

Permit Fact Sheet

General Information

Permit Number:	WI-0065196-02-0
Permittee Name:	Kane Family Farm
Address:	4367 Lark Road
City/State/Zip:	Denmark WI 54208
Discharge Location:	West Twin and Branch River Watersheds, 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
Dairy Calves (under 400 lbs.)	56	0	65	0	08/01/2019
Milking and Dry Cows	1225	1251	1680	1716	08/01/2019
Heifers (400 lbs. to 800 lbs.)	129	215	180	300	08/01/2019
Heifers (800 lbs. to 1200 lbs.)	325	295	440	400	08/01/2019
Total	1735	1251	2365	1716	

Facility Description

Kane Family Farm LLC is a Concentrated Animal Feeding Operation (CAFO) owned and operated by Tim Kane. It currently has 1,735 animal unites and based on current size, Kane Family Farm has approximately 239 days of liquid waste storage and 59 days of solid waste storage. Kane Family Farm generates 12,000,000 gallons of liquid manure and process wastewater and 3,300 tons of solid manure annually. Kane Family Farm has a total of 2,469.5 acres available for land application of manure and process wastewater. Of this acreage, 2,418 are spreadable, 803.5 are owned, and 1,666 acres are rented or controlled through contracts.

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)	
001	Sample point 001 is for liquid manure and process wastewater land applied from waste storage facility 1 (WSF 1). WSF 1 is a concrete lined storage basin located south of the feed pad and barn on Fairview	

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)	
	Road. This facility has a maximum operating level capacity of 3,274,101 gallons and was constructed in 2001. WSF 1 was upgraded in 2015 which included removing the berm between cell 1 and cell 2.	
003	Sample point 003 is for liquid manure and process wastewater land applied from waste storage facility 3 (WSF 3). WSF3 is a clay lined storage basin located south of the feed pad and barn on Fairview Road. This facility has a maximum operating level capacity of 3,970,447 gallons and was constructed in 2009.	
004	Sample point 004 is for liquid manure and process wastewater land applied from waste storage facility 4 (WSF 4). WSF 4 is a earthen-lined storage located at the Aerts' farm on Cooperstown Road. The facility has a maximum operating level capacity of 556,159 gallons and was constructed in the 1980's. WSF 1 was last evaluated in 2012.	
005	Sample Point 005 is for any miscellaneous solid manure directly land applied and not stored in a waste storage facility. This includes calf hutch manure, maternity pen bedpack, heifer bedpack, etc. Representative samples shall be taken for each manure source type.	
006	Sample point 006 is for visual monitoring and inspection of the feed storage area and associated runoff control system at the main dairy. Leachate and runoff is collected and pumped to WSF 3, runoff is also treated with a vegetated treatment area. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program	
007	Sample point 007 is for visual monitoring and inspection of the east concrete feedlot and associated runoff control system located at the Home farm. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
008	Sample point 008 visual monitoring and inspection of the east concrete feedlot and associated runoff control system located at the Cooperstown Road (Aerts) farm. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
009	Sample Point 009 is for visual monitoring and inspection of the calf hutch area. Proper operation and maintenance is required to ensure to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
010	Sample Point 010 is for visual monitoring and inspection of all production site storm water conveyance systems. 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.	
011	Sample Point 011 is for manure solids land applied from WSF 1, WSF 3, WSF 4, or WSF 5. Representative samples shall be taken from each waste storage facility when land application occurs.	
014	Sample Point 014 is for liquid manure and process wastewater land applied from waste storage facility 5 (WSF 5). WSF 5 is a 250,000 gallon vertical wall structure located south of the small barn on the west side of the Main Farm.	

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 239 days of storage for liquid manure. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

Solid Manure Stacking

The operation has proposed to stack solid manure. All stacking of solid manure shall be done in accordance with ch. NR 243, Wis. Adm. Code, which includes restrictions from NRCS Standard 313. Stacking of manure is considered to be part of the production area and is subject to the Production Area Discharge Limitations.

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 1,735 animal units, it is estimated that approximately 12,000,000 gallons of liquid manure and process wastewater and 3,300 tons of solid manure will be produced per year. The permittee owns *approximately* 803 acres of cropland and rents about 1,666. Given the rotation commonly used by the permittee, 2,418 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.

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- WSF 1 (liquids); 003- WSF 3 (liquids); 004- WSF 4 (liquids), and 014- WSF 5 (liquid)

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	

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

1.1.1 Changes from Previous Permit

Sample point language was updated, sample point 002 was removed, and sample point 014 was added to more accurately describe the existing production area.

1.1.2 Explanation of Operation and Management Requirements

Manure must be properly stored and land applied according to the permit and nutrient management plan.

Sample Point Number: 005- Solid manure from mixed source and 011- WSF (solids)

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	

1.1.3 Changes from Previous Permit

Sample point language was updated, and sample point 011 was added to more accurately describe the existing production area.

1.1.4 Explanation of Operation and Management Requirements

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

Sample Point Number: 006- Feed Storage Area ; 007- Outdoor Lot - Main Dairy; 008- Outdoor Lots - Aerts Farm; 009- Calf Hutch Area, and 010- Stormwater Diversions

1.1.5 Changes from Previous Permit

Sample point language was updated, and sample point 009 was added to more accurately describe the production area.

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 Schedules

2.1 Emergency Response Plan

Required Action	Due Date
Update the Emergency Response Plan: Update the written Emergency Response Plan within 30 days of permit coverage and submit to the department.	12/01/2020

2.2 Monitoring & Inspection Program

Use of the department’s monitoring and inspection program template is encouraged, but optional.

Required Action	Due Date
Update the Monitoring and Inspection Program: Consistent with the monitoring and sampling requirements subsection, the permittee shall update and submit a proposed monitoring and inspection program within 60 days of the effective date of this permit.	01/01/2021

2.3 Annual Reports

Submit Annual Reports by January 31st of each year in accordance with the Annual Reports subsection in Standard Requirements.

Required Action	Due Date
Submit Annual Report #1: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2021
Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2022
Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2023
Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2024

Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2025
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

2.4 Nutrient Management Plan

Submit annual nutrient management plan (NMP) updates by March 31 of each year. Note, in addition to annual NMP updates, submit NMP amendments and substantial revisions to the department for written approval prior to implementation of any changes to the NMP.

Required Action	Due Date
Management Plan Submittal: Submit any necessary updates to the Nutrient Management Plan to meet the conditions outlined in this permit (see conditions in the Livestock Operational and Sampling Requirements section).	
Submit NMP Update #1: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2021
Submit NMP Update #2: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2022
Submit NMP Update #3: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2023
Submit NMP Update #4: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2024
Submit NMP Update #5: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2025
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

2.5 Solid Manure Storage Facility - Engineering Evaluation

Referring to the old feed bunker on the Main Farm that is currently being used as a solid manure stacking area.

Required Action	Due Date
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.)	06/01/2021
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.	10/01/2021
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.	12/31/2022

2.6 Manure Storage Facility - Engineering Evaluation

Referring to the 250,000 gallon vertical wall storage located east of the old feed bunker currently being used as a solid manure stacking area on the Main Farm.

Required Action	Due Date
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.)	06/01/2021
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.	10/01/2021
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.	12/31/2022

2.7 Process Wastewater Collection System - Engineering Evaluation

Referring to the milk loading area collection and transfer system located south of the old feed bunker currently being used as a solid manure stacking area.

Required Action	Due Date
Written Report: Submit a written report evaluating the existing 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.)	06/01/2021
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.	10/01/2021
Corrections and Post Construction Documentation: Complete construction on the 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.	12/31/2022

2.8 Manure Transfer System - Engineering Evaluation

Referring to the in-floor manure transfer system located in the new calf barn on the north side of the Main Farm.

Required Action	Due Date
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.)	06/01/2021
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.	10/01/2021

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.	12/31/2022
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2.9 Feed Storage - Engineering Evaluation

Referring to the main feed pad and its associated runoff controls, including VTA, on the eastside of Fairview Road.

Required Action	Due Date
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.	06/01/2021
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.	10/01/2021
Corrections and Post Construction Documentation: Complete construction of improvements to permanently correct any adverse conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	12/31/2022

2.10 Outdoor lot - Closure

Referring to the outdoor feedlot on the east side of Fairview Road at the Main Farm

Required Action	Due Date
Closure Plan: Submit a closure plan for the outdoor feedlot to the Department.	06/01/2021
Complete Closure: Complete closure as approved by the Department.	12/31/2021

2.11 Solid Manure Storage Facility - Abandonment

Referring to the solid manure stacking concrete bunker located on the east side of the outdoor lot on the east side of Fairview Road.

Required Action	Due Date
Abandonment Plan: Submit an abandonment plan for the solid manure stacking concrete bunker to the Department for approval in accordance with USDA Natural Resource Conservation Services Technical Guide, Section IV, Standard 360 outlining the proposed method of abandonment.	06/01/2021
Complete Abandonment: Complete abandonment as approved by the Department.	12/31/2021

2.12 Outdoor lot - Closure

Referring to the outdoor feedlot at the Aert's Farm.

Required Action	Due Date
Closure Plan: Submit a closure plan for the outdoor lot at the Aert's Farm to the Department.	06/01/2021

Complete Closure: Complete closure as approved by the Department.	12/31/2021
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2.13 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	05/01/2025

2.14 Explanation of Schedules

Emergency Response Plan, Monitoring and Inspection Program – Schedules consistent with permit requirements

Annual Reports, Nutrient Management Plan, Submit Permit Reissuance Application - Schedules consistent with permit requirements.

Other schedule items are required to comply with s. NR 243 and WPDES permit conditions.

Attachments:

- Substantial Compliance Determination
- Plan Approval Letter(s)
- Public Notice

Proposed Expiration Date:

October 31, 2025

Prepared By:

Holly Stegemann Agricultural Runoff Management Specialist

Date: 9/21/2020