

**CWA COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5**

Purpose:

Compliance Sampling Inspection

Facility:

Frankenreider Farms, LLC
28338 N 2050th Avenue
Annawan, Illinois 61234
41.451772, -89.90975

NPDES Permit Number: No Permit.

Integrated Compliance Information System ID: ILA000608

Date of Inspection: 05/5/2022

EPA Representatives:

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State Representatives:

Benjamin Neuendorf, Illinois Environmental Protection Agency, Inspector
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Facility Representatives:

Shannon Frankenreider Owner/Operator 309-489-6119
Sjfrankenreider@yahoo.com

Inspector Signature/ Date:

CHERYL BURDETT Digitally signed by CHERYL BURDETT
Date: 2022.06.28 14:07:20 -05'00'

Approver Signature/Date:

Bahr, Ryan Digitally signed by Bahr, Ryan
Date: 2022.06.28 17:07:48 -05'00'

1. BACKGROUND

The purpose of this report is to describe, evaluate and document Frankenreider Farm's (Frankenreider) compliance with the Clean Water Act (CWA) at its Annawan, Illinois Facility on May 5, 2022. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended.

Frankenreider is a large cow/calf pair operation and finishing operation with approximately 999 finishing cattle in the Finishing Barn and another 130 cattle on a feedlot. Based on the number of animals, Frankenreider is a large Concentrated Animal Feeding Operation

Illinois EPA inspected the facility on April 05, 2021. Illinois EPA identified in their inspection report that the Facility was not complying with setbacks during land application.

Runoff from the Production Area flows into Spath Spur waterway which flows into Green River. Green River flows to the Rock River which flows to the Wabash River, a traditional navigable waterway.

2. SITE INSPECTION

Table 1: Site Entry and Opening Conference

Arrival Time:	9:15 a.m.
Temperature:	60 degrees Fahrenheit
Precipitation:	A light mist of rain started around 9:00 AM
Presented credentials?	Yes
Credentials presented to whom and at what time?	Shannon Frankenreider

The United States Environmental Protection Agency and Illinois Environmental Protection Agency arrived on May 5, 2022, at Frankenreider Farms, LLC in Henry County, Illinois at approximately 9:15 a.m. EPA donned their yellow rubber boots. EPA walked over to meet with the owner/operator Mr. Shannon Frankenreider (the Owner). After EPA presented credentials, EPA conducted their entry interview with the Owner and explained the purpose for the inspection and EPA's authority to conduct inspections at Animal Feeding Operations. EPA's authority comes from Section 308 of the Clean Water Act.

EPA confirmed the number of finishing cattle in the barn was 980 with a maximum capacity of 999. They had approximately another 10 cattle in the working barn and another 130 cattle on a feedlot. There were approximately 420 cow/calf pairs on pasture. EPA explained that they needed to go through their checklist and then would need to conduct a walk-through of the Facility to determine compliance with the Clean Water Act.

EPA explained if anything was determined to be Confidential, the Facility could inform EPA at that time or after the Owner received the inspection report at which time they could determine if all or parts of the inspection report should be considered Confidential Business Information (CBI).

If photographs or documents were taken, does the facility consider any to be Confidential Business Information (CBI)?	The Owner did not consider any information to be CBI at the time of the inspection.
Which information does the facility consider to be CBI?	At the time of inspection, the owner did not claim CBI on any of the photographs or information provided to EPA.
EPA vehicle parked in approved location.	Yes. The Owner stated that EPA's car was in an approved location.
Location where EPA vehicle was parked?	South of the office.
Disposable boots worn?	Yes.
Other bio-security measures taken (state vet contacted, etc.):	EPA verified with the State Veterinarian by email that there were no disease outbreaks related to beef cattle.

2.1 Records Review (The following Records Review tables reflect information provided before the walk-through of the facility, unless otherwise noted.)

Table 2: Documents

Checklist(s) Used
R5 CAFO Inspection Checklist
Facility Documents Reviewed:
None.

Table 3: Facility Description (Owner Description)

Type of Animal	Number of Animals	Capacity	Type of Confinement
Confined Animals	980	999	Barn
Feedlot	130	Unknown	Unknown
Working Barn	10	Unknown	Barn
Pasture	420	Unknown	Pasture
Minimum Number of Animals in previous 5 years:	Stays consistent.		
Maximum Number of Animals in previous 5 years:	Stays consistent.		
Number of Animals that are stabled/confined and/or fed/maintained for 45 days or more in previous 12 months:	Approximately 1110. Number in the feedlot varies.		
Amount of Liquid Manure Generated per year:	The Owner stated approximately two million gallons.		
Amount of Solid Manure Generated per year:	The Owner stated very little.		
Does the facility have an NPDES Permit?	No NPDES Permit		
SIC or NAICS code:	0212/0211		
CAFO Designation/Defined Date (If a designated CAFO)	Defined as CAFO by the size of the operation.		
Do animals have direct access to WOUS?	No.		
Are crops, vegetation, forage growth, or post-harvest residues sustained in the normal growing season over any portion of the lot or facility where animals are kept?	Cattle are put out on crop field in the winter before crops are on the field of approximately 100 acres.		
What is the area (acres) of the production area?	The Owner stated the Production Area was approximately 10 acres. This did not include the feedlots. They also have an approximately 35-acre feedlot. There are also feeders and waterers in the crop fields.		
What is the area (acres) of the pasture?	Yes. Approximately 1000 acres.		
How many employees (not counting family members)?	One employee.		

Other facilities under common ownership (name and address):
Bill Frankenreider, the father has a separate site has two lots with approximately two cattle on one of the lots.

Table 4: Livestock Waste Storage

Type of Storage	Storage Capacity	Type of Liner	Depth Markers Present	Last Time Waste was Removed	Amount of Waste Removed	Days of Storage
Pit under Barn	2.5 million gallons 14ft. x 450 ft. x 60 ft.	Concrete	No depth markers	Last fall	Owner estimated approximately two million gallons.	Over 365 days because the Owner stated that the pit is usually pumped out 1x per year. However, it has been pumped out in the fall and spring.
Working Barn	Solids	Not applicable	Not applicable	Spring	Owner was not sure	It is land applied once a year in the spring.
Calving Barn	Solids	Not applicable	Not applicable	Spring	Owner was not sure	It is land applied once a year in the spring.
When was the last time a storage structure was emptied, either partially or completely?				According to the Owner, last spring the pit under the Finishing Barn was almost completely pumped out which was approximately 2.0 million gallons.		
What amount of manure or process wastewater was removed the last time the storage structure was emptied, either partially or completely?				Approximately 2.0 million gallons were emptied from the pit in the Finishing Barn.		
Do the facility personnel inspect and keep records of all diversion devices?				According to the Owner, there were no records kept on diversion structures.		
Do the facility personnel inspect and keep records of all impoundments?				According to the Owner, there were no records of storage structures.		

Do the facility personnel inspect and keep records of all the water lines?	According to the Owner, he and other workers walk the Facility daily, but no records were kept of the water lines.
Do the facility personnel perform routine visual inspections and keep records of the production area?	According to the Owner, visual inspections are done as the Owner and other employees go through their daily work, but no records were kept.
Does the waste storage system have a managed outfall or discharge point?	No.
Has the facility had any documented discharges of livestock waste to surface water in the past year?	According to the Owner, they have not had any discharges to waters of the United States.
Are there safety devices installed around any manure storage ponds? (Barriers at the end of manure push off platforms, fences around pond, signage.)	According to the Owner, the storage structure is an underground pit under the Finishing Barn.
Additional Information:	No.

Table 5: Livestock Waste Management

Describe the way manure is collected and disposed of at the facility:	
According to the Owner, the cattle in the Finishing Barn are on slotted floors. The manure from the pit is pumped out using a drag line and applied to the fields. There is no bedding used within the Finishing Barn.	
Describe the way used bedding is collected and disposed of at the facility:	
According to the Owner, in the calving barn straw and corn stalks are used for bedding. The calving barn is scraped with a front-end loader and applied to crop fields. The Owner stated that the calving barn is cleaned out in the spring and applied to the crop fields when the fields are dry enough to get out on to the crop fields.	
Are mortality records kept?	According to the Owner, the mortality records are on the computer, The Owner stated that when there is a mortality, it is subtracted from the number of cattle or cow/calf pair.
Describe the way mortalities are managed at the facility:	
According to the Owner, the mortalities stay where they were found, and a renderer usually comes the same day they are called.	
What type of method is used to provide drinking water for the animals? (Drinkers with float system? Nipple waters? If nipple waters, is backflow prevention installed?)	According to the Owner, the waterers for the cattle in the barns and out in the feedlots are on a float system and the water comes from a well.
Describe the way spilled drinking water is collected and disposed of at the facility:	

According to the Owner, spilled water in the Finishing Barn goes into the pit with the manure. The spilled waterers out in the feedlots spill on to the ground.
Describe the way mist cooling water is collected and disposed of at the facility:
There is no mist cooling system.
Describe how chemicals are stored and how used or spilled chemicals are collected and disposed of at the facility:
Chemicals are not stored on-site.
Describe the way water that has been used to wash/flush barns are collected and disposed of at the facility:
There is no water used to clean the barns.
Describe where water comes from that is used to clean and/or flush. (Wells, city, etc.)
Not applicable.
Describe the way feed is contained and how runoff from feed is collected and disposed of at the facility:
Feed is contained in the silage bunker and in feed bags. There is no containment for the process wastewater.

Table 6: Land Application and Disposal of Manure and Process Wastewater

Does the facility perform and keep records of the manure testing?	The Owner is not sure if there are records for manure testing.
When was the last time a sample was taken of the manure and/or process wastewater?	The Owner is not sure when the last time manure was tested.
Describe the process to take the manure and/or process wastewater sample.	Not Applicable.
Number of acres available for land application:	According to the Owner, the Facility has approximately 1500 acres with approximately 750 rented fields.
Are land application records kept?	The Operator is not sure of where or if land application records are kept.
Who applies the manure and process wastewater to the fields?	The manure application is contracted out to a third party.
Are weather conditions at time of application kept? (24 before – 24 after)	No. The Owner stated that they do not record the weather prior to land application or after land application.
Does the facility perform and keep records of the soil testing?	The Owner stated that some of the crop fields owned by the Facility have had soil tests but

	did not have the records available at the time of the inspection.
Is manure transferred off-site to another party?	Yes.
Are manure transfer records maintained?	No records of sales or the manure that is given away.
Do facility personnel perform periodic inspection of land application equipment?	No. The Owner contracts out the land application.

Table 7: Receiving Surface Waters

Describe the surface flow pathways:	
<p>There is surface flow off the feedlots that flows by gravity to Spath Spur waterway. Spath Spur waterway flows west then north under Highway 78 through a culvert and continues northwest to the Green River to the Rock River to the Wabash River, a traditional navigable waterway. At the time of the inspection, EPA observed flow within Spath Spur to Highway 78, but EPA did not observe flow from Spath Spur waterway going through the culvert. According to the Owner, the city installed a lip on the culvert that is too high and the flow within Spath Spur waterway now backs up in the fields on the east side of Frankenreider Farm, LLC, instead of flowing through the culvert. The owner had called the city to see if they can lower the lip on the culvert to allow flow, so the water does not back up into the fields.</p>	
How many months out of the year is there flow in the nearest surface water pathway:	<p>According to the Owner, water is usually continuously within Spath Spur waterway due to it being backed up at the culvert that flows under Highway 78. The Owner stated that water does go through the culvert under Highway 78, but only at a trickle.</p>
Are there any storm water pathways entering the facility?	<p>Yes. EPA observed that storm water from the roadside ditch on 2050th Avenue flows through the Facility's feed storage area and into a grassy area that flows through a culvert under an access road on the property to another low area. It flows through a pathway within the facility to the feedlot/crop field.</p>
Are there any clean water ponds on site?	No.
What is the name of the first waterway that is identified as a Traditional Navigable Water (TNW) for surface flow from the facility?	<p>Green River to the Rock River to the Wabash River, a traditional navigable waterway.</p>
Is the surface water pathway nearest to the facility considered to be ephemeral, intermittent, or perennial?	<p>Spath Spur waterway is an intermittent waterway.</p>

Has the surface water pathway nearest to the facility been assessed for water quality?	No.
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Table 8: Nutrient Management Plan

NMP on site?	The Owner did not have a Nutrient Management Plan (NMP).
Date NMP Submitted:	Not Applicable.
Planner Name/Company:	Not Applicable.
Date that the NMP was last updated:	Not Applicable.
Storage Description:	The Owner did not have a description, but the Finishing Barn was built in 2018. He stated that he would have to locate the plans.
Amount of Manure Generated:	This is not documented.
Capacity of Storage:	This information was provided by the Owner, he believes he can find the as-builts with the size of the pit.
Duration of Storage:	The Owner stated that they have over one year of storage since they usually empty the storage structure in the fall.
Amount of Spreadable Land:	According to the Owner, the Facility has approximately 1500 acres with approximately 750 rented fields.
Mortality Management Plan:	The Owner stated they do not have a Mortality Management Plan.
Clean Water Diversion System:	The Owner does not have a Clean Water Diversion System
Direct Contact Prevention Plan:	The Owner does not have a Direct Contact Prevention Plan. EPA observed cattle prints around Spath Spur waterway, but the areas are fenced off, so cattle are mostly kept out of Spath Spur.
Chemical Management Plan:	The Owner stated that he does not have a Chemical Management Plan.
Conservation Practices:	The Owner stated that he does not have Conservation Practices.
Manure Testing Protocols:	The Owner stated that he does not have protocols for collecting samples from the Finishing Barn pit or from the solids of the calving barn or working barn.
Soil Testing Protocols:	The Owner stated that he does not have soil testing protocols.
Land Application Protocols:	The Owner stated he does not have written land application protocols but knows the size of field and number of gallons applied per acre.

Additional NMP comments:	None.
Does the NMP reflect the current operational characteristics?	Not Applicable.
Are the number of acres owned/leased consistent with what is listed in the NMP?	Not Applicable.

Table 9: Land Application Records (details of the records reviewed)

Fields available for application this year:	The Owner stated there were no records to review for land application.
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Table 11: NPDES Permit

Type of permit (General, individual)	No Permit.
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2.2 Walkthrough of the Facility

EPA, Illinois EPA, and the Facility Representative (We) started the walk-through on the south side of the office. We walked west on the south side of the Finishing Barn. EPA observed a hole in the concrete wall on the west side of the concrete lot of the Finishing Barn. EPA observed eroded pathways from the hole and along the bank on the west side of the concrete lot to the crop field where storm water and process wastewater pooled. At the time of the inspection, EPA did not observe flow under 2050th Avenue to the wetland area. We continued the walk-around on the west side of the production area to the north. According to the Owner, cattle were moved from the crop field, west of the Facility which was used as a winter feedlot. We continued to walk and observe cow/calf pairs in the pasture northwest of the Facility east of Highway 78. EPA observed an unnamed waterway to the northwest which flowed through a culvert to the east into Spath Spur waterway. We walked back to the south and then to the east along Spath Spur waterway.

We walked along the north side of Spath Spur waterway. EPA observed water within Spath Spur waterway. The feedlot along the north side of Spath Spur waterway showed runoff from the feedlot into Spath Spur waterway. We continued to walk east along the south side of Spath Spur waterway. EPA observed to the south the denuded bagged feed and hay storage area. EPA observed runoff from the feedlot on the north side of Spath Spur waterway into the waterway (P5050050). We walked on the south side of Spath Spur waterway where EPA observed a pipe that drains water on the north side of the denuded feed bag and hay storage area and south of Spath Spur water. EPA observed the pipe outlet which drains into Spath Spur waterway (P5050053 -P5050056). EPA continued to observe water within Spath Spur waterway as we walked east along the North Access Road. We continued to walk east along Spath Spur waterway and observed a feedlot south of Spath Spur waterway and east of the denuded bagged feed and hay storage area. EPA observed additional feedlots on the north side of Spath Spur waterway and northwest of the barns.

We continued to walk east where a bridge goes over Spath Spur waterway. We continued to walk east along Spath Spur waterway. EPA observed areas east of the bridge where runoff from the feedlots drain and crop fields runoff into Spath Spur waterway (P5050064, P5050066, P5050067, P5050068, and P5050069).

We walked along the feedlot to the south. EPA observed that the Feedlots both north and south of Spath Spur waterway showed signs of discharging to Spath Spur waterway.

We walked south along the fence line of the feedlot on the south side of Spath Spur waterway and east of the bridge. EPA observed runoff from the feedlot into the grassy area north of the silage bunkers. We walked west north of the silage bunkers where EPA observed a concrete channel off the concrete pad which was part of the silage bunkers and the Finishing Barn. EPA observed storm water from the roadside ditch flow through the center of the concrete pad down the concrete channel to low grassy area south of the concrete pad. Process wastewater and storm water collected in the low grassy area flows through a culvert that runs under the center access road to a low grassy on the west side of the Center Access Road. It flows to a drainage channel to the west that conveys flow to the north through the denuded bagged feed and hay storage area. EPA did not observe flow to Spath Spur waterway.

EPA walked back to the east side of the bridge along Spath Spur waterway and collected a sample on the east side of the bridge within the waterway and on the west side of the bridge within Spath Spur waterway.

EPA observed water within Spath Spur waterway from the Facility to Highway 78. The Owner stated that water within Spath Spur backed up due to the concrete culvert under Highway 78 and EPA did not observe water flowing through the culvert at the time of the inspection. The Owner has spoken to Illinois EPA and the county to request that they fix the culvert so water can flow through and not back up into the pasture and the crop field east of the Facility.

2.3 Closing Conference and Post-Inspection

EPA went back to the Facility and explained to the Owner that EPA was not able to collect a sample at Spath Spur waterway due to the fence and because there was no flow going through the culvert at the time of the inspection.

EPA went through the following areas of concern with the Owner:

1. EPA explained that the hole in the concrete wall to the west of the Finishing Barn attached to an outside feedlot. EPA was concerned with the runoff from this area and the erosion that is occurring on the berm.

2. EPA was concerned that the Facility did not have a Nutrient Management Plan or any of the records available documenting their land application of manure. The Owner stated that he may have some of the records but would need time to look for them. On May 18 and May 25, EPA sent emails to the Owner with a list of records. The Owner did not send the records.
3. EPA’s observation that areas along Spath Spur waterway had runoff from the feedlots on both sides of the Spath Spur waterway.
4. EPA was concerned about the runoff from the feedlots that flowed to the low grassy area south of the concrete pad attached to the Silage Bunker and the Finishing Barn. It was designed that the process wastewater flowed through a culvert to the west side of the Center Access Road where it flowed to a channel that flowed north through the denuded area where feed bags and hay bales were stored.

EPA asked the Owner to choose his samples and EPA provided the Owner with a chain of custody. EPA explained that the report would be completed within 60 days, and he should receive a copy within 70 days.

Table 12: Post Walk-Through

Were specific Areas of Concern discussed with facility personnel?	Yes.
Who were the Areas of Concern discussed with? The Owner.	
Were any deficiencies or areas of concern addressed or fixed during the inspection? If so, list what was done. EPA did not observe any of the areas of concern being addressed at the time of the inspection.	
Compliance assistance materials given to facility personnel:	
No, compliance assistance materials were provided at the time of the inspection.	
Exit Time:	Approximately 1:30 p.m.
Disposable Boots Left at Facility?	Yes.

Table 13: Waterway Documentation

List the pathway taken by EPA inspectors to document the waterway at the facility.
EPA walked along south side of Spath Spur waterway and observed runoff pathways from the feedlot to the north into Spath Spur west of bridge. EPA observed discharge pathways from the crop field to north and the feedlots to the south into Spath Spur waterway. EPA documented that Spath Spur waterway had water in it to Highway 78.

Table 14a: Sampling Information

Were samples taken?	Yes.
Were samples split with facility?	Yes.
Number of samples taken?	Two.
Was a trip blank created (done prior to entering the facility)?	No.
Identify which sample is the trip blank.	No Trip Blank.

Were field duplicate samples taken (1 duplicate per 20 samples)?	No.
Identify which sample(s) is/are the field duplicate(s)	Not Applicable.
Were equipment blanks taken (if more than one type of equipment was used to collect samples)?	No.
Identify which samples were equipment blanks.	Not Applicable.
List chain of custody for fecal coliform samples:	<i>E. coli</i> samples and Chain of Cust was filled out and provided to Lyons Laboratory in Stockton, Illinois.
Location where samples were preserved:	Due to holding time for <i>E. coli</i> , samples were preserved on-site.
Name of people involved with sample preservation:	Cheryl Burdett
Time of sample preservation:	13:30
Were samples shipped to a lab?	No.
Name/Address of shipping location:	Not Applicable.
Date and time that samples were dropped off for shipping:	Not Applicable
Did all inspectors involved with the sampling sign the chain of custody?	Yes.
Weather conditions at the time of sample collection:	Raining.
Camera name and type used to photograph sample collection:	Olympus Tough F2.0

Table 14b: Facility Sample Information

Number	Name	Location	Date	Time	Collector	Color/ Smell	Photo #	Photo- grapher	Method of Collection	# Of Sulfuric Acid Ampoules
S01	Northeast of Spath Spur waterway	At the Facility, in the back of the vehicle.	May 5, 2022	12:00 p.m.	CB	Dark Brown	P5050082	CB	Grab	40
S02	Northwest of Spath Spur waterway	At the Facility, in the back of the vehicle.	May 5, 2022	12:15 p.m.	CB	Dark Brown	P5050083	CB	Grab	40

Name of Laboratory where fecal coliform/E. coli samples were taken Lyons Laboratory in Stockton, Illinois.

Name of Laboratory where nutrients and general chemistry samples were taken EPA Region 5 (ASB) Laboratory

Table 14c: Facility Sample Results

Number	Name	Date	Time	E. coli	Nitrate- Nitrite	Total Phosphorus	Ammonia- Nitrogen	TKN	Total Dissolved Solids	Total Suspended Solids
S01	Northeast Feedlot	5/5/2022	12:00 p.m.	39,726	U	22.8	10.3	38	1120	85
S02	Northwest Feedlot	5/5/2022	12:15 p.m.	20,294	U	21.5	10.6	37	926	536