) Wis. Adm. Code. This notification may be provided in the general remarks section of the groundwater monitoring form or by letter attached to the groundwater monitoring form. Any values reported as exceeding a groundwater standard shall be confirmed as being from a representative sample and as a correct laboratory analysis result.

### **7.5.6 Preventive Action Limit (PAL) Exceedance**

Sections NR 206.07 (1)(c) and NR 214.07 (1), Wis. Adm. Code, require all land disposal and land treatment system to be designed and operated to prevent exceedances of PALs. Results from groundwater samples 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 s. NR 140.24, Wis. Adm. Code.

### **7.5.7 Enforcement Standard (ES) Exceedance Within the Design Management Zone**

Substance concentrations greater than this permit's 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 140.24, Wis. Adm. Code, per s. NR 140.27, Wis. Adm. Code.

### **7.5.8 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 ES 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 to 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 s. NR 140.26(1)(b), Wis. Adm. Code. The Department may propose modification of this permit to require the permittee to implement additional treatment or other actions as specified in s. NR 140.26, Wis. Adm. Code.

### **7.5.9 New Monitoring Wells Installed During the Current Permit-Term**

If the new monitoring well is proposed to act as a background monitoring well for the use in calculating indicator parameter PALs and ACLs, then a minimum of eight rounds of sampling results are required prior to the calculation of indicator parameter PALs and ACLs for inclusion in a modified permit. The methodology and requirements for the assessment of background groundwater quality and calculation of indicator PALs and ACLs can be found in Evaluating and Calculating Preventative Action Limits and Alternative Concentration Limits for Groundwater Discharges (3400-2020-10).

## **7.6 Land Application Requirements**

### **7.6.1 General Sludge Management Information**

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

### **7.6.2 Monitoring and Calculating PCB Concentrations in Sludge**

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

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

### **7.6.3 Land Application Characteristic Report**

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

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

#### **7.6.4 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.

#### **7.6.5 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.

#### **7.6.6 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.

#### **7.6.7 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.

#### **7.6.8 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:

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

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

### 7.6.9 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"):

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

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

### 7.6.10 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.

### 7.6.11 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.

### 7.6.12 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.

### **7.6.13 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.

### **7.6.14 By-Product Storage Sites**

All sites used for storage of by-product solids shall be located such that surface water or groundwater pollution does not occur. Written Department approval is required prior to storage of more than 150 tons of by-product solids on a site at any one time.

### **7.6.15 Annual Inspections-Stacking Pads and Leachate Containment**

Stacking pads for more than 1200 tons of silage and all leachate containment facilities shall be inspected annually for cracks and shall be repaired as necessary to prevent leakage from the containment system. The inspection reports shall be available for inspection by Department personnel for a period of three years, and shall include at a minimum the following information:

- Date and name of person(s) performing the inspection;
- Description of what the inspection consisted of;
- Details of what was discovered during the inspection;
- Recommendations for repair or maintenance; and
- Details or repair completed.

### **7.6.16 Additional Requirements from ch. NR 214, Wis. Adm. Code**

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

## 8 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Phosphorus Schedule - Optimization and Compliance Planning - Optimization and Compliance Alternatives	March 31, 2027	34
Phosphorus Schedule - Optimization and Compliance Planning -Progress Report #2	March 31, 2028	34
Phosphorus Schedule - Optimization and Compliance Planning -Progress Report #3	March 31, 2029	34
Phosphorus Schedule - Optimization and Compliance Planning -Progress Report #4	March 31, 2030	34
Phosphorus Schedule - Optimization and Compliance Planning -Final MDV Optimization and Compliance Alternatives Report	September 30, 2030	34
Phosphorus Payment per Pound to County -Annual Verification of Phosphorus Payment to County	March 1, 2027	35
Phosphorus Payment per Pound to County -Annual Verification of Payment #2	March 1, 2028	35
Phosphorus Payment per Pound to County -Annual Verification of Payment #3	March 1, 2029	35
Phosphorus Payment per Pound to County -Annual Verification of Payment #4	March 1, 2030	35
Phosphorus Payment per Pound to County -Annual Verification of Payment #5	March 1, 2031	35
Phosphorus Payment per Pound to County -Continued Coverage	See Permit	35
Phosphorus Payment per Pound to County -Annual Verification of Payment After Permit Expiration	See Permit	35
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Report on Effluent Discharges	September 30, 2026	35
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Action Plan	March 31, 2027	35
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Initiate Actions	September 30, 2027	35
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Complete Actions	March 31, 2028	35
Chloride Source Reduction Measures (SRMs) for Groundwater Discharges - Chloride Reduction Plan	June 30, 2026	36
Chloride Source Reduction Measures (SRMs) for Groundwater Discharges - Annual Progress Report	March 31, 2027	36
Chloride Source Reduction Measures (SRMs) for Groundwater Discharges - Second Annual Progress Report	March 31, 2028	36
Chloride Source Reduction Measures (SRMs) for Groundwater Discharges -	March 31, 2029	36

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Chloride Source Reduction Measures (SRMs) for Groundwater Discharges - Fourth Annual Progress Report	March 31, 2030	36
Chloride Source Reduction Measures (SRMs) for Groundwater Discharges - Final Annual Progress Report	March 31, 2031	36
Groundwater Monitoring Well - Abandonment -Abandonment	March 31, 2027	36
Groundwater Ammonia Contamination Remediation -Submit Report	March 31, 2027	36
Groundwater Ammonia Contamination Remediation -Initiate Actions	March 31, 2028	36
Groundwater Ammonia Contamination Remediation -Progress Report	March 31, 2029	36
Groundwater Ammonia Contamination Remediation -Complete Actions & Submit Report	March 31, 2030	37
Groundwater Ammonia Contamination Remediation -Submit Report	March 31, 2031	37
Desludging Management Plan -Desludging Management Plan Submittal	See Permit	37
Land Application Management Plan -Land Application Management Plan	March 31, 2027	37
Land Treatment Management Plan -Land Treatment Management Plan	March 31, 2027	37
Land Treatment Annual Report -Submit Annual Land Treatment Report #1	February 28, 2027	37
Land Treatment Annual Report -Submit Annual Land Treatment Report #2	February 28, 2028	38
Land Treatment Annual Report -Submit Annual Land Treatment Report #3	February 28, 2029	38
Land Treatment Annual Report -Submit Annual Land Treatment Report #4	February 28, 2030	38
Land Treatment Annual Report -Submit Annual Land Treatment Report #5	February 28, 2031	38
Land Treatment Annual Report -Annual Land Treatment Report Required After Permit Expiration	See Permit	38
General Sludge Management Form 3400-48	prior to any significant sludge management changes	49
Characteristic Report Form 3400-49	no later than the date indicated on the form	49
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	50
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	50
Groundwater Monitoring Form	no later than the date indicated on the form	48
Wastewater Discharge Monitoring Report	no later than the date	39

	indicated on the form	
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Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to: South Central Region, 3911 Fish Hatchery Rd, Fitchburg, WI 53711-5397.