

Permit Fact Sheet

General Information

Permit Number	WI-0064947-03-0
Permittee Name and Address	Viresco Turtle Lake 465 Western Blvd, Turtle Lake, WI 54889
Permitted Facility Name and Address	Viresco Turtle Lake 465 Western Blvd, Turtle Lake WI 54889
Permit Term	October 01, 2025 to September 30, 2030
Discharge Location	Land spreading sites in Barron and Polk Counties
Receiving Water	Groundwaters of the state via land spreading on approved sites including, but not limited to the counties of Barron and Polk
Discharge Type	Existing

Facility Description

Viresco Turtle Lake owns and operates an anaerobic digester that processes food waste and creates renewable energy from biogas which is converted to electricity. Bulk liquid waste enters the plant via two direct pipelines and tanker truck. Waste is stored in 4 equalization tanks (EQ) and metered into two enclosed anaerobic digester tanks. In anaerobic digestion, organic materials in the absence of oxygen are metabolized by micro-organisms already present in the wastewater. Anaerobic digestion also produces biogas consisting primarily of methane and carbon dioxide. This biogas is used to fuel on-site generators producing energy and heat. Digester effluent is treated by a primary Dissolved Air Flotation (DAF). The DAF process involves dosing the wastewater with a coagulant/flocculant to conglomerate suspended solids into larger clusters. Air is introduced saturating the water and causing bubbles to rise carrying with them the suspended solids forming a froth layer which is removed by a skimmer. After the DAF the water moves to a Moving Bed Biofilm Reactor (MBBR). A MBBR is made up of tanks containing thousands of small polyethylene disks that are kept in motion. Oxygen using micro-organisms attach and grow on the surface of the discs, consuming and treating more organic materials in the water. Final treatment is by a secondary Dissolved Air Flotation (DAF) unit and pH adjustment. Effluent is discharged to the Village of Turtle Lake or to tanker trucks and hauled to another permitted wastewater facility. Biosolids are stored in a sludge storage tank, thickened with a belt filter press to produce cake, and land applied on department approved fields. Liquid sludge may be applied on department approved fields as a contingency if the sludge thickener is unable to be used for an extended period of time.

Substantial Compliance Determination

There have been a few minor violations of late reporting, and a number of spills have occurred. However, the department is working with the facility to take the necessary steps to prevent future violations. The department is also working with the facility to update their land management plan to maintain permit compliance while land spreading.

After a desk top review of all discharge monitoring reports, land app reports, compliance schedule items, and a site visit on September 19, 2024, by Carson Johnson, WDNR, Viresco has been found to be in substantial compliance with their current permit.

Sample Point Descriptions

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
709	INTAKE A new sample point number representing an existing process.	Inflow to equalization (EQ) tanks or approved storage of recycled liquid waste and by-product recycled waste from the Viresco De Pack line (Industrial liquid waste).
710	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks of mixed by-product recycling waste from the Viresco De Pack line (Industrial by-product solids).
711	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of dairy processing wastewater from confidential client 1 (Industrial liquid waste).
712	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of food processing wastewater from confidential client 2 (Industrial liquid waste).
713	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of pretreatment sludge from confidential client 3 (Industrial liquid sludge).
714	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of dairy processing wastewater from confidential client 4 (Industrial liquid waste).
715	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of mixed liquid and by-product recycling wastewater from confidential client 5 (Industrial liquid waste).
716	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of dairy processing wastewater from confidential client 6 (Industrial liquid waste).
717	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of food processing wastewater from confidential client 7 (Industrial liquid waste).
718	INTAKE A new sample point number representing an existing client.	Inflow to EQ tanks or approved storage of pretreatment sludge from confidential client 8 (Industrial sludge).
009	LIQUID SLUDGE 1,500,000 gallons per year (information from the application)	SLUDGE - Discharge shall be limited to land spreading of liquid sludge from the system removed prior to the filter press and land applied on department approved sites. The process for obtaining a representative sample is detailed in the land management plan.
010	CAKE SLUDGE 500 tons per year (information from the application)	SLUDGE - Discharge shall be limited to land spreading of cake sludge (biosolids) from the filter press on department approved sites. The process for obtaining a representative sample is detailed

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
		in the land management plan.
013	DAF EFFLUENT Outfall wasn't used in the previous permit term.	EFFLUENT - Discharge shall be limited to land spreading of fully treated effluent (taken after Secondary Dissolved Air Flotation (DAF)). The process for obtaining a representative sample is detailed in the land management plan.
019	SLUDGE – STORAGE 1 1,000,000 gallons per year (information from the application)	STORAGE SLUDGE - Discharge shall be limited to land spreading of liquid sludge from the storage pit #1 and land applied on department approved sites. The concrete lined storage pit located in SE-NW section 5; T33N-R13W was built in 1989 and has a capacity of 675,000 gallons. The process for obtaining a representative sample is detailed in the land management plan.
020	SLUDGE – STORAGE 2 650,000 gallons per year (information from the application)	STORAGE SLUDGE - Discharge shall be limited to land spreading of liquid sludge from the storage pit #2 and land applied on department approved sites. The geomembrane lined storage pit located in NE-SW section 1; T33N-R13W was built in 1997 and has a capacity of 700,000 gallons. The process for obtaining a representative sample is detailed in the land management plan.

Permit Requirements

1 Influent – Monitoring Requirements

Sample Point Number:

**709- RECYCLING LINE - LIQUID;
712- CONFIDENTIAL CLIENT 2;
715- CONFIDENTIAL CLIENT 5;
717- CONFIDENTIAL CLIENT 7**

**711- CONFIDENTIAL CLIENT 1;
714- CONFIDENTIAL CLIENT 4;
716- CONFIDENTIAL CLIENT 6; and**

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Industrial Liquid Waste		gal/month	Monthly	Estimated	

Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

This is a new section this permit term.

Explanation of Limits and Monitoring Requirements

Monitoring is consistent with s. NR 214, Wis. Adm. Code. The permit has been reformatted to be consistent with other similar permitted facilities.

- The permittee made a formal request for confidentiality which was granted by the department June 19, 2025. Individual clients are identified by numbers.
- The permittee operates a recycling program that includes acceptance of liquid waste and de-packaged liquid food waste (De Pack line). A log of wastes recycled will be maintained per schedule 3.2. The source(s) of products processed by the recycling program are included in the confidentiality approval.
- Excess inflow may be held in the approved Storage 1 until there is capacity in the EQ tanks.

This is a new section to the permit and includes the clients contributing industrial liquid wastes which is current as of the effective date of this permit. New clients may be added without modification by following the requirements identified in permit section 1.3.

Sample Point Number: 710- DE PACK - BY-PRODUCT SOLIDS

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Industrial By-Product Solids		lbs/month	Monthly	Estimated	

Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

This is a new section this permit term.

Explanation of Limits and Monitoring Requirements

Monitoring is consistent with s. NR 214, Wis. Adm. Code. The permit has been reformatted to be consistent with other similar permitted facilities.

The permittee operates a recycling program that includes De Pack equipment is used to open and de-package solid waste food. A log of wastes processed will be maintained per schedule 3.2. The source(s) of products recycled through De Pack equipment are included in the confidentiality approval granted by the department June 19, 2025.

This is a new section to the permit and includes the clients contributing solid by product wastes which is current as of the effective date of this permit. New clients may be added without modification by following the requirements identified in permit section 1.3.

Sample Point Number: 713- CONFIDENTIAL CLIENT 3 and 718- CONFIDENTIAL CLIENT 8

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Industrial Liquid Sludge		gal/month	Monthly	Estimated	

Changes from Previous Permit:

Influent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

This is a new section this permit term.

Explanation of Limits and Monitoring Requirements

Monitoring is consistent with s. NR 214, Wis. Adm. Code. The permit has been reformatted to be consistent with other similar permitted facilities.

- The permittee made a formal request for confidentiality which was granted by the department June 19, 2025. Individual clients are listed by numbers.
- Excess inflow may be held in the approved Storage 1 until there is capacity in the EQ tanks.

This is a new permit section to the permit and includes all clients contributing industrial liquid sludge which is current as of the effective date of this permit. New clients may be added without modification by following the requirements identified in permit section 1.3.

New Waste Stream Requirements

This section is new this permit term. It allows Viresco to add waste from new clients or a new type of waste stream from an existing client during the term of the permit subject to pre-approval by the department. There is an exception to this requirement. New food processing waste can be added to storage without department pre-approval.

Updated Characteristic Sampling Data

This new section requires Viresco to submit updated characteristic sampling data for all industrial clients with data older than five years from the expiration date of this WPDES permit.

- Facility processes routinely change, which can result in waste characterization changes. Having updated data on influent waste provides information that is used to establish permit limitations that are protective of groundwater and public health.
- The sampling requirement also ensures that the client list is updated every five years and contains only active clients, thus decreasing the number of unnecessary influent sampling points in the permit.
- Requiring updated sampling results increases the ability for the permittee to ensure that they have a proper understanding of the characteristics of the wastes coming into the facility.

In Plant - Monitoring and Limitations

Sample Point Numbers: 706 - COMBINED INFLUENT TO DIGESTER and 112 – TRANSFERRED EFFLUENT

Changes from Previous Permit:

The In Plant section has been removed this permit term:

- 706 – The combined influent sample point is more appropriate classified as a in plant sample point. Monitoring is suspended because new clients are sampled prior to acceptance and current clients shall be sampled once a permit term.
- 112 – Effluent may be transferred to another permitted wastewater treatment facility. Monitoring is suspended this permit term because the facility(s) accepting effluent is responsible for any waste received.

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

Sample Point Number: 009- LIQUID SLUDGE; 019- STORAGE 1, and 020- STORAGE 2

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gal/month	Monthly	Estimated	Industrial liquid sludge
COD		mg/L	Monthly	Composite	
Solids, Total		Percent	Monthly	Composite	
pH Field		su	Monthly	Grab	
Nitrogen, Total Kjeldahl		Percent	Monthly	Composite	
Nitrogen, Ammonia (NH ₃ -N) Total		Percent	Monthly	Composite	
Phosphorus, Total		Percent	Monthly	Composite	
Phosphorus, Water Extractable		% of Tot P	Monthly	Composite	
Potassium, Total Recoverable		Percent	Monthly	Composite	
Chloride		Percent	Monthly	Composite	

Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

- Monitoring is required only during periods of land application.
- To remain consistent with other similar permitted facilities the **Flow Rate** and **Chemical Oxygen Demand (COD)** have been added.
- The facility no longer accepts salt brine, therefore, reporting the total **Chloride** mass is not needed this permit term and has been removed.
- The **unfrozen site maximum daily loading volume** identified in the permit table for the “Daily Log” has been changed from 10,000 to 13,500 gallons/acre/day.

Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214 Wis. Adm. Code.

Sample Point Number: 010- CAKE SLUDGE

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Volume		lbs/month	Monthly	Total Monthly	Cake sludge
Solids, Total		Percent	Monthly	Composite	
pH Field		su	Monthly	Grab	
Nitrogen, Total Kjeldahl		Percent	Monthly	Composite	
Nitrogen, Ammonia (NH ₃ -N) Total		mg/kg	Monthly	Composite	
Phosphorus, Total		Percent	Monthly	Composite	
Phosphorus, Water Extractable		% of Tot P	Monthly	Composite	
Potassium, Total Recoverable		mg/kg	Monthly	Composite	
Chloride		Percent	Monthly	Composite	
Arsenic, Total Recoverable		mg/kg	Quarterly	Composite	
Cadmium, Total Recoverable		mg/kg	Quarterly	Composite	
Copper Dry Wt		mg/kg	Quarterly	Composite	
Lead Dry Wt		mg/kg	Quarterly	Composite	
Mercury Dry Wt		mg/kg	Quarterly	Composite	
Molybdenum Dry Wt		mg/kg	Quarterly	Composite	
Nickel Dry Wt		mg/kg	Quarterly	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Selenium Dry Wt		mg/kg	Quarterly	Composite	
Zinc Dry Wt		mg/kg	Quarterly	Composite	

2.1.1 Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

- Monitoring is required only during periods of land application.
- To remain consistent with other similar permitted facilities the **Volume** and **Chemical Oxygen Demand (COD)** have been added.
- Monitoring for **metals** (arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc) has been added this permit term. The need for monitoring will be re-evaluated during the next permit reissuance.
- The facility no longer accepts salt brine, therefore, reporting the total **Chloride** mass is not needed this permit term and has been removed.

Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214 Wis. Adm. Code.

Sample Point Number: 013- EFFLUENT LANDSPREAD - DAF

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gal/month	Monthly	Total Monthly	Effluent
COD		mg/L	Weekly	Grab	
pH Field		su	Weekly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Weekly	Grab	
Nitrogen, Ammonia (NH ₃ -N) Total		mg/L	Weekly	Grab	
Phosphorus, Total		mg/L	Weekly	Grab	
Phosphorus, Water Extractable		% of Tot P	Weekly	Grab	
Potassium, Total Recoverable		mg/L	Weekly	Grab	
Chloride		mg/L	Weekly	Grab	

Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

- Monitoring is required only during periods of land application.
- The parameter **Flow Rate** replaces the parameter Volume used in the previous permit term. Flow rate is used for liquid discharges while volume is used for mass.
- To remain consistent with other similar permitted facilities **Chemical Oxygen Demand (COD)** replaces **Biological Oxygen Demand (BOD)**.
- The facility no longer accepts salt brine, therefore, reporting the total **Chloride** mass is not needed this permit term and has been removed.
- The **unfrozen site maximum daily loading volume** identified in the permit table for the “Daily Log” has been changed from 10,000 to 13,500 gallons/acre/day.

Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214 Wis. Adm. Code.

3 Schedules

3.1 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Management Submittal: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with ch. ch. NR 214, Wis. Adm. Codes, by the Due Date. This management plan shall 1) specify information on pretreatment processes (if any); 2) identify land application sites; 3) describe site limitations; 4) address vegetative cover management and removal; 5) specify availability of storage; 6) describe the type of transporting and spreading vehicle(s); 7) specify sampling methods, procedures, and locations; 8) track site loading; 9) address contingency plans for adverse weather and odor/nuisance abatement; 10) spill notification and mitigation procedures; and 11) include any other pertinent information. Once approved, all land spreading activities shall be conducted in accordance with the plan. Any changes to the plan must be approved by the department prior to implementing the changes.	03/31/2026
Ongoing Management Plan Updates: Updates are to be submitted and approved by the department when changes are made in land application practices. All updates should contain the latest colored aerial photos available.	

Explanation of Schedule

Land Application Management Plan (industrial)- An up-to-date Land Application Management plan is a standard requirement in reissued industrial permits per s. NR 214.17(6)(c), Wis. Adm. Code.

3.2 Viresco's Recycling Waste Inventory

The permittee is required to submit an inventory of the different types of waste streams that are recycled and routed to the EQ tanks. Information included in this inventory is covered by the confidentiality approval.

Required Action	Due Date
Develop Recycling Center Waste Inventory: The permittee shall submit an inventory to the department which outlines the specific clients and waste streams that are routed through the recycling process and discharged into an EQ tank. This inventory should specify: 1) client name/source of waste, 2) type of waste (e.g. industrial liquid waste), 3) product/description of waste, and 4) estimated annual volume of waste discharged to the EQ tanks.	12/31/2025
Inventory Update 1: The permittee shall review the Recycling Center Waste Inventory and update it with the amount of each waste type received during the previous 12 months.	12/31/2026
Inventory Update 2: The permittee shall review the Recycling Center Waste Inventory and update it with the amount of each waste type received during the previous 12 months.	12/31/2027
Inventory Update 3: The permittee shall review the Recycling Center Waste Inventory and update it with the amount of each waste type received during the previous 12 months.	12/31/2028
Inventory Update 4: The permittee shall review the Recycling Center Waste Inventory and update it with the amount of each waste type received during the previous 12 months.	12/31/2029
Ongoing Inventory Update: In the event that this permit expires, the permittee shall continue to review the Recycling Center Waste Inventory, update it with the amount of each waste type received during the previous 12 months, and submit it by December 31st annually.	

Viresco's Recycling Waste Inventory - The recycling center waste inventory is needed to characterize the type of waste and pollutants present in the wastewater that is collected from the recycling center, placed in the EQ tanks.

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance

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Wastewater Specialist

Date: June 30, 2025