

Permit Fact Sheet

General Information

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| Permit Number: | WI-0050385-10-0 |
| Permittee Name: | SILVER LEWIS CHEESE COOP |
| Address: | W3075 County EE |
| City/State/Zip: | Monticello WI 53570 |
| Discharge Location: | Ridge and Furrow system and land spreading on agricultural fields, N ½, NE ¼, Section 14, T3N R8E, Town of Mt. Pleasant in Green County. |
| Receiving Water: | Groundwaters of the Sugar/Pecatonica River Watersheds |
| Discharge Type: | Existing, Intermittent |

Facility Description

Silver Lewis Cheese Coop is a farmer owned cheese plant located near Monticello, WI that produces Brick, Muenster, Colby, Cojack, Farmers, Havarti, and Edam Cheese. Approximately 1,500 gallons per day of process water, wash water, and boiler blowdown are discharged as wastewater to either the 0.5-acre ridge and furrow land treatment system or land spread on Department approved sites. Whey (sample point 004) and process waste sludge (sample point 005) are hauled off-site and have been removed from this permit. The approved land application management plan shall address the management of whey and process waste sludge.

Substantial Compliance Determination

After a desk top review of all discharge monitoring reports, land app reports, compliance schedule items, and a site visit on August 15, 2023, this facility has been found to be in substantial compliance with their current permit.

| Sample Point Designation | | |
|--------------------------|---|--|
| Sample Point Number | Discharge Flow, Units, and Averaging Period | Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable) |
| 001 | 247 gpd (January 2019 – March 2024) | Effluent: Representative samples shall be collected at the 3,000-gallon above ground holding tank after adequately mixing the process water, wash water and boiler blowdown directed to the Ridge and Furrow Treatment System. |
| 002 | 1,500 gpd (January 2019 – March 2024) | Effluent: Representative samples shall be collected at the 3,000-gallon above ground holding tank after adequately mixing the process water, wash water and boiler blowdown prior to land application on approved sites. |

1 Land Treatment – Monitoring and Limitations

Sample Point Number: 001- Process Wastewater

| Monitoring Requirements and Limitations | | | | | |
|---|--------------|-----------------|------------------|--------------|--|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Flow Rate | | gpd | Daily | Measure | Report the total daily gallons. |
| Hydraulic Application Rate | | gal/ac/day | Daily | Calculated | |
| Nitrogen, Total Kjeldahl | | mg/L | Monthly | Grab | |
| Chloride | | mg/L | Monthly | Grab | |
| Phosphorus, Total | | mg/L | Quarterly | Grab | |
| Nitrogen, Max Applied On Any Zone | Annual Total | 300 lbs/ac/yr | Annual | Total Annual | See Standard Requirement section 'Formulas for Land Treatment Calculations.' |
| Chloride | | lbs/ac/yr | Annual | Total Annual | See Standard Requirement section 'Formulas for Land Treatment Calculations.' |

Changes from Previous Permit:

Flow: The monthly average – LT limit was removed because the flow is limited by the nitrogen loading. Monitoring frequency and type have been changed for eDMR reporting purposes.

Hydraulic Application Rate: This parameter has been added to the permit in replacement of Hydraulic Loading Rate.

Nitrogen, Total Kjeldahl: The monitoring frequency has been changed to monthly.

Chloride: The monitoring frequency has been changed to monthly.

Phosphorus: The monitoring frequency has been changed to quarterly.

Explanation of Limits and Monitoring Requirements

Requirements for land treatment of industrial wastewater are determined in accordance with ch. NR 214 Wis. Adm. Code. The monitoring and limitations for this outfall are typical of a ridge and furrow treatment system of dairy wastewater. This monitoring is necessary to calculate hydraulic chloride and nutrient loadings to the ridge and furrow treatment system. Testing of wastewater is only required during month when there is a discharge of wastewater to the ridge and furrow system.

2 Land Application - Sludge/By-Product Solids

Sample Point Number: 002- Process Wastewater, Landspread

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

Changes from Previous Permit:

Flow Rate: This parameter was removed from the permit. Daily loading volume shall be recorded in the daily logs. Annual total gallons land applied shall be reported on the land application and disposal/distribution form (3400-55).

Phosphorus: The monitoring frequency has changed to quarterly.

Solids, Total: The monitoring frequency has changed to quarterly.

Phosphorus, Water Extractable: Monitoring for this parameter has been added to the permit.

Potassium, Total Recoverable: Monitoring for this parameter has been added to the permit.

Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214 Wis. Adm. Code. The monitoring and spreading limitations for this outfall are typical of that required for high strength dairy wastes.

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

3 Schedules

3.1 Land Application Management Plan

A management plan is required for the land application system.

| Required Action | Due Date |
|--|------------|
| Land Application Management Plan: Submit an update to the management plan to optimize the land | 09/30/2024 |

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|--|--|
| <p>application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.</p> <p>The management plan shall include all Department issued approval maps and Land Application Approval Forms (3400-122) for all approved sites, to comply with s. NR 214.17(4)(a), Wis. Adm. Code. Sites that no longer match approval conditions in the Department issued approval maps and Land Application Approval Forms (3400-122), including those sites without approval maps or forms, in the management plan must be reviewed and potentially reauthorized to comply with ch. NR 214, Wis. Adm. Code.</p> <p>The management plan shall be consistent with the requirements of this permits, ss NR 214.17(3) and (6) and NR 214.18(3) and (6), Wis. Adm. Code. To ensure this consistency, the management plan shall address: 1) the information identified in NR 214.17(6) and NR 214.18(6); 2) record keeping and maintenance (including responsible individuals); 3) a full description of calculations used to determine appropriate application rates and loadings delivered to land application sites; 4) tracking of site loading; 5) procedures for notifying the Department of wastes that deviate from those anticipated; and 6) odor control.</p> <p>Outfalls 004 and 005 have been inactivated and removed from the permit. The Land Application Management Plan shall describe how waste from these outfalls are managed.</p> | |
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Explanation of Schedule

An updated land application management plan shall be submitted to the department for approval.

3.2 Land Treatment (Ridge & Furrow) Management Plan

A management plan is required for the land treatment system.

| Required Action | Due Date |
|---|-------------------|
| <p>Land Treatment Management Plan: Submit an update to the management plan to optimize the land treatment system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.</p> <p>The management plan shall include a full description of the method used to measure flow rate and a map of the Ridge and Furrow system. The Ridge and Furrow map shall include individual trench labels and acreage.</p> | <p>09/30/2024</p> |

Explanation of Schedule

An update land treatment management plan shall be submitted to the department for approval.

Special Reporting Requirements

None.

Other Comments:

None.

Attachments:

None.

Expiration Date:

June 30, 2029

Justification Of Any Waivers From Permit Application Requirements

No waivers were requested or given from permit application requirements.

Prepared By: BetsyJo Howe, Wastewater Specialist

Date: 5/3/2024

Updated (based on fact check comments): Editorial changes for clarity. 5/20/2024

Updated (based on public notice comments):