

Permit Fact Sheet

General Information

Permit Number:	WI-0059536-04-1
Permittee Name:	Kinnard Farms Inc
Address:	E2675 County Hwy S
City/State/Zip:	Casco WI 54205
Discharge Location:	E2675 County Road S, Casco, WI (Site One) and E2669 County Road S, Casco (Site Two)
Receiving Water:	Unnamed tributaries to Casco Creek within the Kewaunee River Watershed, and groundwaters of the state

Animal Units					
Animal Type	Current AU		Proposed AU (Note: If all zeroes, expansions are not expected during permit term)		
	Mixed	Individual	Mixed	Individual	Date of Proposed Expansion
Milking and Dry Cows	12530	12799	12530	12799	01/07/2022
Heifers (800 lbs. to 1200 lbs.)	330	300	330	300	01/07/2022
Total	12860	12799	12860	12799	

Facility Description

Kinnard Farms Inc is an existing Concentrated Animal Feeding Operation in Kewaunee, WI. Kinnard Farms is owned and operated by Lee Kinnard and family. As of January of 2020, Kinnard Farms has 5,594 milking and dry cows and 1,997 large heifers (800 to 1,200 lbs.). Kinnard Farms generates 99,748,335 gallons of manure and process wastewater and 5,886 tons of solid waste each year. As of January 2020, Kinnard Farms has greater than the required minimum of 180 days of manure storage. Kinnard Farms has 16325.44 acres in its approved nutrient management plan, of which 14,337.59 acres are rented or in agreements and 1,987.85 acres are owned. Kinnard Farms installed four anaerobic digesters at Site Two in 2020, which will digest all liquid manure produced at Kinnard Farms. This permit is being modified to include the additional sample points to cover the anaerobic digesters.

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)	
001	Solids 001: Sample point 001 is for separated manure solids (sand or fiber). This solid manure is typically reused as bedding and stored under roof in a designed storage structure (Site One and Two both have these sources). If land applied and not reused, representative samples shall be taken for each manure source	

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)	
	type.	
002	WSF 002: Sample point 002 is for liquid waste storage facility 002 (WSF 2) located at Site One. WSF 2 is an earthen storage located at Site One. The facility has a capacity of about 1 million gallons and was constructed in 1999. WSF 2 will require an engineering evaluation, see Schedules section for due dates.	
003	WSF 003: Sample point 003 is for liquid waste storage facility 003 (WSF 3) located at Site One. WSF 3 is an earthen storage located at Site One. The facility has a capacity of about 20 million gallons and was constructed in 1999. WSF 3 will require an engineering evaluation, see Schedules section for due dates.	
004	Solids 004: Sample point 004 is for solid manure sources that are directly land applied and not stored in a waste storage facility. This includes solid sources such as calf hutch manure, maternity pen bedpack, heifer bedpack, steer manure, etc. Representative samples shall be taken for each manure source type (Site One and Two).	
005	WSF 005: Sample point 005 is for liquid waste storage facility 005 (WSF 5) located at Site Two. WSF 5 is the southwestern concrete storage that has a capacity of about 30 million gallons and was constructed in 2016. This storage accepts primarily process wastewater from the feed storage area.	
006	WSF 006: Sample point 006 is for liquid waste storage facility 006 (WSF 6) located at Site Two. WSF 6 is the northwestern concrete storage that has a capacity of about 18 million gallons and was constructed in 2015. This storage accepts manure and process wastewater from Site Two barn.	
007	WSF 007: Sample point 007 is for liquid waste storage facility 007 (WSF 7) located at Site Two. WSF 7 is the eastern concrete storage that has a capacity of about 30 million gallons and was constructed in 2015. This storage accepts manure and process wastewater from Site Two barn.	
008	Solids 008: Sample point 008 is for any manure solids removed from bottom of liquid waste storage facilities. This includes manure-laden sand solids, manure fiber solids, etc. Representative samples shall be taken from each waste storage facility.	
009	Feed Storage Area & Runoff Control System (Site One): Sample point 009 is for visual monitoring and inspection of the feed storage area and associated runoff control system located at Site One. Area is also being utilized as a manure stacking pad. Proper operation and maintenance is required to ensure discharges of manure and process wastewater meet permit conditions. Weekly inspections are required and shall be recorded according to monitoring program. All runoff from this area is collected into WSF 3. An engineering evaluation of the feed storage area and runoff control system shall be submitted according to the Schedules section of the permit.	
010	Feed Storage Area & Runoff Control System (Site Two): Sample point 010 is for visual monitoring and inspection of the feed storage area and associated runoff control system located at Site Two. Proper operation and maintenance is required to ensure discharges of process wastewater meet permit conditions. Weekly inspections are required and shall be recorded according to monitoring program. All runoff from this area is currently collected into WSF 5.	
011	Storm Water Runoff Control System: Sample point 011 is for visual monitoring and inspection of all production site storm water conveyance systems (Site One and Two). This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance is required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required	

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)	
	and shall be recorded according to monitoring program.	
015	Sample Point 15: Digested Liquids – Anaerobic Digesters (AD) 1 and 2. This sample point addresses all digested liquids located within the proposed digester cells AD 1 and AD 2. Manure will be piped from the existing manure processing buildings (after sand removal) to the digesters and then returned to the manure processing buildings to be transferred to existing on-site waste storage facilities after the digestion is completed. Sampling from within the digester cell(s) for nutrient content is only required if the liquids are to be manually pumped from the cell(s) and directly land applied. The plans and specifications for the digesters that were installed in 2020 have been approved by the Department and meet permit requirements.	
016	Sample Point 16: Digested Liquids – Anaerobic Digesters (AD) 3 and 4. This sample point addresses all digested liquids located within the proposed digester cells AD 3 and AD 4. Manure will be piped from the existing manure processing buildings (after sand removal) to the digesters and then returned to the manure processing buildings to be transferred to existing on-site waste storage facilities after the digestion is completed. Sampling from within the digester cell(s) for nutrient content is only required if the liquids are to be manually pumped from the cell(s) and directly land applied. The plans and specifications for the digesters that were installed in 2020 have been approved by the Department and meet permit requirements.	

Sample Point Designation For Groundwater Monitoring Systems			
System	Sample Pt Number	Well Name	Comments
Kinnard Site Two Production Area	801	MW-1 (801)	
	802	MW-2 (802)	
	803	MW-3 (803)	
	804	MW-4 (804)	
	805	MW-5 (805)	

1 Livestock Operations - Proposed Operation and Management

Production Area Discharge Limitations

Beginning on the effective date of the permit, the permittee may not discharge pollutants from the operation's production area (e.g., manure storage areas, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas) to navigable waters, except in the event a 25-year, 24-hour rainfall event (or greater) causes the discharge from a structure which is properly designed and maintained to contain a 25-year, 24-hour rainfall event for this location as determined under s. NR 243.04. If an allowable discharge occurs from the production area, state water quality standards may not be exceeded.

Runoff Control

The permit requires control of contaminated runoff from all elements of the production area to prevent a discharge of pollutants to navigable waters in accordance with the Production Area Discharge Limitations and to comply with surface

water quality standards and groundwater standards. Beginning on the effective date of this permit, (if needed) interim measures shall be implemented to prevent discharges of pollutants to navigable waters. In addition, permanent runoff control system(s) shall be designed, operated and maintained in accordance with the requirements found in USDA Natural Resources Conservation Service standards and ch. NR 243, Wis. Adm. Code. If any upgrading or modifications to runoff controls are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

Manure and Process Wastewater Storage

The permit requires the operation to have adequate storage for manure and process wastewater and that storage or containment facilities are designed, operated and maintained to prevent overflows and discharges to waters of the state. In order to prevent overflows, the permittee must maintain levels of materials in liquid storage or containment facilities at or below certain levels including a one foot margin of safety that can never be exceeded. If any upgrading or modifications to the storage facilities are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

The permittee currently has approximately 12 months of storage for liquid manure. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

Ancillary Service and Storage Areas

The permittee shall take preventative maintenance actions and conduct visual inspections to minimize pollutant discharges from areas of the operation that are not part of the production area or land application areas. These areas are called ancillary service and storage areas and include access roads, shipping and receiving areas, maintenance areas, refuse piles and CAFO outdoor vegetated areas.

Nutrient Management

With 5,594 milking and dry cows and 1,997 large heifers (800 to 1,200 lbs.), it is estimated that approximately 99,748,335 gallons and 5,886 tons of manure and process wastewater will be produced per year. The permittee owns approximately 1,987 acres of cropland and rents or has an agreement for about 14,337 acres. Given the rotation commonly used by the permittee, 15,872 acres are available (or open) to receive manure and process wastewater on an annual basis. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

The permittee is required to implement a number of practices to address potential water quality impacts associated with the land application of manure and process wastewater. Among the permit conditions are restrictions on manure ponding, restrictions on runoff of manure and process wastewater from cropped fields, and setbacks from wells and direct conduits to groundwater (e.g., sinkholes, fractured bedrock at the surface). In addition, the permittee must implement a phosphorus based nutrient management plan that addresses phosphorus delivery to surface waters by basing manure and process wastewater applications on soil test phosphorus levels or the Wisconsin Phosphorus index. Additional phosphorus application restrictions apply to fields that are high in soil test phosphorus (>100 ppm).

The permittee must also implement conservation practices when applying manure near navigable waters and their conduits, referred to as the Surface Water Quality Management Area (SWQMA). These practices include a 100-foot setback from navigable waters and their conduits, a 35-foot vegetated buffer adjacent to the navigable water or conduit, or a practice that provides equivalent pollutant reductions equivalent to or better than the 100-foot setback.

In addition, the permittee must comply with restrictions on land application of manure and process wastewater on frozen or snow-covered ground. Included in these restrictions is a prohibition on surface applications of solid manure ($\geq 12\%$

solids) on frozen or snow-covered ground during February and March. Beginning [November 1, 2020](#), non-emergency surface applications of liquid manure (<12%) on frozen or snow-covered ground are prohibited.

Monitoring and Sampling Requirements

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

Sampling Points

The permit identifies the different sources of land applied materials (e.g., manure storage facilities, milking centers, egg-washing facilities) as “Sampling Points.” For these Sampling Points, the permittee is required to sample and analyze the different sources for nutrients and other parameters which serve as the basis for determining rates of application for these materials. Other areas are also identified as Sampling Points as a means of identifying them as areas requiring action by the permittee, such as an upgrade or evaluation of a certain system or structure (e.g., runoff control systems), even though sampling is not actually required.

Sample Point Number: 001- Solids 001; 004- Solids 004; 008- Solids 008

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lbs/ton	Quarterly	Grab	
Nitrogen, Available		lbs/ton	Quarterly	Calculated	
Phosphorus, Total		lbs/ton	Quarterly	Grab	
Phosphorus, Available		lbs/ton	Quarterly	Calculated	
Solids, Total		Percent	Quarterly	Grab	

1.1.1 Changes from Previous Permit

Sample Point 008 was modified to add settled solids removed from the digesters when they are being emptied.

1.1.2 Explanation of Operation and Management Requirements

This gives removed settled solids from the digesters the same sampling requirements as those for solid manure removed from waste storage ponds.

Solid manure sources must be properly sampled, and land applied according to the permit and nutrient management plan.

Sample Point Number: 002- WSF 002; 003- WSF 003; 005- WSF 005; 006- WSF 006; 007- WSF 007; 015- Digested Liquids, and 016- Digested Liquids

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lb/1000gal	2/Month	Grab	
Nitrogen, Available		lb/1000gal	2/Month	Calculated	
Phosphorus, Total		lb/1000gal	2/Month	Grab	
Phosphorus, Available		lb/1000gal	2/Month	Calculated	
Solids, Total		Percent	2/Month	Grab	

1.1.3 Changes from Previous Permit

Sample Point 015 was added to the permit. It includes the new anaerobic digesters AD 1 and AD 2 and is for any liquid manure which is removed from the digesters for land application. This unlikely event could occur during a clean-out of the tanks.

Sample Point 016 was added to the permit. It includes the new anaerobic digesters AD 3 and AD 4 and is for any liquid manure which is removed from the digesters for land application. This unlikely event could occur during a clean-out of the tanks.

1.1.4 Explanation of Operation and Management Requirements

For both sample points 010 and 011, this requires the manure that would be landspread to be sampled in the same way as other manure sources.

Liquid Waste must be properly stored, and land applied according to the permit and nutrient management plan.

Sample Point Number: 009- Feed Storage Area Site One; 010- Feed Storage Area Site Two; 011- Storm Water Runoff

1.1.5 Changes from Previous Permit

There are no changes above from the previous permit.

1.1.6 Explanation of Operation and Management Requirements

Proper operation and maintenance is required to ensure unlawful discharges to waters of the state do not occur. Weekly or quarterly inspections are required and shall be recorded according to the monitoring plan.

2 Groundwater – Proposed Monitoring and Limitations

3 Schedules

3.1 Annual Reports

Required Action	Due Date
Submit Annual Report #1: Production site inspection summaries and groundwater monitoring annual report.	01/31/2019
Submit Annual Report #2: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2020
Submit Annual Report #3: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2021
Submit Annual Report #4: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2022
Submit Annual Report #5: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2023
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

3.2 Emergency Response Plan

Required Action	Due Date
Update Emergency Response Plan: Update a written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request.	03/01/2018

3.3 Manure Storage Facility - Engineering Evaluation

Required Action	Due Date
Retain Expert: Retain a qualified expert to complete an engineering evaluation for Site One liquid manure storage facilities and report the name of the expert to the Department.	03/01/2019
Written Report: Submit a written report evaluating the existing manure storage facility's ability to meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	03/01/2020
Plans and Specifications: Submit plans and specifications for Department review and approval in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code, to permanently correct any adverse manure storage conditions.	03/01/2021
Corrections and Post Construction Documentation: Complete construction on the manure storage facility that permanently corrects any adverse conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	09/01/2022

3.4 Submit Permit Reissuance Application

Required Action	Due Date
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Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	08/01/2022
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3.5 Monitoring & Inspection Program

Required Action	Due Date
Updated Monitoring and Inspection Program: Consistent with the Monitoring and Sampling Requirements subsection, the permittee shall submit an updated monitoring and inspection program within 60 days of the effective date of this permit.	05/01/2021

3.6 Nutrient Management Plan

Required Action	Due Date
Management Plan Annual Update #1: Submit an Annual Update to the Nutrient Management Plan by March 31st each year. Note: In addition to Annual Updates, submit Management Plan Amendments to the Department for written approval prior to implementation of any changes to nutrient management practices, in accordance with the Nutrient Management requirements in the Livestock Operational and Sampling Requirements section.	03/31/2018
Management Plan Annual Update #2: Submit an Annual Update to the Nutrient Management Plan.	03/31/2019
Management Plan Annual Update #3: Submit an Annual Update to the Nutrient Management Plan.	03/31/2020
Management Plan Annual Update #4: Submit an Annual Update to the Nutrient Management Plan.	03/31/2021
Management Plan Annual Update #5: Submit an Annual Update to the Nutrient Management Plan.	03/31/2022
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

3.7 Feed Storage & Runoff Control - Engineering Evaluation

Required Action	Due Date
Retain Qualified Expert: The permittee shall retain a qualified expert to complete an engineering evaluation for the feed storage area and runoff controls at Site One and report the name of the expert to the Department.	03/01/2019
Written Description of Existing System: Submit an engineering evaluation that includes a written description of the existing feed storage area and its adequacy to meet the conditions found in the Production Area Discharge Limitations subsection and NR 243.15, Wis. Adm. Code.	03/01/2020
Plans and Specifications: Submit plans and specifications for Department review and approval to permanently correct any adverse conditions identified as part of the engineering evaluation for the feed storage area in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	03/01/2021
Corrections and Post Construction Documentation: Complete construction of improvements to permanently correct any adverse conditions in concurrence with and approval by the Department, by	09/01/2022

the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	
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3.8 Groundwater Monitoring System - Plan

Required Action	Due Date
Phase 1 - Groundwater Monitoring Plan: Submit a groundwater monitoring plan for the initial 5 monitoring wells. The plan shall include groundwater monitoring requirements consistent with permit requirements.	02/28/2018
Phase 2 - Groundwater Monitoring Plan: Submit a plan for installation of remaining production area groundwater monitoring wells in accordance with ch. NR 141, Wis. Adm. Code, for Department review and approval. This plan shall include the following: A detailed site characterization based on data collected during Phase 1; A summary of groundwater flow directions and seasonal variability; Recommendations for the number and locations of additional groundwater monitoring wells (at minimum, a piezometer well should be included); and a list of proposed sampling parameters and frequency. The Department may require additional wells to properly monitor the production area.	02/28/2019
Well Installation: Complete well installation in accordance with ch. NR 141, Wis Adm. Code, within 90 days following approval by the Department of the Final Groundwater Monitoring Plan. (Note: Documentation of well construction must be submitted to the Department within 60 days of well installation).	

3.9 Groundwater Monitoring System - Reporting

Required Action	Due Date
Quarterly reporting to the Department: Quarterly reporting of tabulated groundwater monitoring data and water level contour maps is required. Quarterly reports shall be submitted to the regional contact via email or mail within 45 days of the last sample event for that quarter. Online reporting is also required via groundwater monitoring forms.	
Annual Reporting to the Department: An annual report that summarizes the groundwater monitoring data shall be submitted by January 31st each year. Any updates to the groundwater monitoring workplan shall also be included in this report.	

3.10 Explanation of Schedules

Schedule 3.5 is modified to submit an updated monitoring and inspection plan to include the anaerobic digesters that were constructed in 2020.

Other Comments:

The proposed permit for modification includes the addition of Section 4.2.6 “Requirements for Digesters for Biogas Production” which is a Standard Requirement section for permittees that have digesters. The proposed permit also includes updated standard language about how and where submittals are sent to the Department in Section 5 called Summary of Reports Due.

Attachments:

Plans and Specifications Approval Letter
Map(s)

Proposed Expiration Date:

February 1, 2023

Prepared By:

James Salscheider Wastewater Specialist

Date: 10/01/2020

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



August 30, 2021

Lee Kinnard
Kinnard Farms, Inc.
E2675 County Road S
Casco, WI 54205

lee@kinnardfarms.com

WPDES Permit No. WI-0059536-04-1
Kewaunee County

SUBJECT: Referral to the Wisconsin Department of Justice

Dear Mr. Kinnard:

The Department of Natural Resources has referred Kinnard Farms, Inc. to the Department of Justice for alleged violations of Wisconsin Pollutant Discharge Elimination System (WPDES) Permits #WI-0059536-04-0 and #WI-0059536-04-1 and statutes and rules at the facilities located at E2675 County Road S and E2669 County Road S, Casco, Kewaunee County, Wisconsin.

The alleged violations being referred to the Department of Justice occurred between August 2019 and June 2021, and are related to the nutrient management and general reporting requirements of the WPDES Permits. The department has been working with Kinnard Farms, Inc. through secondary enforcement actions since August 2019, and has referred the case as part of the stepped enforcement process.

Please contact the Department of Justice at 608-266-1221 if you have questions regarding this referral.

Sincerely,

Shaun C. Deeney, Section Chief
Investigations and Environmental Enforcement Section
Division of Public Safety and Resource Protection

cc: Andrea Gruen, DNR – Green Bay
Chris Clayton, DNR – GEF2
P. Duncan Moss, DNR – GEF2



February 19, 2019

Lee Kinnard
Kinnard Farms Inc.
E2675 Cty Hwy S
Casco, WI 54205

WPDES Permit #: WI-0059536-04-0
Kewaunee County

**Subject: Manure Hauling Audit Report Summary &
Notice of Noncompliance – Response Requested by March 5, 2019**

Dear Mr. Kinnard,

The Wisconsin Department of Natural Resources (Department) conducted manure hauling audits on November 2, 2018, and November 9, 2018 of fields “7-019” and “4-037” in Kinnard Farms’ approved nutrient management plan (NMP). The manure hauling audit reports are attached for your review.

The Department documented the following compliant items during the manure hauling audits:

1. Applied manure was not ponded on the application site of field 7-019.
2. Applied manure did not run off the application site or discharge to waters of the state on any fields audited.
3. Manure was not applied to areas that contained saturated soils on any fields audited.
4. Manure was not applied within 100 feet of a private well on any fields audited.
5. Manure was not applied within SWQMAs on any fields audited.
6. All observed restrictive features were labeled on the existing restriction map for field 7-019.

Based upon a file review and observations made during the manure hauling audits, the Department has reason to believe that Kinnard Farms is in noncompliance with its Wisconsin Pollutant Discharge Elimination System (WPDES) Permit #WI-0059536-04-0 (Permit) that became effective on February 1, 2018. The Department believes that Kinnard Farms is in noncompliance with the following Permit conditions:

- 1. Permit Section 1.5.1 – General Spreading Restrictions:** The permittee shall land apply manure and process wastewater in compliance with the following:
 - Manure or process wastewater may not pond on the application site.
 - Land application practices shall maximize the use of available nutrients for crop production, prevent delivery of manure and process wastewater to waters of the state, and minimize the loss of nutrients and other contaminants to waters of the state to prevent exceedances of groundwater and surface water quality standards and to prevent impairment of wetland

functional values. Practices shall retain land applied manure and process wastewater on the soil where they are applied with minimal movement.

- **On November 9, 2018, Department staff observed land applied manure migrating from the initial application area and the ponding of manure within the boundaries of field “4-037”.**

2. Permit Section 1.5.3 – Additional Nutrient Management Plan Requirements:

- The permittee shall identify, to the maximum extent practicable, the presence of subsurface drainage systems in fields where its manure or process wastewater is applied as part of the nutrient management plan.
 - **On November 9, 2018, Department staff observed a drain tile breather vent within the boundaries of field “4-037” that was not identified as a restrictive feature on the restriction map in Kinnard Farms’ NMP.**

In response to this letter, please submit the following information to the Department:

1. A revised restriction map for field “4-037” that includes the tile breather vent feature. This restriction map shall be submitted as a NMP Substantial Revision via the Department’s ePermitting System, and shall be approved by the Department **prior to any future manure applications occurring.**
2. A written description of actions that Kinnard Farms will take to address field verification of permanent restrictive features and field conditions during hauling events for all fields within Kinnard Farms’ NMP **March 5, 2019.**

If you have any questions regarding this letter or permit requirements, please contact me at (920) 367-3007 or Andrea.Gruen@wisconsin.gov.

Sincerely,



Andrea Gruen
Agricultural Runoff Management Specialist

Attachment: November 2, 2018 Hauling Audit Report
November 9, 2018 Hauling Audit Report

E-Copy to: Joe Baeten, Benjamin Uvaas, Aaron O’Rourke – WDNR
Tyler Cravillion, Amanda Barta – Kinnard Farms Inc.
Nathen Nysse – Tilth Agronomy Group
Erin Hanson – Door County Soil & Water Conservation Department
Davina Bonness – Kewaunee County Land & Water Conservation Department



August 6, 2019

Lee Kinnard, Registered Agent
Kinnard Farms, Inc.
E2675 County Road S
Casco, Wisconsin 54205

Certified Mail / Return Receipt Requested
2019-NEEE-Kinnard Farms, Inc
Kewaunee County

Subject: **Notice of Violation / Enforcement Conference – September 3, 2019**

Dear Mr. Kinnard:

The Department of Natural Resources (DNR) has reason to believe Kinnard Farms, Inc. (Kinnard), is in violation of Wisconsin Pollutant Discharge Elimination System Permit Number WI-0059536-04-0 (Permit) issued on January 29, 2018. Kinnard is a large concentrated animal feeding operation located in Casco, Kewaunee County, WI.

The DNR alleges the following violations:

- 1. Permit Section 1.5.1: The permittee shall land apply manure and process wastewater in compliance with the following: Manure or process wastewater may not be land applied on areas of a field with a depth to groundwater or bedrock of less than 24 inches.**

On June 11, 2019, DNR staff responded to a complaint and inspected fields 8-061 and 8-062 (Inspection). Based on observations during the Inspection and available information, DNR staff determined Kinnard land applied manure on soils less than 24 inches to bedrock.

- 2. Permit Section 1.5, Nutrient Management: Except as provided for in s. NR 243.142(2), the permittee is responsible for ensuring that the manure and process wastewater generated by the operation is land applied in a manner that complies with the terms of this permit, the approved nutrient management plan (NMP) and s. NR 243.14.**

- Section NR 243.14(1)(b), Wis. Admin. Code, requires a NMP to contain the information required in NRCS Standard 590. NRCS 590 (VII)(A), requires a NMP to include the locations of sensitive areas and the resulting nutrient application restriction.

During the Inspection, DNR staff observed fractured bedrock at the soil surface within field 8-006. DNR staff also documented soil to be less than 24 inches over bedrock within fields 8-061 and 8-062. Based on a review of Kinnard restriction maps in its NMP and the observations made during the Inspection, DNR determined fractured bedrock at the surface, a direct conduit to groundwater and a sensitive area subject to nutrient application restrictions, was not identified in Kinnard's restriction maps. .

DNR believes Kinnard failed to include sensitive areas within fields 8-006, 8-061 and 8-062 on Kinnard Farms' restriction maps, as required.

- 3. Permit Section 3.6, Nutrient Management Plan: Management Plan Annual Update #2: Submit an Annual Update to the Nutrient Management Plan (date due March 31, 2019).**

DNR received NMP Annual Update #2 on April 29, 2019. The DNR believes that Kinnard Farms failed to submit Management Plan Annual Update #2 by March 31, 2019, as required.

We have scheduled an enforcement conference to discuss this matter in more detail:

Conference Date /Time:	Tuesday, September 3, 2019 at 10:00 AM
Conference Location:	DNR Northeast Region Headquarters – Green Bay 2984 Shawano Avenue, Green Bay, WI

Please be prepared to discuss the actions that will be taken to prevent future noncompliance and a timeline in which will be strictly adhered to.

The DNR requests Kinnard to attend the enforcement conference, as it is an important opportunity to discuss the circumstances surrounding the alleged violations and to learn your perspective on this matter. Please note that to encourage a candid and productive conversation, attendance is limited to you, your legal counsel and others with the technical expertise necessary to understand, evaluate and correct the violations. A fact sheet describing an enforcement conference is enclosed. The DNR's enforcement decision will be based upon available information if you do not attend the enforcement conference.

Please be advised that the violations alleged above are enforced through s. 283.89, Wis. Stats., and may be referred to the Department of Justice to obtain court ordered compliance and penalties of up to \$25,000 for each violation; each day of a continuing violation is a separate offense.

If you have questions regarding this notice or need to reschedule the enforcement conference, please contact me, Kody Hansen, at (920) 360-6320.

Sincerely,



Kody Hansen
Environmental Enforcement Specialist

Enclosure: Enforcement Conference Fact Sheet

Cc: Andrea Gruen, DNR
Joe Baeten, DNR
Erin Hansen, Door County Soil & Water Conservation Department



Environmental Enforcement Conference

An Enforcement Conference (EC) is a meeting between Department of Natural Resources (Department) staff and representatives of a person or business that the Department believes has violated an environmental law. The Department issues a Notice of Violation (NOV) when it has reason to believe that a violation of a permit condition, administrative rule or statutory requirement has occurred. The NOV either offers or schedules an EC.

Why Should I Attend?

The EC is an important opportunity to discuss the Department's basis for the alleged violation(s) and learn more about what happened, why it may have happened, and any factors you believe the Department should consider, such as steps that have been or will be taken to stop the violation, correct any effects of the violation, and prevent violations from occurring in the future. It is also your opportunity to explain why you might disagree with the factual and legal conclusions underlying the NOV.

Historic data shows that most violations are resolved at the EC level, without the need for court ordered compliance and/or penalties. In situations where the significance of the violation warrants further enforcement action, your cooperative efforts to resolve the violation and prevent future violations will help minimize your legal and financial liability.

Who Should Attend the EC?

Department staff involved in the EC typically consists of an Environmental Enforcement Specialist and regulatory staff that are familiar with the issues identified in the NOV.

While not required, you may seek representation by legal counsel or the assistance of an environmental consultant to prepare for and/or attend the EC. The EC is most productive when all involved are well-prepared to discuss the allegations and any corrective actions that may be necessary.

To ensure a productive candid discussion, participation in the EC is limited to the person or business involved and others with the legal or technical expertise necessary to understand, evaluate, mitigate and correct the violation. The EC is not an open meeting under state law and the Department will limit participation to those directly involved in the resolution of the matter.

What Happens if I don't Attend the EC?

If a party is unable to attend the EC, they should immediately contact the Environmental Enforcement Specialist at the phone number in the NOV to reschedule. When a party refuses to attend the EC and provides no further information to the Department, the Department's enforcement decision will be based upon available information.

What Happens Following the EC?

The EC is part of the Department's stepped enforcement process. At the EC, Department staff will explain the process and options available to address the alleged violation. Generally, the options range from closing the matter with no further action to referral to the Wisconsin Department of Justice (DOJ) or to U.S. EPA, for further enforcement action. In limited circumstances, the Department can issue citations, which are handled in local court similar to traffic offenses. If a case is referred to DOJ, the DOJ may initiate an action in court on behalf of the State. The State typically asks the Court to impose financial penalties and order completion of any necessary corrective actions. In most of the Department's cases, a cooperative return to compliance with any necessary restoration results in close out of the case. At close out, the Department will send a letter advising of no further enforcement action.



August 26, 2019

Lee Kinnard, Registered Agent
Kinnard Farms, Inc.
E2675 County Road S
Casco, Wisconsin 54205

Certified Mail / Return Receipt Requested
2019-NEEE-Kinnard Farms, Inc
Kewaunee County

Subject: **Notice of Violation**

Dear Mr. Kinnard:

The Department of Natural Resources (DNR) issued Kinnard Farms, Inc. (Kinnard), a notice of violation on August 6, 2019. The DNR has reason to believe Kinnard committed a subsequent violation of Wisconsin Pollutant Discharge Elimination System Permit Number WI-0059536-04-0 (Permit).

The DNR alleges the following violation:

- 1. In part, Permit section 1.5.1 specifies that manure may not run off the application site due to precipitation except if the permittee complies with application restrictions, the permittee complies with the Permit, and the rain event is greater than or equal to a 25-year, 24-hour rain event.**

On August 7, 2019, the DNR received notification from Kinnard that a spill related to a nutrient application occurred. On August 8, 2019, the DNR inspected the field identified in Kinnard's nutrient management plan (NMP) as Field 2-021. Based on the observations, DNR determined manure ran off Field 2-021. The manure laden runoff flowed north to the property located at N7574 Chestnut Drive, Algoma, Kewaunee County, Wisconsin.

On August 8, 2019, the DNR received a subsequent complaint indicating manure runoff related to Kinnard's land application practices. On that day, DNR staff inspected the field identified in NMP as 1-200. Based on observations and a review of available information, the DNR determined manure was applied to Field 1-200 and ran off the application site.


Please be advised that based on precipitation data collected from the National Weather Service Forecast Office, the DNR has determined that the rain that occurred on August 7, 2019 was less than a 25-year, 24-hour rain event.

The DNR plans to discuss the circumstances that gave rise to this allegation during the enforcement conference that was scheduled in the August 6, 2019 Notice of Violation. Please be prepared to provide Kinnard's view of the allegation and any additional information Kinnard would like included in the DNR's enforcement decision.

As with the violations previously alleged, the allegation provided above is enforced through s. 283.89, Wis. Stats., and may be referred to the Department of Justice to obtain court ordered compliance and penalties of up to \$25,000 for each violation; each day of a continuing violation is a separate offense.

If you have questions regarding this notice or need to reschedule the enforcement conference, please contact me, Kody Hansen, at (920) 360-6320.

Sincerely,



Kody Hansen
Environmental Enforcement Specialist

Encl: Enforcement Conference Fact Sheet
August 26, 2019, DNR Inspection Report – August 8 – 9, 2019 Inspections

Cc: Andrea Gruen, DNR
Joe Baeten, DNR
Erin Hansen, Door County Soil & Water Conservation Department
Davina Bonness, Kewaunee County Soil & Water Conservation Department



Environmental Enforcement Conference

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To ensure a productive candid discussion, participation in the EC is limited to the person or business involved and others with the legal or technical expertise necessary to understand, evaluate, mitigate and correct the violation. The EC is not an open meeting under state law and the Department will limit participation to those directly involved in the resolution of the matter.

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What Happens Following the EC?

The EC is part of the Department's stepped enforcement process. At the EC, Department staff will explain the process and options available to address the alleged violation. Generally, the options range from closing the matter with no further action to referral to the Wisconsin Department of Justice (DOJ) or to U.S. EPA, for further enforcement action. In limited circumstances, the Department can issue citations, which are handled in local court similar to traffic offenses. If a case is referred to DOJ, the DOJ may initiate an action in court on behalf of the State. The State typically asks the Court to impose financial penalties and order completion of any necessary corrective actions. In most of the Department's cases, a cooperative return to compliance with any necessary restoration results in close out of the case. At close out, the Department will send a letter advising of no further enforcement action.



February 6, 2020

Lee Kinnard, Registered Agent
Kinnard Farms, Inc.
E2675 County Road S
Casco, WI 54205

Certified Mail / Return Receipt Requested
2019-NEEE-Kinnard Farms, Inc
Kewaunee County

Subject: **Notice of Violation**

Dear Mr. Kinnard:

The Department of Natural Resources (department) has issued Kinnard Farms, Inc. (Kinnard) notices of violation on August 6, 2019 and August 26, 2019. The department has reason to believe that Kinnard has committed subsequent violations of Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No. WI-0059536-04-0 (Permit).

The department alleges the following violations:

1. **Section NR 243.143, Wis. Admin. Code, Silurian bedrock performance standards. Owners or operators that mechanically apply manure directly or through contract or other agreement to cropland or pasture areas that meet the definition of Silurian bedrock under s. NR 151.015(17) must comply with s. NR 151.075.**

Section NR 151.075(13), Wis. Admin. Code, Silurian bedrock performance standards. Mechanical applications are prohibited in any of the following: (b) 250 feet of a private water system or a non-community water system as defined in s. NR 812.07.

On November 4, 2019, Door County Soil & Water Conservation Department staff observed manure that was land applied by Kinnard approximately 153 feet from a private water system on field "8-011" and 175 feet from a private water system on field "8-012" in Kinnard's nutrient management plan (NMP).

The department believes that Kinnard failed to maintain a 250-foot manure application setback to private water systems, as required.

2. **Section NR 243.143, Wis. Admin. Code, Silurian bedrock performance standards. Owners or operators that mechanically apply manure directly or through contract or other agreement to cropland or pasture areas that meet the definition of Silurian bedrock under s. NR 151.015(17) must comply with s. NR 151.075.**

Section NR 151.075(13), Wis. Admin. Code, Silurian bedrock performance standards. Mechanical applications are prohibited in any of the following: (c) An area within 300 feet upslope of 100 feet downslope of a direct conduit to groundwater as defined in s. NR 151.002 (11m).

On November 8, 2019, department staff observed manure that was land applied by Kinnard approximately 145 feet upslope of a direct conduit to groundwater within the field identified as "8-011" in Kinnard's NMP.

The department believes that Kinnard Farms failed to maintain a 300-foot upslope manure application setback to direct conduits to groundwater, as required.

- 3. Permit Section 1.5.1 General Spreading Restrictions – The permittee shall land apply manure and process wastewater in accordance with the following: Manure or process wastewater may not run off the application site nor discharge to waters of the state through subsurface drains due to precipitation or snowmelt except if the permittee has complied with all land application restrictions in NR 243 and this permit, and the runoff of discharge occurs as a result of a rain event that is equal to or greater than a 25-year, 24-hour rain event.**

On November 27, 2019, department staff observed manure that was land applied by Kinnard on field "002-16" in Kinnard's NMP running off the application site. Data from the National Oceanic and Atmospheric Association indicates that the rain event that occurred on November 27, 2019 was less than a 25-year, 24-hour rain event.

The department believes that Kinnard failed to land apply manure does in a manner such that it does not run off the application site, as required.

The department has issued notices of violation to Kinnard on August 6, 2019 and August 26, 2019 for similar violations to those alleged above and held an enforcement conference with Kinnard on September 25, 2019 to discuss the alleged violations and educate Kinnard on applicable regulations.

If you have questions or would like to schedule an enforcement conference to meet and discuss the alleged violations and your perspective on the circumstances surrounding this matter, please contact me at (920) 366-1980 within 14 days of receipt of this letter. Alternatively, you may provide information in writing that you would like the department to consider in its decision.

The enforcement decision made by the department will be based upon available information if you do not schedule an enforcement conference or provide written information within 14 days of receipt of this letter.

As with the violations previously alleged, the allegations provided above are enforced through s. 283.91, Wis. Stats., and may be referred to the Department of Justice to obtain court ordered compliance and penalties of up to \$10,000 per violation; each day of continuing violation is a separate offense.

If you have questions regarding this notice or need to reschedule the enforcement conference, please contact me at (920) 366-1980.

Sincerely,



Andrea Gruen
Environmental Enforcement Specialist

Enclosure: November 27, 2019 Inspection Report

Mr. Kinnard
Kinnard Farms Inc.
February 6, 2020

3

Cc: James Salscheider, DNR
Joe Baeten, DNR
Davina Bonness, Kewaunee County Land & Water Conservation Department
Erin Hanson, Door County Soil & Water Conservation Department

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Green Bay Service Center
2984 Shawano Ave
Green Bay, WI 54313

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



November 10, 2021

Lee Kinnard
Kinnard Farms Inc
E2675 County Highway S
Casco, WI 54205

WPDES Permit No. WI-0059536-04-1
Kewaunee County

Subject: September 28, 2021 Manure Hauling Audit Summary Letter

Dear Mr. Kinnard:

On September 28, 2021, the Wisconsin Department of Natural Resources (Department) met with you and conducted a manure hauling audit on a field identified as "1-021" in Kinnard Farms' approved nutrient management plan. The report and photo log from the hauling audits are enclosed for your review. During the field inspection, the department observed the following compliance violations:

- On field "1-021", the department observed manure applied on less than 24 inches of soil depth to bedrock

The department is continuing to review available information to decide whether enforcement actions are necessary. If you have any questions regarding this letter, the report, or your permit requirement, please give me a call at (920) 367-3007 or email me at James.Salscheider@Wisconsin.gov.

Sincerely,

James B Salscheider
Agricultural Runoff Management Specialist

Electronic CC: Joseph Baeten - WDNR
Davina Bonness, Travis Engels - Kewaunee County LWCD
Nathen Nysse - Tilth Agronomy



March 2, 2021

Via email: lee@kinnardfarms.com

Lee Kinnard, Registered Agent
Kinnard Farms, Inc.
E2675 County Road S
Casco, WI 54205

Permit No. WI-0059536-04-0
Kewaunee County
Electronic Delivery

Subject: **NOTICE OF VIOLATION / ENFORCEMENT CONFERENCE: MARCH 16, 2021**

Dear Mr. Kinnard:

The Department of Natural Resources (department) has issued Kinnard Farms, Inc. (Kinnard Farms) notices of violation on August 6, 2019; August 26, 2019 and February 6, 2020. The department has reason to believe that Kinnard Farms has committed a subsequent violation of Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No. WI-0059536-04-0 (Permit). The alleged violation was documented during a manure hauling audit that was conducted on October 22, 2020.

The department alleges the following violation:

Permit Section 1.5.1 General Spreading Restrictions: The permittee shall land apply manure and process wastewater in compliance with the following:

- **Manure or process wastewater may not be applied within 100 feet of a private well or non-community system as defined in ch. NR 812 or within 1000 feet of a community well as defined in ch. NR 811.**

On October 19, 2020, Kinnard Farms land applied manure and process wastewater to the field identified as "003-08" in its nutrient management plan. On October 22, 2020, department staff performed a manure hauling audit and observed manure land applied within 100 feet of a private well.

The department believes that Kinnard failed to maintain a 100-foot manure application setback to a private well, as required.

We have scheduled an enforcement conference to discuss this matter in more detail:

Teleconference Date & Time: March 16, 2021 at 9:00 a.m.

Teleconference Call Number: 608-316-9000; Passcode 85576827#

The department strongly encourages Kinnard Farms to attend the enforcement conference, as it is an important opportunity to discuss the circumstances surrounding the alleged violation and to learn your perspective on this

matter. Please note that to encourage a candid and productive conversation, attendance is limited to you, your legal counsel and others with the technical expertise necessary to understand, evaluate and correct the violations. The department would also like to discuss why Kinnard Farms believes land application violations have continued after the previous notices of violation. Please be prepared to discuss steps Kinnard Farms has taken, or will take, to comply with Permit requirements.

On August 21, 2020, the department requested a meeting with Kinnard Farms to discuss the open enforcement case and moving forward – specifically what actions Kinnard Farms has taken to prevent future noncompliance with Permit land application requirements and potential associated natural resource impacts. However, representatives of Kinnard Farms declined to meet with the department to discuss the matter. As previously communicated, the department has serious concerns about the repetitive nature of Kinnard Farms' noncompliance with applicable land application regulations and would like to work more closely with Kinnard Farms in the form of manure hauling audits.

The nature of manure hauling audits relies on department staff accessing land application sites during or immediately after land application has occurred. Section 283.55(2) Wis. Stats., states that authorized employees or representatives of the department shall have right to enter upon any premises on which there is an effluent source covered by a WPDES Permit and may at reasonable times conduct an inspection of the effluent source and records required to be maintained by the permit. No person shall refuse entry or access to any authorized representative of the department who requests entry under this subsection and who presents appropriate credentials nor shall any person obstruct, hamper or interfere with any such inspection. Representatives of Kinnard Farms have historically delayed department staff from performing manure hauling audits for several days, which can potentially prevent staff from making a compliance determination. In similar situations when the department feels delays are unreasonable or unacceptable, the department has obtained a special inspection warrant under the authority granted in s. 66.0119, Wis. Stats.

The department is considering referring this case to the Department of Justice. Please be advised that the violations alleged above are enforced through s. 283.89, Wis. Stats., and may be referred to the Department of Justice to obtain court ordered compliance and penalties of up to \$10,000 for each violation; each day of a continuing violation is a separate offense.

If there are any questions or concerns, please contact me at (920) 366-1980.

Sincerely,



Andrea Gruen
Environmental Enforcement Specialist

Cc: James Salscheider, DNR - Green Bay
Joe Baeten, DNR – Green Bay
Ben Uvaas, DNR - Oshkosh
Nathen Nysse, Tilth Agronomy
David Crass, Michael Best & Friedrich LLP

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Green Bay Service Center
2984 Shawano Ave
Green Bay, WI 54313

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



July 13, 2021

Lee Kinnard
Kinnard Farms Inc.
E2675 County Hwy S
Casco, WI 54205

WPDES Permit No. WI-0059536-04-0
Kewaunee County

Subject: Manure Hauling Audit Summary Letter

Dear Mr. Kinnard:

On June 2 and June 4, 2021, the Wisconsin Department of Natural Resources (Department) conducted manure hauling audits on fields identified as "8-005", "8-008" and "7-004" in Kinnard Farms' approved nutrient management plan. The report and photo log from the hauling audits are enclosed for your review. During the field inspections, the department observed the following compliance violations:

- On field "7-004", manure was observed within 100 feet of a direct conduit to groundwater.
 - Permit Section 1.5.1 – Manure or process wastewater may not be applied within 100 feet of a direct conduit to groundwater

The department is continuing to review available information to decide whether enforcement actions are necessary. If you have any questions regarding this letter, the report, or your permit requirements, please give me a call at (920) 367-3007 or email me at James.Salscheider@Wisconsin.gov.

Sincerely,

James B Salscheider
Agricultural Runoff Management Specialist

Electronic CC: Joseph Baeten - WDNR
Nathan Nysse – Tilth Agronomy
Erin Hanson – Door County SWCD



January 12, 2022

Lee Kinnard
Kinnard Farms Inc
E2675 County Hwy S
Casco, WI 54205

Dear Mr. Kinnard:

On November 3, 2021, the department met with you to inspect your dairy farm for reissuance of your WPDES Permit. Observations made by the department during the inspection are included in the enclosed report.

Kinnard Farms' current WPDES permit (WI-0059536-04-1) will expire January 31, 2023. A permit reissuance application is due to the department by August 1, 2022. A list of materials needed for the permit reissuance application can be found on page 65 of the report.

Please find on pages 64 and 65 of the enclosed report, a detailed list of action items and areas of concern observed during the inspection. Please review this section carefully. The department will determine how to proceed with permit reissuance after review of this inspection report and the final permit reissuance application.

If you have any questions regarding this letter or your WPDES permit requirements, please contact me at 920-367-3007 or James.Salscheider@wisconsin.gov.

Sincerely,

James Salscheider
Agricultural Runoff Management Specialist

Enclosure: Haberli Farms Inc. Permit Reissuance Inspection Report 12/22/2021

Electronic CC:
Joseph Baeten, Tyler Dix, Anthony Salituro, Ian Anderson – DNR
Nathen Nysse – Tilth Agronomy
Davina Bonness – Kewaunee County LWCD
Bob Nauta – RJN Environmental Services LLC



WPDES PERMIT

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

Kinnard Farms Inc

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

E2675 County Road S, Casco, WI (Site One) and E2669 County Road S, Casco (Site Two)

to

to unnamed tributaries to Casco Creek within the Kewaunee River Watershed, and groundwaters of the state

in accordance with the effluent limitations, monitoring requirements and other conditions on the management and
utilization of manure and process wastewater 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 _____
Tyler Dix
Wastewater Specialist

Date Permit Signed/Issued for Modification

PERMIT TERM: EFFECTIVE DATE – February 01, 2018
EFFECTIVE DATE OF MODIFICATION: February 01, 2022

EXPIRATION DATE – January 31, 2023

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1 Livestock Operational and Sampling Requirements

1.1 Production Area Discharge Limitations

The permittee shall comply with the livestock performance standards and prohibitions in ch. NR 151. In accordance with s. NR 243.13, the permittee may not discharge manure or process wastewater pollutants to navigable waters from the production area, including approved manure stacking sites, unless all of the following apply:

- Precipitation causes an overflow of manure or process wastewater from a containment or storage structure.
- The containment or storage structure is properly designed, constructed and maintained to contain all manure and process wastewater from the operation, including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event for this location (**Kewaunee County – 4.30 inches**).as determined under s. NR 243.04.
- The production area is operated in accordance with the inspection, maintenance and record keeping requirements in s. NR 243.19.
- The discharge complies with surface water quality standards.

All structures shall be designed and operated in accordance with ss. NR 243.15 and NR 243.17 to control manure and process wastewater for the purpose of complying with discharge limitations established above and groundwater standards.

The permittee may not discharge pollutants to navigable waters under any circumstance or storm event from areas of the production area, including manure stacks on cropland, where manure or process wastewater is not properly stored or contained by a structure.

NOTE: Wastewater treatment strips, grassed waterways or buffers are examples of facilities or systems that by themselves do not constitute a structure.

Production area discharges to waters of the state authorized under this permit shall comply with water quality standards, groundwater standards and may not impair wetland functional values.

1.1.1 Animal Unit Maximum

The permittee may not exceed 21,450 animal units under this permit. Manure and process wastewater volumes generated by 21,450 animal units is the permittee's foreseeable maximum level of discharge in accordance with s. 283.31(5), Wis. Stats.

The permittee currently operates with 11,369 animal units. Increasing animal units beyond current levels is allowable only if storage and nutrient management requirements are maintained in accordance with the "Manure and Process Wastewater Storage" and "Nutrient Management" sections.

The permittee is required to demonstrate to the Department compliance with the 180-day design storage capacity requirement if proposing to increase by an amount of 1,000 animal units or more unless the Department has approved reductions in design storage in accordance with s. NR 243.17(4).

The nutrient management plan may be amended during the permit term to accommodate any changes in the number of livestock provided the proposed amendments are approved in writing by the Department and meet the requirements of s. NR 243.14.

1.2 Runoff Control

All runoff control systems shall be designed and maintained to comply with production area discharge limitations. Uncontaminated runoff shall be diverted away from manure and process wastewater storage and containment areas, raw materials storage and containment areas, and outdoor animal lots. All storage and containment structures

associated with runoff control systems shall be operated in accordance with the “Proper Operations and Maintenance” section.

1.2.1 Non-permanent feed storage areas

All proposed non-permanent feed storage (e.g., silage bags) areas shall be submitted to the Department for approval. A permittee may not use non-permanent feed storage areas unless the permittee has obtained Department approval. Upon approval from the Department, the permittee shall comply with the following requirements, Production Area Discharge Limitations, and the table below when siting and operating non-permanent feed storage areas:

- Feed with over 75% moisture is not allowed on non-permanent areas.
- Stored feed may not be placed on bare ground and must be covered to prevent infiltration of precipitation. Significantly degraded or damaged covers shall be repaired or replaced.
- Stored feed must be moved annually to an area where feed wasn’t stored within the previous 12 months.
- The area where feed was stored must be re-vegetated after the feed is moved.
- Clean water shall be diverted away from the area where the feed is stored.
- Spilled feed shall be removed, and all working faces shall be recovered to minimize potential spillage and exposure to precipitation.

Siting Criteria	Restriction
1. Hydrologic Soil Groups	B, C, D
2. Subsurface Separation Distance - Saturation - Bedrock	$\geq 3'$ $\geq 3'$
3. Surface Separation Distance - Wells - Lakes - Sinkholes, or other Karst Features - Quarries - Streams - Wetlands and Surface Inlets - Open channel flow - Land Slope - Floodplain (100 yr)	$\geq 250'$ $\geq 1,000'$ $\geq 1,000'$ $\geq 1,000'$ $\geq 300'$ $\geq 300'$ $\geq 100'$ $\leq 6\%$ $\geq 100'$

As part of the Department approval, the Department may require additional restrictions on non-permanent feed storage areas needed to protect water quality. The permittee shall manage the storage areas in compliance with the additional restrictions specified in the approval.

Storage area approvals may be rescinded by the Department based on documented impacts to waters of the state at or from the storage area, the presence of significant amounts of runoff or ponded runoff contaminated with leachate or stored feed or the permittee’s failure to comply with siting and operational requirements.

NOTE: Ch. NR 429.04, Wis. Adm. Code, prohibits the burning of covers used for feed storage.

1.3 Manure and Process Wastewater Storage

All permittees shall have and maintain adequate storage for all manure and process wastewater generated at the operation to ensure that wastes can be properly stored and land applied in compliance with the conditions and timing restrictions of the permit, a Department approved nutrient management plan and s. NR 243.14(9).

1.3.1 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all manure and process wastewater facilities and systems in compliance with the conditions of this permit. The permittee shall comply with the permit and s. NR 243.17, including the following requirements:

- All liquid manure and process wastewater storage or containment facilities shall have the permanent markers specified in s. NR 243.15(3)(e) (margin of safety and maximum operating level for liquid manure and process wastewater storage and the 180-day storage marker for liquid manure storage).
- Chemicals and other pollutants may not be added to manure, process wastewater or stormwater storage facilities or treatment systems without prior Department approval.
- Liquid manure storage facilities or systems shall be emptied to the point that the 180-day level indicator is visible on at least one day between October 1 and November 30, except for liquid manure remaining due to unusual fall weather conditions prohibiting manure applications during this time period. The permittee shall record the day on which the 180-day level indicator was visible during this time period. Permittees unable to empty their storage facility to the 180-day level indicator between October 1 and November 30, shall notify the department in writing by December 5.
- The permittee shall maintain a design storage capacity of 180 days for liquid manure unless the Department approves a temporary reduction in design storage capacity to 150 days in accordance with s. NR 243.17(4).
- Prior to introducing any influent additives to a digester, other than manure, the permittee shall obtain written Department approval. If any materials other than manure are used in the digester, the permittee shall maintain daily records of the volumes of all manure and non-manure components added to the digester influent. As part of its approval, the Department may apply additional requirements in accordance with s. NR 243.17(1). As part of the Department's review, the Department may also require amendments to the permittee's nutrient management plan and the permittee shall submit an amended plan to the Department to incorporate the additional requirements.

1.3.2 Discharge Prevention

A permittee shall operate and maintain storage and containment facilities to prevent overflows and discharges to waters of the state.

- The permittee may not exceed the maximum operating level in liquid storage or containment facilities except as a result of recent precipitation or conditions that do not allow removal of material from the facility in accordance with permit conditions.
- The permittee shall maintain a margin of safety in liquid storage or containment facilities that levels of manure, process wastewater and other wastes placed in the storage or containment facility may not exceed. Materials shall be removed from the facility in accordance with the approved nutrient management plan to ensure that the margin of safety is not exceeded. Failure to maintain a margin of safety is permit noncompliance that must be reported to the Department in accordance with the timeframes specified in the Noncompliance-24 Hour Reporting subsection in the Standard Requirements.

1.3.3 Liquid Manure – 180-day storage

The permittee shall demonstrate compliance with the 180-day design storage capacity requirement at all the following times:

- As part of an application for permit reissuance.
- At the time of submittal of plans and specifications for proposed reviewable facilities or systems.
- In annual reports to the department.
- When an operation is proposing, at any time, a 20% expansion in animal units or an increase by an amount of 1,000 animal units or more unless the Department has approved reductions in design storage in accordance with s. NR 243.17(4).

1.3.4 Facility Closure and Abandonment

In accordance with s. NR 243.17, if the permittee plans to close or abandon structures or systems regulated by this permit, a closure or abandonment plan shall be submitted to the Department and written Department approval must be granted before closing the facility. Manure storage facilities shall be closed or abandoned in accordance with NRCS Standard 360 (December 2002). Closure or abandonment of a manure storage facility shall occur when manure has

not been added or removed for a period of 24 months, unless the owner or operator can provide information to the Department that the structure is designed to store manure for a longer period of time or that the storage structure will be utilized within a specific period of time.

1.4 Ancillary Service and Storage Areas

The permittee may discharge contaminated storm water to waters of the state from ancillary service and storage areas provided the discharges of contaminated storm water comply with groundwater and surface water quality standards. The permittee shall take preventive maintenance actions and conduct periodic visual inspections to minimize the discharge of pollutants from these areas to surface waters. For CAFO outdoor vegetated areas, the permittee shall also implement the following practices:

- Manage stocking densities, implement management systems and manage feed sources to ensure that sufficient vegetative cover is maintained over the entire area at all times.
- Prohibit direct access of livestock or poultry to surface waters or wetlands located in or adjacent to the area unless approved by the Department.

1.5 Nutrient Management

Except as provided for in s. NR 243.142(2), the permittee is responsible for ensuring that the manure and process wastewater generated by the operation is land applied or disposed of in a manner that complies with the terms of this permit, the approved nutrient management plan and s. NR 243.14.

The permittee shall land apply manure and process wastewater in compliance with the Department approved nutrient management plan, s. NR 243.14 and the terms and conditions of this permit. Land application practices shall not exceed crop nutrient budgets determined in accordance with NRCS Standard 590, this permit and s. NR 243.14 and shall be based on manure and process wastewater analyses, soil tests, as well as other nutrient sources applied to a field. The permittee shall review and amend the nutrient management plan on an annual basis to reflect any changes in operations over the previous year (including incorporation of the previous year's amendments and new soil test results) and to include projected changes for the upcoming year. Annual updates are due in accordance with the Schedules section of the permit.

The management plan may be amended at any time provided the proposed amendments are approved in writing by the Department and meet the requirements of s. NR 243.14. Changes requiring a plan amendment include, but are not limited to, changes to application rates, new spreading sites, changes in the number of livestock, changes in manure storage procedures, or changes in the type of manure spreading equipment. Unless specified in the "Special Permit Conditions" section of the permit, an amendment does not become effective and may not be implemented until the Department has reviewed and approved the amendment. In addition, all approved amendments in a given year shall be included in the Annual Update.

The permittee shall maintain daily spreading records and submit annual reports relating to land application activities in accordance with s. NR 243.19.

1.5.1 General Spreading Restrictions

The permittee shall land apply manure and process wastewater in compliance with the following:

- Manure or process wastewater may not pond on the application site.
- During dry weather conditions, manure or process wastewater may not run off the application site, nor discharge to waters of the state through subsurface drains.
- Manure or process wastewater may not cause the fecal contamination of water in a well.
- Manure or process wastewater may not run off the application site nor discharge to waters of the state through subsurface drains due to precipitation or snowmelt except if the permittee has complied with all land application

restrictions in NR 243 and this permit, and the runoff or discharge occurs as a result of a rain event that is equal to or greater than a 25-year, 24-hour rain event.

- Manure or process wastewater may not be applied to saturated soils.
- Land application practices shall maximize the use of available nutrients for crop production, prevent delivery of manure and process wastewater to waters of the state, and minimize the loss of nutrients and other contaminants to waters of the state to prevent exceedances of groundwater and surface water quality standards and to prevent impairment of wetland functional values. Practices shall retain land applied manure and process wastewater on the soil where they are applied with minimal movement.
- Manure or process wastewater may not be applied on areas of a field with a depth to groundwater or bedrock of less than 24 inches.
- Manure or process wastewater may not be applied within 100 feet of a direct conduit to groundwater.
- Manure or process wastewater may not be applied within 100 feet of a private well or non-community system as defined in ch. NR 812 or within 1000 feet of a community well as defined in ch. NR 811.
- Unless specified otherwise in this permit, where incorporation of land applied manure is required, the incorporation shall occur within 48 hours of application.
- Manure or process wastewater may not be surface applied when precipitation capable of producing runoff is forecast within 24 hours of the time of planned application.
- Manure or process wastewater may not be spread on surface waters, established concentrated flow channels, or non-harvested vegetative buffers.
- Fields receiving manure and process wastewater may not exceed tolerable soil loss ("T").

1.5.2 Non-Cropland Applications

Manure may be applied to non-cropland if pre-approval in writing is issued by the Department. Considerations for approval may include acceptable application timing, amounts and methods.

1.5.3 Additional Nutrient Management Plan Requirements

- If applicable, the permittee shall specify the method(s) of incorporation in its nutrient management plan.
- The permittee shall identify, to the maximum extent practicable, the presence of subsurface drainage systems in fields where its manure or process wastewater is applied as part of the nutrient management plan.
- In accordance with s. NR 243.14(3), the permittee shall account for 1st and 2nd year nutrient credits.
- On a field-by-field basis, the permittee shall select and implement one of the practices listed in s. NR 243.14(4) for manure and process wastewater applications in a SWQMA (defined in ch. NR 243), and include the selected practices in the nutrient management plan. Whenever manure or process wastewater is applied within a SWQMA, the permittee shall apply the material in compliance with the SWQMA practices specified in the approved nutrient management plan.
- On a field-by-field basis, the permittee shall select one of the methods specified in s. NR 243.14(5) for assessing and minimizing the potential delivery of phosphorus to surface waters, and include the selected method in the nutrient management plan. The permittee shall apply manure and process wastewater to fields in compliance with the phosphorus methods specified in the approved nutrient management plan. On a field-by-field basis, the permittee shall select and implement one of the methods.

1.5.4 Frozen or Snow Covered Ground – General Spreading Restrictions

If the permittee applies manure on frozen or snow-covered ground, the permittee shall land apply the manure in compliance with all of the restrictions in s. NR 243.14(6)-(8). Some of these restrictions include:

- Any incorporation of manure on frozen or snow-covered ground must be done immediately after application.
- The permittee shall identify acceptable sites for allowable applications on frozen or snow-covered ground as part of its nutrient management plan.
- The permittee shall evaluate each field at the time of application to determine if conditions are suitable for applying manure and complying with the requirements of this permit. All surface applications of manure or process wastewater on frozen or snow-covered ground shall occur on those fields that represent the lowest risk of pollutant delivery to waters of the state and where the application results in a winter acute loss index value of 4 or less using the Wisconsin phosphorus index.

- Manure or process wastewater may not be land applied on fields when snow is actively melting such that water is flowing off the field.
- On fields with soils that are 60 inches thick or less over fractured bedrock, manure may not be applied on frozen ground or where snow is present.
- Manure may not be incorporated on areas of fields with greater than 4 inches of snow.

[NOTE: Please refer to ch. NR 243 for all requirements contained in s. NR 243.14(6)-(8).]

1.5.5 Frozen or Snow Covered Ground – Solid Manure (12% solids or more)

The permittee may surface apply solid manure on frozen or snow-covered ground in compliance with the following restrictions:

- Solid manure may not be surface applied on slopes greater than 9%.
- Solid manure may not be surface applied from February 1 through March 31 on areas of fields where an inch or more of snow is present or where the ground is frozen.
- The surface application shall comply with the restrictions in Table 1.

<p>Table 1 Restrictions for Surface Applying Solid Manure on Frozen or Snow Covered Ground</p>		
Criteria	Restrictions for fields with 0-6% slopes	Restrictions for fields with slopes > 6% and up to 9%
Required fall tillage practice prior to application	Chisel or moldboard plow, no-till or a department approved equivalent ^A	Chisel or moldboard plow, no-till or department approved equivalent ^A
Minimum % solids allowed	12%	> 20%
Application rate (cumulative per acre)	Not to exceed 60 lbs. P ₂ O ₅ per winter season, the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less	Not to exceed 60 lbs. P ₂ O ₅ per winter season, the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less
Setbacks from surface waters	No application allowed within SWQMA	No application allowed within 2.0 x SWQMA
Setbacks from downslope areas of channelized flow, vegetated buffers, and wetlands	200 feet	400 feet
Setbacks from direct conduits to groundwater	300 feet	600 feet
<p>A – All tillage and farming practices shall be conducted in accordance with the following requirements; 0-2% slope = no contouring required, >2-6% slope = tillage and practices conducted along the general contour, >6% slope = tillage and farming practices conducted along the contour. The department may approve alternative tillage practices on a case-by-case basis in situations where conducting practices along the contour is not possible. Allowances for application on no-till fields only apply to fields where no-till practices have been in place for a minimum of 3 years.</p>		

1.5.6 Frozen or Snow Covered Ground – Allowances for Surface Applications of Liquid Manure (<12% solids)

The permittee is prohibited from surface applying liquid manure during February and March, and is prohibited from surface applying liquid manure on frozen or snow-covered ground except for the following conditions:

- The permittee may surface apply liquid manure on frozen or snow covered ground, including during February and March, on an emergency basis in accordance with Table 2 and s. NR 243.14(7)(d) on fields the Department has approved for emergency applications. The permittee must notify the department verbally prior to the emergency application. Unless the emergency application is necessitated by imminent impacts to the environment or human or animal health, the permittee may not apply manure to a field on an emergency basis until the department has verbally approved the application. The permittee shall submit a written description of the emergency application and the events leading to the emergency application to the department within 5 days of the emergency application.
- Liquid manure that is frozen and cannot be transferred to a manure storage facility may be surface applied on frozen or snow-covered ground, including during February and March, in accordance with the restrictions in Tables 2 and s. NR 243.14(7)(f). Surface applications of frozen liquid manure do not require prior department approval or notification provided application sites for frozen liquid manure are identified in the approved nutrient management plan. During February and March, the permittee shall notify the department if the permittee expects to surface apply frozen liquid manure more than 5 days in any one month.

Table 2 Restrictions for Surface Applications of Liquid Manure on Frozen or Snow Covered Ground		
Criteria	Restrictions for fields with 0-2% slopes	Restrictions for fields with >2-6% slopes
Required fall tillage practice prior to application	Chisel or moldboard plow or department approved equivalent ^A	Chisel or moldboard plow or department approved equivalent ^A
Application rate (cumulative per acre)	Maximum application volume of 7,000 gallons per acre per winter season, not to exceed 60 lbs. P ₂ O ₅ , the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied or other phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less	Maximum application volume of 3,500 gallons per acre per winter season, not to exceed 30 lbs. P ₂ O ₅ , the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or other phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less
Setbacks from surface waters	No application allowed within SWQMA	No application allowed within SWQMA
Setbacks from downslope areas of channelized flow, vegetated buffers, wetlands	200 feet	200 feet
Setbacks from direct conduits to groundwater	300 feet	300 feet
^A – All tillage and farming practices shall be conducted along the contour in accordance with the following requirements; 0-2% slope = no contouring required, >2-6% slope = tillage and practices conducted along the general contour. The department may approve alternative tillage practices on a case-by-case basis in situations where conducting practices along the contour is not possible		

1.5.7 Frozen or Snow Covered Ground – Process Wastewater

If a permittee land applies process wastewater on frozen or snow-covered ground, the permittee shall land apply the process wastewater in compliance with s. NR 214.17(2) through (6) and the other land application restrictions in this permit, except for the restrictions in the “Frozen or Snow Covered Ground – Solid Manure (12% solids or more)” and “Frozen or Snow Covered Ground – Allowances for Surface Applications of Liquid Manure (<12% solids)” sections of this permit.

1.5.8 Spreading Sites Submittals

Permittee requests to amend a nutrient management plan to include landspreading sites not found in an approved management plan shall include the following information:

- The location of the site on maps and aerial photographs, and soil survey maps.
- A unique site identification number
- Information used to verify the site meets locational requirements of the permit,
- A nutrient budget for the site consistent with permit requirements. This includes a completed worksheet outlining the process in determining appropriate spreading rates for each additional site, including a crop history identifying the previous season’s crops and future cropping plans for each site and estimated nutrient uptake.
- A demonstration that the field(s) in question meets tolerable soil loss rate.
- Maps that show where land application is prohibited or restricted on a map or aerial photograph of the site.
- Soil samples if available for one-time applications. If the permittee wishes to use the site for subsequent applications, soil samples shall be submitted prior to additional landspreading.

1.6 Monitoring and Sampling Requirements

The permittee shall comply with the monitoring and sampling requirements specified below for the listed sampling point(s), and the following conditions.

1.6.1 Monitoring and Inspection Program

As specified in the Schedules section of this permit, the permittee shall submit a monitoring and inspection program designed to determine compliance with permit requirements. The program shall be consistent with the requirements of this section and shall identify the areas that the permittee will inspect, the person responsible for conducting the inspections and how inspections will be recorded and submitted to the department.

Visual inspections shall be completed by the permittee or designee in accordance with the following frequencies:

- Daily inspections for leakage of all water lines that potentially come into contact with pollutants or drain to storage or containment structures or runoff control systems, including drinking or cooling water lines.
- Weekly inspections to ensure proper operation of all storm water diversion devices and devices channeling contaminated runoff to storage or containment structures.
- Weekly inspections of liquid storage and containment structures. For liquid storage and containment facilities, the berms shall be inspected for leakage, seepage, erosion, cracks and corrosion, rodent damage, excessive vegetation and other signs of structural weakness. In addition, the level of material in all liquid storage and containment facilities shall be measured and recorded in feet or inches above or below the margin of safety level.
- Quarterly inspections of the production area, including outdoor animal pens, barnyards and raw material storage areas. CAFO outdoor vegetated areas shall be inspected quarterly.
- Periodic inspections and calibration of landspreading equipment to detect leaks and ensure accurate application rates for manure and process wastewater. An initial calibration of spreading equipment shall be followed by additional calibration after any equipment modification that may impact application of manure or process wastewater or after changes in product or manure or process wastewater consistency. Spreading equipment for both liquid and solid manure shall be inspected just prior to the hauling season, and equipment used for spreading liquids shall be inspected at least once per month during months when hauling occurs.

- Inspections of fields each time manure or process wastewater is surface applied on frozen or snow-covered ground to determine if applied materials have run off the application site. Inspections shall occur during and shortly after application.

The permittee shall take corrective actions as soon as practicable to address any equipment, structure or system malfunction, noncompliance, failure or other problem identified through monitoring or inspections. If the permittee fails to take corrective actions within 30 days of identifying a malfunction, noncompliance, failure or other problem, the permittee shall contact the Department immediately following the 30-day period and provide an explanation for its failure to take action.

1.6.2 Sampling Requirements

The permittee shall collect and analyze representative samples of land applied manure and process wastewater for the parameters outlined in the monitoring requirements for each sample point. The permittee shall also collect and analyze soils from fields used for manure or process wastewater applications at least once every four years. Sampling of manure, process wastewater and soils shall be done in accordance with s. NR 243.19(1)(c).

1.7 Sampling Point(s)

The permittee is authorized to use only the facilities identified below, in accordance with the conditions specified in this permit. The permittee may not install or use new facilities or structures or land apply manure or other process wastewaters from these facilities unless written Department approval is received. A new facility is any facility that is not specifically identified in this permit. If a new facility is approved in writing by the Department, the conditions in the corresponding 'New Facility' sampling point (e.g. Manure Storage Facilities, Runoff Control Systems) will apply.

1.7.1 Manure and Process Wastewater Storage Facilities - Sampling Required

In accordance with the Production Area Discharge Limitations subsection, manure and process wastewater storage facilities shall be operated and maintained to prevent discharges to navigable waters and to comply with surface water quality standards. In addition, manure and process wastewater storage facilities shall be operated and maintained to minimize leakage for the purpose of complying with groundwater standards. Unless specifically approved and designated by the Department as a sampling point, in-field unconfined storage of manure (manure stacking) is prohibited. The permittee is authorized to use facilities identified below, in accordance with the conditions specified in this permit.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, System Description (including capacity, legal location, and action needed as applicable), and Treatment Description
001	Solids 001: Sample point 001 is for separated manure solids (sand or fiber). This solid manure is typically reused as bedding and stored under roof in a designed storage structure (Site One and Two both have these sources). If land applied and not reused, representative samples shall be taken for each manure source type.
002	WSF 002: Sample point 002 is for liquid waste storage facility 002 (WSF 2) located at Site One. WSF 2 is an earthen storage located at Site One. The facility has a capacity of about 1 million gallons and was constructed in 1999. WSF 2 will require an engineering evaluation, see Schedules section for due dates.
003	WSF 003: Sample point 003 is for liquid waste storage facility 003 (WSF 3) located at Site One. WSF 3 is an earthen storage located at Site One. The facility has a capacity of about 20 million gallons and was constructed in 1999. WSF 3 will require an engineering evaluation, see Schedules section for due dates.
004	Solids 004: Sample point 004 is for solid manure sources that are directly land applied and not stored in a waste storage facility. This includes solid sources such as calf hutch manure, maternity pen bedpack, heifer bedpack, steer manure, etc. Representative samples shall be taken for each manure source type (Site One and Two).
005	WSF 005: Sample point 005 is for liquid waste storage facility 005 (WSF 5) located at Site Two. WSF 5 is the southwestern concrete storage that has a capacity of about 30 million gallons and was constructed in 2016. This storage accepts primarily process wastewater from the feed storage area.
006	WSF 006: Sample point 006 is for liquid waste storage facility 006 (WSF 6) located at Site Two. WSF 6 is the northwestern concrete storage that has a capacity of about 18 million gallons and was constructed in 2015. This storage accepts manure and process wastewater from Site Two barn.
007	WSF 007: Sample point 007 is for liquid waste storage facility 007 (WSF 7) located at Site Two. WSF 7 is the eastern concrete storage that has a capacity of about 30 million gallons and was constructed in 2015. This storage accepts manure and process wastewater from Site Two barn.
008	Solids 008: Sample point 008 is for any manure solids removed from bottom of liquid waste storage facilities and anaerobic digesters. This includes manure-laden sand solids, manure fiber solids, etc. Representative samples shall be taken from each waste storage facility.
015	Sample Point 15: Digested Liquids – Anaerobic Digesters (AD) 1 and 2. This sample point addresses all digested liquids located within the proposed digester cells AD 1 and AD 2. Manure will be piped from the existing manure processing buildings (after sand removal) to the digesters and then returned to the manure processing buildings to be transferred to existing on-site waste storage facilities after the digestion is completed. Sampling from within the digester cell(s) for nutrient content is only required if the liquids are to be manually pumped from the cell(s) and directly land applied. The plans and specifications for the digesters that were installed in 2020 have been approved by the Department and meet permit requirements.
016	Sample Point 16: Digested Liquids – Anaerobic Digesters (AD) 3 and 4. This sample point addresses all digested liquids located within the proposed digester cells AD 3 and AD 4. Manure will be piped from the existing manure processing buildings (after sand removal) to the digesters and then returned to the manure processing buildings to be transferred to existing on-site waste storage facilities after the digestion is completed. Sampling from within the digester cell(s) for nutrient content is only required if the liquids are to be manually pumped from the cell(s) and directly land applied. The plans and specifications for the digesters that were installed in 2020 have been approved by the Department and

	meet permit requirements.
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Manure and Process Wastewater Storage Facilities - Action Needed: For manure and process wastewater storage facilities that are to be installed, evaluated or abandoned (as indicated in the above table), see the Schedules section herein for actions required. Although this permit may require actions for installing permanent facilities, or controls, or modifications to existing facilities, interim measures shall be immediately implemented to prevent discharges of pollutants to navigable waters. Specifically, if monitoring or inspection reports indicate discharges to navigable waters from a storage facility in violation of the Production Area Discharge Limitations subsection, the permittee shall immediately install interim control measures to contain the discharges. Plans and specifications for permanent facilities must be submitted to the Department for review and approval in accordance with Chapter 281.41, Wis. Statutes, and Chapter NR 243, Wis. Adm. Code.

1.7.2 Runoff Control System(s) - No Sampling Required

In accordance with the Production Area Discharge Limitations subsection, the permittee shall control contaminated runoff from all elements of the livestock operation to prevent a discharge of pollutants to navigable waters and to comply with surface water quality standards and groundwater standards.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, System Description (including capacity, legal location, and action needed as applicable), and Treatment Description
009	Feed Storage Area & Runoff Control System (Site One): Sample point 009 is for visual monitoring and inspection of the feed storage area and associated runoff control system located at Site One. Area is also being utilized as a manure stacking pad. Proper operation and maintenance is required to ensure discharges of manure and process wastewater meet permit conditions. Weekly inspections are required and shall be recorded according to monitoring program. All runoff from this area is collected into WSF 3. An engineering evaluation of the feed storage area and runoff control system shall be submitted according to the Schedules section of the permit.
010	Feed Storage Area & Runoff Control System (Site Two): Sample point 010 is for visual monitoring and inspection of the feed storage area and associated runoff control system located at Site Two. Proper operation and maintenance is required to ensure discharges of process wastewater meet permit conditions. Weekly inspections are required and shall be recorded according to monitoring program. All runoff from this area is currently collected into WSF 5.
011	Storm Water Runoff Control System: Sample point 011 is for visual monitoring and inspection of all production site storm water conveyance systems (Site One and Two). This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance is required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program.

Runoff Control System(s) - Action Needed: For runoff control systems that are to be installed, evaluated or abandoned (as indicated in the above table), see the Schedules section herein for actions required. Although permanent control measures may be required by this permit, interim measures shall be implemented to prevent discharges of pollutants to navigable waters. Specifically, if monitoring or inspection reports indicate discharges to navigable waters from a runoff control facility or practice in violation of the Production Area Discharge Limitations subsection, the permittee shall immediately install interim control measures to contain the discharges. Plans and specifications for permanent runoff controls must be submitted to the Department for review and approval in accordance with Chapter 281.41, Wis. Statutes, and Chapter NR 243, Wis. Adm. Code.

1.7.3 Sampling Point 001 - Solids 001; 004- Solids 004; 008- Solids 008

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limits and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lbs/ton	Quarterly	Grab	
Nitrogen, Available		lbs/ton	Quarterly	Calculated	
Phosphorus, Total		lbs/ton	Quarterly	Grab	
Phosphorus, Available		lbs/ton	Quarterly	Calculated	
Solids, Total		Percent	Quarterly	Grab	

Reporting: Sampling test results shall be submitted with the Annual Report. Sampling is only required when land application has actually occurred.

Daily Log Requirements	
The permittee shall document all discharge and monitoring activities on daily log report form 3200-123A or a Department approved equivalent log sheet. Originals of the daily log reports shall be kept by the permittee as described under Record Keeping and Retention in the Standard Requirements section, and if requested, made available to the Department.	
Parameters	Units
Date of Application	Date
Field ID	Number/Name
Acres Applied	Number of Acres
Manure/Process Wastewater Source	Specify Storage Facility or Barn
Spreader Volume	Tons or Gallons
Number of Loads	Number
Soil Conditions	Dry, Wet, Frozen, Snow Covered
Temperature During Application	°F
Precipitation During Application	Describe Precipitation
Application Method	Surface Applied, Injected, Incorporated

Annual Report		
The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the "T" compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.		
Parameters	Units	Sample Type
Date of Application	Date	-
Field ID	Number/Name	-
Acres Applied	Number of Acres	-
Slope	Percent	-
Soil Test P Ave.	ppm	-
Manure Source	-	Composite
Current Crop	-	-
Crop Nitrogen Needs (per soil test)	Pounds/Acre	-
Crop P ₂ O ₅ Needs (per soil test)	Pounds/Acre	-
Manure Analysis: Available Nitrogen	Pounds/Ton	Calculated
Manure Analysis: Available P ₂ O ₅	Pounds/Ton	Calculated
Manure Application Rate	Tons/Acre	-
Manure/Process Wastewater Applied: Nitrogen	Pounds/Acre	-
Manure/ Process Wastewater Applied: P ₂ O ₅	Pounds/Acre	-
Previous Crop	-	-
Legume Nitrogen Credit	Pounds/Acre	-
Second Year Manure Credit	Pounds/Acre	-
Additional Fertilizer: Nitrogen	Pounds/Acre	-
Additional Fertilizer: P ₂ O ₅	Pounds/Acre	-
Total Nitrogen Applied	Pounds/Acre	-
Total P ₂ O ₅ Applied	Pounds/Acre	-
Soil Conditions	Dry, Wet, Frozen, Snow Covered	-
Application Method	Surface Applied, Injected, Incorporated	-
Banked	Yes/No	-

Annual Report		
The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the "T" compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.		
Parameters	Units	Sample Type
Field Restrictions	Per Nutrient Management Plan	-

1.7.4 Sampling Point 002 - WSF 002; 003- WSF 003; 005- WSF 005; 006- WSF 006; 007- WSF 007; Anaerobic Digesters 1, 2, 3, and 4

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limits and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lb/1000gal	2/Month	Grab	
Nitrogen, Available		lb/1000gal	2/Month	Calculated	
Phosphorus, Total		lb/1000gal	2/Month	Grab	
Phosphorus, Available		lb/1000gal	2/Month	Calculated	
Solids, Total		Percent	2/Month	Grab	

Reporting: Sampling test results shall be submitted with the Annual Report. Sampling is only required when land application has actually occurred.

Daily Log Requirements	
The permittee shall document all discharge and monitoring activities on daily log report form 3200-123A or a Department approved equivalent log sheet. Originals of the daily log reports shall be kept by the permittee as described under Record Keeping and Retention in the Standard Requirements section, and if requested, made available to the Department.	
Parameters	Units
Date of Application	Date
Field ID	Number/Name
Acres Applied	Number of Acres
Manure/Process Wastewater Source	Specify Storage Facility or Barn
Spreader Volume	Tons or Gallons
Number of Loads	Number
Soil Conditions	Dry, Wet, Frozen, Snow Covered

Daily Log Requirements

The permittee shall document all discharge and monitoring activities on daily log report form 3200-123A or a Department approved equivalent log sheet. Originals of the daily log reports shall be kept by the permittee as described under Record Keeping and Retention in the Standard Requirements section, and if requested, made available to the Department.

Parameters	Units
Temperature During Application	°F
Precipitation During Application	Describe Precipitation
Application Method	Surface Applied, Injected, Incorporated

Annual Report

The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the "T" compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.

Parameters	Units	Sample Type
Date of Application	Date	-
Field ID	Number/Name	-
Acres Applied	Number of Acres	-
Slope	Percent	-
Soil Test P Ave.	ppm	-
Manure Source	-	Composite
Current Crop	-	-
Crop Nitrogen Needs (per soil test)	Pounds/Acre	-
Crop P ₂ O ₅ Needs (per soil test)	Pounds/Acre	-
Manure/Process Wastewater Analysis: Available Nitrogen	Pounds/1000 Gallons	Calculated
Manure/Process Wastewater Analysis: Available P ₂ O ₅	Pounds/1000 Gallons	Calculated
Manure/Process Wastewater Application Rate	Gallons/Acre	-
Manure/Process Wastewater Applied: Nitrogen	Pounds/Acre	-
Manure/ Process Wastewater Applied: P ₂ O ₅	Pounds/Acre	-

Annual Report		
<p>The permittee shall submit an Annual Report, including Form 3200-123 or a Department approved equivalent, that summarizes all landspreading activities and includes the information identified below, the lab analyses of the manure and other waste landspread, the "T" compliance worksheet for all fields, and the soil test frequency in the past four years. The Annual Report is due each year by the date specified in the Schedules section of this permit. Nitrogen and phosphorus from all sources applied to a given field, including commercial fertilizers, shall be included in the "Total Nitrogen" and "Total Phosphorus" sections of the Annual Report.</p>		
Parameters	Units	Sample Type
Previous Crop	-	-
Legume Nitrogen Credit	Pounds/Acre	-
Second Year Manure Credit	Pounds/Acre	-
Additional Fertilizer: Nitrogen	Pounds/Acre	-
Additional Fertilizer: P ₂ O ₅	Pounds/Acre	-
Total Nitrogen Applied	Pounds/Acre	-
Total P ₂ O ₅ Applied	Pounds/Acre	-
Soil Conditions	Dry, Wet, Frozen, Snow Covered	-
Application Method	Surface Applied, Injected, Incorporated	-
Banked	Yes/No	-
Field Restrictions	Per Nutrient Management Plan	-

2 Groundwater Requirements

2.1 Monitoring Requirements and Limitations

2.1.1 Groundwater Monitoring System for Kinnard Site Two Production Area

Location of Monitoring System: Perimeter of Site Two Production Area

Wells to be Monitored: MW-1 (801), MW-2 (802), MW-3 (803), MW-4 (804), MW-5 (805)

Well Used To Calculate Indicator Parameter Preventive Action Limits (PALs): To be designated in a Department approved groundwater monitoring plan in accordance with the Schedules section of the permit.

PALs for Indicator Parameters contained in the table below shall be calculated based on background groundwater quality data after 8 consecutive samples have been collected from designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent that is technically and economically feasible.

Compliance Well(s) for Enforcement Standards (ESs): To be designated in a Department approved groundwater monitoring plan in accordance with the Schedules section of the permit.

Enforcement standards are to be met in groundwater located beyond the designed established in accordance with section s. NR 140.22(3), or at the property boundary, whichever is closer. See the Standard Requirements section of this permit for additional conditions related to exceedance of groundwater standards.

Required Monitoring: Samples shall be collected from each well to be monitored. Wells shall be sampled for the parameters in table below at the specified frequency. The Department will notify the permittee if any wells need to be resampled prior to the next month/quarter in the event a well(s) exceeds a standard for any parameter(s).

NOTE: Hourly water level and temperature monitoring is required in wells MW-1 and MW-5.

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY**
Depth To Groundwater	feet	*****	N/A	Hourly/Monthly/Quarterly
Groundwater Elevation	feet MSL	*****	N/A	Hourly/Monthly/Quarterly
Temperature	deg F	*****	N/A	Hourly/Monthly/Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved*	mg/L	2.0	10	Monthly/Quarterly
Chloride Dissolved*	mg/L	125	250	Monthly/Quarterly
pH Field	su	*****	N/A	Monthly/Quarterly
COD	mg/L	*****	N/A	Monthly/Quarterly
Carbon, Total Organic	mg/L	*****	N/A	Monthly/Quarterly
Nitrogen, Total Kjeldahl Dissolved	mg/L	*****	N/A	Monthly/Quarterly
Nitrogen, Ammonia Dissolved*	mg/L	0.97	9.7	Monthly/Quarterly
Solids, Total Dissolved	mg/L	*****	N/A	Monthly/Quarterly
Potassium Dissolved	mg/L	*****	N/A	Monthly/Quarterly

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY**
E. coli	#/100 ml	0	0	Monthly/Quarterly

*In the event that background well concentrations exceed the PAL or ES for a given parameter, the Department may consider granting exemptions to groundwater quality standards and establishing site specific Alternative Concentration Limits (ACLs) in accordance with Chapter NR 140, Wis. Adm. Code.

**Results for parameters monitored on an hourly monitoring frequency shall be submitted to the Department in writing on a quarterly basis, separate from required monitoring forms. The highest recorded value during a given month/quarter shall be reported on monitoring forms submitted to the Department. Hourly samples shall be collected from wells MW-1 and MW-5 for the first 12 months. After that, quarterly sampling is required. Monthly samples shall be collected from all wells during the first 12 months. After that, quarterly sampling is required.

*****Preventive Action Limits (PALs) for NR 140 Indicator Parameters have not yet been established for this site. For more information see “Indicator Parameter – Preventive Action Limits” in the Standard Requirements section. PALs are not calculated for Depth to Groundwater, Groundwater Elevation, or Temperature.

2.1.2 Groundwater Monitoring System for Kinnard Land Application Sites

Location of Monitoring System: Land application sites, to be determined during phased plan implementation.

Wells to be Monitored: To be determined during phased plan implementation.

Well Used To Calculate Indicator Parameter Preventive Action Limits (PALs): To be designated in a Department approved groundwater monitoring plan in accordance with the Schedules section of the permit.

PALs for Indicator Parameters contained in the table below shall be calculated based on background groundwater quality data after 8 consecutive samples have been collected from designated well(s). Groundwater contaminant concentrations shall be minimized and PALs met in groundwater monitoring wells to the extent that is technically and economically feasible.

Compliance Well(s) for Enforcement Standards (ESs): To be designated in a Department approved groundwater monitoring plan in accordance with the Schedules section of the permit.

Enforcement standards are to be met in groundwater located beyond the design management zone established in accordance with section s. NR 140.22(3), or at the property boundary, whichever is closer. See the Standard Requirements section of this permit for additional conditions related to exceedance of groundwater standards.

Required Monitoring: Samples shall be collected from each well to be monitored. Wells shall be sampled for the parameters in table below at the specified frequency. The Department will notify the permittee if any wells need to be resampled prior to the next month in the event a well(s) exceeds a standard for any parameter(s).

PARAMETER	UNITS	PREVENTIVE ACTION LIMIT	ENFORCEMENT STANDARD	FREQUENCY
E. coli	#/100 ml	0	0	Monthly
Total Coliform General	#/100 ml	0	0	Monthly
Temperature	deg F	*****	N/A	Monthly
Depth To Groundwater	feet	*****	N/A	Monthly
Groundwater Elevation	feet MSL	*****	N/A	Monthly
Carbon, Total Organic	mg/L	*****	N/A	Monthly

Chloride Dissolved*	mg/L	125	250	Monthly
COD, Filtered	mg/L	*****	N/A	Monthly
Nitrogen, Ammonia Dissolved*	mg/L	0.97	9.7	Monthly
Nitrogen, Nitrite + Nitrate (as N) Dissolved*	mg/L	2	10	Monthly
Nitrogen, Total Kjeldahl Dissolved	mg/L	*****	N/A	Monthly
Potassium Dissolved	mg/L	*****	N/A	Monthly
Solids, Total Dissolved	mg/L	*****	N/A	Monthly
pH Lab	su	*****	N/A	Monthly

*In the event that background well concentrations exceed the PAL or ES for a given parameter, the Department may consider granting exemptions to groundwater quality standards and establishing site specific Alternative Concentration Limits (ACLs) in accordance with Chapter NR 140, Wis. Adm. Code.

**Monthly samples shall be collected from all wells, unless a different frequency is agreed upon in the Phase 2 Groundwater Monitoring Plan.

*****Preventive Action Limits (PALs) for NR 140 Indicator Parameters have not yet been established for this site. For more information see “Indicator Parameter – Preventive Action Limits” in the Standard Requirements section. PALs are not calculated for all parameters.

3 Schedules

3.1 Annual Reports

Required Action	Due Date
Submit Annual Report #1: Production site inspection summaries and groundwater monitoring annual report.	01/31/2019
Submit Annual Report #2: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2020
Submit Annual Report #3: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2021
Submit Annual Report #4: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2022
Submit Annual Report #5: Production Site inspection summaries and groundwater monitoring annual report.	01/31/2023
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

3.2 Emergency Response Plan

Required Action	Due Date
Update Emergency Response Plan: Update a written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request.	03/01/2018

3.3 Manure Storage Facility - Engineering Evaluation

Required Action	Due Date
Retain Expert: Retain a qualified expert to complete an engineering evaluation for Site One liquid manure storage facilities and report the name of the expert to the Department.	03/01/2019
Written Report: Submit a written report evaluating the existing manure storage facility's ability to meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	03/01/2020
Plans and Specifications: Submit plans and specifications for Department review and approval in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code, to permanently correct any adverse manure storage conditions.	03/01/2021
Corrections and Post Construction Documentation: Complete construction on the manure storage facility that permanently corrects any adverse conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	09/01/2022

3.4 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	08/01/2022

3.5 Monitoring & Inspection Program

Required Action	Due Date
Updated Monitoring and Inspection Program: Consistent with the Monitoring and Sampling Requirements subsection, the permittee shall submit an updated monitoring and inspection program within 60 days of the effective date of this permit.	05/01/2021

3.6 Nutrient Management Plan

Required Action	Due Date
Management Plan Annual Update #1: Submit an Annual Update to the Nutrient Management Plan by March 31st each year. Note: In addition to Annual Updates, submit Management Plan Amendments to the Department for written approval prior to implementation of any changes to nutrient management practices, in accordance with the Nutrient Management requirements in the Livestock Operational and Sampling Requirements section.	03/31/2018
Management Plan Annual Update #2: Submit an Annual Update to the Nutrient Management Plan.	03/31/2019
Management Plan Annual Update #3: Submit an Annual Update to the Nutrient Management Plan.	03/31/2020
Management Plan Annual Update #4: Submit an Annual Update to the Nutrient Management Plan.	03/31/2021
Management Plan Annual Update #5: Submit an Annual Update to the Nutrient Management Plan.	03/31/2022
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

3.7 Feed Storage & Runoff Control - Engineering Evaluation

Required Action	Due Date
Retain Qualified Expert: The permittee shall retain a qualified expert to complete an engineering evaluation for the feed storage area and runoff controls at Site One and report the name of the expert to the Department.	03/01/2019
Written Description of Existing System: Submit an engineering evaluation that includes a written description of the existing feed storage area and its adequacy to meet the conditions found in the Production Area Discharge Limitations subsection and NR 243.15, Wis. Adm. Code.	03/01/2020
Plans and Specifications: Submit plans and specifications for Department review and approval to permanently correct any adverse conditions identified as part of the engineering evaluation for the	03/01/2021

feed storage area in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	
Corrections and Post Construction Documentation: Complete construction of improvements to permanently correct any adverse conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	09/01/2022

3.8 Groundwater Monitoring System - Plan

Required Action	Due Date
Phase 1 - Groundwater Monitoring Plan: Submit a groundwater monitoring plan for the initial 5 monitoring wells. The plan shall include groundwater monitoring requirements consistent with permit requirements.	02/28/2018
Phase 2 - Groundwater Monitoring Plan: Submit a plan for installation of remaining production area groundwater monitoring wells in accordance with ch. NR 141, Wis. Adm. Code, for Department review and approval. This plan shall include the following: A detailed site characterization based on data collected during Phase 1; A summary of groundwater flow directions and seasonal variability; Recommendations for the number and locations of additional groundwater monitoring wells (at minimum, a piezometer well should be included); and a list of proposed sampling parameters and frequency. The Department may require additional wells to properly monitor the production area.	02/28/2019
Well Installation: Complete well installation in accordance with ch. NR 141, Wis Adm. Code, within 90 days following approval by the Department of the Final Groundwater Monitoring Plan. (Note: Documentation of well construction must be submitted to the Department within 60 days of well installation).	

3.9 Groundwater Monitoring System - Reporting

Required Action	Due Date
Quarterly reporting to the Department: Quarterly reporting of tabulated groundwater monitoring data and water level contour maps is required. Quarterly reports shall be submitted to the regional contact via email or mail within 45 days of the last sample event for that quarter. Online reporting is also required via groundwater monitoring forms.	
Annual Reporting to the Department: An annual report that summarizes the groundwater monitoring data shall be submitted by January 31st each year. Any updates to the groundwater monitoring workplan shall also be included in this report.	

3.10 Groundwater Monitoring System - Plan

Applicable to Land Application Sites

Required Action	Due Date
Phase 1 - Groundwater Monitoring Plan: Submit a groundwater monitoring plan consistent with the Groundwater Requirements section of the permit for the initial monitoring wells for Department review and approval. The plan shall outline the permittee's design for monitoring at least one land	03/31/2022

application site. Each proposed site's tillage, cropping, and nutrient application practices must be typical for Kinnard Farms. The Phase 1 plan must include installation of a sufficient number of groundwater monitoring wells to establish site groundwater quality and groundwater flow direction, at least three wells per site are required. The Phase 1 plan shall outline the permittee's design for monitoring land application site(s). The submittal shall include plans and specifications for installation of monitoring wells to be constructed in accordance with the requirements of ch. NR 141, Wis. Adm. Code.	
Phase 2 - Groundwater Monitoring Plan: Submit a Phase 2 groundwater monitoring plan, for Department review and approval, for installation of additional recommended groundwater monitoring wells to be constructed in accordance with the requirements of ch. NR 141, Wis. Adm. Code. The Phase 2 plan shall include the following: a detailed site characterization based on data collected during Phase 1, a summary of groundwater flow direction and seasonal variability, recommendations for the number and location of additional sites and/or groundwater monitoring wells, and a list of proposed sampling parameters and frequency. The department may require additional sites, wells, or sampling parameters to ensure compliance with nutrient management plan effluent limitations and groundwater quality standards.	09/30/2022
Well Installation: Complete well installation in accordance with ch. NR 141, Wis Adm. Code, within 90 days following approval by the Department of the Final Groundwater Monitoring Plan. (Note: Documentation of well construction must be submitted to the Department within 60 days of well installation).	

4 Standard Requirements

4.1 General Conditions

NR 205, Wisconsin Administrative Code: The conditions in s. NR 205.07(1), 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 s. NR 205.07(1).

4.1.1 Duty to comply

The permittee shall comply with all conditions of the permit. Any permit noncompliance is a violation of the permit and is grounds for enforcement action; permit termination, revocation and reissuance or modification; or denial of a permit reissuance application. If a permittee violates any terms of the permit, the permittee is subject to the penalties established in ch. 283, Wis. Stats.

4.1.2 Permit Actions

As provided in s. 283.53, Wis. Stats., after notice and opportunity for a hearing the permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4.1.3 Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. The permit does not authorize any injury or damage to private property or any invasion of personal rights, or any infringement of federal, state or local laws or regulations.

4.1.4 Schedules

Reports of compliance or noncompliance with interim and final requirements contained in any schedule of the permit shall be submitted in writing within 14 days after the schedule date, except that progress reports shall be submitted in writing on or before each schedule date for each report. Any report of noncompliance shall include the cause of noncompliance, a description of remedial actions taken and an estimate of the effect of the noncompliance on the permittee's ability to meet the remaining schedule dates.

4.1.5 Inspection and Entry

The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:

- enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are required under the conditions of the permit;
- have access to and copy, at reasonable times, any records that are required under the conditions of the permit;
- inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under the permit; and
- sample or monitor at reasonable times, for the purposes of assuring permit compliance, any substances or parameters at any location.

4.1.6 Transfers

A permit is not transferable to any person except after notice to the Department. In the event of a transfer of control of a permitted facility, the prospective owner or operator shall file a new permit application and shall file a stipulation of permit acceptance with the Department WPDES permit section. The Department may require modification or

revocation and reissuance of the permit to change the name of the permittee and to reflect the requirements of ch. 283, Stats.

4.1.7 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any adverse impact on the waters of the state resulting from noncompliance with the permit.

4.1.8 Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking or reissuing the permit or to determine compliance with the permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by the permittee.

4.1.9 Recording of Results-Sampling

For each manure, process wastewater or soil sample taken by the permittee, the permittee shall record the following information:

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

4.1.10 Recording of Results-Inspections

For each inspection conducted by the permittee, the permittee shall record the following information:

- The date and name of the person(s) performing the inspection,
- An inspection description, including components inspected,
- Details of what was discovered during the inspection,
- Recommendations for repair or maintenance,
- Any corrective actions taken.

4.1.11 Spill Reporting

The permittee shall notify the Department in 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 or restrictions established in this permit, or the spill or accidental release of the material that 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, and the "Noncompliance - 24 Hour Reporting,"section of this permit.

4.1.12 Planned Changes

The permittee shall report to the Department any facility or operation expansion, production increase or process modifications which will result in new, different or increased amount of manure or process wastewater produced or handled by the permittee or which will result in new, different or increased discharges of pollutants to waters of the state. The report shall either be a new permit application, or if the new discharge will not violate the conditions of this permit, a written notice of the planned change. The report shall contain a description of the planned change, an estimate of the new, different or increased discharge of pollutants and a description of the effect of change will on current manure and process wastewater handling practices. Changes cannot be implemented prior to reporting changes to the Department. Following receipt of this report, the Department may require that the permittee submit

plans and specifications, or modify its nutrient management plan to address the planned change. Changes requiring Department action or approval may not be initiated prior to Department action or approval.

4.1.13 Submittal of Plans and Specifications

In accordance with s. NR 243.15, the permittee shall submit plans and specifications for proposed new or upgraded reviewable facilities or systems to the Department for approval prior to construction. Post construction documentation for these projects shall be submitted within 60 days of completion of the project, or as otherwise specified by the Department.

4.1.14 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.

4.1.15 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.

• Noncompliance - 24 Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. This includes any upset which exceeds any effluent limitation in the permit, or violations of the discharge limitations listed in the permit.

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**.

4.1.16 Reports and Submittal Certification

Signature(s) on reports required by this permit shall certify to the best of the permittee's knowledge the reports to be true, accurate and complete. All reports required by this permit shall be signed 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.

4.2 Livestock Operation General Requirements

4.2.1 Responsibility for Manure and Process Wastewater

The permittee is responsible for the storage, management and land application of all manure and process wastewater generated by the operation. The permittee is also responsible for any manure or process wastewater received from non-permitted operations that are accepted by the permittee for storage, management or land application.

4.2.2 Distribution of Manure and Process Wastewater

All manure and process wastewater generated by the permittee is the responsibility of the permittee and shall be stored and applied in compliance with the terms and conditions of this permit and the approved nutrient management plan, except if the manure or process wastewater is distributed to another person in accordance with s. NR 243.142 and the Department has approved the transfer of responsibility in writing.

To transfer responsibility for handling, storage and application of manure or process wastewater, a permittee shall submit a written request to the Department. At minimum the request shall indicate how the permittee will comply with all conditions identified in ch. NR 243.142(3), Wis. Adm. Code. If approved, the permittee will be responsible for the following recordkeeping and reporting:

- Update the nutrient management plan to include the estimated amount of manure and process wastewater to be transferred, and record the actual amount transferred at the time of transfer.
- Maintain records that identify the name and address of the recipient of the manure or process wastewater, quantity, and dates of transfer.
- Provide the recipient with written information regarding the nutrient content (nitrogen and phosphorus at minimum) of the manure and process wastewater.
- Submit transfer reports to the Department with the annual report.
- Records shall be maintained for at least 5 years.

Upon written approval from the Department, the permittee is not responsible for the land application, use or disposal of distributed manure or process wastewater if the manure or process wastewater is distributed in compliance with the conditions of the Department approval and s. NR 243.142.

4.2.3 Emergency Response Plans

Within 30 days of the effective date of the permit, the permittee shall develop a written emergency response plan, or update an existing plan if necessary, in accordance with s. NR 243.13(6). The plan shall be made available to the Department upon request. The emergency response plan shall be reviewed and, if appropriate or necessary, amended whenever the operation undergoes significant expansions or other changes that affect the volume or location of potential unauthorized spills or discharges. The plan shall be amended as needed to reflect changes in available equipment, available clean-up contractors or procedures to address unauthorized spills or discharges, or amended in accordance with comments provided by the department. The plan shall be retained at the production area and the permittee shall notify all employees involved in manure and process wastewater handling of the location of the plan.

4.2.4 Mortality Management

Animal carcasses may not be disposed of in a manner that results in a discharge of pollutants to surface waters, violates groundwater standards or impairs wetland functional values. Animal carcasses may not be disposed of directly into waters of the state. In addition, carcasses may not be disposed of in liquid manure or process wastewater containment, storage or treatment facilities unless the containment, storage or treatment facility is adequately designed to contain and treat carcasses and the facility has been approved by the department for that use.

The permittee shall record the date and method of carcass disposal.

[NOTE: The permittee should be aware that there are additional restrictions on the disposal of animal carcasses in ch. 95, Stats., and ATCP 3, Wis. Adm. Code. Furthermore, there may be local regulations regarding disposal of carcasses. If a carcass is disposed of off-site, the disposal may be subject to the requirements in ch. NR 502.12 or 518, Wis. Adm. Code]

4.2.5 Department Review of Nutrient Management Plans

The Department reserves the right to review the Nutrient Management Plan at any time for application rates and cover crop nutrient removal rates, as well as the timing and methods of application. If the Department determines that a landspreading site is no longer acceptable for manure and process wastewater applications, the permittee shall modify the Nutrient Management Plan to remove the site from the plan. In addition, if the Department determines application rates need to be adjusted for individual fields, the permittee shall modify the Nutrient Management Plan. All Department initiated modifications shall be completed by the permittee within 3 months of written notification from the Department.

4.2.6 Existing Manure Storage Facilities Evaluation

The following information shall be included in any required written report evaluating existing manure storage facilities:

- a narrative providing general background and operational information on the existing storage facility(s);
- the adequacy of each facility's linings to prevent exfiltration of manure contaminants to groundwater, and the facility's ability to permanently meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections;
- the proximity of bedrock and the water table to the floors of the facility(s);
- scaled drawings showing the locations of each storage unit, any surface water, water supply wells, property boundaries, and other pertinent information;
- any post construction documentation available, including the date and materials of construction;
- an assessment of the ability of the facility to meet the design requirements for manure storage in s. NR 243.15; and
- any proposed actions to address issues identified as part of the evaluation.

4.2.7 Existing Runoff Control System(s) Evaluation

The following information shall be included in any required written report evaluating existing runoff control system(s) or practice(s):

- a narrative providing general background and operational information on the existing runoff control system(s), including a full description of each system's components;
- the adequacy of the system(s) to permanently meet the conditions in the Production Area Discharge Limitations and Runoff Control subsections;
- scaled drawings showing the locations of the runoff control system, any surface water, water supply wells, property boundaries, and other pertinent information;
- any post construction documentation available, including the date and materials of construction.
- an assessment of the ability of the facility to meet the design requirements for runoff control in s. NR 243.15; and
- any proposed actions to address issues identified as part of the evaluation

4.2.8 Requirements for Digesters for Biogas Production

New Installation - Plans and Specifications: New construction of digester facilities for biogas production shall be in accordance s. NR 243.15. In accordance with s. NR 243.15, additional requirements under ch. NR 213, Wis. Adm. Code, may apply based on materials added or chemical characterization of the digester influent/effluent. Exemptions to the design criteria may be given on a case-by-case basis. Prior written approval is required. The following (minimum) information shall be included in the plans and specifications submitted for the new construction of a digester for biogas production (three complete copies are required):

- a narrative describing the proposed facility(s);
- a written management and site assessment;
- an operation and maintenance plan;
- an assessment of the ability of the facility(s) to meet the applicable design requirements in s. NR 243.15;
- the adequacy of each facility's proposed linings to prevent exfiltration of manure (untreated or digested) and other contaminants to groundwater and the facility's ability to permanently meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections;
- the proximity of bedrock and the water table to the proposed elevation of each facility's floors verified through on-site soil test borings or pits;
- scaled drawings showing the design details and locations of each proposed storage unit, any surface water, water supply wells, property boundaries, and other pertinent information;
- details concerning the proposed materials of construction;
- relevant engineering calculations; and
- additional design considerations based on operation of the digester (e.g., proposed additives, operational temperatures, etc.).

4.2.9 Record Keeping and Retention

The permittee shall keep records associated with production area and land application activities in accordance with s. NR 243.19(2). The permittee shall retain these records and 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 5 years from the date of the sample, measurement, report or application. The Department may request that this period be extended by issuing a public notice to modify the permit to extend this period. These records shall be made available to the Department upon request.

Note: A form for recording daily land application activities (Form 3200-123A) can be obtained at regional offices of the Department or the Department's Bureau of Watershed Management, 101 S. Webster St., P.O. Box 7921, Madison, Wisconsin 53707.

4.2.10 Reporting Requirements

The permittee shall submit the following reports in accordance with s. NR 243.19(3)

- **Corrective Actions:** If the permittee fails to take corrective action within 30 days of identifying a malfunction, failure, permit noncompliance or other identified problem, the permittee shall contact the Department immediately following the 30-day period and provide an explanation for its failure to take action.
- **Quarterly Reports:** The permittee shall summarize the results of inspections conducted at the production area in a written quarterly report. The permittee shall maintain the quarterly reports onsite until the quarterly report is submitted to the Department as part of the annual report.
- **Annual Reports:** The permittee shall submit written annual reports to the department by the date specified in the Schedules section of permit for all manure and other process wastewater that is generated by the permittee. These annual reports shall cover quarterly reports, annual spreading activities and other information required in s. NR 243.19(3) for the previous calendar year or cropping year, as specified in this permit.

Note: Form 3200-123 (Annual Spreading Report) can be obtained at regional offices of the department or the department's Bureau of Watershed Management, 101 S. Webster St., P.O. Box 7921, Madison, Wisconsin 53707.

4.2.11 Duty to Maintain Permit Coverage

The permittee shall submit a reissuance application in accordance with s. NR 243.12(2)(b) at least 180 days prior to the expiration date of its current WPDES permit, unless the permittee submits a letter to the Department documenting all of the following:

- That the permittee has ceased operation or is no longer defined as a large CAFO under s. NR 243.03(28).
- That the permittee has demonstrated to the Department's satisfaction that it has no remaining potential to discharge of manure or process wastewater pollutants to waters of the state that was generated while the operation was a CAFO.

4.3 Groundwater Standard Requirements

4.3.1 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.

4.3.2 Groundwater Sampling

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

4.3.3 Indicator Parameter - Preventive Action Limits

Preventive action limits for indicator parameters are calculated using a minimum of eight sample analysis results available from a representative background well in accordance with the procedures in s. NR 140.20, Wis. Adm. Code.

4.3.4 Groundwater Monitoring Forms

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

4.3.5 Appropriate Formulas for Groundwater

Total Nitrogen = Total Kjeldahl Nitrogen (mg/L) + [NO₂ + NO₃] Nitrogen (mg/L)

Organic Nitrogen (mg/L) = Total Kjeldahl Nitrogen (mg/L) - Ammonia Nitrogen (mg/L)

4.3.6 Reporting Depth to Groundwater

Depth to groundwater shall be reported in feet, to the nearest 0.01 foot, below the top of the well casing. A report shall be on file with the Department stating the well casing top elevation in feet above mean sea level (MSL), to the nearest 0.01 foot, for each groundwater monitoring well.

4.3.7 Groundwater Elevation

Groundwater elevations shall be calculated by subtracting the depth to groundwater measurement from the well casing top elevation and shall be reported in feet above mean sea level (MSL) to the nearest 0.01 foot.

4.3.8 Groundwater Grab Samples

Grab samples shall be taken of the groundwater only after adequate removal or purging of standing water within the well casing has been performed. For those wells which will refill with water as fast as the water can be removed by bailing or pumping, four well volumes shall be removed prior to sample collection and analysis. For those wells which will not refill with water as fast as the water can be removed by bailing or pumping, the existing volume of water inside the well casing shall be removed and samples collected after the well has refilled to at least half the original volume in the well.

4.3.9 Filtering of Groundwater Samples

All groundwater monitoring well samples shall be filtered prior to analysis, except for the portion used to collect bacteria samples or to measure pH or field specific conductance, which shall be done using an unfiltered sample. While in-field analysis is preferred for pH and field specific conductance, laboratory analysis done within two hours of sample collection is acceptable. For the portion to be filtered, it is preferred that filtering be performed in the field immediately following sample collection. However, laboratory filtering is acceptable. Filtering shall be performed through a standard 0.45 micron filter.

4.3.10 Groundwater Data Log

A data log shall be used to record the results of all field sampling and analysis events. This log shall include date of sampling event, groundwater sampler's name, well identification, depth from pipetop to water, depth from pipetop to well bottom, time of purging (start to end), volume of water purged, indication of whether the well was purged dry, time of sample withdrawal, and the following applicable field observations: pH, field conductivity, temperature, color, odor and turbidity, indication of whether field filtering was performed and time of filtering, indication of cap and lock replaced, and comments.

4.3.11 Notification of Attaining or Exceeding Groundwater Quality Standards

The permittee shall notify the Department when monitoring results indicate that a Preventive Action Limit or Enforcement Standard has been attained or exceeded. This notification may be provided in the general remarks section of the groundwater monitoring form or by letter attached to the groundwater monitoring form. Any values reported as exceeding a groundwater standard shall be confirmed as being from a representative sample and as a correct laboratory analysis result.

4.3.12 Preventive Action Limit (PAL) Exceedance

Analysis results (from facility monitoring wells) that are less than this permit's PALs indicate that facility operation is protective of groundwater quality. Substance concentrations greater than the PAL may indicate that additional technically and economically feasible actions are needed to reduce the discharge of a substance to the groundwater. In such a case, the Department may request an evaluation and response or propose a permit modification to require submittal of a groundwater evaluation report and implementation of a feasible response as specified in NR 140.24(1)(b), Wis. Adm. Code.

4.3.13 Enforcement Standard Exceedance Within the Design Management Zone

Substance concentrations greater than this permit's enforcement standard (ES) in a permittee's monitoring well located within the property boundary or within a designated design management zone may indicate that the

groundwater concentration exceeds an ES outside of these boundaries. If the Department determines that an ES is being attained or exceeded within a designated design management zone or within the property boundary, whichever is the appropriate point of standards application, the Department may request an evaluation and response or propose a permit modification to require an evaluation report and appropriate response as specified in s. NR 140.27, Wis. Adm. Code.

4.3.14 Enforcement Standard Exceedance Outside the Design Management Zone

The permittee's facility operation shall not cause the concentration of a substance in groundwater to attain or exceed this permit's enforcement standard at any point of present groundwater use, at any point beyond the property boundary, or at any point beyond a design management zone established under s. NR 140.22, Wis. Adm. Code. When this condition is not met, **the permittee shall, within 120 days following notification by the Department of the attainment or exceedance of an ES beyond the compliance boundary, submit a groundwater quality evaluation and response report** as specified in NR 140.26(1)(b), Wis. Adm. Code. The Department may propose modification of this permit to require the permittee to implement additional treatment or other actions as specified in s. NR 140.26, Wis. Adm. Code.

5 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Annual Reports -Submit Annual Report #1	January 31, 2019	20
Annual Reports -Submit Annual Report #2	January 31, 2020	20
Annual Reports -Submit Annual Report #3	January 31, 2021	20
Annual Reports -Submit Annual Report #4	January 31, 2022	20
Annual Reports -Submit Annual Report #5	January 31, 2023	20
Annual Reports -Ongoing Annual Reports	See Permit	20
Emergency Response Plan -Update Emergency Response Plan	March 1, 2018	20
Manure Storage Facility - Engineering Evaluation -Retain Expert	March 1, 2019	20
Manure Storage Facility - Engineering Evaluation -Written Report	March 1, 2020	20
Manure Storage Facility - Engineering Evaluation -Plans and Specifications	March 1, 2021	20
Manure Storage Facility - Engineering Evaluation -Corrections and Post Construction Documentation	September 1, 2022	20
Submit Permit Reissuance Application -Reissuance Application	August 1, 2022	21
Monitoring & Inspection Program -Updated Monitoring and Inspection Program	May 1, 2021	21
Nutrient Management Plan -Management Plan Annual Update #1	March 31, 2018	21
Nutrient Management Plan -Management Plan Annual Update #2	March 31, 2019	21
Nutrient Management Plan -Management Plan Annual Update #3	March 31, 2020	21
Nutrient Management Plan -Management Plan Annual Update #4	March 31, 2021	21
Nutrient Management Plan -Management Plan Annual Update #5	March 31, 2022	21
Nutrient Management Plan -Ongoing Management Plan Annual Updates	See Permit	21
Feed Storage & Runoff Control - Engineering Evaluation -Retain Qualified Expert	March 1, 2019	21
Feed Storage & Runoff Control - Engineering Evaluation -Written Description of Existing System	March 1, 2020	21
Feed Storage & Runoff Control - Engineering Evaluation -Plans and Specifications	March 1, 2021	22
Feed Storage & Runoff Control - Engineering Evaluation -Corrections and Post Construction Documentation	September 1, 2022	22
Groundwater Monitoring System - Plan -Phase 1 - Groundwater Monitoring Plan	February 28, 2018	22
Groundwater Monitoring System - Plan -Phase 2 - Groundwater Monitoring Plan	February 28, 2019	22

Groundwater Monitoring System - Plan -Well Installation	See Permit	22
Groundwater Monitoring System - Reporting -Quarterly reporting to the Department	See Permit	22
Groundwater Monitoring System - Reporting -Annual Reporting to the Department	See Permit	22
Groundwater Monitoring System - Plan -Phase 1 - Groundwater Monitoring Plan	March 31, 2022	23
Groundwater Monitoring System - Plan -Phase 2 - Groundwater Monitoring Plan	September 30, 2022	23
Groundwater Monitoring System - Plan -Well Installation	See Permit	23
Groundwater Monitoring Forms.	no later than the date indicated on the form	30

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any (1) plans and specifications for proposed new, modified or upgraded reviewable facilities or systems, (2) evaluations of constructed facilities or systems, (3) nutrient management plan modifications, updates and annual reports, and (4) WPDES permit reissuance or modification applications, shall be submitted online through the Department's ePermitting System. This system is accessed through the Water Permit Applications web portal page located at <http://dnr.wi.gov/permits/water>. All other submittals required by this permit shall be submitted to: Northeast Region, 2984 Shawano Avenue, Green Bay, WI 54313-6727



September 19, 2019

FILE REF: R-2019-0104
WPDES Permit #: WI-0059536

Lee Kinnard
Kinnard Farms Inc.
E2675 County Highway S
Casco, WI 54130

Subject: Conditional Approval of Plans & Specifications for Four Anaerobic Digesters, at Kinnard Farm, Sec. 19, T25N, R24E, Lincoln Township, Kewaunee County

Dear Mr. Kinnard:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has reviewed and conditionally approves the above referenced plans and specifications, submitted by Douglas Gatrell, P.E., GHD, and received on June 28, 2019, with revisions received on August 26 and September 9 and 17, 2019. The review was conducted in accordance with s. 281.41, Wis. Stats., chs. NR 151 and NR 243, Wis. Adm. Code, and applicable NRCS Standards. The attached engineering report describes the project, lists standards that apply and provides compliance analysis. Questions may be directed to the assigned regional staff, or the review engineer Bernie Michaud (contact information is at the end of this letter).

Proposed Project: The proposed project includes the following facilities that are reviewable under s. NR 243.15, Wis. Adm. Code:

- Four anaerobic digesters (digesters).

Additionally proposed related components include a compressed gas truck loading station, a biogas conditioning building, and a thermal oxidizer and flare, not subject to review under s. NR 243.15, Wis. Adm. Code, except if they will handle waste in a liquid or solid form. The proposed digesters will not accept off-site wastes.

Plans and specifications were also received for waste transfer systems associated with the proposed digesters, which the Department will address in separate correspondence.

Conditions of Approval: The plans and specifications for project number R-2019-0104 are hereby approved, subject to chs. NR 151 and NR 243, Wis. Adm. Code, and the conditions listed below:

1. **Revisions:** If revisions are made to the approved plans and specifications, revised plans and specifications shall be submitted for approval modification, in accordance with ss. NR 108.03 and NR 108.04, Wis. Adm. Code, and s. 281.41(1)(c), Wis. Stats. Submit revised plans and specifications via the Department's e-Permitting System. **Note:** This includes revisions for local permitting. If a formal approval modification may not be warranted, contact the review engineer to confirm.
2. **Approval Period:** In accordance with ss. NR 243.15(1)(a)1., and NR 108.04(2)d., Wis. Adm. Code, if construction is not commenced within 2 years from the approval date, the approval is void, and a new approval must be obtained prior to commencing construction.
3. **Notification:** Prior to construction and when construction is complete, notify the Department's regional contact and county contact provided a copy of the approval (contact information is at the end of this letter).
4. **Inspection:** During the construction of critical components, inspection shall be performed by a Wisconsin registered professional engineer or other qualified third party (excludes the owner and construction contractor and their employees).
5. **Post-Construction Documentation:** In accordance with the permit, a post-construction report must be submitted to the DNR's e-Permitting website (<http://dnr.wi.gov/permits/water>) within 60 days of completing construction. The report must include documentation specified by s. NR 243.15(10), Wis. Adm. Code.

Limitation of Approval: The Department reserves the right to order changes or additions should conditions arise making this necessary. This approval is not to be construed as a determination on the issuance of a Wisconsin Pollutant Discharge Elimination System Permit or opinion as to the ability of the proposed system to comply with effluent limitations in such a permit, approval of an Environmental Impact Statement that may be prepared, or approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. Where necessary, plans and specifications should be submitted to the Department of Safety and Professional Services or other state or local agencies to ensure conformance with applicable codes or regulations of such agencies.

Tax Treatment: Tangible personal property, that becomes part of a waste treatment of pollution abatement plant or equipment, may be exempt from sales tax under s. 77.45(26), Wis. Stats. Similarly, property purchased or constructed as a waste treatment facility and used for industrial waste treatment may be exempt from general property taxes under s. 70.11(21), Wis. Stats. A prerequisite to exemption is filing a statement on prescribed forms. To obtain the forms, and information about this sales tax exemption, please contact the Department of Revenue, P.O. Box 8933, Madison, WI 53708, or check their website <http://www.revenue.wi.gov/>.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to WIS. STAT. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to WIS. STAT. § 227.42, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with WIS. ADMIN. CODE § NR 2.05(5), and served on the Secretary in accordance with WIS. ADMIN. CODE § NR 2.03. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary



Mary Anne Lowndes
Chief, Runoff Management Section
Watershed Management Program

Enclosures: Wisconsin Department of Natural Resources Engineering Report

email: Douglas M Gatrell – GHD
(920) 490-1663; doug.gatrell@ghd.com

Davina Bonness; Kewaunee County LCD
(920) 845-9743; bonness.davina@kewauneeco.org

Matt Woodrow - DATCP
(920) 427-8505; matthew.woodrow@wisconsin.gov

Ben Uvaas – DNR – Oshkosh
(902)303-5433; benjamin.uvaas@wisconsin.gov

Joe Baeten - DNR, Northeast Region
(920) 662-5196; Joseph.Baeten@wisconsin.gov

Bernie Michaud; DNR, Central Office
(608) 266-5239; Bernard.Michaud@wisconsin.gov

WISCONSIN DEPARTMENT OF NATURAL RESOURCES ENGINEERING REPORT**GENERAL INFORMATION****Farm Name:** Kinnard Farms**WPDES Permit#:** WI-0059536**Location Address:** E2675 County Highway S, Casco, WI**DNR Project #:** R-2019-0104

Project Status: Construction of the digesters is anticipated to begin as soon as possible after obtaining Department approval of the plans and specifications. The proposed project does not involve a herd expansion or other activities that would cause an increase in waste generation.

Construction of the associated transfer systems will occur after construction of the digesters has commenced. Plans and specifications for the associated manure transfer systems were received on July 10, 2019. Plans and specifications for the waste transfer pipeline from the sand separation facility to the proposed digesters were received on August 26, 2019. These two sets of plans and specifications will be addressed separately by the Department in subsequent correspondence.

Engineering Plans Certified by:

Douglas M. Gatrell, P.E.

Initial Submittal:

June 28, 2019

Revised Submittal(s):August 26, and September 9
and 17, 2019

This is a multi-disciplinary project involving several technical service providers. The submittal lists responsibility for the design and certification of proposed components as follows:

- PlanET: Digester technology provider.
- Kiewit: Structural design and layout of the digesters, grading, and construction site sediment and erosion control, including swale and culvert sizing calculations.
- GHD: Waste transfer systems, and storm water components.

Site Assessment: The production area (site) is located in the Kewaunee River Watershed (HUC Code 0403010203). The nearest intermittent stream is approximately 4000 feet to the east. The nearest wetland is approximately 1000 feet to the northeast.

Clean runoff will be diverted around waste handling areas to an existing stormwater detention basin. No ground water supply wells are located within 250 feet of the proposed facilities or systems.

Soil investigation was performed in May 2019 by S&ME, Valley View, Ohio, consisting of ten soil borings ranging in depth from 10.5 to 19 feet below ground surface (b.g.s.) in the vicinity of the proposed project, and six test pits to 12-13 feet b.g.s.

The soil investigation found the primary soils to be top soil overlaying silty sand with gravel and then underneath that sandy lean clay over limestone bedrock. Perched water was found in soil boring (SB-305) beyond the required separation distance, otherwise groundwater and bedrock were found near the bottom of many of the borings and well beyond the required separation distance. A soils analysis was conducted on 14 of the soil boring and the percent fines ranged from 28.6 to 60.1 percent.

No karst or sinkhole features are known to exist within 1,000 feet of the proposed facilities. The site was screened for karst features with the assistance of Kewaunee County staff and karst features were greater than 1000 feet away. Given the distance to karst features and the high percent fines in the site soils, the site does not meet the criteria for a Sensitive Environmental Setting (SES) site as described in NRCS 313 (10/17R).

PROJECT SUMMARY: The proposed facilities will be owned and operated by Kewaunee Renewable Energy, LLC, but are regulated under the Kinnard Farms, Inc. WPDES CAFO Permit. The biogas will be generated and processed on-site, and transported by trucks to an off-site pipeline injection station.

The construction drawings primarily reference elevations using an on-site local benchmark (BM), wherein 100 feet BM correlates to 792.50 feet NAVD88 (North American Vertical Datum, 1988). To ensure a structurally sound soil sub-base for the proposed digesters, a geotechnical engineer will be onsite to conduct tests and observations to insure that the project compaction criteria are met.

Proposed Facilities:

Digesters (four): The proposed design was submitted to meet NRCS 313 (10/17R), and NRCS 522 (10/17R), Table 3, Column A Liquid Tight Concrete with Waterstop, which is meant to be used for an SES site (described above). The proposed design does not meet two design parameters, but this is not a concern for two reasons.

- The proposed design is deemed to substantially meet the referenced criteria (see Concrete Design Parameter Exceptions, below).
- Since the project site is not an SES site, the design does not need to meet the requirements of NRCS 522 (10/17R), Table 3, Column A Liquid Tight Concrete with Waterstop, and instead just needs to meet the requirements of 522 (10/17R), Table 2, Column A Reduced Seepage Concrete with Waterstop, which this plan design is considered to meet.

The proposed design was also submitted to meet NRCS 366 Anaerobic Digester (01/18). The design is in compliance with s. NR 243.15(3), Wis. Adm. Code. The digesters will be located in the northern portion of the production area. Below is a summary of what is proposed.

- Each of four proposed digesters (AD1, AD2, AD3 and AD4) will be a stand alone circular shaped structure with interior dimensions of 98 feet 5 inches diameter by 26 feet 4 inches deep. Approximately 4 feet of the interior depth will be below grade. Each digester's floors and walls will be constructed of steel bar reinforced concrete, and each digester will have a flexible membrane cover.
- The walls will be 12 inches thick. The floor will be 10 inches thick, and the footings will be 24 inch thick and 6-foot wide. The walls and floors will have two mats of steel bar reinforcement.
 - The 12-inch thick walls will have #5 rebar at varying spacing vertically and #8 rebar at varying spacing horizontally.
 - The 10-inch thick floor will have #5 rebar spaced at 10 inches and 12 inches. The rebar design for the walls and floor achieve a minimum rebar to concrete ratio of 0.5% as specified by ACI-350.
 - Additional rebar will be placed within the footings, and around penetrations and openings.
 - Below the concrete floor of each digester, a layer of high density rigid foam will be placed for thermal insulation. The rigid foam is reported to have a compressive strength of 100 psi, and a compressive modulus of 3,700 psi, adequate to provide bearing support for the digesters.
- Each digester will have an access door located near the ground level, and four agitation hatches (see Drwg. SF103 and SF104).
- The floors will slope at two percent towards the center with the center approximately 1 ft lower than the perimeter.
- Each digester's cover will be supported by a stainless steel pier anchored near the center of the concrete floor.
- Each digester will have a total volume of 1,498,506 gallons. The freeboard level will be at 2.05 feet from the top or 120.276 feet BM [Drwg SF301]. Because the digesters will be covered and not collect precipitation, the freeboard level will be the same as the maximum operating level (MOL). The MOL volume or usable capacity will be 1,381,849 gallons per each digester.
- The floor perimeter will be at 788.50 feet NAVD88, and the top of wall will be at 814.833 feet NAVD88. The MOL will be at 812.776 feet NAVD88 or 2.06 feet below the top of the wall.
- Each digester's fill pipes will discharge into the digester above its MOL, which avoids the risk of spills due to back syphoning. Spill risk is also minimized by a system of level sensors, flow meters, and automated valves to prevent spills. If the flow meter in the pipe system manifold detects zero flow when the pumps are running (a sign of a pipe break), the pump will be shut down automatically. In the event that a spill occurs, existing on-site storm water detention ponds would be able to provide some level of temporary containment.

Concrete Design Parameter Exceptions: The design does not meet the following design parameters for Liquid Tight Concrete with Waterstop as required for an SES site:

F_y (flexural yield strength of the rebar) \leq 60,000 psi

F_s (flexural steel stress) \leq 20,000 psi

NRCS 522 (10/17R), Table 3, Column A Liquid Tight Concrete with Waterstop specifies that both ACI-350 and NEM Part 536 must be met. The maximum values for F_y and F_s listed above are specified in NEM 536.21, and are in addition to the criteria in ACI-350.

The submittal reports the proposed design follows the Portland Concrete Association's specifications for a reinforced concrete circular tank, which is acceptable, but does not alleviate the need to meet the F_y and F_s values specified in NEM 536.21 (and listed above) in order to meet NRCS 522 (10/17R), Table 3, Column A Liquid Tight Concrete with Waterstop. However, the proposed design provides an F_s of 21,700 psi and an F_y of 75,000 psi. The F_s is relatively close to the values specified in NEM 536.21. The F_y value of 75,000 psi is commonly used in industry. Using the NEM 535.21 values above would decrease the rebar spacing and could result in greater difficulty in consolidating the concrete and potentially decrease the concrete installation quality. The Department's investigation into this issue has found a negligible negative impact to the anticipated concrete quality as a result of the proposed F_y and F_s values. Therefore, the Department finds the proposed design substantially complies with NRCS 522 (10/17R), Table 3, Column A Liquid Tight Concrete with Waterstop.

Operation: Prior to transfer to a digester, sand will be separated from the manure in the existing manure processing building. Following initial sand separation, remaining liquid manure will be pumped through a digester. Silage leachate and feed storage runoff will not go through the ADs but instead will be directly transferred to long term storage.

From the digesters, digestate will be returned to the manure processing building prior to being pumped to Waste Storage 1 for long term storage prior to land application. The project does not propose acceptance of any off-site wastes.

The biogas from the ADs will be collected and processed to remove carbon dioxide, water, and hydrogen sulfide. The processed biogas will be compressed and loaded into trucks for transport to a pipeline injection facility in Newton, Wisconsin. A thermal oxidizer will be located onsite, to destroy hydrogen sulfide removed from the biogas. A gas flare will also be located onsite to burn off-specification biogas.

DAYS OF STORAGE:

The proposed project is not anticipated to change the days of storage, so the provided days of storage calculations were not reviewed.

PURPOSE OF THIS REPORT: This report documents review of plans and specifications for each structure or practice indicated below, including findings regarding the structure or practice's compliance with applicable standards. The reviewer considered if management and site assessment were conducted, documented, and reflected in the final design, and if proper construction and related plans (operation and maintenance, inspection, erosion control if applicable) were provided, and demonstrated compliance with applicable rules standards.

DECISION RECOMMENDATION: Based on my review completed on September 18, 2019, the proposed plans and specifications meet ch. NR 243, Wis. Adm. Code, and applicable NRCS Standards. Therefore, I recommend the plans and specifications be approved.



Bernie Michaud, P.E.
Water Resources Engineer