



REGION 1

NEW ENGLAND REGIONAL LABORATORY
NORTH CHELMSFORD, MA 01863

July 1st, 2024

MEMORANDUM

Subj: Concentrated Animal Feeding Operation (CAFO) Sampling at Veldman Farm

From: Nafisah Ali, Inspector
Laboratory Services and Applied Science Division (LSASD)
Field Services Branch (FSB2)

Ali,
Nafisah

Digitally signed
by Ali, Nafisah
Date: 2024.07.18
14:48:08 -04'00'

Reviewed By: Jerome Keefe, Investigations Team Leader,
LSASD-FSB2

To: Andrew Spejewski, Inspector
Enforcement and Compliance Assurance Division (ECAD)
Water Compliance Section 1

I. Facility Information

- A. Facility Name: Veldman Farm
- B. Facility Location: 6144 VT Route 22a. Vergennes, VT 05491
- C. Facility Contact: N/A
- D. NPDES Permit ID: N/A

II. Background Information

- A. Date/Start time of sampling inspection: 5/21/2024 12:41, 5/22/2024 08:25
- B. Weather conditions: Sunny, 85°F
- C. USEPA Representatives: Andrew Spejewski, Eleanor Horvath, Nafisah Ali, Anna Hatke
- D. State/Local Representatives: Nate Sands, VT DEC
- E. Federally Enforceable Requirements Investigated: N/A

III. Disclaimer:

Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on

potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

IV. Type and Purpose of Sampling Inspection(s)

The purpose of the compliance sampling inspection was to assess applicability of and compliance with the CAFO requirements under the Clean Water Act at 40 C.F.R. Part 122.23.

V. Sampling Inspection Summary

On Tuesday, May 21st and Wednesday, May 22nd, 2024, Nafisah Ali, and Anna Hatke of FSB 2 ("the EPA Sampling Team"), conducted wastewater sampling of three locations at Veldman Farm (see photos and descriptions included as Attachment 1). The sampling activities were conducted in accordance with the Standard Operating Procedure for the Collection of Chemical and Biological NPDES Water and Wastewater Samples FSB SOP-NPDES Water Revision 2, 2020.

On Tuesday May 21st, 2024, the EPA sampling team collected one grab sample ("VF01") for Total Suspended Solids (TSS), Source Tracking Analysis (\$STA), Ammonia (AMMO), Total Nitrogen (TN) and Total Phosphorous (TP). Total Suspended Solids sample were collected in a 1-liter (L) High Density Polyethylene (HDPE) bottle. Source Tracking Analysis sample was collected in a 1-L Amber glass teflon, lined cap bottle. Ammonia, Total Nitrogen and Total Phosphorous were collected in one 500 mL HDPE bottle with preservative Sulfuric Acid to attain a pH of <2. Samples were split with the facility; the EPA sampling team provided the sample bottles. The samples collected by the EPA sampling team were then placed in coolers with ice to maintain an internal temperature of less than 4 degrees Celsius.

On Wednesday May 22nd, 2024, the EPA sampling team collected two in-stream samples (VF02 and VF03) for E. coli (Colilert-MPN), Total Suspended Solids (TSS), Source Tracking Analysis (\$STA), Ammonia (AMMO), Total Nitrogen (TN) and Total Phosphorous (TP). The E. coli samples were collected in 120mL UV Sterile, pre-preserved bottle with Sodium Thiosulfate. Total Suspended Solids samples were collected in a 1-liter (L) High Density Polyethylene (HDPE) bottle. Source Tracking Analysis samples were collected in a 1-L Amber glass teflon, lined cap bottle. Ammonia, Total Nitrogen and Total Phosphorous were collected in one 500 mL HDPE bottle with preservative Sulfuric Acid to attain a pH of <2. There were no split samples with the facility.

The samples collected by the EPA sampling team were then placed in coolers with ice to maintain an internal temperature of less than 4 degrees Celsius. Samples will be analyzed for E. Coli, at Endyne Laboratory, 56 Etna Road Lebanon, NH 03766. Samples for TSS, \$STA, AMMO, TN, and TP will be analyzed at the EPA New England Regional Laboratory in North Chelmsford, MA.

VI. Description of Sampling Location (in order of collection time)

Photographs depicting each sample location are included in Attachment 1 of this report.

- **VF01:** Grab sample from a stagnant deposition of water immediately downhill of a large, exposed tire pile was collected at Veldman Farm (6146 VT-22A). The sample was collected approximately 3 feet from the Southern bank of the leachate run-off water as indicated by red X. A sweet, fermented odor was detected. Color was clear-yellow, and turbidity was minimal. Organic floatables were observed floating in the water. Specks of white foam was observed on

top of the water. Grasses and small juvenile trees were observed growing in and around the stagnant water.

- **VF02:** In-stream sample of unnamed Brook discharging into Lake Champlain collected at 537-7 Basin Harbor Road. The sample was collected approximately 1 foot from the Southern bank of the stream approximately 50 feet upstream of a 2.5 foot-diameter PVC culvert as indicated with red X. No notable odor was detected. Color was clear-brown, and turbidity was low. Yellowish-white foam was observed collecting approximately 50 feet downstream before the culvert pipe.
- **VF03:** In-stream sample of an unnamed brook discharging into wetlands surrounding Lake Champlain collected at the intersection of Basin Harbor Road and Town Line Road. The sample was collected approximately half a foot from the Northern bank of the approximately 10 feet downstream of a PVC culvert pipe 1 foot in diameter as indicated by red X. No notable odor was detected. Color was clear-yellow, and turbidity was low. Organic matter including leaves and grass was observed floating on top of the water directly downstream of the culvert.

VII. EPA Sampling and Analytical Results

The table below provides a summary of the laboratory analytical results collected during the inspection. For a full list of compounds analyzed for each parameter and their results, refer to the laboratory reports that are attached to this inspection report (Attachment 2).

Table 1: Summary of Veldman Farm (VF01, VF02 VF03) May 21ST – May 22nd, 2024, analytical results.

Location	Site ID	VF01	VF02	VF03
	Sample date	5/21/24	5/22/24	5/22/24
	Sample time	12:41	08:25	12:00
Bacteria (MPN/100mL)	E. coli	NC	920	420
Ammonia (mg/L)	AMMO	NA	NA	NA
Total Nitrogen (ug/L)	TN	1100	140	380
Total Phosphorous (mg/L)	TP	3000	70	1100
TSS (mg/L)	TSS	45	5.3	37
PPCPs (ng/L)	Cotinine	NC	0.56	3.4
	Acetaminophen	NC	ND	ND
	Paraxanthine	NC	ND	12
	Atenolol	NC	ND	2.5
	Caffeine	NC	ND	130
	Metoprolol	NC	ND	ND
	Diphenhydramine	NC	ND	ND
	Carbamazepine	NC	ND	ND

*NC= Not Collected

*NA= Not Available

*ND = Not Detected

Attachments:

Attachment 1: Photo of sampling locations (VF01, VF02, VF03) and arial image at Veldman Farm.

Attachment 2: Laboratory Reports for Analysis (E. coli, TSS, \$STA, TN, TP)

Note: Pages of Laboratory Reports have been redacted, the information that has been redacted does not pertain to this facility.

Attachment 1:

Photo of sampling location VF01 and arial image at Veldman Farm.

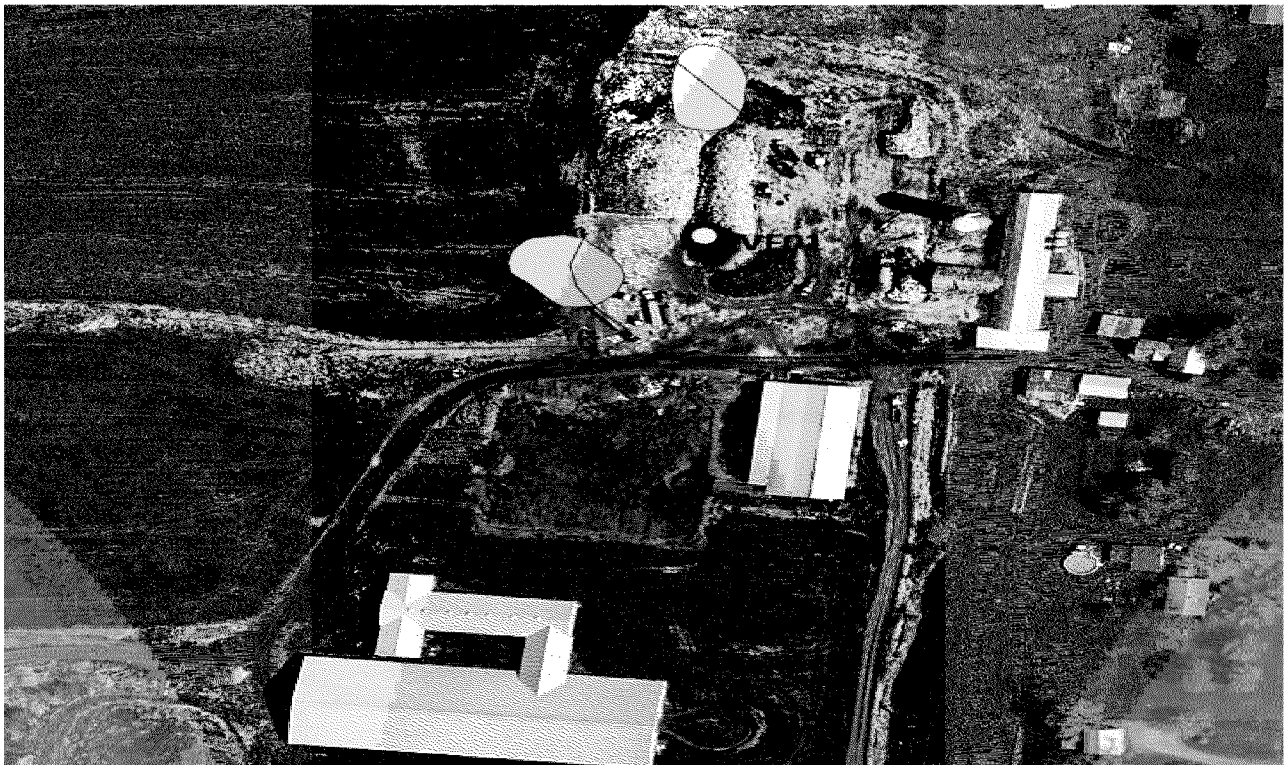


Photo of sampling location VF02 and arial image at Veldman Farm.

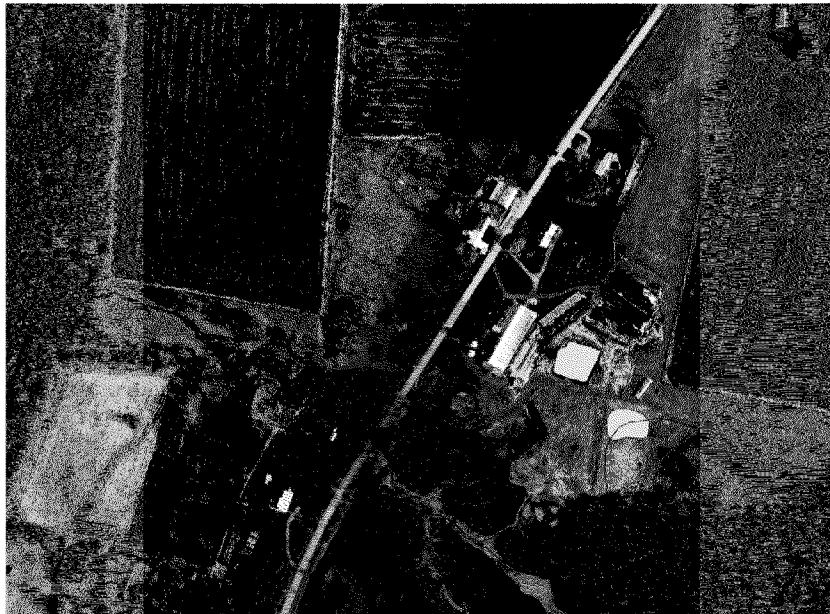


Photo of sampling location VF03 and arial image at Veldman Farm.



Attachment 2: Laboratory Reports for Analysis (E. coli, TSS, \$STA, TN, TP)

Note: Pages of Laboratory Reports have been redacted, the information that has been redacted does not pertain to this facility.

Redacted Information

E. coli: Total of 4 pages

TSS: Total of 7 pages

TN: Total of 18 pages, pages 1,2,4,10-18 pertains to this facility.

\$STA: Total of 15 pages, pages 1,2,7,8,9,10-15 pertains to this facility.

TP: Total of 8 pages



Laboratory Report

EPA 089621
11 Technology Drive
Chelmsford, MA 01863

PROJECT: E. coli Analysis
WORK ORDER: 2405-14444
DATE RECEIVED: May 22, 2024
DATE REPORTED: May 28, 2024
SAMPLER: Nafisah Ali

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody located at the end of this report.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

This NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers.

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Alexander J Rakotz
Laboratory Director Lebanon, NH

www.endynelabs.com



ELAP 11263

160 James Brown Dr., Williston, VT 05495
Ph 802-879-4333 Fax 802-879-7103

56 Etna Road, Lebanon, NH 03766
Ph 603-678-4891 Fax 603-678-4893



NH2037

ED_019088A_00004647-00009

Laboratory Report

DATE REPORTED: 05/28/2024

CLIENT: EPA
PROJECT: E. coli Analysis

WORK ORDER: 2405-14444
DATE RECEIVED: 05/22/2024

001 Site: VF 02 Date Sampled: 5/22/24 Time: 8:25

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli	920	MPN/100 mL	SM20 9223B QuantiTray	5/22/24 15:54	R AJR	A	

002 Site: VF 03 Date Sampled: 5/22/24 Time: 12:00

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli	420	MPN/100 mL	SM20 9223B QuantiTray	5/22/24 15:54	R AJR	A	

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli							

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli							

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli							

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli							

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli							

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
E. coli							



E. coli Analysis

Endyne Inc. COC

Lab Use WO#

Bill To:

Report To:

Prepared: 1/31/23

2405-14444

EPA

Nafisah Ali

Cust #



EPA
E. coli Analysis

11 Technology Drive, Chelmsford 01863

917-373-7272

Ph: Email: ali.nafisah@epa.gov

LOCATION VF 02

Sampled Date/Time:

5/22/24 @ 8:25am

Sampler:

Nafisah Ali

E. coli

1 - 120ml Sterile Plastic

<10C, Na2S2O3

LOCATION VF 03

Sampled Date/Time:

5/22/24 @ 12:00

Sampler:

NA

E. coli

1 - 120ml Sterile Plastic

<10C, Na2S2O3

\$25.00 Per Sample

****Samples MUST be received within 6 hours of sample collection****

Samples must be filled to the bottom of the bottle's cap where the lid screws on.

Relinquished by:

Accepted by:

Date Time

Date Time

Relinquished by:

Received by:

Date Time

Date Time

Sites/Parameters correct as listed. Client Initials

Client Authorization to use Subcontract lab Client Initials

Sample origin: VT ☐ NH ☐ NY ☐ Other ☐

Special reporting instructions: (PO#)

Requested Turnaround Time: Routine: Rush Due Date

Delv:

Temp Ck

Lab use Only

Temp C:

Log by

Comment:



160 James Brown Dr.
Williston, VT 05495
Ph 802-879-4333
Fax 802-879-7103

56 Etna Road
Lebanon, NH 03766
Ph 603-678-4891
Fax 603-678-4893

315 New York Rd.
Plattsburgh, NY 12903
Ph 518-563-1720
Fax 518-563-0052

ED_019088A_00004647-00011

E. coli Analysis

Endyne Inc. COC

Lab Use WO#

Bill To:

Report To:

Prepared: 1/31/23

Cust #

089621



GEN



ECOLI



Ph:

Email:

Page 1 of 1

LOCATION _____ Sampled Date/Time: ____/____/____@____ Sampler: _____

E. coli

1 - 120ml Sterile Plastic

<10C, Na2S2O3

LOCATION _____ Sampled Date/Time: ____/____/____@____ Sampler: _____

E. coli

1 - 120ml Sterile Plastic

<10C, Na2S2O3

LOCATION _____ Sampled Date/Time: ____/____/____@____ Sampler: _____

E. coli

1 - 120ml Sterile Plastic

<10C, Na2S2O3

LOCATION _____ Sampled Date/Time: ____/____/____@____ Sampler: _____

E. coli

1 - 120ml Sterile Plastic

<10C, Na2S2O3

\$25.00 Per Sample

****Samples MUST be received within 6 hours of sample collection*****

Samples must be filled to the bottom of the bottle's cap where the lid screws on.

Relinquished by: _____ Date Time _____ Accepted by: _____ Date Time _____

Relinquished by: _____ Date Time _____ Received by: AS 1/22/24 1530 Date Time _____

Sites/Parameters correct as listed. Client Initials _____

Client Authorization to use Subcontract lab Client Initials _____

Sample origin: VT ☐ NH ☐ NY ☐ Other ☐

Special reporting instructions: (PO#) _____

Requested Turnaround Time: Routine: Rush Due Date _____

Delv:

Temp C:

Comment:

Tmpl Ck

Log by

Lab use Only



160 James Brown Dr.
Williston, VT 05495
Ph 802-879-4333
Fax 802-879-7103

56 Etna Road
Lebanon, NH 03766
Ph 603-678-4891
Fax 603-678-4893

315 New York Rd.
Plattsburgh, NY 12903
Ph 518-563-1720
Fax 518-563-0052

2012

ED_019088A_00004647-00012

Laboratory Results

June 10, 2024

Nafisah Ali
US EPA Region 1

Project No: 24050033
Project: Concentrated Animal Feeding Operation Sampling Inspectio
Analysis: Total Suspended Solids in Water
EPA Chemist: Holly Westbrook

Date Samples Received by the Laboratory: 05/23/2024

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, LSBSOP-TSS-TDS7.

The SOP is based on SM 2540 D.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

If you have any questions please call me at 617-918-8340.

Sincerely,

DANIEL
BOUDREAU

Digitally signed by
DANIEL BOUDREAU
Date: 2024.06.10
13:21:22 -04'00'

24050033TSS

Qualifiers:

RL = Reporting limit

ND = Not Detected above Reporting limit

NA = Not Applicable due to high sample dilutions or sample interferences

NC = Not calculated since analyte concentration is ND.

J = Estimated value

J1 = Estimated value due to MS recovery outside acceptance criteria

J2 = Estimated value due to LFB result outside acceptance criteria

J3 = Estimated value due to RPD result outside acceptance criteria

J4 = Estimated value due to LCS result outside acceptance criteria

E = Estimated value exceeds the calibration range

L = Estimated value is below the calibration range

B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.

R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

P = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.

C = The identification has been confirmed by GC/MS.

A = Suspected Aldol condensation product.

N = Tentatively identified compound.

ANR = Analysis not required.

24050033TSS

Concentrated Animal Feeding Operation Sampling Inspection

Total Suspended Solids in Water

Matrix: Wastewater

Sample Number	Lab ID	Collected	Analysis	Concentration mg/L	RL mg/L	Qualifier
██████████ ██████████	██████████	██████████	██████████	████	████	
██████████ ██████████	██████████	██████████	██████████	████	████	
██████████ ██████████	██████████	██████████	██████████	████	████	
██████████ ██████████	██████████	██████████	██████████	████	████	
██████████ ██████████	██████████	██████████	██████████	████	████	
██████████ ██████████	██████████	██████████	██████████	████	████	
██████████ ██████████	██████████	██████████	██████████	████	████	
VF01	AC13045	05/22/2024 12:41	05/29/2024	45	2.5	
Comments:						
VF02	AC13046	05/22/2024 8:25	05/28/2024	5.3	2.5	
Comments:						
VF03	AC13047	05/22/2024 12:00	05/29/2024	37	2.5	
Comments:						
Blank			05/28/2024	ND	2.5	
Comments:						

Concentrated Animal Feeding Operation Sampling Inspection

Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Duplicate Results

SAMPLE ID	PARAMETER	SAMPLE RESULT	SAMPLE DUP RESULT	PRECISION RPD	QC LIMITS
		mg/L	mg/L	%	(%RPD)
AC13039	Total Suspended Solids in Water	7.0	6.5	7.4	25



US EPA Region 1

11 Technology Drive, N. Chelmsford, MA 01863

CHAIN OF CUSTODY RECORD

EPA Project No: 24050033		Project Name & Location: Concentrated Animal Feeding Operation (CAFO) Sampling Inspection		Sampler's Name and Signature: Nafisah Ali/Anna Hatke			
Matrix (insert letter in column below) A. Drinking water B. Ground/Well water C. Storm water D. Surface water E. Wastewater	Preservative (insert # in box to the right) → 1. Ice 2. H ₂ SO ₄ , pH<2 3. HNO ₃ , pH<2 4. HCl, pH<2 5. Na ₂ S ₂ O ₃ 6. NaOH, pH>12 7. Ascorbic Acid 8. MeOH 9. Other _____ 10. Other _____	# of Containers	Analysis Requested		For EPA Staff Only: If after hours or nobody is available, leave cooler(s) and signed COC in the walk-in fridge (Room 190A) and notify appropriate staff for next day check-in.		
			Ammo/NO2NO3	TSS		\$STA	
Sample ID	Date	Time	Comp	Grab	Matrix	Sample Specific Comments	
VF01	05/21/2024	12:41	☒		E		
VF02	05/22/2024	08:25	☒		E		
VF03	05/22/2024	12:00	☒		E		
			☐				
			☐				
			☐				
			☐				
			☐				
			☐				
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			☐				
			☐				
			☐				
			☐				
Relinquished by: (Signature) Ali, Nafisah	Digitally signed by Ali, Nafisah Date: 2024.05.22 18:57:23 -04'00'		Received by: (Signature) <i>Laura S. Swacko (ESAT)</i>		Date 5/23/24	Time 8:58	Remarks CAFO samples collected at different farms.
Relinquished by: (Signature)			Received by: (Signature)		Date	Time	
Relinquished by: (Signature)			Received for Laboratory by: (Signature)		Date	Time	

US EPA REGION 1 SAMPLE RECEIPT CHECKLIST

PROJ #:24050033	RECEIPT DATE:5/23/24
SURVEY NAME: Concentrated Animal Feeding Operation LOCATION:	REC'D BY: Laura Glowacki (ESAT)
OSC/PO: Nafisah Ali	SITE ID: SUPERFUND: N

WERE SAMPLES SHIPPED? _____		COMMENTS: Wastewater samples 9 \$TNL 9 AMMO 9 TP 9 TSS 8 \$STA Samples relinquished to walk in on 5/22/24 by Nafisah Ali and recieved by Laura Glowacki on 5/23/24
TRACKING #: _____		
DATE/SENT: _____		
NO, Hand Delivered	☒	
COOLER TEMPERATURE UPON ARRIVAL <u>25</u> °C / NA		
CHAIN OF CUSTODY PRESENT?	Y ☒	
COMPLETE?	Y ☒	
CUSTODY SEALS PRESENT ON COOLER?	N ☒	
SAMPLES?	N ☒	
WERE SAMPLE CONTAINERS INTACT?	Y ☒	
WAS SAMPLE PRESERVATION DOCUMENTED?	Y ☒	
COC ☒ Sample Container ☒		
APPROPRIATE SAMPLES VOLUME		
FOR REQUESTED ANALYSIS?	Y ☒	
SAMPLES AND COC MATCH?	Y ☒	
IF ANY PROBLEMS WAS PROJECT MANAGER NOTIFIED?		
BY WHOM? <u>NA</u>		
APPROPRIATE SAMPLE CONTAINERS?	Y ☒	
SAMPLES WITHIN HOLDING TIMES?	Y ☒	
ALL ANALYSIS SPECIFIED ON COC?	Y ☒	
DATE/TIME OF COLLECTION ON COC	Y ☒	
TURN-AROUND TIME: 4 weeks		



United States Environmental Protection Agency
Laboratory Services and Applied Science Division
11 Technology Drive
North Chelmsford, MA 01863-2431

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Laboratory Report

June 24, 2024

Nafisah Ali
US EPA Region 1

Project Number: 24050033
Project: Concentrated Animal Feeding Operation Sampling Inspectic
Analysis: Total Nitrogen
EPA Chemist: Paul Toompas

Date Samples Received by the Laboratory: 05/23/2024

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, LSBSOP-NO2-NO34.

Combined nitrate and nitrite will be reported as nitrogen.

Total nitrogen (the sum of nitrate-nitrogen, nitrite-nitrogen, ammonia-nitrogen and organically bonded nitrogen) will be reported as nitrogen.

Samples were analyzed according to LSBSOP-NO2-NO34, which is currently under review.

Samples were analyzed on a SEAL AQ300 Discrete Analyzer.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

DANIEL
BOUDREAU

Digitally signed by
DANIEL BOUDREAU
Date: 2024.06.24
10:42:43 -04'00'

24050033\$TNL

Qualifiers:

Page 2 of 18

RL = Reporting limit

ND = Not Detected above Reporting limit

NA = Not Applicable due to high sample dilutions or sample interferences

NC = Not calculated since analyte concentration is ND.

J = Estimated value

J1 = Estimated value due to MS recovery outside acceptance criteria

J2 = Estimated value due to LFB result outside acceptance criteria

J3 = Estimated value due to RPD result outside acceptance criteria

J4 = Estimated value due to LCS result outside acceptance criteria

E = Estimated value exceeds the calibration range

L = Estimated value is below the calibration range

B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.

R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

P = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.

C = The identification has been confirmed by GC/MS.

A = Suspected Aldol condensation product.

N = Tentatively identified compound.

ANR = Analysis not required.

24050033\$TNL

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

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Concentrated Animal Feeding Operation Sampling Inspection

Total Nitrogen

Client Sample ID:	VF01	Lab Sample ID:	AC13045
Date of Collection:	5/22/2024	Matrix:	Wastewater
Date of Preparation:	6/12/2024	Amount Prepared:	N/A
Date of Analysis:	6/12/2024	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	>2
Volume Extracted:	N/A	GPC Factor:	N/A
Final Volume:	N/A		

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
	Combined Nitrate & Nitrite	1100	40	J

Comments: Sample not preserved to a pH less than 2.

24050033\$TNL

ED_019088A_00004647-00022

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Page 11 of 18

Concentrated Animal Feeding Operation Sampling Inspection

Total Nitrogen

Client Sample ID:	VF02	Lab Sample ID:	AC13046
Date of Collection:	5/22/2024	Matrix:	Wastewater
Date of Preparation:	6/12/2024	Amount Prepared:	N/A
Date of Analysis:	6/12/2024	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	>2
Volume Extracted:	N/A	GPC Factor:	N/A
Final Volume:	N/A		

<u>CAS Number</u>	<u>Compound</u>	<u>Concentration</u> <u>ug/L</u>	<u>RL</u> <u>ug/L</u>	<u>Qualifier</u>
	Combined Nitrate & Nitrite	140	40	J

Comments: Sample not preserved to a pH less than 2.

24050033\$TNL

ED_019088A_00004647-00023

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Page 12 of 18

Concentrated Animal Feeding Operation Sampling Inspection

Total Nitrogen

Client Sample ID:	VF03	Lab Sample ID:	AC13047
Date of Collection:	5/22/2024	Matrix:	Wastewater
Date of Preparation:	6/12/2024	Amount Prepared:	N/A
Date of Analysis:	6/12/2024	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	>2
Volume Extracted:	N/A	GPC Factor:	N/A
Final Volume:	N/A		

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
	Combined Nitrate & Nitrite	380	40	J

Comments: Sample not preserved to a pH less than 2.

24050033\$TNL

ED_019088A_00004647-00024

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Page 4 of 18

Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Blank for Nitrogen

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Wastewater
Date of Preparation:	6/12/2024	Amount Prepared:	N/A
Date of Analysis:	6/12/2024	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	N/A
Wet Weight Prepared:	N/A	pH:	n/a
Volume Extracted:	N/A	GPC Factor:	N/A
Final Volume:	N/A		

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
	Combined Nitrate & Nitrite	ND	40	

24050033\$TNL

ED_019088A_00004647-00025

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

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Concentrated Animal Feeding Operation Sampling Inspection

MATRIX SPIKE (MS) RECOVERY

Sample ID: AC13039

PARAMETER	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
Combined Nitrate & Nitrite	400	3440	4010	R	80 - 120

24050033\$TNL

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Page 14 of 18

Concentrated Animal Feeding Operation Sampling Inspection

MATRIX SPIKE DUPLICATE (MSD) RECOVERY

Sample ID:AC13039

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/L	MSD % REC	RPD %	QC LIMITS RPD
Combined Nitrate & Nitrite	400	4440	R	10.2	20

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Page 15 of 18

Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Duplicate Results

Sample ID: AC13039

PARAMETER	SAMPLE RESULT ug/L	SAMPLE DUPLICATE RESULT ug/L	PRECISION RPD %	QC LIMITS
Combined Nitrate & Nitrite	3440	3280	5	20

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

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Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Combined Nitrate & Nitrite	400	393	98	90 - 110

Comments:

Samples in Batch: AC13039, AC13040, AC13041, AC13042, AC13043, AC13044, AC13045, AC13046, AC13047

**US EPA REGION 1
SAMPLE RECEIPT CHECKLIST**

PROJ #: 24050033	RECEIPT DATE: 5/23/24
SURVEY NAME: Concentrated Animal Feeding Operation LOCATION:	REC'D BY: Laura Glowacki (ESAT)
OSC/PO: Nafisah Ali	SITE ID: SUPERFUND: N ☒

WERE SAMPLES SHIPPED? _____ TRACKING #: _____ DATE/SENT: _____ NO. Hand Delivered ☒ COOLER TEMPERATURE UPON ARRIVAL 23 °C / NA CHAIN OF CUSTODY PRESENT? Y ☒ COMPLETE? Y ☒ CUSTODY SEALS PRESENT ON COOLER? N ☒ SAMPLES? N ☒ WERE SAMPLE CONTAINERS INTACT? Y ☒ WAS SAMPLE PRESERVATION DOCUMENTED? Y ☒ COC ✓ Sample Container ✓ APPROPRIATE SAMPLES VOLUME FOR REQUESTED ANALYSIS? Y ☒ SAMPLES AND COC MATCH? Y ☒ IF ANY PROBLEMS WAS PROJECT MANAGER NOTIFIED? BY WHOM? _____ APPROPRIATE SAMPLE CONTAINERS? Y ☒ SAMPLES WITHIN HOLDING TIMES? Y ☒ ALL ANALYSIS SPECIFIED ON COC? Y ☒ DATE/TIME OF COLLECTION ON COC Y ☒ TURN-AROUND TIME: 4 weeks	COMMENTS: Wastewater samples 9 \$TNL 9 AMMO 9 TP 9 TSS 8 \$STA Samples relinquished to walk in on 5/22/24 by Nafisah Ali and recieved by Laura Glowacki on 5/23/24
--	--



United States Environmental Protection Agency
Laboratory Services and Applied Science Division
11 Technology Drive
North Chelmsford, MA 01863-2431

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Laboratory Report

June 10, 2024

Nafisah Ali
US EPA Region 1

Project Number: 24050033
Project: Concentrated Animal Feeding Operation Sampling Inspection
Analysis: HPLC/MS/MS Source Tracking Analysis
EPA Chemist: Peter Philbrook

Date Samples Received by the Laboratory: 05/23/2024

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, LSBSOP-LCMS_STA3.

The SOP is based on an EPA Regional Analytical Method developed at the EPA New England Laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

**DANIEL
BOUDREAU**

Digitally signed by
DANIEL BOUDREAU
Date: 2024.06.10
09:08:18 -04'00'

24050033\$STA

Qualifiers:

Page 2 of 15

RL = Reporting limit

ND = Not Detected above Reporting limit

NA = Not Applicable due to high sample dilutions or sample interferences

NC = Not calculated since analyte concentration is ND.

J = Estimated value

J1 = Estimated value due to MS recovery outside acceptance criteria

J2 = Estimated value due to LFB result outside acceptance criteria

J3 = Estimated value due to RPD result outside acceptance criteria

J4 = Estimated value due to LCS result outside acceptance criteria

E = Estimated value exceeds the calibration range

L = Estimated value is below the calibration range

B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.

R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

P = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.

C = The identification has been confirmed by GC/MS.

A = Suspected Aldol condensation product.

N = Tentatively identified compound.

24050033\$STA

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION I
LABORATORY SERVICES BRANCH

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Concentrated Animal Feeding Operation Sampling Inspection

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	VF02	Lab Sample ID:	AC13046
Date of Collection:	5/22/2024	Matrix:	Wastewater
Date of Preparation:	5/28/2024	Amount Prepared:	500 mL
Date of Analysis:	6/04/2024	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	0.56	1	0.40	
103-90-2	Acetaminophen	ND	1	2.0	
611-59-6	Paraxanthine	ND	1	2.0	
29122-68-7	Atenolol	ND	1	2.0	
58-08-2	Caffeine	ND	1	4.0	
56392-17-7	Metoprolol	ND	1	2.0	
58-73-1	Diphenhydramine	ND	1	0.40	
298-46-4	Carbamazepine	ND	1	0.40	

Surrogate Compounds	Recoveries (%)	QC Ranges
Phentermine-D5	73	37 - 113
Diphenhydramine-D3	65	8 - 114

Comments:

24050033\$STA

ED_019088A_00004647-00034

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 1
LABORATORY SERVICES BRANCH

Page 9 of 15

Concentrated Animal Feeding Operation Sampling Inspection

HPLC/MS/MS Source Tracking Analysis

Client Sample ID:	VF03	Lab Sample ID:	AC13047
Date of Collection:	5/22/2024	Matrix:	Wastewater
Date of Preparation:	5/28/2024	Amount Prepared:	500 mL
Date of Analysis:	6/04/2024	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	3.4	1	0.40	
103-90-2	Acetaminophen	ND	1	2.0	
611-59-6	Paraxanthine	12	1	2.0	
29122-68-7	Atenolol	2.5	1	2.0	
58-08-2	Caffeine	130	1	4.0	
56392-17-7	Metoprolol	ND	1	2.0	
58-73-1	Diphenhydramine	ND	1	0.40	
298-46-4	Carbamazepine	ND	1	0.40	

Surrogate Compounds	Recoveries (%)	QC Ranges
Phentermine-D5	68	37 - 113
Diphenhydramine-D3	57	8 - 114

Comments:

24050033\$STA

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U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 1
LABORATORY SERVICES BRANCH

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Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Wastewater
Date of Preparation:	5/28/2024	Amount Prepared:	500 mL
Date of Analysis:	6/04/2024	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ng/L	Dilution	RL ng/L	Qualifier
486-56-6	Cotinine	ND	1	0.40	
103-90-2	Acetaminophen	ND	1	2.0	
611-59-6	Paraxanthine	ND	1	2.0	
29122-68-7	Atenolol	ND	1	2.0	
58-08-2	Caffeine	ND	1	4.0	
56392-17-7	Metoprolol	ND	1	2.0	
58-73-1	Diphenhydramine	ND	1	0.40	
298-46-4	Carbamazepine	ND	1	0.40	

Surrogate Compounds	Recoveries (%)	QC Ranges
Phentermine-D5	100	37 - 113
Diphenhydramine-D3	83	8 - 114

Comments:

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U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION I
LABORATORY SERVICES BRANCH

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Concentrated Animal Feeding Operation Sampling Inspection

MATRIX SPIKE (MS) RECOVERY

Sample ID: AC13047

PARAMETER	SPIKE ADDED ng/L	SAMPLE CONCENTRATION ng/L	MS CONCENTRATION ng/L	MS % REC	QC LIMITS (% REC)
Acetaminophen	120	ND	99.3	83	55 - 99
Atenolol	120	2.5	100	81	24 - 160
Caffeine	240	129	337	87	34 - 131
Carbamazepine	24.0	ND	21.7	90	61 - 107
Cotinine	24.0	3.4	22.9	81	48 - 112
Diphenhydramine	24.0	ND	16.6	69	17 - 112
Metoprolol	120	ND	94.2	79	31 - 137
Paraxanthine	120	12.0	84.5	60	41 - 132

24050033\$STA

ED_019088A_00004647-00037

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 1
LABORATORY SERVICES BRANCH

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Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Duplicate Results

Sample ID: AC13046

PARAMETER	SAMPLE RESULT ng/L	SAMPLE DUPLICATE RESULT ng/L	PRECISION RPD %	QC LIMITS
Acetaminophen	ND	ND	NC	50
Atenolol	ND	ND	NC	50
Caffeine	ND	ND	NC	50
Carbamazepine	ND	ND	NC	50
Cotinine	0.55994	0.662	17	50
Diphenhydramine	ND	ND	NC	50
Metoprolol	ND	ND	NC	50
Paraxanthine	ND	ND	NC	50

24050033\$STA

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U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION I
LABORATORY SERVICES BRANCH

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Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ng/L	LFB RESULT ng/L	LFB RECOVERY %	QC LIMITS %
Acetaminophen	120	92.2	77	45 - 106
Atenolol	120	105	88	33 - 129
Caffeine	240	189	79	41 - 120
Carbamazepine	24	20.4	85	63 - 108
Cotinine	24	18.5	77	55 - 106
Diphenhydramine	24	19.0	79	15 - 113
Metoprolol	120	110	92	41 - 122
Paraxanthine	120	103	86	52 - 115

Comments:

Samples in Batch: AC13039, AC13040, AC13041, AC13044, AC13046, AC13047

24050033\$STA

ED_019088A_00004647-00039



US EPA Region 1

11 Technology Drive, N. Chelmsford, MA 01863

CHAIN OF CUSTODY RECORD

Page 14 of 15

Page: ____ of ____

EPA Project No: 24050033		Project Name & Location: Concentrated Animal Feeding Operation (CAFO) Sampling Inspection				Sampler's Name and Signature: Nafisah Ali/Anna Hatke												
Matrix (insert letter in column below)		Preservative (insert # in box to the right) -->				2												For EPA Staff Only: If after hours or nobody is available, leave cooler(s) and signed COC in the walk-in fridge (Room 190A) and notify appropriate staff for next day check-in.
A. Drinking water B. Ground/Well water C. Storm water D. Surface water E. Wastewater F. Soil/Sediment/Solid G. Oil/Solvent/Liquid H. Soil Gas I. Air Canister J. _____		1. Ice 2. H ₂ SO ₄ , pH<2 3. HNO ₃ , pH<2 4. HCl, pH<2 5. Na ₂ S ₂ O ₃ 6. NaOH, pH>12 7. Ascorbic Acid 8. MeOH 9. Other _____ 10. Other _____				# of Containers	Analysis Requested											
							Ammo/NO ₂ /NO ₃	TSS	SSTA									
Sample ID	Date	Time	Comp	Grab	Matrix													
VF01	05/21/2024	12:41		✓	E	2	✓	✓										
VF02	05/22/2024	08:25		✓	E	3	✓	✓	✓									
VF03	05/22/2024	12:00		✓	E	3	✓	✓	✓									
Relinquished by: (Signature) Ali, Nafisah Digitally signed by Ali, Nafisah Date: 2024.05.22 18:57:23 -04'00'			Received by: (Signature) Laura Schwaab (ESAT)				Date 5/23/24	Time 8:58	Remarks CAFO samples collected at different farms.									
Relinquished by: (Signature)			Received by: (Signature)				Date	Time										
Relinquished by: (Signature)			Received for Laboratory by: (Signature)				Date	Time										

Distribution: Original Accompanies Shipment. Copy to Coordinator Field Files.

ESBFORM-CHAINCUSTODY1

Revision 1

05/16/2022

ED_019088A_00004647-00040

**US EPA REGION 1
SAMPLE RECEIPT CHECKLIST**

PROJ #: 24050033	RECEIPT DATE: 5/23/24
SURVEY NAME: Concentrated Animal Feeding Operation LOCATION:	REC'D BY: Laura Glowacki (ESAT)
OSC/PO: Nafisah Ali	SITE ID: SUPERFUND: N ☒

WERE SAMPLES SHIPPED? _____ TRACKING #: _____ DATE/SENT: _____ NO. Hand Delivered ☒ COOLER TEMPERATURE UPON ARRIVAL _____ °C / NA CHAIN OF CUSTODY PRESENT? Y ☒ COMPLETE? Y ☒ CUSTODY SEALS PRESENT ON COOLER? N ☒ SAMPLES? N ☒ WERE SAMPLE CONTAINERS INTACT? Y ☒ WAS SAMPLE PRESERVATION DOCUMENTED? Y ☒ COC ☒ Sample Container ☒ APPROPRIATE SAMPLES VOLUME FOR REQUESTED ANALYSIS? Y ☒ SAMPLES AND COC MATCH? Y ☒ IF ANY PROBLEMS WAS PROJECT MANAGER NOTIFIED? BY WHOM? NA _____ APPROPRIATE SAMPLE CONTAINERS? Y ☒ SAMPLES WITHIN HOLDING TIMES? Y ☒ ALL ANALYSIS SPECIFIED ON COC? Y ☒ DATE/TIME OF COLLECTION ON COC Y ☒ TURN-AROUND TIME: 4 weeks	COMMENTS: Wastewater samples 9 \$TNL 9 AMMO 9 TP 9 TSS 8 \$STA Samples relinquished to walk in on 5/22/24 by Nafisah Ali and recieved by Laura Glowacki on 5/23/24
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United States Environmental Protection Agency
Laboratory Services and Applied Science Division
11 Technology Drive
North Chelmsford, MA 01863-2431

Page 1 of 8

Laboratory Results

June 24, 2024

Nafisah Ali
US EPA Region 1

Project No: 24050033
Project: Concentrated Animal Feeding Operation Sampling Inspectic
Analysis: Total Phosphorus in Water as P
EPA Chemist: Holly Westbrook

Date Samples Received by the Laboratory: 05/23/2024

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region 1 SOP, LSBSOP-OPHOS-TP13.

The SOP is based on the AQ300 Method EPA-119-D Rev. 3A "Phosphorus-P, Total, in Surface and Saline Waters, Domestic and Industrial Wastes" and EPA method 365.1 "Determination of Phosphorous by Semi-Automated Colorimetry", Revision 2.0, August 1993 .

Samples were analyzed on a SEAL AQ300 Discrete Analyzer.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

If you have any questions please call me at 617-918-8340.

Sincerely,

DANIEL

BOUDREAU

Digitally signed by
DANIEL BOUDREAU

Date: 2024.06.24
11:19:07 -04'00'

24050033TP

Qualifiers:

Page 2 of 8

RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
J1 = Estimated value due to MS recovery outside acceptance criteria
J2 = Estimated value due to LFB result outside acceptance criteria
J3 = Estimated value due to RPD result outside acceptance criteria
J4 = Estimated value due to LCS result outside acceptance criteria
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.
P = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.
C = The identification has been confirmed by GC/MS.
A = Suspected Aldol condensation product.
N = Tentatively identified compound.
ANR = Analysis not required.

24050033TP

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Page 3 of 8

Concentrated Animal Feeding Operation Sampling Inspection

Total Phosphorus in Water as P

Matrix: Wastewater

Sample Number	Lab ID	Collected	Extracted	Analysis	Concentration ug/L	RL ug/L	Qualifier
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
VF01	AC13045	05/22/2024 12:41	06/17/2024	06/17/2024	3000	360	J
Comments:	Result determined from 30x dilution, reporting limit raised accordingly. Sample not preserved, results qualified.						
VF02	AC13046	05/22/2024 8:25	06/17/2024	06/18/2024	70	12	J
Comments:	Sample not preserved, results qualified.						
VF03	AC13047	05/22/2024 12:00	06/17/2024	06/17/2024	1100	120	J
Comments:	Result determined from 10x dilution, reporting limit raised accordingly. Sample not preserved, results qualified.						
Blank			06/17/2024	06/17/2024	ND	12	
Comments:							

24050033TP

ED_019088A_00004647-00044

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Page 4 of 8

Concentrated Animal Feeding Operation Sampling Inspection

MATRIX SPIKE (MS) Results

SAMPLE ID	PARAMETER	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
AC13040	Total Phosphorus in Water as P	800	1551	2334	97.9	83 - 119

Comments:

MATRIX SPIKE DUPE (MSD) RESULTS

SAMPLE ID	PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/L	MSD % REC	RPD %	QC LIMITS RPD
AC13040	Total Phosphorus in Water as P	800	2240	86.1	4	20

Comments:

24050033TP

ED_019088A_00004647-00045

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

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Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Duplicate Results

SAMPLE ID	PARAMETER	SAMPLE RESULT ug/L	SAMPLE DUP RESULT ug/L	PRECISION RPD %	QC LIMITS (%RPD)
AC13040	Total Phosphorus in Water as P	1551	1662	7	20

24050033TP

ED_019088A_00004647-00046

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

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Concentrated Animal Feeding Operation Sampling Inspection

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Total Phosphorus in Water as P	80	82.8	103.5	90 - 110

Samples in Batch: AC13039, AC13040, AC13041, AC13042, AC13043, AC13044, AC13045, AC13046, AC13047

24050033TP

ED_019088A_00004647-00047



US EPA Region 1

11 Technology Drive, N. Chelmsford, MA 01863

CHAIN OF CUSTODY RECORD

Page 7 of 8

Page: ____ of ____

EPA Project No: 24050033		Project Name & Location: Concentrated Animal Feeding Operation (CAFO) Sampling Inspection					Sampler's Name and Signature: Nafisah Ali/Anna Hatke										
Matrix (insert letter in column below)		Preservative (insert # in box to the right) →					2										For EPA Staff Only: If after hours or nobody is available, leave cooler(s) and signed COC in the walk-in fridge (Room 190A) and notify appropriate staff for next day check-in.
A. Drinking water B. Ground/Well water C. Storm water D. Surface water E. Wastewater F. Soil/Sediment/Solid G. Oil/Solvent/Liquid H. Soil Gas I. Air Canister J. _____		1. Ice 2. H ₂ SO ₄ , pH<2 3. HNO ₃ , pH<2 4. HCl, pH<2 5. Na ₂ S ₂ O ₅ 6. NaOH, pH>12 7. Ascorbic Acid 8. MeOH 9. Other _____ 10. Other _____					# of Containers	Analysis Requested									
								Ammonia/NO ₂ /NO ₃	TSS	SSTA							
Sample ID	Date	Time	Comp	Grab	Matrix												
VF01	05/21/2024	12:41		✓	E	2	✓	✓									
VF02	05/22/2024	08:25		✓	E	3	✓	✓	✓								
VF03	05/22/2024	12:00		✓	E	3	✓	✓	✓								
Relinquished by: (Signature) Ali, Nafisah Digitally signed by Ali, Nafisah Date: 2024.05.22 18:57:23 -04'00'			Received by: (Signature) <i>Anna Hatke</i> (ESAT)				Date 5/23/24	Time 8:58	Remarks CAFO samples collected at different farms.								
Relinquished by: (Signature)			Received by: (Signature)				Date	Time									
Relinquished by: (Signature)			Received for Laboratory by: (Signature)				Date	Time									

**US EPA REGION 1
SAMPLE RECEIPT CHECKLIST**

PROJ #: 24050033	RECEIPT DATE: 5/23/24
SURVEY NAME: Concentrated Animal Feeding Operation LOCATION:	REC'D BY: Laura Glowacki (ESAT)
OSC/PO: Nafisah Ali	SITE ID: SUPERFUND: N ☐

WERE SAMPLES SHIPPED? _____ TRACKING #: _____ DATE/SENT: _____ NO. Hand Delivered ☒ COOLER TEMPERATURE UPON ARRIVAL _____ °C / NA CHAIN OF CUSTODY PRESENT? Y ☒ COMPLETE? Y ☒ CUSTODY SEALS PRESENT ON COOLER? N ☒ SAMPLES? N ☒ WERE SAMPLE CONTAINERS INTACT? Y ☒ WAS SAMPLE PRESERVATION DOCUMENTED? Y ☒ COC ☒ Sample Container ☒ APPROPRIATE SAMPLES VOLUME FOR REQUESTED ANALYSIS? Y ☒ SAMPLES AND COC MATCH? Y ☒ IF ANY PROBLEMS WAS PROJECT MANAGER NOTIFIED? BY WHOM? NA APPROPRIATE SAMPLE CONTAINERS? Y ☒ SAMPLES WITHIN HOLDING TIMES? Y ☒ ALL ANALYSIS SPECIFIED ON COC? Y ☒ DATE/TIME OF COLLECTION ON COC Y ☒ TURN-AROUND TIME: 4 weeks	COMMENTS: Wastewater samples 9 \$TNL 9 AMMO 9 TP 9 TSS 8 \$STA Samples relinquished to walk in on 5/22/24 by Nafisah Ali and recieved by Laura Glowacki on 5/23/24
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End of Report