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

Purpose:
Compliance Evaluation Sampling Inspection

Facility:
Richter Dairy Farm
14113 St. Rose Road
Breese, Illinois 62230
Clinton County, Illinois
38.62797657159176, -89.55355561706052

NPDES ICIS Tracking Number: ILA000349

Date of Inspection: Site Inspection - September 14th, 2022
Operator Interview – September 27th, 2022

EPA Representatives:
Benjamin Atkinson, Agronomist, 312-353-8243 atkinson.ben@epa.gov
Cheryl Burdett, Life Scientist, 312-886-1463 burdett.cheryl@epa.gov

State Representatives:
Bruce Rodely, Inspector, 618-318-1376, bruce.rodely@illinois.gov

Facility Representatives:
Keith Richter, Owner/Operator, 618-791-6434

Inspector Signature: Atkinson, Benjamin Digitally signed by Atkinson, Benjamin Date: 2022.11.28 13:13:27 -06'00'

Approver Signature and Date: Ryan Bahr Digitally signed by Ryan Bahr Date: 2022.11.28 14:30:33 -06'00'

1. BACKGROUND

The purpose of this report is to describe, evaluate and document Richter Dairy Farm's (the facility's) compliance with the Clean Water Act (CWA) at its Breese, Illinois facility on September 14th, 2022. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended.

The facility is a medium dairy Animal Feeding Operation located in Clinton County, Illinois. At the time of the inspection, the facility confined approximately 230 mature dairy cows (milking and dry), 105 heifers, and 35 calves. A dairy animal feeding operation is considered medium if it stables or confines 200 to 699 mature dairy cows, whether milked or dry.

Surface runoff from the facility flows to Bull Branch, an intermittent stream which flows directly through the facility. Bull Branch is listed as impaired for Aquatic life in the 2022 303(d) list. The impaired parameters include dissolved oxygen, total phosphorus, sedimentation/siltation, and total suspended solids.

2. SITE INSPECTION

Table 1: Site Entry and Opening Conference

Arrival Time:	Approximately 9:15 AM.
Temperature:	76° F
Precipitation:	No precipitation on the day of or the day prior to the inspection.
Presented credentials?	Yes.
Credentials presented to whom and at what time?	Presented credentials to the operator at 9:15 AM
Was an opening conference held? With whom?	Yes, an opening conference was held with the operator.
If photographs or documents were taken, does the facility consider any to be Confidential Business Information (CBI)?	No CBI claim was made at the time of the inspection.
EPA vehicle parked in approved location?	Yes.
Location where EPA vehicle was parked?	Adjacent to the calf hutch area.
Disposable boots worn?	Yes.
Other bio-security measures taken:	The state veterinarian office was contacted, and no infectious disease outbreaks were reported. The EPA vehicle was washed following the inspection.

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

Table 3: Facility Description

Type of Animal	**Number of Animals**	**Capacity**	**Type of Confinement**
Mature dairy cows (milking and dry)	230	260	Total confinement except for limited outdoor lots for dry cows
Heifers	105	105	Total confinement
Calves	35	35	Total confinement
Minimum Number of Animals in previous 5 years:			185 mature, 85 heifers, 20 calves
Maximum Number of Animals in previous 5 years:			Current numbers
Number of Animals that are stabled/confined and/or fed/maintained for 45 days or more in previous 12 months:			Current numbers
Amount of Liquid Manure Generated per year:			Operator was unsure – estimated 2 million gallons a year
Amount of Solid Manure Generated per year:			80 loads – 12 ton per load
(Illinois Only) Name of Certified Livestock Manager for facility: (if 300 animal units or greater):			The operator is the Certified Livestock Manager
Does the facility have an NPDES Permit?			No
SIC or NAICS code:			SIC 0241
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?			No
What is the area (acres) of the production area?			8
What is the area (acres) of the pasture?			3
How many employees (not counting family members)?			1 full time 4 part time
Other facilities under common ownership (name and address):			no

Table 4: Livestock Waste Storage

Type of Storage	Dimensions	Type of Liner	Depth Markers Present	Last Time Waste was Removed	Amount of Waste Removed	Days of Storage
Pit 1	40'x 50'x10'	Concrete	Yes			
Pit 2	16'x40'x10'	Concrete	Yes			
Pit 3	16'x40'x10'	Concrete	Yes			
Pit 4	60'x80'x10'	Concrete	Yes			
Pit 5	140'x140x10'	Concrete	Yes	Late September	1.1 million gallons	~1 year

Records at site of storage structure design?	Yes
Is manure stored for the short term? If yes, describe where it is stored, how it is drained and where it drains to.	No.
Are records kept of the level of manure in the storage structures?	Yes, has depth gauges, just visual checks
When was the last time a storage structure was emptied, either partially or completely?	Late September
What amount of manure or process wastewater was removed the last time the storage structure was emptied, either partially or completely?	1.1 million gallons
Do the facility personnel inspect and keep records of all diversion devices?	The operator stated that inspections were conducted but records were not kept
Do the facility personnel inspect and keep records of all impoundments?	
Do the facility personnel inspect and keep records of all the water lines?	
Do the facility personnel perform routine visual inspections and keep records of the production area?	
Does the waste storage system have a managed outfall or discharge point? If yes, provide a description of the outfall and a description of the area receiving the discharge.	No
Has the facility had any documented discharges of livestock waste to surface water in the past year?	The operator stated that they had not

Are there safety devices installed around any manure storage ponds? (Barriers at the end of manure push off platforms, fences around pond, signage.)	Yes

Table 5: Livestock Waste Management

Describe the way manure is collected and disposed of at the facility:	
Manure from the milk cow barns is pushed to Manure Pit 4 and then pumped to Manure Pit 5. Manure from the dry cow and heifer cow barns is pushed to Manure Pit 1. Leachate and runoff from the feed storage area on the east side of the facility flows to pits 2 and 3 which are pumped to pit 5.	
Describe the way used bedding is collected and disposed of at the facility:	
Solids are scraped and land applied as needed.	
Are mortality records kept?	yes
Describe the way mortalities are managed at the facility:	
Small carcasses are composted, and large carcasses are picked up by a rendering service.	
What type of method is used to provide drinking water for the animals?	Automatic waterers are used. Overflow is collected with manure.
Describe the way mist cooling water is collected and disposed of at the facility:	
No mist cooling is used.	
Describe how chemicals are stored and how used or spilled chemicals are collected and disposed of at the facility:	
Chemicals are stored in the milk parlor and any spilled chemicals would be collected with parlor wash water.	
Describe the way water that has been used to wash/flush barns is collected and disposed of at the facility:	
No flush water is used.	
Describe the way feed is contained and how runoff from feed is collected and disposed of at the facility:	
Leachate and runoff from the feed storage area on the east side of the facility flows to pits 2 and 3 which are pumped to pit 5.	
If a dairy, describe how process wastewater from the cleaning of the milking parlor is collected and disposed of at the facility:	
Wash water flows to septic tank which is pumped to Pit 5.	

If a dairy, describe how process wastewater from the cleaning of the milk tanks is disposed of at the facility:	
Collected with wash water and pumped to Pit 5.	
If a dairy, how many times per day are cows milked?	2x a day

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

Does the facility perform and keep records of the manure testing?	Yes
When was the last time a sample was taken of the manure and/or process wastewater?	Late September when hauling occurred
Describe the process to take the manure and/or process wastewater sample.	Grab sample as hauling
Number of acres available for land application:	415 acres
Are land application records kept?	Yes
Who applies the manure and process wastewater to the fields?	Metro Ag
Are weather conditions at time of application kept? (24 before – 24 after)	No
Does the facility perform and keep records of the soil testing?	Yes
Is manure transferred off-site to another party?	no

Table 7: Receiving Surface Waters

Describe the surface flow pathways:	
Bull Branch is an intermittent waterway that flows southwest through the facility. All uncontained runoff from the site flows directly to Bull Branch or, on the west side of the facility, to the roadside ditch along St. Rose Road and then to Bull Branch.	
How many months out of the year is there flow in the nearest surface water pathway:	The operator stated that Bull Branch is flowing 20 times a year and has standing water 80 percent of the time.
Are there any storm water pathways entering the facility?	No
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?	The Kaskaskia River is the first TNW

Is the surface water pathway nearest to the facility considered to be ephemeral, intermittent or perennial?	Intermittent
Has the surface water pathway nearest to the facility been assessed for water quality?	Yes – it is listed as impaired for Aquatic life in the 2022 303(d) list. The impaired parameters include dissolved oxygen, total phosphorus, sedimentation/siltation, and total suspended solids.

Table 8: Nutrient Management Plan

NMP on site?	Yes
Planner Name/Company:	Mauer and Stutz

Note: A Nutrient Management Plan Review was not completed for this facility due to its size.

2.2 Walkthrough of the Facility

Ben Atkinson and Cheryl Burdett (the Inspectors) met with Bruce Rodely (the IEPA Inspector) offsite and proceeded to the facility arriving at approximately 9:15 AM. The Inspectors donned their biosecurity boots and found Mr. Keith Richter (the Operator). The Inspectors presented their credentials and held an opening conference. During the opening conference, the Inspectors explained that the purpose of the inspection was to evaluate the facility's compliance with the Clean Water Act, discussed what areas of the facility would be inspected, and explained the Operator's right to claim CBI. The Operator stated that prior engagements made the timing of the inspection unacceptable. The Inspectors asked if it would be possible to conduct the walkthrough of the facility and schedule a time to complete the interview portion of the inspection by phone at a more convenient time. The Operator agreed and the walkthrough of the facility began.

The walkthrough began on the west side of the Dry Cow Barn. The Inspectors observed manure solids and dark brown liquid around the exterior of the gate located in the southwest corner of the Dry Cow Barn. The Inspectors also observed that the roof gutter downspout outlet was located in the same area (photo 1). The Inspectors noted that if stormwater were to come into contact with manure and discharge that it would be violation of the CWA.

The Inspectors then walked east along the south side of the Dry Cow Barn past manure Pit 1 and observed the Hospital Barn (photos 2 and 3). The Operator stated that manure from the Dry Cow Barn and the Heifer Barn was pushed to Pit 1. The Inspectors observed manure solids and dark brown liquid around the entrance to the Hospital Barn and around the outdoor lot area attached to the south side of the Hospital Barn (photos 4 and 5). There was no containment for any manure or process wastewater around the Hospital Barn Pen. The Inspectors noted that, given the proximity to Bull Branch, it

seemed likely that runoff from the area could potentially discharge. The Operator stated that he had been intending to abandon the Hospital Barn but had not done so.

The Inspectors walked north along the east side of the Heifer barn to the north side of the facility. The Inspectors observed an apparent flow path from the north end of the feed bags toward the north end of the property (photos 12-14). The Inspectors did not observe the flow path continuing into the field to the north.

The Inspectors then walked east along the north side of the facility to the west bank of Bull Branch and observed water within the Bull Branch (photos 15 and 16). The Inspectors then walked south along the west bank of Bull Branch. The Inspectors observed a mound of manure solids north of the Hospital Barn (photo 17). The Inspectors also observed dark colored leachate (photo 25) and manure solids in the access road and along the west bank of Bull Branch (photos 18-28). The Inspectors also observed further manure solids around the outdoor pen on the southside of the Hospital Barn (photos 29-31).

The Inspectors then walked east across the access road culvert over Bull Branch to the feed storage area on the east side of Bull Branch. The Inspectors observed fibrous solids on the culvert (photos 33 and 58). The Inspectors observed Pit 2 and Pit 3 which collect the runoff from the feed storage areas on the east side of Bull Branch (photos 34 and 35). The Inspectors walked north along the east bank of Bull Branch and observed a solid manure stack on the northwest corner of the feed storage area (photos 39-41, and 44). It appeared that the runoff from the manure pile was being collected by Pit 2 (photo 40). The Inspectors also observed the Commodity Barn and a mound of organic solids (photos 45 and 46).

The Inspectors walked south on the east side of the silos and then west to the Hay Barn. The Inspectors observed Pit 3 (photos 49-51). The Inspectors walked south to the south end of Pit 3 and observed a hose attached to a pump sitting at the south end of Pit 3. The opposite end of the hose was lying on the ground and oriented toward Bull Branch (photos 52-56). When asked what the pump was for, the Operator stated that he did not know why it was there and that his father had been put it there. At the Inspectors request, the hose was moved onto the Pit 3 area so it could not discharge to Bull Branch (photo 57).

The Inspectors stated that they intended to walk along the west bank of Bull Branch. The Operator stated that it wouldn't be passable due to overgrown vegetation and suggested that the Inspectors look along the east side of the outdoor lot connected to the East Milk Cow Barn by looking through the barn. The Inspectors stated that they would still like to try to walk along the exterior wall of the outdoor lot and Pit 4. The Operator stated that it would be best to start from the south side and that he would not be able to join the Inspectors. The Inspectors walked west past the East Milk Cow Barn, the Milking Parlor, and the West Milk Cow Barn (photos 59 and 60). The Inspectors walked to the west side of the facility. The Inspectors observed a white pipe protruding from the east side of the roadside ditch (photo 61). The Inspectors walked south along the outside of the white

fence along the west side of the facility. The Inspectors observed a depression that appeared to be a flow path for runoff from the denuded outdoor lot west of the West Milk Cow Barn (photos 62-64). The Inspectors continued south and observed a blue pipe protruding from the east side of the roadside ditch. The pipe appeared to be in line with a blue pipe connected to the downspout of the roof gutters on the West Milk Cow Barn (photos 65 and 66). The Inspectors observed that the outdoor lot was denuded (photos 68 and 69).

The Inspectors continued walking south along the west fence and observed burnt vegetation and manure solids in a path from the area west of the Pit 4 ramp down to the roadside ditch (photos 70 – 77).

The Inspectors then walked east toward Bull Branch. The Inspectors observed manure solids and burnt vegetation in a path from the area south of the Pit 4 ramp towards Bull Branch (photos 79-84).

The Inspectors walked north along the east side of Pit 4 and observed manure solids deposited on the fence along Pit 4 (Photos 88 and 89). The Inspectors also observed Bull Branch was covered in foam (photos 92-97). The Inspectors continued north and observed manure deposited on top and exterior side of the east concrete wall of Pit 4 (photos 99-102).

The Inspectors continued north and observed manure solids in the channel of Bull Branch (photos 109 and 110). The Inspectors also observed manure on the top of and along the exterior edge of the concrete wall on the east side of the outdoor lot south of the East Milk Cow Barn (photos 111 – 113).

The Inspectors continued walking north and observed a hole in the concrete wall east of the East Milk Cow Barn which was allowing manure to flow down through a channel into Bull Branch (photos 117 – 131). The Inspectors observed liquid manure flowing in the channel and into Bull Branch.

The Inspectors walked north and met with the Operator informing him of the active flow of manure to Bull Branch. The Inspectors asked if the Operator could take immediate steps to stop the flow of manure. The Operator stated that he would. The Inspectors then walked across the culvert over Bull Branch to the east side of Bull Branch and started walking south to observe Pit 5.

The Inspectors observed an area west between Pit 5 and Bull Branch where there were multiple animal bones and decomposing animal carcasses (photos 134 -139). The Inspectors walked around Pit 5 and returned north to the EPA Vehicle. The Inspectors met the Operator and informed him that they would be taking samples and offered split samples. The Operator declined the split samples. The Operator notified the Inspectors that he had filled the area around the concrete hole with soil to stop the flow of manure. The Inspectors provided the Operator with a summary of the areas of concern they had observed which included the lack of containment for manure and runoff from the

Hospital Barn, the lack of containment for manure and runoff for the mound of manure north of the Hospital Barn, the paths of organic material and burned vegetation from the denuded earthen lot on the west side of the facility, and manure that had been flowing from the cracked wall into Bull Branch.

The Inspectors then collected their sampling equipment and went to the north end of the facility to collect an upstream sample from Bull Branch (photos 170 – 171). The Inspectors then returned to confluence of the channel conveying manure from the cracked wall to Bull Branch and collected a sample from Bull Branch at the confluence with the channel (photos 177 – 181).

The Inspectors observed that fill had been placed over the hole in the concrete wall (photos 182 and 183).

The Inspectors then returned to their vehicle, preserved the samples, and exited the site.

A follow up call to complete the interview portion of the Inspection was held on September 27th, 2022. The operator's responses during the interview portion of the Inspection were used to complete the checklist. During the interview, the Operator stated that the crack in the wall has been there for "a few months".

2.3 Closing Conference and Post-Inspection

Table 9: Post Walk-Through

Was a closing conference held? With whom? A brief closing conference was held with the Operator and a tenative time was set up to complete the interview portion of the Inspection at a later date.	
Were specific Areas of Concern discussed with facility personnel?	Yes
Who were the Areas of Concern discussed with?	The Operator
Were any deficiencies or areas of concern addressed or fixed during the inspection? If so, list what was done.	During the Inspection, the Operator moved the hose from the pump in Pit 3 so that it could not discharge. Additionally, the Operator took steps to stop the flow of manure to Bull Branch. Following the site visit, the Operator notified EPA that he had blocked Bull Branch, flushed the channel with fresh water, and used a vacuum truck to remove the manure which was then placed in Pit 5.
Exit Time:	12:30 PM
Disposable Boots Left at Facility?	Yes
Vehicle Washed after leaving facility?	Yes

Table 10a: Sampling Information

Were samples taken?	Yes
Were samples split with facility?	No
Number of samples taken?	2
Was a trip blank created (done prior to entering the facility)?	Yes
Identify which sample is the trip blank.	Sample B01
Were field duplicate samples taken (1 duplicate per 20 samples)?	No
List chain of custody for fecal coliform samples:	Chain of Custody sheet number 5-65974
List chain of custody for nutrient and general chemistry samples:	Chain of Custody sheet number 5-65976
Location where samples were preserved:	Facility
Name of people involved with sample preservation:	Ben Atkinson, Cheryl Burdett
Time of sample preservation:	12:15 PM
Were samples shipped to a lab?	No

Table 10b: Facility Sample Information

Number	Name	Location	Date	Time	Collector	Color/ Smell	Photo #	Photo-grapher	Method of Collection	# of Sulfuric Acid Drops
SO1	Upstream	38.62951526 319047, -89.55206039 818188	09/14/2022	11:45 AM	BA CB	Slight brown color. No smell noted	170 171	CB	Grab	20
S02	Confluence	38.62754301 396082, -89.55274426 28533	09/14/2022	11:58 AM	BA CB	Dark Brown/ smelled of manure	179 - 181	CB	Grab	35
B01	Field Blank	38.62809818 201452, -89.55341482 436322	09/14/2022	12:04 PM	BA CB	None/no ne	None		Grab	5

Name of Laboratory where fecal coliform/E.coli samples were taken: Pace Analytical Services, LLC

Name of Laboratory where nutrients and general chemistry samples were taken: Chicago Regional Laboratory

Table 10c: Richter Dairy Inspection Sampling Results

Sample ID	Sample Location	Fecal coliform bacteria MPN/100mL	Nitrate-Nitrite N mg/L	Ammonia N mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Biochemical Oxygen Demand	Total Kjeldahl Nitrogen mg/L	Total Phosphorus mg/L
S01	Upstream at north end of property	712	U	0.41	154	19	3	1.31	2.09
S02	Confluence with manure channel	>242,000	U	46.6	1580	550	640	69.5	21.5
B01	Blank	NA	U	U	U	U	6	U	U

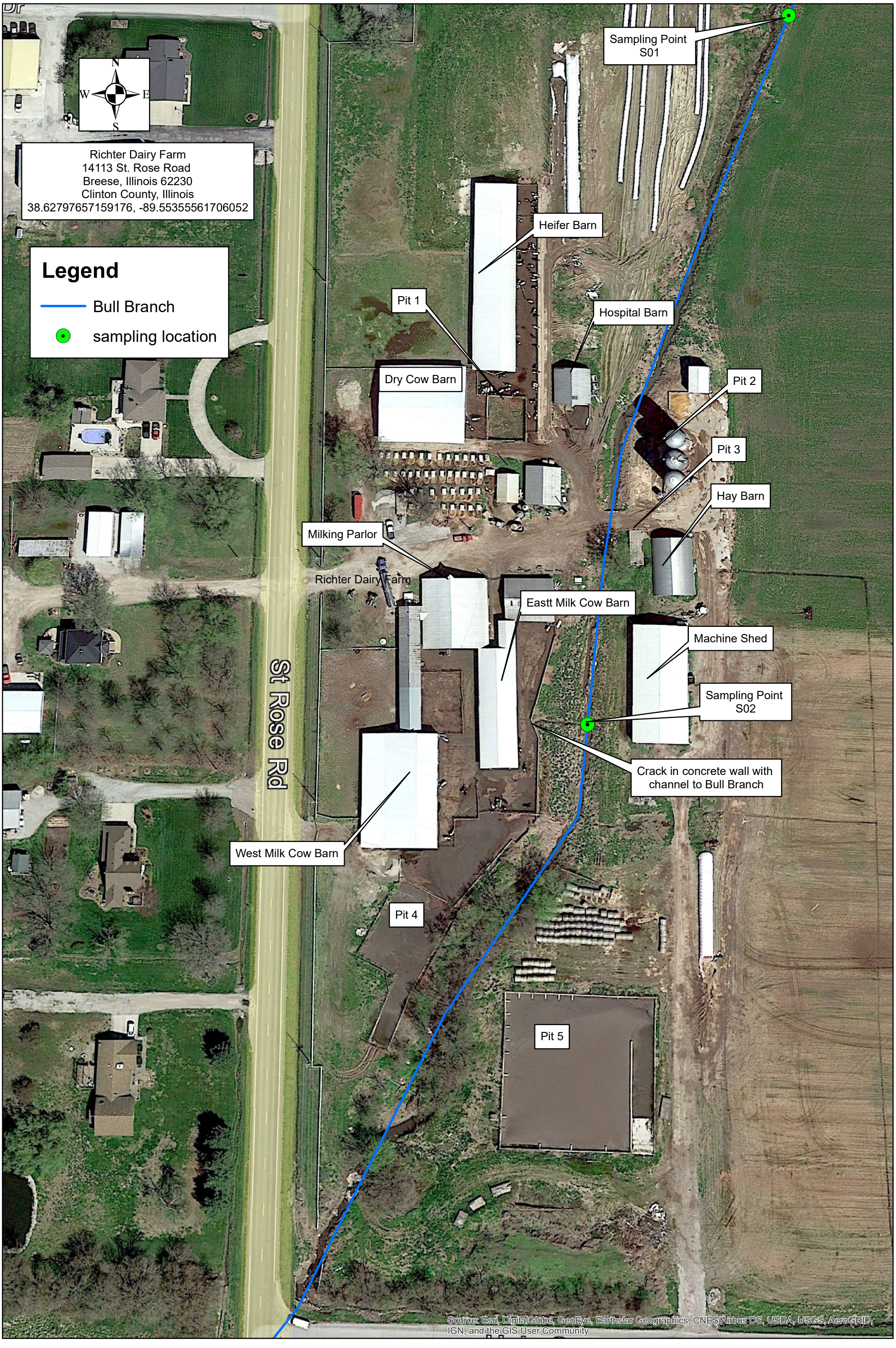
3. AREAS OF CONCERN

EPA observed these areas of concern:

1. Manure was observed flowing out of a hole in the concrete wall along the east side of Pit 4 in a channel approximately 50 feet into Bull Branch.
2. Manure solids were observed in the channel of Bull Branch.
3. A path of burnt vegetation and organic material was observed from the area west of the Pit 4 ramp to the roadside ditch.
4. A path of burnt vegetation and organic material was observed from the area south of the Pit 4 ramp toward the Bull Branch.
5. The mound of solid manure stacked north of the Hospital Barn did not have containment.
6. The Hospital Barn Pen area lacks containment.
7. The mortality pile west of Pit 5 did not have containment.
8. Manure and feed solids were observed uncontained on and around the culvert over Bull Branch.
9. A pump with a hose from manure Pit 3 was observed directed toward Bull Branch.
10. The denuded earthen lot west of the West Milk Cow Barn lacked containment.
11. Manure was observed outside of the gate to the Dry Cow Barn in close proximity to the roadside ditch and a roof gutter downspout.

List of appendices:
Appendix A - Aerial Map
Appendix B - Photo Log
Appendix C - Sampling Results

APPENDIX A


N
W
E
S
Richter Dairy Farm
14113 St. Rose Road
Breese, Illinois 62230
Clinton County, Illinois
38.62797657159176, -89.55355561706052
Legend
Bull Branch
sampling location
Sampling Point S01
Heifer Barn
Pit 1
Hospital Barn
Dry Cow Barn
Pit 2
Pit 3
Hay Barn
Milking Parlor
Richter Dairy Farm
Eastt Milk Cow Barn
Machine Shed
St Rose Rd
Sampling Point S02
Crack in concrete wall with channel to Bull Branch
West Milk Cow Barn
Pit 4
Pit 5
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

APPENDIX B

Richter Dairy
EPA Inspection September 14, 2022
All photos taken by Cheryl Burdett, Environmental Scientist, U.S. EPA
Camera: Olympus TG-4

1: P9140092
Description: Looking north along the west side of the Dry Cow Barn. Note there are manure solids around the gate to the animal area as well a downspout outlet in the same area.
Location: Southwest corner of the Dry Cow Barn
Camera Direction: North
Date/Time: September 14, 2022 9:36 AM

2: P9140093
Description: Looking north across Pit 1 (behind the fence where the vegetation is seen) toward the south end of the Heifer Barn.
Location: Southwest corner of Pit 1.
Camera Direction: North Date/Time: September 14, 2022 9:37 AM

3: P9140094
Description: Looking west along the south side of the Dry Cow Barn (right) and the calf hutch area (left).
Location: Southwest corner of Pit 1.
Camera Direction: West Date/Time: September 14, 2022 9:37 AM

4: P9140095
Description: Looking north at the south side of the Hospital Barn.
Location: East of Pit 1. Southwest corner of the Hospital Barn.
Camera Direction: North Date/Time: September 14, 2022 9:38 AM

5: P9140096
Description: Looking southeast from the southwest corner of the Hospital Barn. Note that there is no containment around the south end of the Hospital Barn. Also note the proximity of the waterway (blue arrow).
Location: Southwest corner of the Hospital Barn.
Camera Direction: Southeast Date/Time: September 14, 2022 9:38 AM

6: P9140097
Description: Looking south along the east side of the Heifer Barn (right).
Location: East side of the Heifer barn.
Camera Direction: South Date/Time: September 14, 2022 9:40 AM

7: P9140098
Description: Looking south along the west side of the Heifer Barn (left) toward the Dry Cow Barn (in distance).
Location: Northwest corner of the Heifer Barn.
Camera Direction: South Date/Time: September 14, 2022 9:41 AM

8: P9140099
Description: Looking west toward the fence along St. Rose Road from the Northwest corner of the Heifer Barn.
Location: Northwest corner of the Heifer Barn.
Camera Direction: West Date/Time: September 14, 2022 9:41 AM

9: P9140100
Description: Looking west toward the fence along St. Rose Road from the Northwest corner of the Heifer Barn.
Location: Northwest corner of the Heifer Barn.
Camera Direction: West Date/Time: September 14, 2022 9:42 AM

10: P9140101
Description: Looking northwest toward the fence along St. Rose Road from the Northwest corner of the Heifer Barn.
Location: Northwest corner of the Heifer Barn.
Camera Direction: Northwest Date/Time: September 14, 2022 9:42 AM

11: P9140102
Description: Looking north from the north end of the Heifer Barn toward plastic wrapped feed.
Location: North of the Heifer Barn.
Camera Direction: North Date/Time: September 14, 2022 9:42 AM

12: P9140103
Description: Looking southeast from the north end of the facility. Note the flow path (red line) originating at the north end of the feed bags.
Location: North end of the facilty.
Camera Direction: Southeast Date/Time: September 14, 2022 9:45 AM

13: P9140104
Description: Close up of the flow path noted in photo 12.
Location: North end of the facility.
Camera Direction: Southeast Date/Time: September 14, 2022 9:45 AM

14: P9140105
Description: Looking southeast from the north end of the facility. Note the flow path (red line) originating at the north end of the feed bags.
Location: North end of the facilty.
Camera Direction: Southeast Date/Time: September 14, 2022 9:45 AM

15: P9140106
Description: Looking upstream along Bull Branch from the west bank.
Location: West bank of Bull Branch on the north side of the facility.
Camera Direction: Northeast Date/Time: September 14, 2022 9:50 AM

16: P9140107
Description: Looking downstream along Bull Branch from the west bank.
Location: West bank of Bull Branch on the north side of the facility.
Camera Direction: Southeast Date/Time: September 14, 2022 9:50 AM

17: P9140108
Description: A mound of solid manure with no runoff containment located north of the Hospital Barn and east of the Heifer Barn.
Location: North of the Hospital Barn and east of the Heifer Barn.
Camera Direction: West Date/Time: September 14, 2022 9:52 AM

18: P9140109
Description: Manure solids on the west bank of Bull Branch east of the mound of solid manure.
Location: East of the mound of solid manure.
Camera Direction: Down Date/Time: September 14, 2022 9:52 AM

19: P9140110
Description: Manure solids on the west bank of Bull Branch east of the mound of solid manure.
Location: East of the mound of solid manure.
Camera Direction: Down Date/Time: September 14, 2022 9:52 AM

20: P9140111
Description: Error Photo
Location:
Camera Direction:
Date/Time: September 14, 2022

21: P9140112
Description: Error Photo
Location:
Camera Direction: Date/Time: September 14, 2022

22: P9140113
Description: Looking downstream along the Bull Branch.
Location: West bank of Bull Branch, east of the Hospital Barn.
Camera Direction: Southeast Date/Time: September 14, 2022 9:52 AM

23: P9140114
Description: Looking south along Bull Branch.
Location: East of the Hospital Barn
Camera Direction: South Date/Time: September 14, 2022 9:52 AM

24: P9140115
Description: Looking north along the access road paralel to Bull Branch.
Location: West of Bull Branch and east of the Hospital Barn.
Camera Direction: North Date/Time: September 14, 2022 9:53 AM

25: P9140116
Description: Dark colored leachate in access road between the solid manure mound and Bull Branch.
Location: East of the solid manure mound and the Hospital Barn.
Camera Direction: West Date/Time: September 14, 2022 9:53 AM

26: P9140117
Description: Solids deposited in grass along the west bank of Bull Branch.
Location: West bank of Bull Branch, east of Hospital Barn.
Camera Direction: East Date/Time: September 14, 2022 9:53 AM

27: P9140118
Description: Manure solids deposited on access road east of the Hospital Barn.
Location: East of the Hospital Barn.
Camera Direction: South Date/Time: September 14, 2022 9:54 AM

28: P9140119
Description: Dead vegitation and eroded flow paths along the west bank of Bull Branch and the access road.
Location: East of the Hospital Barn.
Camera Direction: Northeast Date/Time: September 14, 2022 9:54 AM

29: P9140120
Description: Manure solids on the ground around the exterior of the pen on the south side of the Hospital Barn.
Location: Southeast corner of the Hospital Barn
Camera Direction: West Date/Time: September 14, 2022 9:54 AM

30: P9140121
Description: Looking north along the access road between Bull Branch (right) and the Hospital Barn (left center).
Location: South of the Hospital Barn.
Camera Direction: North Date/Time: September 14, 2022 9:55 AM

31: P9140122
Description: Looking north along the access road between Bull Branch (right) and the Hospital Barn (left center).
Location: South of the Hospital Barn.
Camera Direction: North Date/Time: September 14, 2022 9:55 AM

32: P9140123
Description: Looking north along Bull Branch from the access road over the waterway.
Location: Access road over Bull Branch.
Camera Direction: North Date/Time: September 14, 2022 9:56 AM

33: P9140124
Description: Looking south along Bull Branch from the access road over the waterway.
Location: Access road over Bull Branch.
Camera Direction: South Date/Time: September 14, 2022 9:56 AM

34: P9140125
Description: Looking north on the east side of Bull Branch. Note the slatted concrete cover over the 16'x40' pit and the curbing along the top west edge of the pit.
Location: East side of the facility, west of the silos.
Camera Direction: North Date/Time: September 14, 2022 9:56 AM

35: P9140126
Description: Looking south toward the Hay Barn (left) and the Pit 3 (right).
Location: East side of the facilty, southwest of the silos.
Camera Direction: South Date/Time: September 14, 2022 9:56 AM

36: P9140127
Description: Looking southwest across Bull Branch from the area northwest of the silos.
Location: Northwest of the silos on the east side of the facility.
Camera Direction: Southwest Date/Time: September 14, 2022 9:58 AM

37: P9140128
Description: Looking southwest across Bull Branch from the area northwest of the silos.
Location: Northwest of the silos on the east side of the facility.
Camera Direction: Southwest Date/Time: September 14, 2022 9:58 AM

38: P9140129
Description: Looking west across Bull Branch toward the Hospital Barn. The solids deposited along the western bank are visible (red arrows).
Location: Northwest of the silos on the east side of the facility.
Camera Direction: West Date/Time: September 14, 2022 9:58 AM

39: P9140130
Description: Looking west from the area northwest of the silos. Note the solid manure stacked (right) and the runoff flowpaths (blue arrow).
Location: Northwest of the silos on the east side of the facility.
Camera Direction: West Date/Time: September 14, 2022 9:58 AM

40: P9140131
Description: Looking southwest along the runoff pathways (blue arrows) from the solid manure stacked northwest of the silos to Pit 2.
Location: Northwest of the silos on the east side of the facility.
Camera Direction: Southwest Date/Time: September 14, 2022 9:59 AM

41: P9140132
Description: Solid manure stacked northwest of the silos.
Location: Northwest of the silos on the east side of the facility.
Camera Direction: North Date/Time: September 14, 2022 9:59 AM

42: P9140133
Description: Looking south along the feed bag on the east side of the silos.
Location: Northeast of the silos on the east side of the facility.
Camera Direction: South Date/Time: September 14, 2022 10:00 AM

43: P9140134
Description: Looking at the north end of the feed bag east of the silos (right), the north commodity barn (left) and a mound of organic solids.
Location: North of the silos on the east side of the facility.
Camera Direction: North Date/Time: September 14, 2022 10:00 AM

44: P9140135
Description: Looking northwest at the northwest corner of the bunker north of the silos on the east side of the facility.
Location: North of the silos on the on east side of the facility.
Camera Direction: Northwest Date/Time: September 14, 2022 10:01 AM

45: P9140136
Description: Looking north at the Commodity Barn north of the silos.
Location: North of the silos on the east side of the facility.
Camera Direction: North Date/Time: September 14, 2022 10:01 AM

46: P9140137
Description: Looking north at the Commodity Barn north of the silos.
Location: North of the silos on the east side of the facility.
Camera Direction: North Date/Time: September 14, 2022 10:01 AM

47: P9140138
Description: Looking northwest at the northwest corner of the bunker north of the silos on the east side of the facility.
Location: North of the silos on the on east side of the facility.
Camera Direction: Northwest Date/Time: September 14, 2022 10:01 AM

48: P9140139
Description: Feed loading area south of the silos.
Location: South of the silos
Camera Direction: Northwest Date/Time: September 14, 2022 10:01 AM

49: P9140140
Description: North side of the Hay Barn (left) and the adjacent Pit 3 (right).
Location: North of the Hay Barn.
Camera Direction: West Date/Time: September 14, 2022 10:03 AM

50: P9140141
Description: North side of the Hay Barn (left) and the adjacent Pit 3 (right).
Location: North of the Hay Barn.
Camera Direction: West Date/Time: September 14, 2022 10:03 AM

51: P9140142
Description: North side of the Hay Barn (left) and the adjacent Pit 3. (right).
Location: North of the Hay Barn.
Camera Direction: West Date/Time: September 14, 2022 10:03 AM

52: P9140143
Description: Looking south along the west side of Pit 3. Note the black hose connected to a pump at the south end (red arrow).
Location: Northwest corner of Pit 3.
Camera Direction: South Date/Time: September 14, 2022 10:03 AM

53: P9140144
Description: Potential flow path on the east bank of Bull Branch west of Pit 3.
Location: East bank of Bull Branch, west of Pit 3.
Camera Direction: Southwest Date/Time: September 14, 2022 10:04 AM

54: P9140145
Description: Area southwest of Pit 3. Note the black hose (red arrow). One end of the black hose is connected to a pump and other end is toward Bull Branch.
Location: Southwest corner of Pit 3.
Camera Direction: Southwest Date/Time: September 14, 2022 10:04 AM

55: P9140146
Description: Potential flow paths on the east bank of Bull Branch west of the the black hose attached to the pump. Location: Southwest corner of Pit 3.
Camera Direction: Southwest Date/Time: September 14, 2022 10:04 AM

56: P9140147
Description: Potential flow paths on the east bank of Bull Branch west of the the black hose attached to the pump.
Location: Southwest corner of Pit 3.
Camera Direction: Southwest Date/Time: September 14, 2022 10:04 AM

57: P9140148
Description: Looking south along the west side of Pit 3. Note the black hose was picked up and moved over onto Pit 3 (red arrow).
Location: Northwest corner of Pit 3. Camera Direction: South Date/Time: September 14, 2022 10:05 AM

58: P9140149
Description: Organic solids deposited on the road, culvert, and banks of Bull Branch.
Location: East side of the box culvert over Bull Branch.
Camera Direction: Southwest Date/Time: September 14, 2022 10:05 AM

59: P9140150
Description: Looking south along the west side of the Milking Parlor (left) toward the outdoor lot on the west side of the West Milk Cow Barn.
Location: Northwest of the Milking Parlor.
Camera Direction: South Date/Time: September 14, 2022 10:11 AM

60: P9140151
Description: Looking south along the outdoor lot on the west side of the West Milk Cow Barn.
Location: North end of the outdoor lot on the west side of the West Milk Cow Barn.
Camera Direction: South Date/Time: September 14, 2022 10:11 AM

61: P9140152
Description: White pipe protruding from the east side of the roadside ditch adjacent to the entrance to the facility. Location: South side of entrance on west side of the facility.
Camera Direction: Down Date/Time: September 14, 2022 10:11 AM

62: P9140153
Description: Potential flow path from outdoor lot on the west side of the West Milk Cow Barn to the roadside ditch.
Location: West side of the facility, west of the West Milk Cow Barn.
Camera Direction: South Date/Time: September 14, 2022 10:12 AM

63: P9140154
Description: Potential flow path from outdoor lot on the west side of the West Milk Cow Barn to the roadside ditch.
Location: West side of the facility, west of the West Milk Cow Barn.
Camera Direction: South Date/Time: September 14, 2022 10:12 AM

64: P9140155
Description: Potential flow path from outdoor lot on the west side of the West Milk Cow Barn to the roadside ditch.
Location: West side of the facility, west of the West Milk Cow Barn.
Camera Direction: South Date/Time: September 14, 2022 10:12 AM

65: P9140156
Description: Blue pipe protruding from the east side of the roadside ditch.
Location: West side of the facility, west of the West Milk Cow Barn.
Camera Direction:
Date/Time: September 14, 2022

66: P9140157
Description: Looking east toward the West Milk Cow Barn across the denuded outdoor lot. Note the blue pipe receiving roof gutter water (blue arrow).
Location: West side of the facility, west of the West Milk Cow Barn.
Camera Direction: East Date/Time: September 14, 2022 10:13 AM

67: P9140158
Description: Looking north along the roadside ditch from the south entrance.
Location: South entrance on west side of the facility.
Camera Direction: North Date/Time: September 14, 2022 10:14 AM

68: P9140159
Description: Looking north across the outdoor lot on the west side of the West Milk Cow Barn.
Location: South entrance on the west side of the facility.
Camera Direction: North Date/Time: September 14, 2022 10:14 AM

69: P9140160
Description: Looking northeast across the outdoor lot on the west side of the West Milk Cow Barn.
Location: South entrance on the west side of the facility.
Camera Direction: Northeast Date/Time: September 14, 2022 10:14 AM

70: P9140161
Description: Burnt vegetation and organic solids on ground in path on west side of fence west of Pit 4 ramp.
Location: West side of the facility approximately 220 feet south of the south entrance.
Camera Direction: Southeast Date/Time: September 14, 2022 10:15 AM

71: P9140162
Description: Burnt vegetation and organic solids on ground in path on west side of fence west of Pit 4 ramp.
Location: West side of the facility approximately 220 feet south of the south entrance.
Camera Direction: South Date/Time: September 14, 2022 10:15 AM

72: P9140163
Description: Roadside ditch along St. Rose Road.
Location: West side of the facility approximately 220 feet south of the south entrance.
Camera Direction: Southwest Date/Time: September 14, 2022 10:15 AM

73: P9140164
Description: Burnt vegetation and organic solids on ground in path on west side of fence west of Pit 4 ramp.
Location: West side of the facility approximately 220 feet south of the south entrance.
Camera Direction: East Date/Time: September 14, 2022 10:16 AM

74: P9140165
Description: Looking on the east side of the fence from photos 70 and 73 toward the ramp to Pit 4.
Location: Southwest of the ramp to Pit 4.
Camera Direction: Northeast Date/Time: September 14, 2022 10:16 AM

75: P9140166
Description: Looking on the east side of the fence from photos 70 and 73 toward the ramp to Pit 4.
Location: Southwest of the ramp to Pit 4.
Camera Direction: Northeast Date/Time: September 14, 2022 10:16 AM

76: P9140167
Description: Organic solids and pathway seen in photos 70 – 73.
Location: Location: West side of the facility approximately 220 feet south of the south entrance.
Camera Direction: Northwest Date/Time: September 14, 2022 10:16 AM

77: P9140168
Description: Looking north along fence line.
Location: West side of the facility approximately 220 feet south of the south entrance.
Camera Direction: North Date/Time: September 14, 2022 10:16 AM

78: P9140169
Description: Concrete within the Bull Branch channel.
Location: Bull Branch approximately 100 feet northeast from the intersection of St. Rose Road and Holy Cross Lane.
Camera Direction: Southeast Date/Time: September 14, 2022 10:19 AM

79: P9140170
Description: Organic solids and burnt vegetation along a path down to Bull Branch.
Location: Approximately 100 feet southwest of the ramp to Pit 4.
Camera Direction: Northwest Date/Time: September 14, 2022 10:19 AM

80: P9140171
Description: Potential flow path from photo 79 continuing southeast toward Bull Branch.
Location: Approximately 100 feet southwest of the ramp to Pit 4.
Camera Direction: Southeast Date/Time: September 14, 2022 10:19 AM

81: P9140172
Description: Potential flow path from photo 79 continuing southeast toward Bull Branch.
Location: Approximately 100 feet southwest of the ramp to Pit 4.
Camera Direction: Southeast Date/Time: September 14, 2022 10:19 AM

82: P9140173
Description: Potential flow path from photo 79 continuing southeast toward Bull Branch.
Location: Approximately 100 feet southwest of the ramp to Pit 4.
Camera Direction: Southeast Date/Time: September 14, 2022 10:19 AM

83: P9140174
Description: Looking north into Pit 4 along the ramp.
Location: South of Pit 4.
Camera Direction: North Date/Time: September 14, 2022 10:20 AM

84: P9140175
Description: Looking south toward the upslope portion of the path seen in photos 79-81. Note the organic solids on the ground (red arrow).
Location: South of Pit 4.
Camera Direction: Southwest Date/Time: September 14, 2022 10:20 AM

85: P9140176
Description: Looking south toward the upslope portion of the path seen in photos 79-81. Note the organic solids on the ground (red arrow).
Location: South of Pit 4.
Camera Direction: South Date/Time: September 14, 2022 10:20 AM

86: P9140177
Description: Looking north into Pit 4 along the ramp.
Location: South of Pit 4.
Camera Direction: North Date/Time: September 14, 2022 10:20 AM

87: P9140178
Description: Looking southwest from the southeast corner of the ramp to Pit 4.
Location: Southeast corner of the ramp to Pit 4.
Camera Direction: Southwest Date/Time: September 14, 2022 10:21 AM

88: P9140179
Description: Organic solids deposited on the fence on the east side of the ramp to Pit 4.
Location: East side of the ramp to Pit 4.
Camera Direction: Northwest Date/Time: September 14, 2022 10:21 AM

89: P9140180
Description: Organic solids deposited on the fence on the east side of the ramp to Pit 4.
Location: East side of the ramp to Pit 4.
Camera Direction: North Date/Time: September 14, 2022 10:22 AM

90: P9140181
Description: Potential flow path down the bank Bull Branch from the area on the east side of the ramp to Pit 4.
Location: East of the ramp to Pit 4 west of Bull Branch.
Camera Direction: East Date/Time: September 14, 2022 10:22 AM

91: P9140182
Description: Potential flow path down the bank Bull Branch from the area on the east side of the ramp to Pit 4.
Location: East of the ramp to Pit 4 west of Bull Branch.
Camera Direction: East Date/Time: September 14, 2022 10:22 AM

92: P9140183
Description: Potential flow path down the bank Bull Branch from the area on the east side of the ramp to Pit 4. Note the foam on the surface of the water.
Location: East of the ramp to Pit 4 west of Bull Branch.
Camera Direction: East Date/Time: September 14, 2022 10:22 AM

93: P9140184
Description: Upstream on Bull Branch. Note the foam on the surface of the water.
Location: West side of Bull Branch east of the ramp to Pit 4.
Camera Direction: Northeast Date/Time: September 14, 2022 10:22 AM

94: P9140185
Description: Downstream on Bull Branch. Note the foam on the surface of the water.
Location: West side of Bull Branch east of the ramp to Pit 4.
Camera Direction: Southeast Date/Time: September 14, 2022 10:22 AM

95: P9140186
Description: Downstream on Bull Branch. Note the foam on the surface of the water.
Location: West side of Bull Branch east of the ramp to Pit 4.
Camera Direction: Southeast Date/Time: September 14, 2022 10:22 AM

96: P9140187
Description: Looking east into Bull Branch. Note the foam on the surface on the water.
Location: West bank of Bull Branch, East of Pit 4.
Camera Direction: East Date/Time: September 14, 2022 10:23 AM

97: P9140188
Description: Looking east into Bull Branch. Note the foam on the surface on the water.
Location: West bank of Bull Branch, East of Pit 4.
Camera Direction: East Date/Time: September 14, 2022 10:23 AM

98: P9140189
Description: Looking at Pit 4 from the northeast corner.
Location: Northeast corner of Pit 4
Camera Direction: West Date/Time: September 14, 2022 10:23 AM

99: P9140190
Description: Looking north from the northeast corner of Pit 4.
Location: Northeast corner of Pit 4.
Camera Direction: North Date/Time: September 14, 2022 10:24 AM

100: P9140191
Description: Looking northwest across the solids settling area north of Pit 4. Note the manure solids on the top of the concrete wall (red arrows).
Location: Northeast of the northeast corner of Pit 4.
Camera Direction: Northwest Date/Time: September 14, 2022 10:24 AM

101: P9140192
Description: Looking northwest across the solids settling area north of Pit 4. Note the manure solids on the top of the concrete wall (red arrows).
Location: Northeast of the northeast corner of Pit 4.
Camera Direction: Northwest Date/Time: September 14, 2022 10:24 AM

102: P9140193
Description: Manure flowing from the solids settling area into Pit 4.
Location: Northeast corner of Pit 4.
Camera Direction: Down Date/Time: September 14, 2022 10:24 AM

103: P9140194
Description: Looking Southwest across Pit 4 from the northeast corner of Pit 4.
Location: Northeast corner of Pit 4.
Camera Direction: Southwest Date/Time: September 14, 2022 10:24 AM

104: P9140195
Description: Looking Northwest across the north end of Pit 4.
Location: Northeast corner of Pit 4.
Camera Direction: Northwest Date/Time: September 14, 2022 10:24 AM

105: P9140196
Description: Looking Southwest across Pit 4 from the northeast corner of Pit 4.
Location: Northeast corner of Pit 4.
Camera Direction: Southwest Date/Time: September 14, 2022 10:24 AM

106: P9140197
Description: Looking northwest across the solids settling area north of Pit 4.
Location: Northeast of the northeast corner of Pit 4.
Camera Direction: Northwest Date/Time: September 14, 2022 10:24 AM

107: P9140198
Description: Looking north across the solids settling area north of Pit 4.
Location: Northeast corner of Pit 4.
Camera Direction: North Date/Time: September 14, 2022 10:24 AM

108: P9140199
Description: Looking northeast across the solids settling area north of Pit 4.
Location: Northeast corner of Pit 4.
Camera Direction: North Date/Time: September 14, 2022 10:24 AM

109: P9140200
Description: Looking east into Bull Branch. Note organic solids deposited in the channel (red arrow).
Location: Southeast of the East Milk Cow Barn.
Camera Direction: East Date/Time: September 14, 2022 10:27 AM

110: P9140201
Description: Looking southeast into Bull Branch. Note organic solids deposited in the channel (red arrow).
Location: Southeast of the East Milk Cow Barn.
Camera Direction: Southeast Date/Time: September 14, 2022 10:28 AM

111: P9140202
Description: Looking north along the east side of the outdoor concrete lot east of the East Milk Cow Barn. Note the manure solids on the top of and on the east side of the concrete wall (red arrows).
Location: East of the East Milk Cow Barn.
Camera Direction: North Date/Time: September 14, 2022 10:28 AM

112: P9140203
Description: Looking west at the east side of the outdoor concrete lot east of the East Milk Cow Barn. Note the manure solids on the top of and on the east side of the concrete wall (red arrows).
Location: East of the East Milk Cow Barn.
Camera Direction: West Date/Time: September 14, 2022 10:28 AM

113: P9140204
Description: Looking southwest toward the outdoor concrete lot east of the East Milk Cow Barn.
Location: East of the East Milk Cow Barn.
Camera Direction: Southwest Date/Time: September 14, 2022 10:29 AM

114: P9140205
Description: A blue pipe protruding from the west bank of Bull Branch. There was a small flow of clear water coming from the pipe.
Location: East of the southeast corner of the East Milk Cow Barn
Camera Direction: Down Date/Time: September 14, 2022 10:30 AM

115: P9140206
Description: A blue pipe protruding from the west bank of Bull Branch. There was a small flow of clear water coming from the pipe.
Location: East of the southeast corner of the East Milk Cow Barn
Camera Direction: Down Date/Time: September 14, 2022 10:30 AM

116: P9140207
Description: Looking west from the location of the blue pipe protruding from west bank of Bull Branch. Note the two blue pipes collecting roof gutter water.
Location: East of East Milk Cow Barn.
Camera Direction: West Date/Time: September 14, 2022 10:31 AM

117: P9140208
Description: Cracked concrete wall allowing manure to flow into channelized path to Bull Branch.
Location: East side of the outdoor lot east of the East Milk Cow Barn.
Camera Direction: West Date/Time: September 14, 2022 10:33 AM

118: P9140209
Description: Channelized flow path conveying liquid manure to Bull Branch.
Location: East side of the outdoor lot east of the East Milk Cow Barn.
Camera Direction: North Date/Time: September 14, 2022 10:33 AM

119: P9140210
Description: Cracked concrete wall allowing manure to flow into channelized path to Bull Branch.
Location: East side of the outdoor lot east of the East Milk Cow Barn.
Camera Direction: West Date/Time: September 14, 2022 10:33 AM

120: P9140211
Description: Channelized flow path conveying liquid manure to Bull Branch.
Location: East side of the outdoor lot east of the East Milk Cow Barn.
Camera Direction: North Date/Time: September 14, 2022 10:33 AM

121: P9140212
Description: Manure flowing in the channelized flow path to Bull Branch.
Location: West bank of Bull Branch east of the East Milk Cow Barn.
Camera Direction: South Date/Time: September 14, 2022 10:34 AM

122: P9140213
Description: Confluence of the channelized flow path conveying manure to Bull Branch.
Location: Location: West bank of Bull Branch east of the East Milk Cow Barn.
Camera Direction: Southeast Date/Time: September 14, 2022 10:34 AM

123: P9140214
Description: Confluence of the channelized flow path conveying manure to Bull Branch.
Location: Location: West bank of Bull Branch east of the East Milk Cow Barn.
Camera Direction: Southeast Date/Time: September 14, 2022 10:34 AM

124: P9140215
Description: Upstream along Bull Branch from the confluence of the channelized flow path.
Location: West bank of Bull Branch east of the East Milk Cow Barn.
Camera Direction: North Date/Time: September 14, 2022 10:34 AM

125: P9140216
Description: Downstream along Bull Branch from the confluence of the channelized flow path.
Location: West bank of Bull Branch east of the East Milk Cow Barn.
Camera Direction: South Date/Time: September 14, 2022 10:34 AM

126: P9140217
Description: Error photo
Date/Time: September 14, 2022

127: P9140218
Description: Closeup of manure flowing into Bull Branch from the channelized flow path.
Location: The confluence of the channelized flow path and Bull Branch.
Camera Direction: Down Date/Time: September 14, 2022 10:37 AM

128: P9140219
Description: Closeup of manure flowing into Bull Branch from the channelized flow path.
Location: The confluence of the channelized flow path and Bull Branch.
Camera Direction: Down Date/Time: September 14, 2022 10:37 AM

129: P9140220
Description: Closeup of manure flowing into Bull Branch from the channelized flow path.
Location: The confluence of the channelized flow path and Bull Branch.
Camera Direction: Down Date/Time: September 14, 2022 10:37 AM

130: P9140221
Description: Closeup of manure flowing into Bull Branch from the channelized flow path.
Location: The confluence of the channelized flow path and Bull Branch.
Camera Direction: Down Date/Time: September 14, 2022 10:37 AM

131: P9140222
Description: Closeup of manure flowing into Bull Branch from the channelized flow path.
Location: The confluence of the channelized flow path and Bull Branch.
Camera Direction: Down Date/Time: September 14, 2022 10:37 AM

132: P9140223
Description: Looking east across the culvert for the access road on the north side of the facility.
Location: West side of the access road culvert over Bull Branch.
Camera Direction: East Date/Time: September 14, 2022 10:41 AM

133: P9140224
Description: Looking west across Bull Branch toward the channelized flow path.
Location: East bank of Bull Branch, east of the East Milk Cow Barn.
Camera Direction: West Date/Time: September 14, 2022 10:53 AM

134: P9140225
Description: Bones and decomposing animal carcasses on east side of Bull Branch.
Location: West of Pit 5, east of Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:01 AM

135: P9140226
Description: Bones and decomposing animal carcasses on east side of Bull Branch.
Location: West of Pit 5, east of Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:01 AM

136: P9140227
Description: Bones and decomposing animal carcasses on east side of Bull Branch.
Location: West of Pit 5, east of Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:01 AM

137: P9140228
Description: Bones and decomposing animal carcasses on east side of Bull Branch.
Location: West of Pit 5, east of Bull Branch.
Camera Direction: Northwest Date/Time: September 14, 2022 11:01 AM

138: P9140229
Description: Bones and decomposing animal carcasses on east side of Bull Branch.
Location: West of Pit 5, east of Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:01 AM

139: P9140230
Description: Looking west toward Bull Branch west of the area with bones and decomposing animal carcasses on east side Bull Branch.
Location: West of Pit 5, east of Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:01 AM

140: P9140231
Description: Looking downstream along Bull Branch. Note the foam on the surface of the water.
Location: East bank of Bull Branch, west of Pit 5.
Camera Direction: South Date/Time: September 14, 2022 11:02 AM

141: P9140232
Description: Looking downstream along Bull Branch. Note the foam on the surface of the water.
Location: East bank of Bull Branch, west of Pit 5.
Camera Direction: South Date/Time: September 14, 2022 11:03 AM

142: P9140233
Description: Looking west across Bull Branch to the west bank.
Location: East bank of Bull Branch, west of Pit 5.
Camera Direction: South Date/Time: September 14, 2022 11:04 AM

143: P9140234
Description: Looking downstream along Bull Branch. Note the foam on the surface of the water.
Location: East bank of Bull Branch, west of Pit 5.
Camera Direction: South Date/Time: September 14, 2022 11:05 AM

144: P9140235
Description: Looking northeast across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: Northeast Date/Time: September 14, 2022 11:06 AM

145: P9140236
Description: Looking east across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: East Date/Time: September 14, 2022 11:06 AM

146: P9140237
Description: Looking east across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: East Date/Time: September 14, 2022 11:06 AM

147: P9140238
Description: Looking east across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: East Date/Time: September 14, 2022 11:06 AM

148: P9140239
Description: Looking southeast across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: Southeast Date/Time: September 14, 2022 11:06 AM

149: P9140240
Description: Looking east across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: East Date/Time: September 14, 2022 11:06 AM

150: P9140241
Description: Looking northeast across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: Northeast Date/Time: September 14, 2022 11:07 AM

151: P9140242
Description: Looking northeast across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: Northeast Date/Time: September 14, 2022 11:08 AM

152: P9140243
Description: Hose used to transfer manure from Pit 4 to Pit 5.
Location: Southwest corner of Pit 5.
Camera Direction: Northeast Date/Time: September 14, 2022 11:08 AM

153: P9140244
Description: Looking northeast across Pit 5 from the southwest side.
Location: Southwest corner of Pit 5.
Camera Direction: Northeast Date/Time: September 14, 2022 11:08 AM

154: P9140245
Description: Hose used to transfer manure from Pit 4 to Pit 5.
Location: Southwest corner of Pit 5.
Camera Direction: Down Date/Time: September 14, 2022 11:08 AM

155: P9140246
Description: Hose used to transfer manure from Pit 4 to Pit 5.
Location: Southwest corner of Pit 5.
Camera Direction: Down Date/Time: September 14, 2022 11:08 AM

156: P9140247
Description: Hose used to transfer manure from Pit 4 to Pit 5.
Location: Southwest corner of Pit 5.
Camera Direction: Down Date/Time: September 14, 2022 11:09 AM

157: P9140248
Description: Hose used to transfer manure from Pit 4 to Pit 5.
Location: Southwest corner of Pit 5.
Camera Direction: Down Date/Time: September 14, 2022 11:09 AM

158: P9140249
Description: Hose used to transfer manure from Pit 4 to Pit 5.
Location: Southwest corner of Pit 5.
Camera Direction: Down Date/Time: September 14, 2022 11:09 AM

159: P9140250
Description: Looking north across Pit 5 from the west end of the south side.
Location: West end of the south side of Pit 5.
Camera Direction: North Date/Time: September 14, 2022 11:09 AM

160: P9140251
Description: Looking northwest across Pit 5 from the west end of the south side.
Location: West end of the south side of Pit 5.
Camera Direction: Northwest Date/Time: September 14, 2022 11:09 AM

161: P9140252
Description: Looking northwest across Pit 5 from the west end of the south side.
Location: West end of the south side of Pit 5.
Camera Direction: Northwest Date/Time: September 14, 2022 11:09 AM

162: P9140253
Description: Looking north into the ramp to Pit 5 on the east side of Pit 5.
Location: East end of the south side of Pit 5.
Camera Direction: North Date/Time: September 14, 2022 11:10 AM

163: P9140254
Description: Looking north into the ramp to Pit 5 on the east side of Pit 5.
Location: East end of the south side of Pit 5.
Camera Direction: North Date/Time: September 14, 2022 11:10 AM

164: P9140255
Description: Looking west across the south end of Pit 5.
Location: South end of the east side of Pit 5.
Camera Direction: West Date/Time: September 14, 2022 11:11 AM

165: P9140256
Description: Looking west across the south end of Pit 5.
Location: South end of the east side of Pit 5.
Camera Direction: West Date/Time: September 14, 2022 11:11 AM

166: P9140257
Description: Looking west across the south end of Pit 5.
Location: South end of the east side of Pit 5.
Camera Direction: West Date/Time: September 14, 2022 11:11 AM

167: P9140258
Description: Manure application gun sitting east of Pit 5.
Location: East side of Pit 5.
Camera Direction: Northeast Date/Time: September 14, 2022 11:12 AM

168: P9140259
Description: Looking North along the east side of the facility from the northeast corner of Pit 5.
Location: Northeast corner of Pit 5.
Camera Direction: North Date/Time: September 14, 2022 11:12 AM

169: P9140260
Description: Looking east at the feed storage area from the culvert over Bull Branch.
Location: Access road culvert over Bull Branch.
Camera Direction: East Date/Time: September 14, 2022 11:17 AM

170: P9140261
Description: Sample S01 taken at the north end of the facility
Location: Bull Branch at the north end of the facility.
Camera Direction: Down Date/Time: September 14, 2022 11:45 AM

171: P9140262
Description: Sample S01 taken at the north end of the facility
Location: Bull Branch at the north end of the facility.
Camera Direction: Down Date/Time: September 14, 2022 11:45 AM

172: P9140263
Description: Water flowing south into the access road culvert over Bull Branch.
Location: North side of the access road culvert over Bull Branch.
Camera Direction: East Date/Time: September 14, 2022 11:49 AM

173: P9140264
Description: Water flowing out of the acces road culvert over Bull Branch.
Location: South side of the access road culver over Bull Branch.
Camera Direction: Southeast Date/Time: September 14, 2022 11:49 AM

174: P9140265
Description: Water flowing out of the acces road culvert over Bull Branch. Note the water snake in the waterway.
Location: South side of the access road culver over Bull Branch.
Camera Direction: Southeast Date/Time: September 14, 2022 11:49 AM

175: P9140266
Description: Solids near Bull Branch near the outlet of the the acces road culvert over Bull Branch.
Location: South side of the access road culver over Bull Branch.
Camera Direction: Down Date/Time: September 14, 2022 11:49 AM

176: P9140267
Description: Water flowing out of the acces road culvert over Bull Branch. Note the water snake in the waterway.
Location: South side of the access road culver over Bull Branch.
Camera Direction: Southeast Date/Time: September 14, 2022 11:50 AM

177: P9140268
Description: Sampling point S02. The concluence of the channelized manure flow path and Bull Branch.
Location: The concluence of the channelized manure flow path and Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:54 AM

178: P9140269
Description: Sampling point S02. The concluence of the channelized manure flow path and Bull Branch.
Location: The concluence of the channelized manure flow path and Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:54 AM

179: P9140270
Description: Sample S02.
Location: The concluence of the channelized manure flow path and Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:58 AM

180: P9140271
Description: Sample S02.
Location: The concluence of the channelized manure flow path and Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:58 AM

181: P9140272
Description: Sample S02.
Location: The concluence of the channelized manure flow path and Bull Branch.
Camera Direction: West Date/Time: September 14, 2022 11:58 AM

182: P9140273
Description: Fill placed by the operator to prevent further discharges of manure.
Location: Cracked concrete wall east of the East Milk Cow Barn.
Camera Direction: West Date/Time: September 14, 2022 11:59 AM

183: P9140274
Description: Fill placed by the operator to prevent further discharges of manure. Note the channelized flow path to the left.
Location: Cracked concrete wall east of the East Milk Cow Barn.
Camera Direction: Down Date/Time: September 14, 2022 11:59 AM

APPENDIX C

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

US EPA Region 5 LSASD Analytical Services Branch

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **9/27/2022**

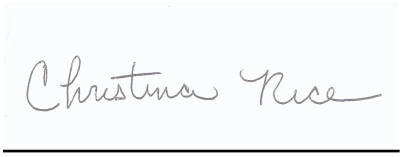
Title: **ASB Data Report for Richter Breese**

To: **Water Division, US EPA Region 5**
77 West Jackson Boulevard
Chicago, IL 60604

From: **Christina Rice, Chemist**
Rice.Christina@epa.gov
US EPA Region 5 LSASD Analytical Services Branch

The results reported in this document apply to the samples as received and relate only to the items tested. The data transmitted under this cover memo successfully passed the data review process and applicable Analytical Services Branch (ASB) laboratory Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation*, ASB performs data verification on all the data generated internally. ASB does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.



Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Robert Snyder at (312)-353-9083 with data transmittal questions. Thank you.

Attached are Results for: **Richter Breese**

Analyses included in this report:

Ammonia N DA, Distilled

Report Name: 2209004 Ammonia N DA, Distilled FINAL Sep 27 22 1214

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 12:14

Accredited Analyses included in this Report

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Method: ***SM 4500-H+ B in Water***
Analysis: ***Ammonia N DA, Distilled***

Analyte	Certifications
Ammonia as N	ISO/IEC 17025:2017

Analytes not listed above are not accredited by ANAB.

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 12:14

ANALYSIS CASE NARRATIVE

GENERAL INFORMATION:

Results are reported for the following samples.

LabNumber	SampleName	LogMatrix	Received	Analysis
2209004-01	S01	Water	9/15/2022 10:33:00AM	Ammonia N DA, Distilled
2209004-02	S02	Water	9/15/2022 10:33:00AM	Ammonia N DA, Distilled
2209004-03	B01	Water	9/15/2022 10:33:00AM	Ammonia N DA, Distilled

Sample Login Incident Reports (IRs) and Client Communications: (CCs):

2209004

Client Contact ID# 30516: Client notified of field blank result.

Analyst:

Christina Rice, Rice.Christina@epa.gov

Holding Times:

All holding times were met except for any listed below.

Sample Analysis

The samples were analyzed using the following SOP(s).

Analysis	Code	SpecificMethod
Ammonia N DA, Distilled	AIG029B v9	SM 4500-H+ B

QUALITY CONTROL:

All quality control audits were within ASB limits or did not result in qualification of the data except for any listed below. Refer to Flag/Qualifiers column in sample results section and the Notes and Definitions section at the end of this report for any flagging information. Also, refer to the Analyst Notes section for any additional information or notes.

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 12:14

B22I022-DUP1 ***Source: 2209004-01***

%RPD for Ammonia as N (32%) was outside acceptance limits (14%) for Ammonia N DA, Distilled.

ANALYST NOTES:

Additional Analysis Information:

B22I022-MS1 had a stick removed prior to distillation.

B22I022-DUP1 met absolute difference criteria.

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 9/15/2022 10:58:49AM**

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis
Project: Richter Breese **Project Number:** [none]

Report To:

Cheryl Burdett | 77 West Jackson Boulevard | Phone: (312) 353-2004
Water Division, US EPA Region 5 | Chicago, IL 60604 | Fax: (312) 886-2001

Date Due: Oct-17-22 15:00 (32 day TAT)
Received By: Robert Snyder Date Received: Sep-15-22 10:33
Logged In By: Robert Snyder Date Logged In: Sep-15-22 10:46

Yes **Work Order Comments:**
Yes pH paper usd in SC = 21K0111, 22E2621
Yes
Yes

Cooler(s) information:
Default Cooler - 1.10 C

Sample ID: 2209004-01 **Sampled:** Sep-14-22 11:45 **Matrix:** Water
Sample Name: S01 **Sample Location/Comments:** Upstream
Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:45	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water
Sample Name: S02 **Sample Location/Comments:** Confluence
Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:58	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis

Project: Richter Breese **Project Number:** [none]

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water

Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-03 **Sampled:** Sep-14-22 12:04 **Matrix:** Water

Sample Name: B01 **Sample Location/Comments:** Field Blank

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.6
BOD	2	Sep-16-22 12:04	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.6
Solids, TDS	7	Sep-21-22 23:59	pH = 5
Solids, TSS	7	Sep-21-22 23:59	pH = 5
TKN DA	28	Oct-12-22 23:59	pH = 1.6
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.6

Reviewed By Date

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 12:14

Ammonia Nitrogen, SM4500B & H (modified)

US EPA Region 5 LSASD Analytical Services Branch

S01 (2209004-01) **Matrix: Water** **Sampled: Sep-14-22 11:45** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	**0.41**	[D]	0.16	0.20	mg/L	1	B22I022	Sep-20-22	Sep-20-22

S02 (2209004-02) **Matrix: Water** **Sampled: Sep-14-22 11:58** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	**46.6**		3.20	4.00	mg/L	20	B22I022	Sep-20-22	Sep-20-22

B01 (2209004-03) **Matrix: Water** **Sampled: Sep-14-22 12:04** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	**U**		0.16	0.20	mg/L	1	B22I022	Sep-20-22	Sep-20-22

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 12:14

Ammonia N DA, Distilled

Result calculations based on MDL

Notes and Definitions:

[D]	The absolute difference between the duplicate and source sample is less than the detection limit. The duplicate criteria is acceptable, even though the Relative Percent Difference (RPD) is not within the acceptance limits.
U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

US EPA Region 5 LSASD Analytical Services Branch

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **9/29/2022**

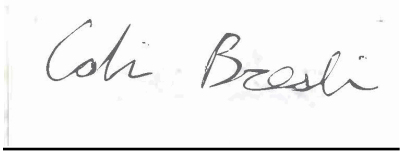
Title: **ASB Data Report for Richter Breese**

To: **Water Division, US EPA Region 5**
77 West Jackson Boulevard
Chicago, IL 60604

From: **Colin Breslin, Chemist**
breslin.colin@epa.gov
US EPA Region 5 LSASD Analytical Services Branch

The results reported in this document apply to the samples as received and relate only to the items tested. The data transmitted under this cover memo successfully passed the data review process and applicable Analytical Services Branch (ASB) laboratory Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation*, ASB performs data verification on all the data generated internally. ASB does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.



Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Robert Snyder at (312)-353-9083 with data transmittal questions. Thank you.

Attached are Results for: **Richter Breese**

Analyses included in this report:

BOD

Report Name: 2209004 BOD FINAL Sep 29 22 0716

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 07:16

Accredited Analyses included in this Report

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Method: ***SM 5210 B in Water***
Analysis: ***BOD***

Analyte	Certifications
Biochemical Oxygen Demand	ISO/IEC 17025:2017

Analytes not listed above are not accredited by ANAB.

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 07:16

ANALYSIS CASE NARRATIVE

GENERAL INFORMATION:

Results are reported for the following samples.

LabNumber	SampleName	LogMatrix	Received	Analysis
2209004-01	S01	Water	9/15/2022 10:33:00AM	BOD
2209004-02	S02	Water	9/15/2022 10:33:00AM	BOD
2209004-03	B01	Water	9/15/2022 10:33:00AM	BOD

Sample Login Incident Reports (IRs) and Client Communications: (CCs):

2209004

Client Contact ID# 30516: Client notified of field blank result.

Analyst:

Colin Breslin, breslin.colin@epa.gov

Holding Times:

All holding times were met except for any listed below.

Sample Analysis

The samples were analyzed using the following SOP(s).

Analysis	Code	SpecificMethod
BOD	AIG006A V7	SM 5210 B

QUALITY CONTROL:

All quality control audits were within ASB limits or did not result in qualification of the data except for any listed below. Refer to Flag/Qualifiers column in sample results section and the Notes and Definitions section at the end of this report for any flagging information. Also, refer to the Analyst Notes section for any additional information or notes.

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 07:16

B22I012-BS4

Recovery for Biochemical Oxygen Demand (62.4%) was outside acceptance limits (84.6-115.4%) for BOD.

ANALYST NOTES:

Additional Analysis Information:

The low recovery of the GGA check solution (identified as QC code B22I012-BS4) was likely due to a weak seed solution. All sample results were flagged with a potential low bias.

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 9/15/2022 10:58:49AM**

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis
Project: Richter Breese **Project Number:** [none]

Report To:

Cheryl Burdett | 77 West Jackson Boulevard | Phone: (312) 353-2004
Water Division, US EPA Region 5 | Chicago, IL 60604 | Fax: (312) 886-2001

Date Due: Oct-17-22 15:00 (32 day TAT)
Received By: Robert Snyder Date Received: Sep-15-22 10:33
Logged In By: Robert Snyder Date Logged In: Sep-15-22 10:46

Yes **Work Order Comments:**
Yes pH paper usd in SC = 21K0111, 22E2621
Yes
Yes

Cooler(s) information:
Default Cooler - 1.10 C

Sample ID: 2209004-01 **Sampled:** Sep-14-22 11:45 **Matrix:** Water
Sample Name: S01 **Sample Location/Comments:** Upstream
Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:45	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water
Sample Name: S02 **Sample Location/Comments:** Confluence
Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:58	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis

Project: Richter Breese **Project Number:** [none]

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water

Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-03 **Sampled:** Sep-14-22 12:04 **Matrix:** Water

Sample Name: B01 **Sample Location/Comments:** Field Blank

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.6
BOD	2	Sep-16-22 12:04	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.6
Solids, TDS	7	Sep-21-22 23:59	pH = 5
Solids, TSS	7	Sep-21-22 23:59	pH = 5
TKN DA	28	Oct-12-22 23:59	pH = 1.6
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.6

Reviewed By Date

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 07:16

BOD, 5 day, SM 5210 B (modified)

US EPA Region 5 LSASD Analytical Services Branch

S01 (2209004-01) **Matrix: Water** **Sampled: Sep-14-22 11:45** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	**3**	(BOD4), (LCS), L		2	mg/L	1	B22I012	Sep-15-22	Sep-15-22

S02 (2209004-02) **Matrix: Water** **Sampled: Sep-14-22 11:58** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	**640**	(LCS), L		2	mg/L	1	B22I012	Sep-15-22	Sep-15-22

B01 (2209004-03) **Matrix: Water** **Sampled: Sep-14-22 12:04** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	**6**	(LCS), L		2	mg/L	1	B22I012	Sep-15-22	Sep-15-22

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 07:16

Notes and Definitions:

L	The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
(LCS)	Blank spike recovery criteria not met for this analyte
(BOD4)	The samples did not have valid depletions of at least 2 mg/L dissolved oxygen (DO) from the initial day to the final day across the dilution series.
(BOD1)	BS4: Average GGA result of BS1, BS2, and BS3 used for final evaluation of QC limit.
U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

US EPA Region 5 LSASD Analytical Services Branch

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **9/29/2022**

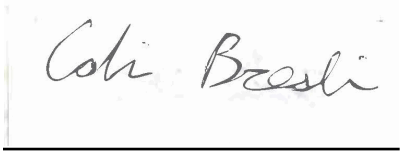
Title: **ASB Data Report for Richter Breese**

To: **Water Division, US EPA Region 5**
77 West Jackson Boulevard
Chicago, IL 60604

From: **Colin Breslin, Chemist**
breslin.colin@epa.gov
US EPA Region 5 LSASD Analytical Services Branch

The results reported in this document apply to the samples as received and relate only to the items tested. The data transmitted under this cover memo successfully passed the data review process and applicable Analytical Services Branch (ASB) laboratory Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation*, ASB performs data verification on all the data generated internally. ASB does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.



Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Robert Snyder at (312)-353-9083 with data transmittal questions. Thank you.

Attached are Results for: **Richter Breese**

Analyses included in this report:

Nitrate-Nitrite N DA, Enzymatic reduction

Report Name: 2209004 Nitrate-Nitrite N DA, Enzymatic reduction FINAL Sep 29 22 1359

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 13:59

Accredited Analyses included in this Report

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Method: ***NECi Method NO7-0003 in Water***
Analysis: ***Nitrate-Nitrite N DA, Enzymatic reduction***

Analyte	Certifications
Nitrate-Nitrite N	ISO/IEC 17025:2017

Analytes not listed above are not accredited by ANAB.

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 13:59

ANALYSIS CASE NARRATIVE

GENERAL INFORMATION:

Results are reported for the following samples.

LabNumber	SampleName	LogMatrix	Received	Analysis
2209004-01	S01	Water	9/15/2022 10:33:00AM	Nitrate-Nitrite N DA, Enzymatic reduction
2209004-02	S02	Water	9/15/2022 10:33:00AM	Nitrate-Nitrite N DA, Enzymatic reduction
2209004-03	B01	Water	9/15/2022 10:33:00AM	Nitrate-Nitrite N DA, Enzymatic reduction

Sample Login Incident Reports (IRs) and Client Communications: (CCs):

2209004

Client Contact ID# 30516: Client notified of field blank result.

Analyst:

Colin Breslin, breslin.colin@epa.gov

Holding Times:

All holding times were met except for any listed below.

Sample Analysis

The samples were analyzed using the following SOP(s).

Analysis	Code	SpecificMethod
Nitrate-Nitrite N DA, Enzymatic reduction	AIG031B v6	NECi Method NO7-0003

QUALITY CONTROL:

All quality control audits were within ASB limits or did not result in qualification of the data except for any listed below. Refer to Flag/Qualifiers column in sample results section and the Notes and Definitions section at the end of this report for any flagging information. Also, refer to the Analyst Notes section for any additional information or notes.

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 13:59

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 9/15/2022 10:58:49AM**

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis
Project: Richter Breese **Project Number:** [none]

Report To:

Cheryl Burdett | 77 West Jackson Boulevard | Phone: (312) 353-2004
Water Division, US EPA Region 5 | Chicago, IL 60604 | Fax: (312) 886-2001

Date Due: Oct-17-22 15:00 (32 day TAT)
Received By: Robert Snyder Date Received: Sep-15-22 10:33
Logged In By: Robert Snyder Date Logged In: Sep-15-22 10:46

Yes **Work Order Comments:**
Yes pH paper usd in SC = 21K0111, 22E2621
Yes
Yes

Cooler(s) information:
Default Cooler - 1.10 C

Sample ID: 2209004-01 **Sampled:** Sep-14-22 11:45 **Matrix:** Water
Sample Name: S01 **Sample Location/Comments:** Upstream
Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:45	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water
Sample Name: S02 **Sample Location/Comments:** Confluence
Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:58	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis

Project: Richter Breese **Project Number:** [none]

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water

Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-03 **Sampled:** Sep-14-22 12:04 **Matrix:** Water

Sample Name: B01 **Sample Location/Comments:** Field Blank

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.6
BOD	2	Sep-16-22 12:04	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.6
Solids, TDS	7	Sep-21-22 23:59	pH = 5
Solids, TSS	7	Sep-21-22 23:59	pH = 5
TKN DA	28	Oct-12-22 23:59	pH = 1.6
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.6

Reviewed By Date

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 13:59

Nitrate-Nitrite Nitrogen, Nitrate Reductase, NECi Method N07-0003 (modified)

US EPA Region 5 LSASD Analytical Services Branch

S01 (2209004-01) **Matrix: Water** **Sampled: Sep-14-22 11:45** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	**U**		0.07	0.10	mg/L	1	B22I026	Sep-22-22	Sep-22-22

S02 (2209004-02) **Matrix: Water** **Sampled: Sep-14-22 11:58** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	**U**		0.07	0.10	mg/L	1	B22I026	Sep-22-22	Sep-22-22

B01 (2209004-03) **Matrix: Water** **Sampled: Sep-14-22 12:04** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	**U**		0.07	0.10	mg/L	1	B22I026	Sep-22-22	Sep-22-22

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-29-22 13:59

Results Reported to MDL:

Nitrate-Nitrite N DA, Enzymatic red

Result calculations based on MDL

Notes and Definitions:

U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

US EPA Region 5 LSASD Analytical Services Branch

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **9/27/2022**

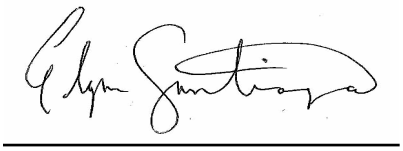
Title: **ASB Data Report for Richter Breese**

To: **Water Division, US EPA Region 5**
77 West Jackson Boulevard
Chicago, IL 60604

From: **Edgar Santiago, Analyst**
santiago.edgar@epa.gov
US EPA Region 5 LSASD Analytical Services Branch

The results reported in this document apply to the samples as received and relate only to the items tested. The data transmitted under this cover memo successfully passed the data review process and applicable Analytical Services Branch (ASB) laboratory Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation*, ASB performs data verification on all the data generated internally. ASB does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.



Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Robert Snyder at (312)-353-9083 with data transmittal questions. Thank you.

Attached are Results for: **Richter Breese**

Analyses included in this report:

TKN DA

Report Name: 2209004 TKN DA FINAL Sep 27 22 1420

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:20

Accredited Analyses included in this Report

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Method: ***EPA 351.2 in Water***
Analysis: ***TKN DA***

Analyte	Certifications
Total Kjeldahl Nitrogen	ISO/IEC 17025:2017

Analytes not listed above are not accredited by ANAB.

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 9/15/2022 10:58:49AM**

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis
Project: Richter Breese **Project Number:** [none]

Report To:

Cheryl Burdett | 77 West Jackson Boulevard | Phone: (312) 353-2004
Water Division, US EPA Region 5 | Chicago, IL 60604 | Fax: (312) 886-2001

Date Due: Oct-17-22 15:00 (32 day TAT)
Received By: Robert Snyder Date Received: Sep-15-22 10:33
Logged In By: Robert Snyder Date Logged In: Sep-15-22 10:46

Yes	**Work Order Comments:**
Yes	pH paper usd in SC = 21K0111, 22E2621
Yes	
Yes	

Cooler(s) information:
Default Cooler - 1.10 C

Sample ID: 2209004-01 **Sampled:** Sep-14-22 11:45 **Matrix:** Water
Sample Name: S01 **Sample Location/Comments:** Upstream

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:45	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water
Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:58	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis

Project: Richter Breese **Project Number:** [none]

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water

Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-03 **Sampled:** Sep-14-22 12:04 **Matrix:** Water

Sample Name: B01 **Sample Location/Comments:** Field Blank

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.6
BOD	2	Sep-16-22 12:04	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.6
Solids, TDS	7	Sep-21-22 23:59	pH = 5
Solids, TSS	7	Sep-21-22 23:59	pH = 5
TKN DA	28	Oct-12-22 23:59	pH = 1.6
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.6

Reviewed By Date

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:20

Total Kjeldahl Nitrogen, EPA 351.2 (modified)

US EPA Region 5 LSASD Analytical Services Branch

S01 (2209004-01) **Matrix: Water** **Sampled: Sep-14-22 11:45** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	**1.31**		0.30	0.50	mg/L	1	B22I019	Sep-19-22	Sep-19-22

S02 (2209004-02) **Matrix: Water** **Sampled: Sep-14-22 11:58** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	**69.5**		3.00	5.00	mg/L	10	B22I019	Sep-19-22	Sep-19-22

B01 (2209004-03) **Matrix: Water** **Sampled: Sep-14-22 12:04** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	**U**		0.30	0.50	mg/L	1	B22I019	Sep-19-22	Sep-19-22

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:20

Total Kjeldahl Nitrogen, EPA 351.2 (modified) - Quality Control
US EPA Region 5 LSASD Analytical Services Branch

Batch 22I1902 - B22I019

Cal Standard (22I1902-CAL1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**0.0040**		0.30	0.50	mg/L	0.000		%			

Cal Standard (22I1902-CAL2) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**0.31**	Q	0.30	0.50	mg/L	0.2500		123%			

Cal Standard (22I1902-CAL3) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**0.50**	Q	0.30	0.50	mg/L	0.5000		100%			

Cal Standard (22I1902-CAL4) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**0.95**	Q	0.30	0.50	mg/L	1.000		95%			

Cal Standard (22I1902-CAL5) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**1.96**	Q	0.30	0.50	mg/L	2.000		98%			

Cal Standard (22I1902-CAL6) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**2.51**	Q	0.30	0.50	mg/L	2.500		100%			

Cal Standard (22I1902-CAL7) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**5.03**	Q	0.30	0.50	mg/L	5.000		101%			

Cal Standard (22I1902-CAL8) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:20

Total Kjeldahl Nitrogen, EPA 351.2 (modified) - Quality Control
US EPA Region 5 LSASD Analytical Services Branch

Batch 22I1902 - B22I019

Cal Standard (22I1902-CAL8) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**9.99**	Q	0.30	0.50	mg/L	10.00		100%			

Calibration Blank (22I1902-CCB1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**-0.03**		0.30	0.50	mg/L	0.000		%			

Calibration Blank (22I1902-CCB2) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**-0.0090**		0.30	0.50	mg/L	0.000		%			

Calibration Check (22I1902-CCV1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**5.11**		0.30	0.50	mg/L	5.000		102%	90-110		

Calibration Check (22I1902-CCV2) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**5.20**		0.30	0.50	mg/L	5.000		104%	90-110		

Initial Cal Blank (22I1902-ICB1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**-0.05**		0.30	0.50	mg/L	0.000		%			

Initial Cal Check (22I1902-ICV1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**5.02**		0.30	0.50	mg/L	5.000		100%	90-110		

Batch B22I019 - EPA 365.4 (TP)

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:20

Total Kjeldahl Nitrogen, EPA 351.2 (modified) - Quality Control
US EPA Region 5 LSASD Analytical Services Branch

Batch B22I019 - EPA 365.4 (TP)

Blank (B22I019-BLK1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**U**		0.30	0.50	mg/L						

LCS (B22I019-BS1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**1.95**		0.30	0.50	mg/L	2.000		97%	90-110		

Duplicate (B22I019-DUP1) — **Source: 2209004-01** — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**1.31**		0.30	0.50	mg/L		1.31			0.09	17

MRL Check (B22I019-MRL1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**0.40**				mg/L	0.5000		79%	73-140		

Matrix Spike (B22I019-MS1) — **Source: 2209004-01** — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	**3.52**		0.30	0.50	mg/L	2.000	1.31	110%	90-110		

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:20

Notes and Definitions

U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

US EPA Region 5 LSASD Analytical Services Branch

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **9/27/2022**

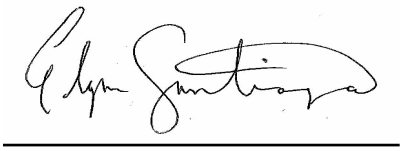
Title: **ASB Data Report for Richter Breese**

To: **Water Division, US EPA Region 5**
77 West Jackson Boulevard
Chicago, IL 60604

From: **Edgar Santiago, Analyst**
santiago.edgar@epa.gov
US EPA Region 5 LSASD Analytical Services Branch

The results reported in this document apply to the samples as received and relate only to the items tested. The data transmitted under this cover memo successfully passed the data review process and applicable Analytical Services Branch (ASB) laboratory Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation*, ASB performs data verification on all the data generated internally. ASB does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.



Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Robert Snyder at (312)-353-9083 with data transmittal questions. Thank you.

Attached are Results for: **Richter Breese**

Analyses included in this report:

Total Phosphorus DA

Report Name: 2209004 Total Phosphorus DA FINAL Sep 27 22 1414

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:14

Accredited Analyses included in this Report

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Method: ***EPA 365.4 in Water***
Analysis: ***Total Phosphorus DA***

Analyte	Certifications
Total Phosphorus	ISO/IEC 17025:2017

Analytes not listed above are not accredited by ANAB.

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 9/15/2022 10:58:49AM**

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis
Project: Richter Breese **Project Number:** [none]

Report To:

Cheryl Burdett | 77 West Jackson Boulevard | Phone: (312) 353-2004
Water Division, US EPA Region 5 | Chicago, IL 60604 | Fax: (312) 886-2001

Date Due: Oct-17-22 15:00 (32 day TAT)
Received By: Robert Snyder Date Received: Sep-15-22 10:33
Logged In By: Robert Snyder Date Logged In: Sep-15-22 10:46

Yes	**Work Order Comments:**
Yes	pH paper usd in SC = 21K0111, 22E2621
Yes	
Yes	

Cooler(s) information:
Default Cooler - 1.10 C

Sample ID: 2209004-01 **Sampled:** Sep-14-22 11:45 **Matrix:** Water
Sample Name: S01 **Sample Location/Comments:** Upstream

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:45	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water
Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:58	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis

Project: Richter Breese **Project Number:** [none]

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water

Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-03 **Sampled:** Sep-14-22 12:04 **Matrix:** Water

Sample Name: B01 **Sample Location/Comments:** Field Blank

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.6
BOD	2	Sep-16-22 12:04	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.6
Solids, TDS	7	Sep-21-22 23:59	pH = 5
Solids, TSS	7	Sep-21-22 23:59	pH = 5
TKN DA	28	Oct-12-22 23:59	pH = 1.6
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.6

Reviewed By Date

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:14

Phosphorus, Colorimetric, EPA 365.4 (modified)

US EPA Region 5 LSASD Analytical Services Branch

S01 (2209004-01) **Matrix: Water** **Sampled: Sep-14-22 11:45** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	**2.09**		0.06	0.15	mg/L	1	B22I018	Sep-19-22	Sep-19-22

S02 (2209004-02) **Matrix: Water** **Sampled: Sep-14-22 11:58** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	**21.5**		0.60	1.50	mg/L	10	B22I018	Sep-19-22	Sep-19-22

B01 (2209004-03) **Matrix: Water** **Sampled: Sep-14-22 12:04** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	**U**		0.06	0.15	mg/L	1	B22I018	Sep-19-22	Sep-19-22

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:14

Phosphorus, Colorimetric, EPA 365.4 (modified) - Quality Control
US EPA Region 5 LSASD Analytical Services Branch

Batch 22I1901 - B22I018

Cal Standard (22I1901-CAL1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**0.03**		0.06	0.15	mg/L	0.000		%			

Cal Standard (22I1901-CAL2) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**0.16**	Q	0.06	0.15	mg/L	0.1500		109%			

Cal Standard (22I1901-CAL3) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**0.30**	Q	0.06	0.15	mg/L	0.3000		101%			

Cal Standard (22I1901-CAL4) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**0.72**	Q	0.06	0.15	mg/L	0.7500		97%			

Cal Standard (22I1901-CAL5) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**0.98**	Q	0.06	0.15	mg/L	1.000		98%			

Cal Standard (22I1901-CAL6) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**1.47**	Q	0.06	0.15	mg/L	1.500		98%			

Cal Standard (22I1901-CAL7) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**3.03**	Q	0.06	0.15	mg/L	3.000		101%			

Calibration Blank (22I1901-CCB1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:14

Phosphorus, Colorimetric, EPA 365.4 (modified) - Quality Control
US EPA Region 5 LSASD Analytical Services Branch

Batch 22I1901 - B22I018

Calibration Blank (22I1901-CCB1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**-0.0050**		0.06	0.15	mg/L	0.000		%			

Calibration Blank (22I1901-CCB2) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**-0.0050**		0.06	0.15	mg/L	0.000		%			

Calibration Check (22I1901-CCV1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**1.98**		0.06	0.15	mg/L	2.000		99%	92-112		

Calibration Check (22I1901-CCV2) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**2.01**		0.06	0.15	mg/L	2.000		100%	92-112		

Initial Cal Blank (22I1901-ICB1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**-0.0050**		0.06	0.15	mg/L	0.000		%			

Initial Cal Check (22I1901-ICV1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**1.99**		0.06	0.15	mg/L	2.000		100%	92-112		

Batch B22I018 - EPA 365.4 (TP)

Blank (B22I018-BLK1) — **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**U**		0.06	0.15	mg/L						

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:14

Phosphorus, Colorimetric, EPA 365.4 (modified) - Quality Control
US EPA Region 5 LSASD Analytical Services Branch

Batch B22I018 - EPA 365.4 (TP)

LCS (B22I018-BS1) **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**0.96**		0.06	0.15	mg/L	1.000		96%	88-114		

Duplicate (B22I018-DUP1) **Source: 2209004-01** **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**2.09**		0.06	0.15	mg/L		2.09			0.09	15

MRL Check (B22I018-MRL1) **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**0.14**				mg/L	0.1500		92%	75-140		

Matrix Spike (B22I018-MS1) **Source: 2209004-01** **Prepared & Analyzed: Sep-19-22**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Phosphorus	**3.00**		0.06	0.15	mg/L	1.000	2.09	91%	79-122		

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Sep-27-22 14:14

Notes and Definitions

U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

US EPA Region 5 LSASD Analytical Services Branch

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **10/14/2022**

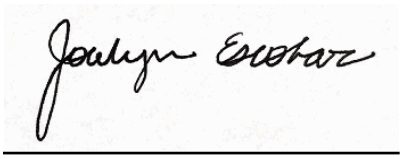
Title: **ASB Data Report for Richter Breese**

To: **Water Division, US EPA Region 5**
77 West Jackson Boulevard
Chicago, IL 60604

From: **Jocelyn Escobar, Chemist**
Escobar.Jocelyn@epa.gov
US EPA Region 5 LSASD Analytical Services Branch

The results reported in this document apply to the samples as received and relate only to the items tested. The data transmitted under this cover memo successfully passed the data review process and applicable Analytical Services Branch (ASB) laboratory Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation*, ASB performs data verification on all the data generated internally. ASB does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.



Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Robert Snyder at (312)-353-9083 with data transmittal questions. Thank you.

Attached are Results for: **Richter Breese**

Analyses included in this report:

Solids, TDS

Report Name: 2209004 Solids, TDS FINAL Oct 14 22 0853

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-14-22 08:53

Accredited Analyses included in this Report

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17025
TESTING LABORATORY

Method: ***SM 2540 C in Water***
Analysis: ***Solids, TDS***

Analyte	Certifications
Total Dissolved Solids	ISO/IEC 17025:2017

Analytes not listed above are not accredited by ANAB.

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 9/15/2022 10:58:49AM**

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis
Project: Richter Breese **Project Number:** [none]

Report To:

Cheryl Burdett | 77 West Jackson Boulevard | Phone: (312) 353-2004
Water Division, US EPA Region 5 | Chicago, IL 60604 | Fax: (312) 886-2001

Date Due: Oct-17-22 15:00 (32 day TAT)
Received By: Robert Snyder Date Received: Sep-15-22 10:33
Logged In By: Robert Snyder Date Logged In: Sep-15-22 10:46

Yes	**Work Order Comments:**
Yes	pH paper usd in SC = 21K0111, 22E2621
Yes	
Yes	

Cooler(s) information:
Default Cooler - 1.10 C

Sample ID: 2209004-01 **Sampled:** Sep-14-22 11:45 **Matrix:** Water
Sample Name: S01 **Sample Location/Comments:** Upstream

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:45	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water
Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:58	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis

Project: Richter Breese **Project Number:** [none]

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water

Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-03 **Sampled:** Sep-14-22 12:04 **Matrix:** Water

Sample Name: B01 **Sample Location/Comments:** Field Blank

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.6
BOD	2	Sep-16-22 12:04	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.6
Solids, TDS	7	Sep-21-22 23:59	pH = 5
Solids, TSS	7	Sep-21-22 23:59	pH = 5
TKN DA	28	Oct-12-22 23:59	pH = 1.6
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.6

Reviewed By Date

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-14-22 08:53

Dissolved Solids, SM 2540C (modified)

US EPA Region 5 LSASD Analytical Services Branch

S01 (2209004-01) **Matrix: Water** **Sampled: Sep-14-22 11:45** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	**154**	(DUP), J		20	mg/L	1	B22I016	Sep-19-22	Sep-19-22

S02 (2209004-02) **Matrix: Water** **Sampled: Sep-14-22 11:58** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	**1580**			20	mg/L	1	B22I016	Sep-19-22	Sep-19-22

B01 (2209004-03) **Matrix: Water** **Sampled: Sep-14-22 12:04** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	**U**			20	mg/L	1	B22I016	Sep-19-22	Sep-19-22

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-14-22 08:53

Notes and Definitions

J	The identification of the analyte is acceptable; the reported value is an estimate.
(DUP)	Duplicate precision criteria not met for this analyte
U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 ANALYTICAL SERVICES BRANCH LABORATORY
536 SOUTH CLARK STREET (LAB-10C)
CHICAGO, ILLINOIS 60605

ELECTRONIC LABORATORY DATA PACKAGE
FINAL LEVEL IV
COVER PAGE

LIMS Work order(s):	2209004
Primary Analyst:	Jocelyn Escobar
Analysis:	Solids, TSS
Date:	October 11, 2022
Data Reporting Qualtrax Workflow ID:	30688

Digital Signature of Primary Analyst:

Digital Signature Agreement: By signing above the primary analyst understands and agrees that they will be held legally bound, obligated, and responsible for the use of their digital signature as they would be by using their hand-written signature.

Table of Contents

Client Project Name: Richter Breese Project Number: [none]
Work Order Number: 2209004

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

US EPA Region 5 LSASD Analytical Services Branch

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: **10/11/2022**

Title: **ASB Data Report for Richter Breese**

To: **Water Division, US EPA Region 5**
77 West Jackson Boulevard
Chicago, IL 60604

From: **Jocelyn Escobar, Chemist**
Escobar.Jocelyn@epa.gov
US EPA Region 5 LSASD Analytical Services Branch

The results reported in this document apply to the samples as received and relate only to the items tested. The data transmitted under this cover memo successfully passed the data review process and applicable Analytical Services Branch (ASB) laboratory Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation*, ASB performs data verification on all the data generated internally. ASB does not perform data validation or quality assessment procedures.

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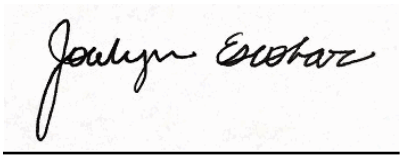

Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Robert Snyder at (312)-353-9083 with data transmittal questions. Thank you.

Attached are Results for: **Richter Breese**

Analyses included in this report:

Solids, TSS

Report Name: 2209004 Solids, TSS FINAL Oct 11 22 0830

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-11-22 08:30

Accredited Analyses included in this Report

ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17025 TESTING LABORATORY

Method: ***SM 2540 D in Water***
Analysis: ***Solids, TSS***

Analyte	Certifications
Total Suspended Solids	ISO/IEC 17025:2017

Analytes not listed above are not accredited by ANAB.

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-11-22 08:30

ANALYSIS CASE NARRATIVE

GENERAL INFORMATION:

Results are reported for the following samples.

LabNumber	SampleName	LogMatrix	Received	Analysis
2209004-01RE1	S01	Water	9/15/2022 10:33:00AM	Solids, TSS
2209004-02RE1	S02	Water	9/15/2022 10:33:00AM	Solids, TSS
2209004-03RE1	B01	Water	9/15/2022 10:33:00AM	Solids, TSS

Sample Login Incident Reports (IRs) and Client Communications: (CCs):

2209004

Client Contact ID# 30516: Client notified of field blank result.

Analyst:

Jocelyn Escobar, Escobar.Jocelyn@epa.gov

Holding Times:

All holding times were met except for any listed below.

Sample Analysis

The samples were analyzed using the following SOP(s).

Analysis	Code	SpecificMethod
Solids, TSS	AIG018 Version #7	SM 2540 D

QUALITY CONTROL:

All quality control audits were within ASB limits or did not result in qualification of the data except for any listed below. Refer to Flag/Qualifiers column in sample results section and the Notes and Definitions section at the end of this report for any flagging information. Also, refer to the Analyst Notes section for any additional information or notes.

Environmental Protection Agency Region 5

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Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-11-22 08:30

B22I021-DUP1 ***Source: 2209004-01RE1***

%RPD for Total Suspended Solids (30.3%) was outside acceptance limits (10%) for Solids, TSS.

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 9/15/2022 10:58:49AM**

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client: Water Division, US EPA Region 5 **Project Manager:** Angela Ockrassa Davis
Project: Richter Breese **Project Number:** [none]

Report To:

Cheryl Burdett | 77 West Jackson Boulevard | Phone: (312) 353-2004
Water Division, US EPA Region 5 | Chicago, IL 60604 | Fax: (312) 886-2001

Date Due: Oct-17-22 15:00 (32 day TAT)
Received By: Robert Snyder Date Received: Sep-15-22 10:33
Logged In By: Robert Snyder Date Logged In: Sep-15-22 10:46

Yes	**Work Order Comments:**	
Yes	pH paper usd in SC = 21K0111, 22E2621	
Yes		
Yes		

Cooler(s) information:
Default Cooler - 1.10 C

Sample ID: 2209004-01 **Sampled:** Sep-14-22 11:45 **Matrix:** Water
Sample Name: S01 **Sample Location/Comments:** Upstream

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:45	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water
Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.3
BOD	2	Sep-16-22 11:58	pH = 7
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.3

WORK ORDER

Printed: 9/15/2022 10:58:49AM

2209004

US EPA Region 5 LSASD Analytical Services Branch

Client:	**Water Division, US EPA Region 5**	**Project Manager:**	**Angela Ockrassa Davis**
Project:	**Richter Breese**	**Project Number:**	**[none]**

Sample ID: 2209004-02 **Sampled:** Sep-14-22 11:58 **Matrix:** Water

Sample Name: S02 **Sample Location/Comments:** Confluence

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	Sep-21-22 23:59	pH = 7
Solids, TSS	7	Sep-21-22 23:59	pH = 7
TKN DA	28	Oct-12-22 23:59	pH = 1.3
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.3

Sample ID: 2209004-03 **Sampled:** Sep-14-22 12:04 **Matrix:** Water

Sample Name: B01 **Sample Location/Comments:** Field Blank

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Oct-12-22 23:59	pH = 1.6
BOD	2	Sep-16-22 12:04	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Oct-12-22 23:59	pH = 1.6
Solids, TDS	7	Sep-21-22 23:59	pH = 5
Solids, TSS	7	Sep-21-22 23:59	pH = 5
TKN DA	28	Oct-12-22 23:59	pH = 1.6
Total Phosphorus DA	28	Oct-12-22 23:59	pH = 1.6

Reviewed By Date

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-11-22 08:30

Total Suspended Solids, SM 2540 D (modified)

US EPA Region 5 LSASD Analytical Services Branch

S01 (2209004-01RE1) **Matrix: Water** **Sampled: Sep-14-22 11:45** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	**19**	(DUP), J		5	mg/L	1	B22I021	Sep-20-22	Sep-20-22

S02 (2209004-02RE1) **Matrix: Water** **Sampled: Sep-14-22 11:58** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	**550**			5	mg/L	1	B22I021	Sep-20-22	Sep-20-22

B01 (2209004-03RE1) **Matrix: Water** **Sampled: Sep-14-22 12:04** **Received: Sep-15-22 10:33**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	**U**			5	mg/L	1	B22I021	Sep-20-22	Sep-20-22

Environmental Protection Agency Region 5

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: Richter Breese	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Oct-11-22 08:30

Notes and Definitions:

J	The identification of the analyte is acceptable; the reported value is an estimate.
(DUP)	Duplicate precision criteria not met for this analyte
U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

Environmental Protection Agency
US EPA Region 5 LSASD Analytical Services Branch
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Quality Control Summary

Date: 10/11/2022 **Analyst:** Jocelyn Escobar

Project: Richter Breese

Analyte: Total Suspended Solids

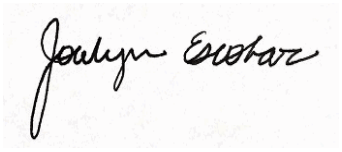
Analysis: Solids, TSS

QC Sample Name	Result	Units	Flags / Qualifiers	MDL	Reporting Limit	Spike Level	Source Result	% REC or abs diff (pH)	% REC or abs diff (pH) Limits	% RPD or abs diff (pH)	%RPD or abs diff (pH) Limits
B22I021-BLK1	**0.00**	mg/L		3	5						
B22I021-DUP1 Source: 2209004-01RE1	**14.00**	mg/L	Q	3	5		19			30.3	10
B22I021-SRM1	**24.00**	mg/L				23.90		100%	82-107		

Notes and Definitions

J	The identification of the analyte is acceptable; the reported value is an estimate.
(DUP)	Duplicate precision criteria not met for this analyte
U	Not Detected
NR	Not Reported
Q	QC limit Exceeded

B22I021-DUP1 Solids, TSS Total Suspended Solids Q



Jocelyn Escobar

ID 30516
Current Step is Close
Initiated by Y_Colin Breslin
Initiate Client Contact by Y_Colin Breslin on 9/22/2022 12:05:43 PM
Send for Notification; Close Contact by Y_Colin Breslin on 9/22/2022 12:13:48 PM
Launched Workflow Record Disposition (ID: 30518) on 9/22/2022 12:13:51 PM
Record Disposition Launched; Close Contact by Workflow Action Executor on 9/22/2022 12:13:51 PM

Close

CC - Type
Select all that apply.
Client Notification/Consent

Short Title
CC and/or NCR short title
BOD Field Blank Result

CC - Contact Summary
If no action is requested, type N/A.

Contact Date	Client Name and Affiliation	Project and/or Work Order	Contact Description	Action Request
9/21/2022	Cheryl Burdett & Ben Atkinson / EPA R5	Richter Breese	Notified Client of potential BOD contamination in the field blank. See email.	Client will pickup fresh water before next inspection. See email.

CC - Contact Attachment
30517 CC_BOD_email.pdf

CC - Affected Personnel
Select all group members that apply.
2. ASB Manager(601)
4. ASB Sample Coordinator(598)
Approver/Reviewer A&I - Colin B(1143)
Approver/Reviewer A&I/GC&MS - Edgar(1149)

CC - Action Summary
ONE GROUP MEMBER ONLY: Complete the appropriate fields below and select SAVE CHANGES. Once the client has accepted the action or requested action of another group, choose the appropriate route. Choose ADDITIONAL AFFECTED PERSONNEL only if an action is requested of another group. If no additional action is requested, type N/A.

Action Date	Action Description	Additional Action Request

CC - Action Attachment

CC - Additional Affected Personnel
ONLY IF actions are requested of another group, select all group members that apply.

CC - Additional Action Summary
ONE GROUP MEMBER ONLY: Complete the appropriate fields below and select SAVE CHANGES. Once the client has accepted the

action, choose the CLOSE CONTACT route. If an action is requested of another group, choose CLOSE CONTACT route and initiate a new client contact.

Additional Action Date	Additional Action Description

CC - Additional Action Attachment

CC - Wait for Disposition Date

Breslin, Colin

From: Atkinson, Benjamin
Sent: Wednesday, September 21, 2022 10:27 AM
To: Breslin, Colin
Cc: Burdett, Cheryl
Subject: RE: CAFO Inspection September 27

I appreciate it! I think Cheryl is getting some new water.

From: Breslin, Colin <breslin.colin@epa.gov>
Sent: Wednesday, September 21, 2022 10:26 AM
To: Atkinson, Benjamin <atkinson.ben@epa.gov>
Cc: Burdett, Cheryl <burdett.cheryl@epa.gov>
Subject: RE: CAFO Inspection September 27

The preliminary report will be transmitted via our regular transmittal procedures. Let me know if you have any questions. I'm working on getting the report peer reviewed and the final approved report sent. All other blank checks in the lab were acceptable. It was peculiar, so I wanted to let you know before your next inspection next week.

From: Atkinson, Benjamin <atkinson.ben@epa.gov>
Sent: Wednesday, September 21, 2022 10:12 AM
To: Breslin, Colin <breslin.colin@epa.gov>
Cc: Burdett, Cheryl <burdett.cheryl@epa.gov>
Subject: RE: CAFO Inspection September 27

Wow.

From: Breslin, Colin <breslin.colin@epa.gov>
Sent: Wednesday, September 21, 2022 10:10 AM
To: Burdett, Cheryl <burdett.cheryl@epa.gov>; Wroble, Amanda <wroble.amanda@epa.gov>
Cc: Atkinson, Benjamin <atkinson.ben@epa.gov>; Snyder, Robert <snyder.robert@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>
Subject: RE: CAFO Inspection September 27

Cheryl and Ben, I am going to send you a preliminary report for BOD. The sample identified as BO1 (presumably the field blank) had BOD above the reporting limit. You may wish to pick-up fresh water before your next inspection.

From: Burdett, Cheryl <burdett.cheryl@epa.gov>
Sent: Tuesday, September 20, 2022 12:52 PM
To: Wroble, Amanda <wroble.amanda@epa.gov>
Cc: Atkinson, Benjamin <atkinson.ben@epa.gov>; Snyder, Robert <snyder.robert@epa.gov>; Breslin, Colin <breslin.colin@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>
Subject: RE: CAFO Inspection September 27

I will thank you.

Cheryl Burdett

From: Wroble, Amanda <wroble.amanda@epa.gov>
Sent: Tuesday, September 20, 2022 12:52 PM
To: Burdett, Cheryl <burdett.cheryl@epa.gov>
Cc: Atkinson, Benjamin <atkinson.ben@epa.gov>; Snyder, Robert <snyder.robert@epa.gov>; Breslin, Colin <breslin.colin@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>
Subject: RE: CAFO Inspection September 27

Hi Cheryl,

Rob will be around to receive the samples on the 28th. Regarding BOD, taking the samples as late as you can on the 27th will be helpful in meeting the 48 hour holding time. If you need anything else, please let me know.

Thanks,
Amanda

Amanda Wroble, Ph.D.
Trace Metals Chemist & Group Leader and Sample Coordinator
USEPA Region 5 LSASD Analytical Services Branch
536 S. Clark St. LAB-10C, 10th Floor
Chicago, IL 60605
(312) 353-0375

From: Wroble, Amanda
Sent: Tuesday, September 20, 2022 10:16 AM
To: Burdett, Cheryl <burdett.cheryl@epa.gov>
Cc: Atkinson, Benjamin <atkinson.ben@epa.gov>; Snyder, Robert <snyder.robert@epa.gov>; Breslin, Colin <breslin.colin@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>
Subject: RE: CAFO Inspection September 27

Hi Cheryl,

Let me check in with Rob and the analysts.

Thanks,
Amanda

Amanda Wroble, Ph.D.
Trace Metals Chemist & Group Leader and Sample Coordinator
USEPA Region 5 LSASD Analytical Services Branch
536 S. Clark St. LAB-10C, 10th Floor
Chicago, IL 60605
(312) 353-0375

From: Burdett, Cheryl <burdett.cheryl@epa.gov>
Sent: Tuesday, September 20, 2022 10:10 AM
To: Wroble, Amanda <wroble.amanda@epa.gov>; Snyder, Robert <snyder.robert@epa.gov>; Breslin, Colin <breslin.colin@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>
Cc: Atkinson, Benjamin <atkinson.ben@epa.gov>
Subject: CAFO Inspection September 27

Hello Amanda:

I am planning on conducting an inspection at a poultry operation on September 27 in Wisconsin. I may take samples would anyone be available on Wednesday, September 28 to receive the samples if I drop them off?

Parameters include:
BOD 5-day
TDS
TSS
Nutrients:
Nitrate-Nitrite
TKN
Total Phosphorus
Ammonia-Nitrogen

Sincerely,

Cheryl Burdett

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 LSASD ANALYTICAL SERVICE BRANCH

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Data Verification Checklist

Work: 2209004 **Project:** Richter Breese

Analysis: Solids, TSS

CRL SOP Used: AIG018 Version #7 **Batch ID:** B22I021

General Information

Question #	Question	Analyst Response (YES/ NO/ NA)
1	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	YES
2	Was customer contact communication included?	YES
3	Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	YES
4	Were all samples prepared and analyzed within holding times?	YES

Sample Results

Question #	Question	Analyst Response (YES/ NO/ NA)
5	Were calculations checked?	YES
6	Were all analyte results checked?	YES
7	Were all results for soil and sediment samples reported on a dry weight basis?	NA
8	Were % moisture (or solids) reported for all soil and sediment samples?	NA
9	Other than those results < RL, were all other raw values bracketed by calibration standards?	YES
10	Are the RLs for each method analyte included in the laboratory data package?	YES
11	Are MDLs/RLs adjusted for dilutions?	NA
12	Were the raw data (for example, chromatograms, spectral data) reviewed?	YES
13	Were data associated with manual integrations flagged on the raw data?	NA

Standards

Question #	Question	Analyst Response (YES/ NO/ NA)
14	Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources as specified in the analytical SOP?	YES
15	Were standard/reagent preparations checked (preparation date, expiration date, parent standard IDs, etc.), if applicable?	YES

Batch Quality Control

Question #	Question	Analyst Response (YES/ NO/ NA)

Batch Quality Control

Question #	Question	Analyst Response (YES/ NO/ NA)
16	Were appropriate type(s) of blanks analyzed?	YES
17	Were blanks analyzed at the appropriate frequency?	YES
18	Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	YES
19	Were blank concentrations <= MDL or RL, as applicable in the analytical SOP?	YES
20	Was each LCS/SRM taken through the entire analytical procedure, including prep and cleanup steps?	YES
21	Were LCSs/SRMs analyzed at the required frequency?	YES
22	Were LCS/SRM %Rs within the laboratory QC limits or other acceptance criteria?	YES
23	Were the project/method specified analytes included in the MS?	NA
24	Were MS analyzed at the appropriate frequency?	NA
25	Were MS %Rs within the laboratory QC limits?	NA
26	Were appropriate analytical duplicates analyzed for each matrix?	YES
27	Were analytical duplicates analyzed at the appropriate frequency?	YES
28	Were RPDs or relative standard deviations within the laboratory QC limits or other acceptance criteria? Notes/Comments: The RPD of B22I021-DUP1 and the source sample 2209004-01RE1 was above QC limits. As a result, sample 2209004-01RE1 was flagged "J" as estimated.	NO
29	Were RLs analyzed at the appropriate frequency?	NA
30	Were RL recoveries within the laboratory QC limits?	NA

Calibration

Question #	Question	Analyst Response (YES/ NO/ NA)
31	Were calibration correlation coefficient or other acceptance criteria met?	YES
32	Was the number of calibration standards recommended in the method used for all analytes?	NA
33	Were all points generated between the lowest and highest standard used to calculate the curve?	NA
34	Are calibration data available for all instruments used?	YES

Calibration Verification

Question #	Question	Analyst Response (YES/ NO/ NA)
35	Was the absolute value of the analyte concentration in the ICB/CCB <= MDL or RL, as applicable in the analytical SOP?	NA
36	Was the calibration curve verified for each analyte?	NA
37	Has the calibration curve been verified using an appropriate second source standard?	NA

Work: 2209004 **Project:** Richter Breese

Calibration Verification

Question #	Question	Analyst Response (YES/ NO/ NA)
38	Were ICV/CCV analyzed at the method-required frequency?	NA
39	Were ICV/CCV %R within the laboratory QC limits?	NA

Quality Control

Question #	Question	Analyst Response (YES/ NO/ NA)
40	QC limits in LIMS checked against the SOP?	YES
41	Were percent differences, recoveries, and the linearity within the QC limits specified in the method? Notes/Comments: See item # 28	NO
42	Were QC charts checked if a QC audit, excluding matrix QC (MS or DUP), was out of limit?	YES

Supporting Data

Question #	Question	Analyst Response (YES/ NO/ NA)
43	Were support equipment data (balance verification, data logs, logbook entries, etc.) included in data package?	YES
44	Were approved spreadsheet(s) used?	YES

Document Verification

Question #	Question	Analyst Response (YES/ NO/ NA)
45	Is the MDL or RL study up-to-date for each reported analyte?	YES
46	Is documentation of the analyst's capability up-to-date and on file? Notes/Comments: DOC 29093	YES
47	Are the procedures for compound/analyte identification documented?	YES
48	Are laboratory SOPs current and on file for the method performed?	YES
49	Were data evaluated against project QAPP or Sample Plan, any special requests in the sample schedule, and documented in case narrative?	YES
50	Were electronic pathways checked (add pathway and files below)? Notes/Comments: \\204.46.201.26\Root Share\R5CRL\Vol1\Projects (New File Structure)\Richter Breese\1. A&I\JEscobar\2209004\Balance #17\Solids, TSS	NA

Accreditation

Question #	Question	Analyst Response (YES/ NO/ NA)
51	ANAB logo used appropriately?	YES

Analyst's Signature and Date*: Jocelyn Escobar Digitally signed by Jocelyn Escobar Date: 2022.10.03 15:15:57 -05'00'

Work: 2209004 **Project:** Richter Breese

Reviewer's Signature and Date*: FRANCIS AWANYA Digitally signed by FRANCIS AWANYA Date: 2022.10.07 11:50:11 -05'00' ***Reviewer Concurs with Analyst Responses**

Additional Notes/Comments (if applicable):

Solids, TSS

BATCH

B22I021

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Date: 9/20/2022

RESIDUE, NON-FILTERABLE (TSS)

Batch Number: B22I021

Prepared Date: Sep-20-22

Analyst (initials): JE

Analyses Included On This Benchsheet

Solids, TSS

Filter ID	Sample Number	Sample Volume (mL)	Spike ID	Clean Filter Weight (g)	Weight of Dried Filter + Sample (g)			Source Sample	Comments
					Initial	2 (if app)	Final		
gU96I	2209004-01RE1	100		0.1186	0.1204		0.1205		pH = 7
gU8PT	2209004-02RE1	10		0.1196	0.1255		0.1251		pH = 7
gU96J	2209004-03RE1	100		0.1192	0.1192		0.1191		pH = 5
gU96F	B22I021-BLK1	100		0.1190	0.1192		0.1190	-	
gU96H	B22I021-DUP1	100		0.1191	0.1209		0.1205	2209004-01RE1	
gU96G	B22I021-SRM1	100	22F1322	0.1195	0.1220		0.1219	-	

Balance ID Number: #17

Oven ID Number: #10

Dry Cycle #1 Date/Time IN - OUT: 09/20/22 10:44 AM - 09/20/22 11:47 AM

Dry Cycle #2 Date/Time IN - OUT: 09/20/22 1:07 PM - 09/20/22 2:11 PM

Dry Cycle #3 Date/Time IN - OUT: NA

PREPARATION REAGENTS/STANDARDS/PIPETTES:

22F1322:	**TSS- SRM (Hardness)**	**Prepared: Jun-13-22**	**Expires: Sep-03-24**
21L0204:	**Filters - ProWeigh**	**Prepared: Dec-02-21**	**Expires: Dec-02-26**

tch Comments: Samples re-analyzed due to failing QC

Balance Check

BALANCE ID: #17
DATE: 9/20/2022
ANALYST: Jocelyn Escobar
WEIGHT SET ID: TROEMNER S/N: 4000017548 **WGT SET # CONFIRMED:** YES
WEIGHT SET 2 ID: _____ **WGT SET # CONFIRMED:** _____

***NOTE: Save as excel file and print to pdf. Store both files in balance check folders on J:\ drive.**

***NOTE: Confirm # of weights in weight set before and after use above. # of weights in weight sets are listed at bottom of page. Create IR if find that weights are missing . Note any weights that are missing in the comments field below and contact QAO to remove weight(s) from Qualtrax records.**

Analytical Balance Tolerance Limits			
Standard Weight (g)	**Actual Weight (g)**	**LCL (g)**	**UCL (g)**
0.0010		0.0009	0.0011
0.0100	0.0101	0.0099	0.0101
0.0200		0.0199	0.0201
0.0200*		0.0199	0.0201
0.0500	0.0501	0.0499	0.0501
0.1000	0.1000	0.0999	0.1001
0.2000		0.1999	0.2001
0.2000*		0.1999	0.2001
0.5000	0.4999	0.4999	0.5001
1.0000	0.9999	0.9999	1.0001
2.0000		1.9999	2.0001
2.0000*		1.9999	2.0001
5.0000	5.0000	4.9999	5.0001
10.0000	10.0000	9.9999	10.0001
20.0000		19.9999	20.0001
20.0000*		19.9999	20.0001
50.0000	50.0000	49.9999	50.0001
100.0000	100.0001	99.9997	100.0003
200.0000		199.9995	200.0005

Top-Loading Balance Tolerance Limits			
Standard Weight (g)	**Actual Weight (g)**	**LCL (g)**	**UCL (g)**
0.01		0.00	0.02
0.02		0.01	0.03
0.02*		0.01	0.03
0.05		0.04	0.06
0.10		0.09	0.11
0.20		0.19	0.21
0.20*		0.19	0.21
0.50		0.49	0.51
1.00		0.99	1.01
2.00		1.99	2.01
2.00*		1.99	2.01
5.00		4.99	5.01
10.00		9.99	10.01
20.00		19.99	20.01
20.00*		19.99	20.01
50.00		49.99	50.01
100.00		99.99	100.01
200.00		199.99	200.01
300.00		299.99	300.01
500.00		499.99	500.01
1000.00		999.99	1000.01

Weight Sets:

TROEMNER S/N: 4000017548: 21 weights
TROEMNER S/N: 4000020557: 22 weights
Denver Inst Co S/N: 01-25360-3A: 1 weight
TROEMNER S/N: 06679: 5 weights
TROEMNER S/N: 4000026116: 22 weights

COMMENTS:

50

PROJECT OVEN 10

Notebook No. _____

Continued from Page _____

DATE	TIME	SET	READ	ELPRO	ANALYST	COMMENT
09/19/22	10:35 AM (IN)	104°C	104°C	104.9°C	JE	TSS B22I017
09/19/22	11:35 AM (OUT)	104°C	104°C	104.9°C	JE	TSS B22I017
09/19/22	1:24 PM (IN)	104°C	104°C	104.9°C	JE	TSS B22I017
9/19/22	2:25 PM (OUT)	104°C	104°C	104.9°C	JE	TSS B22I017
9/20/22	10:44 AM (IN)	104°C	104°C	104.4°C	JE	TSS B22I021
9/20/22	11:47 AM (OUT)	104°C	104°C	104.4°C	JE	TSS B22I021
9/20/22	1:07 PM (IN)	104°C	104°C	104.5°C	JE	TSS B22I021
9/20/22	2:11 PM (OUT)	104°C	104°C	104.5°C	JE	TSS B22I021
9/21/2022	10:30 am (IN)	104°C	104°C	104.5°C	PDL	TSS B22I024
9/21/2022	11:32 am (out	104°C	104°C	104.6°C	PDL	TSS B22I024

Continued on Page

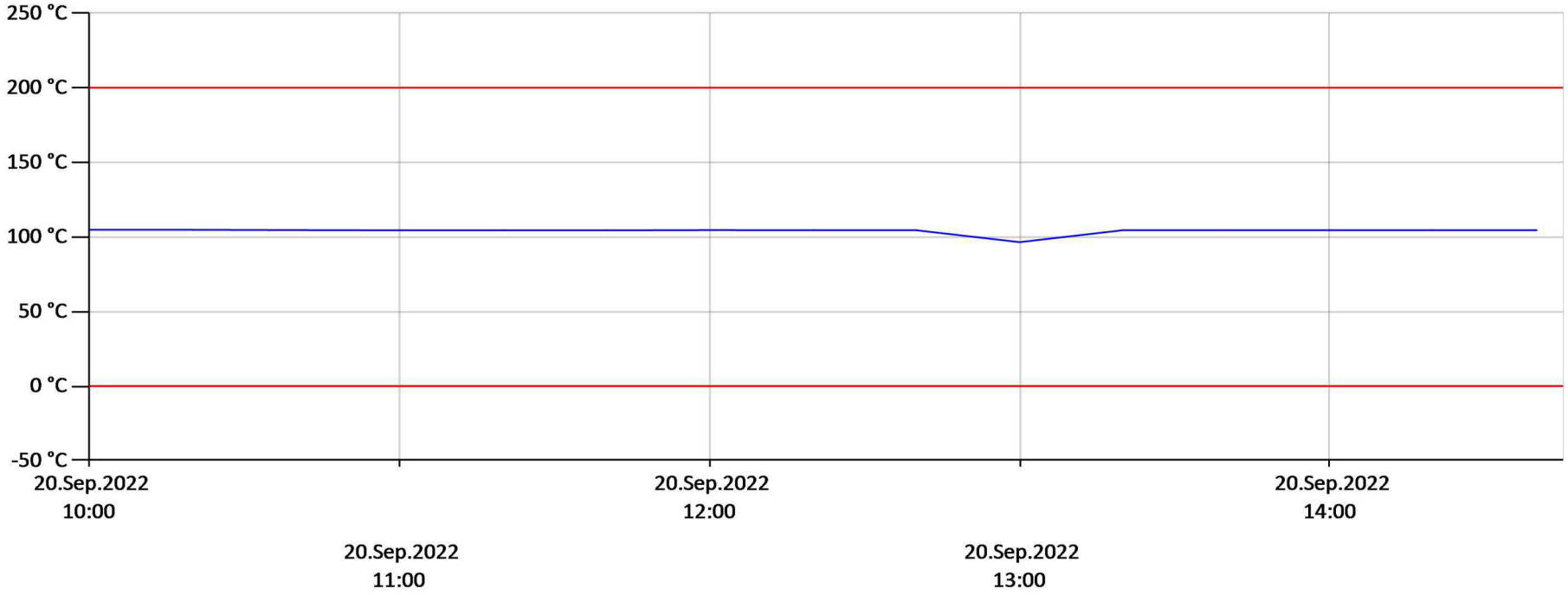
REVIEWED
By Jocelyn Escobar at 12:59 pm, Sep 21, 2022

Read and Understood By

Signed Date Signed Date

Sensor Analysis

Name:	1033 - Oven 10				
ID:	n/a				
Time Range:	From 20.Sep.2022 10:00 to 20.Sep.2022 14:45				
Upper Alarm Delay:	2 Logging Interval(s)	**Total Time Above Limit:**	0d 0h 0m	**Sensor Alarms:**	0
Lower Alarm Delay:	2 Logging Interval(s)	**Total Time Below Limit:**	0d 0h 0m	**Sensor Warnings:**	0
Logging Interval:	20 Minute(s)	**Highest Value:**	104.81 °C; 20.Sep.2022 10:00:00	**Sensor Issues:**	0
Upper Alarm Limit:	200.0 °C	**Lowest Value:**	96.46 °C; 20.Sep.2022 13:00:00	**System Issues:**	0
Lower Alarm Limit:	0.0 °C	**Average Value:**	103.96 °C	**Standard Deviation:**	2.079 °C
MKT:	104.08 °C; 83.14 kJ/mol			**No. of Measurements:**	15



Time of deactivated sensor alarm. These values are not included in statistical calculations.

Reloaded values

Time of calibration

Sensor Name:	1033 - Oven 10
Measure Value Count:	15
From:	20.Sep.2022 10:00:00
To:	20.Sep.2022 14:45:00
Unit:	°C
Time Zone:	UTC - 05:00

Date / Time	Value	Status	
20.Sep.2022 10:00:01	104.81	Activated	
20.Sep.2022 10:20:01	104.74	Activated	
20.Sep.2022 10:40:00	104.54	Activated	Dry Cycle #1
20.Sep.2022 11:00:00	104.40	Activated	REVIEWED By Jocelyn Escobar at 12:38 pm, Sep 23, 2022
20.Sep.2022 11:20:00	104.37	Activated	
20.Sep.2022 11:40:01	104.37	Activated	
20.Sep.2022 12:00:01	104.54	Activated	
20.Sep.2022 12:20:01	104.47	Activated	
20.Sep.2022 12:40:00	104.44	Activated	
20.Sep.2022 13:00:00	96.46	Activated	Dry Cycle #2
20.Sep.2022 13:20:01	104.47	Activated	The oven reached the set temperature
20.Sep.2022 13:40:01	104.44	Activated	at 13:07
20.Sep.2022 14:00:01	104.47	Activated	
20.Sep.2022 14:20:00	104.47	Activated	REVIEWED By Jocelyn Escobar at 12:38 pm, Sep 23, 2022
20.Sep.2022 14:40:00	104.44	Activated	

BATCH REAGENTS

21L0204

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Analytical Standard Record

US EPA Region 5 LSASD Analytical Services Branch

21L0204

Description:	Filters - ProWeigh		
Standard Type:	Other Solution	**Expires:**	Dec-02-26
Solvent:	NA	**Prepared:**	Dec-02-21
Final Volume (mls):	1	**Prepared By:**	** Vendor **
Vials:	1	**Department:**	A&I
Vendor:	Environmental Express	**Last Edit:**	Dec-02-21 08:32 by CR
Lot Number:	600029-1281-R1, Box ID 1046DF		

Environmental Express ProWeigh Filters, Part # F93447MM-X. DoubleWeigh Filters for TSS, 47mm, 100pk.
No expiration date is stated by the vendor - expiration set at 5 years from receipt.

Analyte	CAS Number	Concentration (ppm)

Box ID	Pan ID	Weight 1	Lot
1046DF	gU955	0.119	600029
1046DF	gU956	0.1173	600029
1046DF	gU957	0.119	600029
1046DF	gU958	0.1204	600029
1046DF	gU959	0.1201	600029
1046DF	gU95A	0.1203	600029
1046DF	gU95B	0.1193	600029
1046DF	gU95C	0.1207	600029
1046DF	gU95D	0.1218	600029
1046DF	gU95E	0.1207	600029
1046DF	gU95F	0.1215	600029
1046DF	gU95G	0.1213	600029
1046DF	gU95H	0.1206	600029
1046DF	gU95I	0.1205	600029
1046DF	gU95J	0.1193	600029
1046DF	gU95K	0.1182	600029
1046DF	gU95L	0.1207	600029
1046DF	gU95M	0.1203	600029
1046DF	gU95N	0.1195	600029
1046DF	gU95P	0.1198	600029
1046DF	gU95Q	0.1185	600029
1046DF	gU95R	0.1177	600029
1046DF	gU95S	0.12	600029
1046DF	gU95T	0.1189	600029
1046DF	gU95U	0.1185	600029
1046DF	gU8PR	0.1201	600029
1046DF	gU9Q7	0.1207	600029
1046DF	gU9Q9	0.1203	600029
1046DF	gU9QA	0.118	600029
1046DF	gU9QB	0.1189	600029
1046DF	gU9QC	0.1196	600029
1046DF	gU9QD	0.1203	600029
1046DF	gU9QE	0.1196	600029
1046DF	gU9QF	0.1212	600029
1046DF	gU9QG	0.1195	600029
1046DF	gU9QH	0.1207	600029
1046DF	gU9QI	0.1196	600029
1046DF	gU9QJ	0.1208	600029
1046DF	gU9QK	0.1202	600029
1046DF	gU9QL	0.1172	600029
1046DF	gU9QM	0.1207	600029
1046DF	gU9QN	0.1186	600029
1046DF	gU9QP	0.1171	600029
1046DF	gU9QQ	0.1176	600029
1046DF	gU9QR	0.1201	600029
1046DF	gU9QS	0.1199	600029

1046DF	gU9QT	0.1199	600029
1046DF	gU9QU	0.1207	600029
1046DF	gU9QV	0.1199	600029
1046DF	gU9QW	0.1206	600029
1046DF	gU9PH	0.119	600029
1046DF	gU9PI	0.1199	600029
1046DF	gU9PJ	0.12	600029
1046DF	gU9PK	0.1201	600029
1046DF	gU9PL	0.1179	600029
1046DF	gU9PM	0.1202	600029
1046DF	gU9PN	0.1193	600029
1046DF	gU9PP	0.1198	600029
1046DF	gU9PQ	0.1197	600029
1046DF	gU9PR	0.1189	600029
1046DF	gU9PS	0.1204	600029
1046DF	gU9PT	0.1201	600029
1046DF	gU9PU	0.1189	600029
1046DF	gU9PV	0.1189	600029
1046DF	gU9PW	0.1204	600029
1046DF	gU9PX	0.1195	600029
1046DF	gU9PY	0.1208	600029
1046DF	gU9PZ	0.1196	600029
1046DF	gU9Q0	0.1191	600029
1046DF	gU9Q1	0.1202	600029
1046DF	gU9Q2	0.1201	600029
1046DF	gU9Q3	0.1207	600029
1046DF	gU9Q4	0.1194	600029
1046DF	gU9Q5	0.1201	600029
1046DF	gU9Q6	0.1166	600029
1046DF	gU8PS	0.1184	600029
1046DF	gU8PT	0.1196	600029
1046DF	gU95V	0.1189	600029
1046DF	gU95W	0.1193	600029
1046DF	gU95Y	0.1187	600029
1046DF	gU95Z	0.1193	600029
1046DF	gU960	0.12	600029
1046DF	gU961	0.1185	600029
1046DF	gU962	0.1194	600029
1046DF	gU963	0.1179	600029
1046DF	gU964	0.1197	600029
1046DF	gU965	0.1182	600029
1046DF	gU966	0.1197	600029
1046DF	gU967	0.1212	600029
1046DF	gU969	0.1195	600029
1046DF	gU96A	0.1201	600029
1046DF	gU96B	0.1186	600029
1046DF	gU96C	0.1219	600029

1046DF	gU96D	0.1208	600029
1046DF	gU96E	0.1204	600029
1046DF	gU96F	0.119	600029
1046DF	gU96G	0.1195	600029
1046DF	gU96H	0.1191	600029
1046DF	gU96I	0.1186	600029
1046DF	gU96J	0.1192	600029

environmental express®
an antylia scientific company

ProWeigh® - Certificate of Analysis

Lot #: 600029

Material: 1.5µm binderless borosilicate glass fiber

Methods: 2540C for Total Dissolved Solids
2540D for Total Suspended Solids
2540E for Fixed and Volatile Solids

Property	Minimum	Maximum	Criteria
Basis Weight (lbs/1389 square feet)	17.5	21.5	Pass
Basis Weight (gsm)	61.6	75.5	Pass
Thickness (mils)	10	16	Pass
Thickness (microns)	254	406	Pass
Weight Loss at 550°C (mg/9 cm)	0	0.5	Pass
MD Dry Tensile (lbs/1 inch)	1.5	5	Pass
MD Wet Tensile (lbs/1 inch)	1.5	3.5	Pass

Checked by: Sandy McLaughlin

Date: 1/25/2021

Any questions? Please contact Environmental Express' Quality Department at info@EnvExp.com.

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
10000342669-MSC-ANAB-USA

Initial certification date:
02 December, 2020

Valid:
02 December, 2020 - 02 December, 2023

This is to certify that the management system of

Environmental Express

2345 Charleston Regional Pkwy, Charleston, South Carolina, 29492, USA
and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:
ISO 9001:2015

This certificate is valid for the following scope:
Design, Develop, Manufacture, Sales, Service and Supply of Environmental Laboratory Equipment and Consumables

Place and date:
Katy, TX, 02 December, 2020

For the issuing office:
DNV GL - Business Assurance
1400 Ravello Drive, Katy, TX, 77449-5164, USA

Sherif Mekkawy
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL Business Assurance USA, Inc., 1400 Ravello Drive, Katy, TX, 77449, USA. TEL:+1 281-396-1000. www.dnvglcert.com

Certificate No: 10000342669-MSC-ANAB-USA
Place and date: Katy, TX, 02 December, 2020

Appendix to Certificate

Environmental Express
Locations included in the certification are as follows:

Site Name	Site Address	Site Scope
Environmental Express	2345 Charleston Regional Pkwy, Charleston, South Carolina, 29492, USA	Operations Management, Maintenance, Training, Assembly, Packaging, Shipping, Receiving and Inventory Control, Design & Development, Sales, Manufacture, Service Repair and IT, QC Testing
Environmental Express	498-A Jessen Lane, Charleston, SOUTH CAROLINA, 29492, USA	Assembly, Packaging, Shipping & Receiving, Inventory Control, Maintenance
Environmental Express	1995 Perimeter, Road, Greenville, SOUTH CAROLINA, 29601, USA	Simple Water Process, Assembly, Packaging, Shipping & Receiving, Inventory Control, Maintenance

ERA
A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product: WatR™ Pollution Hardness
Catalog Number: 507
Lot No. P316-507
Certificate Issue Date: May 09, 2022
Expiration Date: September 03, 2024
Revision Number: Original

LIMS 22F1322

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #507 revision 090119.

CERTIFICATION

Parameter	Certified Value[1]	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/L	%	mg/L	mg/L
Total Suspended Solids	23.9	4.23	82% 19.6 - 25.6 107%	15.7 - 29.5
Calcium	32.9	3.78	29.4 - 35.9	28.0 - 37.8
Magnesium	4.82	3.19	4.29 - 5.30	4.10 - 5.54
Calcium Hardness as CaCO3	82.2	3.98	73.8 - 89.6	69.9 - 94.5
Total Hardness as CaCO3	102	3.15	93.1 - 109	86.7 - 117

ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number[6]	Recovery
	mg/L	mg/L	%			%
Total Suspended Solids	23.9	23.4	97.8	98	-	-
Calcium	32.9	33.7	102	32	3109a	103
Magnesium	4.82	4.89	102	30	3131a	102
Calcium Hardness as CaCO3	82.2	82.1	99.8	14	3109a	103
Total Hardness as CaCO3	102	103	101	35	3109a/3131a	103

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ T: 800.372.0122 ▪ 303.431.8454 ▪ www.eraqc.com

Certified Reference Material

▪ Certificate of Analysis ▪

1. The **Certified Values** are the actual gravimetric/volumetric "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this certified reference material alongside USEPA and NELAC compliant PT study materials. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and therefore, the acceptance limits of this certified reference material and any PT study material may differ relative to their difference in concentrations.

5. The **PT Performance Data** include the mean value, percent recovery and number of data points reported by laboratories in our Proficiency Testing study compared to the Certified Values. In the event this lot was not used in a proficiency testing scheme, the data displayed was generated internally by ERA.

6. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

7. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

8. For additional information on this product such as intended use, storage information, instructions for use, minimum sample size, and safety information, please refer to the Product Use Instructions provided.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller

Quality Officer

Matthew Seebeck

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ T: 800.372.0122 ▪ 303.431.8454 ▪ www.eraqc.com

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Analytical Standard Record

US EPA Region 5 LSASD Analytical Services Branch

22F1322

Description:	TSS- SRM (Hardness)		
Standard Type:	Reference Material	**Expires:**	Sep-03-24
Solvent:	NA	**Prepared:**	Jun-13-22
Final Volume (mls):	500	**Prepared By:**	** Vendor **
Vials:	5	**Department:**	A&I
Vendor:	ERA	**Last Edit:**	Jun-13-22 14:59 by CR
Lot Number:	P316-507		

ERA Catalog No. 507, WatR Pollution Hardness. C of A attached.

Analyte	CAS Number	Concentration (ppm)	SRM Control Limits
Suspended Sediment Solids	NA	23.9	82-107
Total Suspended Solids	NA	23.9	82-107

BATCH

B22I017

Data Not Used.

REVIEWED
By Jocelyn Escobar at 9:57 am, Sep 26, 2022

US EPA Region 5 LSASD Analytical Services Branch

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Date: 9/19/2022

RESIDUE, NON-FILTERABLE (TSS)

Batch Number: B22I017

Prepared Date: Sep-19-22

Analyst (initials): JE

Analyses Included On This Benchsheet

Solids, TSS

Filter ID	Sample Number	Sample Volume (mL)	Spike ID	Clean Filter Weight (g)	Weight of Dried Filter + Sample (g)			Source Sample	Comments
					Initial	2 (if app)	Final		
gU95Y	2209004-01	100		0.1187	0.1206		0.1206		pH = 7
gU965	2209004-02	10		0.1182	0.1240		0.1236		pH = 7
gU963	2209004-03	100		0.1179	0.1183		0.1181		pH = 5
gU95Z	B22I017-BLK1	100		0.1193	0.1194		0.1193	-	
gU961	B22I017-DUP1	100		0.1185	0.1213		0.1210	2209004-01	
gU960	B22I017-SRM1	100	22F1322	0.1200	0.1221		0.1218	-	

Balance ID Number: #17

Oven ID Number: #10

Dry Cycle #1 Date/Time IN - OUT: 09/19/22 10:35 AM - 09/19/22 11:35 AM

Dry Cycle #2 Date/Time IN - OUT: 09/19/22 1:24 AM - 09/19/22 2:25 AM

Dry Cycle #3 Date/Time IN - OUT: NA

PREPARATION REAGENTS/STANDARDS/PIPETTES:

22F1322:	**TSS- SRM (Hardness)**	**Prepared: Jun-13-22**	**Expires: Sep-03-24**
21L0204:	**Filters - ProWeigh**	**Prepared: Dec-02-21**	**Expires: Dec-02-26**

tch Comments: Data not used due to failed QC.

REVIEWED
By Jocelyn Escobar at 1:47 pm, Sep 23, 2022

Data not used

REVIEWED
By Jocelyn Escobar at 1:54 pm, Sep 23, 2022

Balance Check

BALANCE ID: #17
DATE: 9/19/2022
ANALYST: Jocelyn Escobar
WEIGHT SET ID: TROEMNER S/N: 4000017548 **WGT SET # CONFIRMED:** YES
WEIGHT SET 2 ID: _____ **WGT SET # CONFIRMED:** _____

***NOTE: Save as excel file and print to pdf. Store both files in balance check folders on J:\ drive.**

***NOTE: Confirm # of weights in weight set before and after use above. # of weights in weight sets are listed at bottom of page. Create IR if find that weights are missing . Note any weights that are missing in the comments field below and contact QAO to remove weight(s) from Qualtrax records.**

Analytical Balance Tolerance Limits			
Standard Weight (g)	Actual Weight (g)	LCL (g)	UCL (g)
0.0010		0.0009	0.0011
0.0100	0.0100	0.0099	0.0101
0.0200		0.0199	0.0201
0.0200*		0.0199	0.0201
0.0500	0.0501	0.0499	0.0501
0.1000	0.1001	0.0999	0.1001
0.2000		0.1999	0.2001
0.2000*		0.1999	0.2001
0.5000	0.4999	0.4999	0.5001
1.0000	1.0000	0.9999	1.0001
2.0000		1.9999	2.0001
2.0000*		1.9999	2.0001
5.0000	4.9999	4.9999	5.0001
10.0000	9.9999	9.9999	10.0001
20.0000		19.9999	20.0001
20.0000*		19.9999	20.0001
50.0000	50.0000	49.9999	50.0001
100.0000	100.0000	99.9997	100.0003
200.0000		199.9995	200.0005

Top-Loading Balance Tolerance Limits			
Standard Weight (g)	Actual Weight (g)	LCL (g)	UCL (g)
0.01		0.00	0.02
0.02		0.01	0.03
0.02*		0.01	0.03
0.05		0.04	0.06
0.10		0.09	0.11
0.20		0.19	0.21
0.20*		0.19	0.21
0.50		0.49	0.51
1.00		0.99	1.01
2.00		1.99	2.01
2.00*		1.99	2.01
5.00		4.99	5.01
10.00		9.99	10.01
20.00		19.99	20.01
20.00*		19.99	20.01
50.00		49.99	50.01
100.00		99.99	100.01
200.00		199.99	200.01
300.00		299.99	300.01
500.00		499.99	500.01
1000.00		999.99	1000.01

Weight Sets:

TROEMNER S/N: 4000017548: 21 weights
TROEMNER S/N: 4000020557: 22 weights
Denver Inst Co S/N: 01-25360-3A: 1 weight
TROEMNER S/N: 06679: 5 weights
TROEMNER S/N: 4000026116: 22 weights

COMMENTS:

Data not used

REVIEWED
By Jocelyn Escobar at 1:53 pm, Sep 23, 2022

50

PROJECT OVEN 10

Notebook No. _____

Continued from Page _____

DATE	TIME	SET	READ	ELPRO	ANALYST	COMMENT
09/19/22	10:35 AM (IN)	104°C	104°C	104.9°C	JE	TSS B22I017
09/19/22	11:35 AM (OUT)	104°C	104°C	104.9°C	JE	TSS B22I017
09/19/22	1:24 PM (IN)	104°C	104°C	104.9°C	JE	TSS B22I017
9/19/22	2:25 PM (OUT)	104°C	104°C	104.9°C	JE	TSS B22I017
9/20/22	10:44 AM (IN)	104°C	104°C	104.4°C	JE	TSS B22I021
9/20/22	11:47 AM (OUT)	104°C	104°C	104.4°C	JE	TSS B22I021
9/20/22	1:07 PM (IN)	104°C	104°C	104.5°C	JE	TSS B22I021
9/20/22	2:11 PM (OUT)	104°C	104°C	104.5°C	JE	TSS B22I021
9/21/2022	10:30 am (IN)	104°C	104°C	104.5°C	PDL	TSS B22I024
9/21/2022	11:32 am (out	104°C	104°C	104.6°C	PDL	TSS B22I024

Continued on Page

REVIEWED
By Jocelyn Escobar at 12:59 pm, Sep 21, 2022

Read and Understood By

Signed _____ Date _____ Signed _____ Date _____

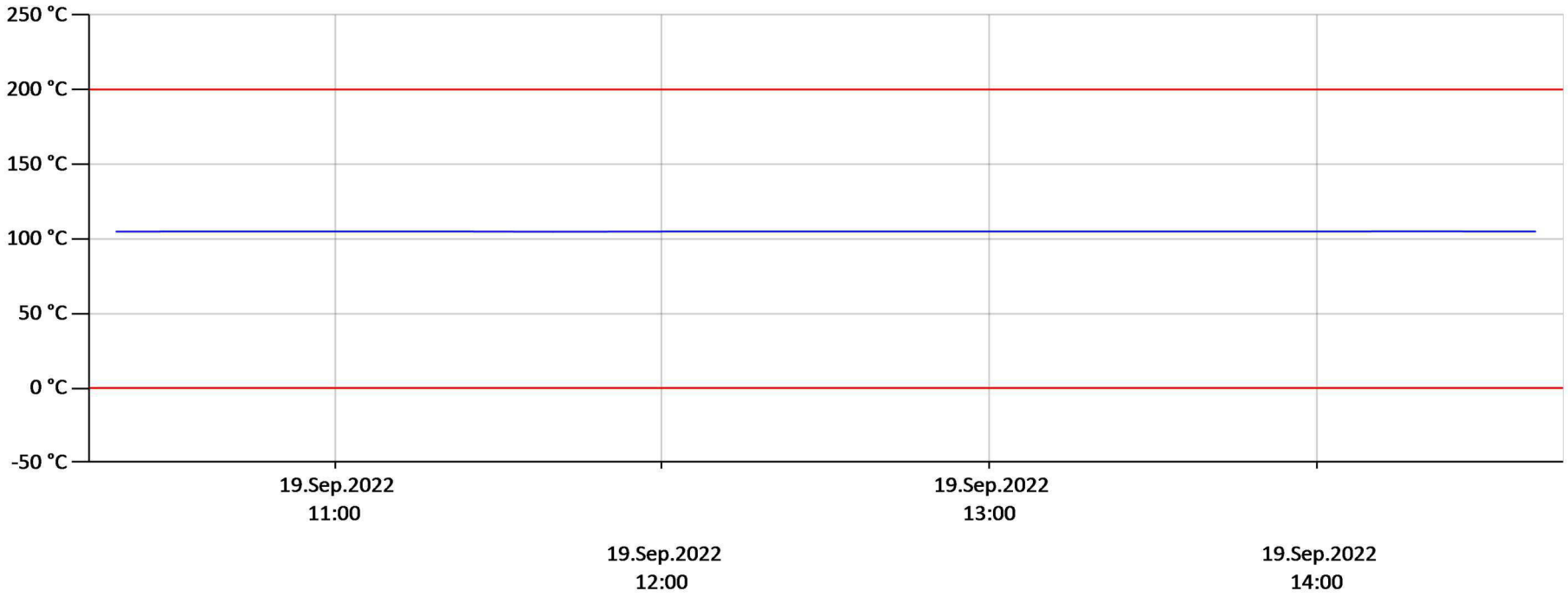
Data not used.

REVIEWED
By Jocelyn Escobar at 3:04 pm, Sep 23, 2022

Sensor Analysis

Name:	1033 - Oven 10
ID:	n/a
Time Range:	From 19.Sep.2022 10:15 to 19.Sep.2022 14:45

Upper Alarm Delay:	2 Logging Interval(s)	**Total Time Above Limit:**	0d 0h 0m	**Sensor Alarms:**	0
Lower Alarm Delay:	2 Logging Interval(s)	**Total Time Below Limit:**	0d 0h 0m	**Sensor Warnings:**	0
Logging Interval:	20 Minute(s)	**Highest Value:**	104.91 °C; 19.Sep.2022 14:20:00	**Sensor Issues:**	0
Upper Alarm Limit:	200.0 °C	**Lowest Value:**	104.67 °C; 19.Sep.2022 11:40:00	**System Issues:**	0
Lower Alarm Limit:	0.0 °C	**Average Value:**	104.83 °C	**Standard Deviation:**	0.060 °C
MKT:	104.83 °C; 83.14 kJ/mol			**No. of Measurements:**	14



Time of deactivated sensor alarm. These values are not included in statistical calculations.

Reloaded values

Time of calibration

Data not used.

REVIEWED
By Jocelyn Escobar at 3:03 pm, Sep 23, 2022

Sensor Name:	1033 - Oven 10
Measure Value Count:	14
From:	19.Sep.2022 10:15:00
To:	19.Sep.2022 14:45:00
Unit:	°C
Time Zone:	UTC - 05:00

Date / Time	Value	Status	
19.Sep.2022 10:20:01	104.77	Activated	Dry cycle #1
19.Sep.2022 10:40:01	104.87	Activated	REVIEWED By Jocelyn Escobar at 3:03 pm, Sep 23, 2022
19.Sep.2022 11:00:01	104.87	Activated	
19.Sep.2022 11:20:00	104.87	Activated	
19.Sep.2022 11:40:01	104.67	Activated	
19.Sep.2022 12:00:01	104.81	Activated	
19.Sep.2022 12:20:00	104.81	Activated	
19.Sep.2022 12:40:01	104.81	Activated	
19.Sep.2022 13:00:01	104.81	Activated	
19.Sep.2022 13:20:01	104.87	Activated	Dry cycle #2
19.Sep.2022 13:40:00	104.87	Activated	REVIEWED By Jocelyn Escobar at 3:03 pm, Sep 23, 2022
19.Sep.2022 14:00:00	104.87	Activated	
19.Sep.2022 14:20:01	104.91	Activated	
19.Sep.2022 14:40:01	104.84	Activated	

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

September 16, 2022

Sara Bossenbroek
Eastern Research Group
14555 Avion Parkway Ste 200
Chantilly, VA 20151

Dear Sara Bossenbroek:

Please find enclosed the analytical results for the **2** sample(s) the laboratory received on **9/14/22 1:35 pm** and logged in under work order **FI02787**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise . We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Chenise Lambert-Sykes
Project Manager
(314)432-0550
Chenise.Lambert-Sykes@pacelabs.com

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order FI02787

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
NO	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
YES	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
NO	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
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ANALYTICAL RESULTS

Sample: FI02787-01
Name: Upstream
Matrix: Waste Water - Grab

Sampled: 09/14/22 11:45
Received: 09/14/22 13:35
PO #: 0352.02.002/26

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Microbiology - STL									
Fecal coliform bacteria	712	MPN/100 mL		09/14/22 16:43	1	10.0	09/14/22 16:43	NDM	SM 9223B

Sample: FI02787-02
Name: Downstream
Matrix: Waste Water - Grab

Sampled: 09/14/22 11:58
Received: 09/14/22 13:35
PO #: 0352.02.002/26

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Microbiology - STL									
Fecal coliform bacteria	>242,000	MPN/100 mL		09/14/22 16:43	1	100	09/14/22 16:43	NDM	SM 9223B

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Peoria, IL 61615
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NOTES

Specifications regarding method revisions, method modifications, and calculations used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Memos

242,000 is the highest the lab can go for Fecal Coliform.

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Certified by: Chenise Lambert-Sykes, Project Manager

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

FID 2787

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
03BA2022	Keith Richter

SAMPLERS: *(Print Name and Sign)* Ben Atkinson

Activity Code:

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte: Fecal Coliform	TAG NUMBERS
SQ	9/14/22	11:45		X	Upstream	1	X	Ice
SQ_2	9/14/22	11:58		X	Downstream	1	X	Ice

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
[signature]	9/14/22 1:35	[signature]
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)* / Date / Time

Ship To: 7.9

ATTN:

Airbill Number

Chain of Custody Seal Numbers

Distribution: White - Accompanies Shipment; Pink - Coordinator Field Files; Yellow - Laboratory File

5-65974