

Chemical Analysis Report

CEN-DIST-2024-05-02-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Algal Bloom Response - CEROC**
Request ID: **RQ-2024-04-01-60**
Customer: **CEN-DIST**
Project ID: **BLOOM-RESP**

Send Reports to:
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Jessie Atchison

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
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Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 30-MAY-2024 08:58



NON-CONFORMANCE REPORT INCLUDED

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Collection Date/Time: 05/01/2024 10:45

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2486298	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P445089	MS
		Cylindrospermopsin	0.10	U	ug/L	P445088	
		Desmethyl microcystin LR	0.25	U	ug/L	P445088	
		Microcystin HilR	0.25	U	ug/L	P445088	
		Microcystin HtyR	0.25	U	ug/L	P445088	
		Microcystin LA	0.10	U	ug/L	P445088	
		Microcystin LF	0.10	U	ug/L	P445088	
		Microcystin LR	0.25	U	ug/L	P445088	
		Microcystin LW	0.25	U	ug/L	P445088	
		Microcystin LY	0.10	U	ug/L	P445088	
		Microcystin RR	0.10	U	ug/L	P445088	
		Microcystin WR	0.50	U	ug/L	P445088	
		Neosaxitoxin	0.50	U	ug/L	P445089	
		Microcystin YR	0.25	U	ug/L	P445088	
		Saxitoxin	0.50	U	ug/L	P445089	
		Nodularin-R	0.10	U	ug/L	P445088	
2486301	DEP SOP: NU-094-1	Color (true)	4.9	I	PCU	P445164	
2486303	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P445347	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.72		mg N/L	P445241	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	UY	mg N/L	P445673	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P445211	
2486305	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P445170	

EPA 353.2 Rev. 2.0: Sample was stored at room temperature for multiple days because of a power failure at the laboratory.

Sample Location: Apopka Beauclair Canal - near Lake Jem Rd

Collection Date/Time: 05/01/2024 12:05

Field ID: HABCE0237

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2486297	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P445089	
		Cylindrospermopsin	0.10	U	ug/L	P445088	
		Desmethyl microcystin LR	0.25	U	ug/L	P445088	
		Microcystin HILR	0.25	U	ug/L	P445088	
		Microcystin HtyR	0.25	U	ug/L	P445088	
		Microcystin LA	0.10	U	ug/L	P445088	
		Microcystin LF	0.10	U	ug/L	P445088	
		Microcystin LR	0.25	U	ug/L	P445088	
		Microcystin LW	0.25	U	ug/L	P445088	
		Microcystin LY	0.10	U	ug/L	P445088	
		Microcystin RR	0.10	U	ug/L	P445088	
		Microcystin WR	0.50	U	ug/L	P445088	
		Neosaxitoxin	0.50	U	ug/L	P445089	MS
		Microcystin YR	0.25	U	ug/L	P445088	
		Saxitoxin	0.50	U	ug/L	P445089	
		Nodularin-R	0.10	U	ug/L	P445088	
2486302	DEP SOP: NU-094-1	Color (true)	18		PCU	P445164	
2486304	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P445347	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P445241	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.42	Y	mg N/L	P445673	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P445211	
2486306	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P445170	

Ref. Method and Comment:

EPA 353.2 Rev. 2.0: Sample was stored at room temperature for multiple days because of a power failure at the laboratory.

Non-Conformance Report

NCR ID: 10462

Event(s)

CEN-DIST-2024-05-02-01

Job(s)

TLH-2024-05-02-12

Sample(s)

Test(s)

NCR Type: CUSTODY

NCR Category: General

Observation: Due to power outages caused by storm damages on 05/10/2024, samples exceeded maximum allowable temperature.

Resolution: Data will be qualified as appropriate.

Authorized by/Date: Sarah A Nixon 5/29/2024

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P445164

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445347

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445241

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445673

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445211

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P445170

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8321B
Batch ID: P445088

Component	Result	Code	Units
Cylindrospermopsin	0.10	U	ug/L
Desmethyl microcystin LR	0.25	U	ug/L
Microcystin H1LR	0.25	U	ug/L
Microcystin HtyR	0.25	U	ug/L
Microcystin LA	0.10	U	ug/L
Microcystin LF	0.10	U	ug/L
Microcystin LR	0.25	U	ug/L
Microcystin LW	0.25	U	ug/L
Microcystin LY	0.10	U	ug/L
Microcystin RR	0.10	U	ug/L
Microcystin WR	0.50	U	ug/L
Microcystin YR	0.25	U	ug/L
Nodularin-R	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P445089

Component	Result	Code	Units
Anatoxin-a	0.25	U	ug/L
Neosaxitoxin	0.50	U	ug/L
Saxitoxin	0.50	U	ug/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P445164

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445347

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445241

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	101		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445673

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445211

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P445170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	101		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P445088

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	96.2		P	40 - 150
Desmethyl microcystin LR	100		P	40 - 150
Microcystin HILR	109		P	40 - 150
Microcystin HtyR	91.9		P	40 - 150
Microcystin LA	96.2		P	40 - 150
Microcystin LF	98.7		P	40 - 150
Microcystin LR	99.7		P	40 - 150
Microcystin LW	104		P	40 - 150
Microcystin LY	107		P	40 - 150
Microcystin RR	94.8		P	40 - 150
Microcystin WR	101		P	40 - 150
Microcystin YR	91.5		P	40 - 150
Nodularin-R	93.3		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P445089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	112		P	40 - 150
Neosaxitoxin	87.5		P	40 - 150
Saxitoxin	92.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445347

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2486303	Ammonia-N	92.8	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2486303	Kjeldahl Nitrogen	92.5	99.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485840	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2486308	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P445170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2486305	O-Phosphate-P	96.5	96.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P445088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485817	Cylindrospermopsin	105	109	P/P	40 - 150
2485817	Desmethyl microcystin LR	101	113	P/P	40 - 150
2485817	Microcystin HiLR	102	120	P/P	40 - 150
2485817	Microcystin HtyR	99.6	109	P/P	40 - 150
2485817	Microcystin LA	95.6	105	P/P	40 - 150
2485817	Microcystin LF	107	111	P/P	40 - 150
2485817	Microcystin LR	100	105	P/P	40 - 150
2485817	Microcystin LW	106	111	P/P	40 - 150
2485817	Microcystin LY	106	115	P/P	40 - 150
2485817	Microcystin RR	105	115	P/P	40 - 150
2485817	Microcystin WR	101	122	P/P	40 - 150
2485817	Microcystin YR	98.5	104	P/P	40 - 150
2485817	Nodularin-R	104	109	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P445089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485817	Anatoxin-a	97.9	93.3	P/P	40 - 150
2485817	Neosaxitoxin	35.5	33.3	F/F	40 - 150
2485817	Saxitoxin	49.1	46.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P445164

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2486317	Color (true)	4.09	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445347

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2486303	Ammonia-N	1.97	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2486303	Kjeldahl Nitrogen	5.36	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485840	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2486308	Total-P	0.740	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P445170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2486305	O-Phosphate-P	0.310	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P445088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485817	Cylindrospermopsin	3.55	Spike	P	0 - 30
2485817	Desmethyl microcystin LR	11.9	Spike	P	0 - 30
2485817	Microcystin HtIR	16.5	Spike	P	0 - 30
2485817	Microcystin HtyR	8.77	Spike	P	0 - 30
2485817	Microcystin LA	9.24	Spike	P	0 - 30
2485817	Microcystin LF	4.13	Spike	P	0 - 30
2485817	Microcystin LR	4.03	Spike	P	0 - 30
2485817	Microcystin LW	4.95	Spike	P	0 - 30
2485817	Microcystin LY	7.78	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P445088

Replicated					
Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485817	Microcystin RR	9.39	Spike	P	0 - 30
2485817	Microcystin WR	18.9	Spike	P	0 - 30
2485817	Microcystin YR	5.54	Spike	P	0 - 30
2485817	Nodularin-R	5.26	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P445089

Replicated					
Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485817	Anatoxin-a	4.87	Spike	P	0 - 30
2485817	Neosaxitoxin	6.35	Spike	P	0 - 30
2485817	Saxitoxin	5.16	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report
Surrogates

Lab Sample ID: 2486297
Field Sample ID: HABCE0237

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	99.0	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	120	P	30 - 160

Lab Sample ID: 2486298
Field Sample ID: HABCE0236

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	103	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	100	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A125622

Included Lab Sample IDs: 2486297, 2486298

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	109	114	P/P	50 - 160
Desmethyl microcystin LR	107	112	P/P	50 - 160
Microcystin HILR	116	117	P/P	50 - 160
Microcystin HtyR	104	111	P/P	50 - 160
Microcystin LA	106	107	P/P	50 - 160
Microcystin LF	115	116	P/P	50 - 160
Microcystin LR	110	113	P/P	50 - 160
Microcystin LW	105	115	P/P	50 - 160
Microcystin LY	118	120	P/P	50 - 160
Microcystin RR	104	104	P/P	50 - 160
Microcystin WR	119	106	P/P	50 - 160
Microcystin YR	109	101	P/P	50 - 160
Nodularin-R	106	109	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A125630

Included Lab Sample IDs: 2486297, 2486298

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	102	99.2	P/P	50 - 160
Neosaxitoxin	79.5	74.3	P/P	50 - 160
Saxitoxin	88.1	81.9	P/P	50 - 160

Reference Method: DEP SOP: NU-094-1

Run ID: A125647

Included Lab Sample IDs: 2486301, 2486302

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A125649

Included Lab Sample IDs: 2486305, 2486306

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A125701

Included Lab Sample IDs: 2486303, 2486304

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	93.0	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A125719

Included Lab Sample IDs: 2486303, 2486304

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	105	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A125724
Included Lab Sample IDs: 2486303, 2486304

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A125860
Included Lab Sample IDs: 2486303, 2486304

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report

Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	97.1				4.09	
EPA 350.1 Rev. 2.0	Ammonia-N	95.6	92.8	94.8			1.97
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	92.5	99.8			5.36
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	97.0	97.0			0.0
EPA 365.1 Rev. 2.0	Total-P	104	102	102			0.740
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	96.5	96.8			0.310
EPA 8321B	Anatoxin-a	112	97.9	93.3			4.87
	Cylindrospermopsin	96.2	105	109			3.55
	Desmethyl microcystin LR	100	101	113			11.9
	Microcystin H1LR	109	102	120			16.5
	Microcystin HtyR	91.9	99.6	109			8.77
	Microcystin LA	96.2	95.6	105			9.24
	Microcystin LF	98.7	107	111			4.13
	Microcystin LR	99.7	100	105			4.03
	Microcystin LW	104	106	111			4.95
	Microcystin LY	107	106	115			7.78
	Microcystin RR	94.8	105	115			9.39
	Microcystin WR	101	101	122			18.9
	Microcystin YR	91.5	98.5	104			5.54
	Neosaxitoxin	87.5	35.5	33.3			6.35
	Nodularin-R	93.3	104	109			5.26
	Saxitoxin	92.2	49.1	46.6			5.16

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2486301, 2486302
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2486303, 2486304
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2486303, 2486304
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2486303, 2486304
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2486303, 2486304
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2486305, 2486306
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2486297, 2486298
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2486297, 2486298

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	05/02/2024			05/02/2024 13:43	Chandler E Cox	2486301, 2486302
EPA 350.1 Rev. 2.0	05/02/2024			05/07/2024 12:21	Khloe J Berg	2486303
	05/02/2024			05/07/2024 12:28	Khloe J Berg	2486304
EPA 351.2 Rev. 2.0	05/02/2024	05/06/2024 11:58	Simonne.V. Calhoun	05/07/2024 12:37	Ping Hua	2486303
	05/02/2024	05/06/2024 11:58	Simonne.V. Calhoun	05/07/2024 12:42	Ping Hua	2486304
EPA 353.2 Rev. 2.0	05/02/2024			05/23/2024 15:56	Fadila Guebre	2486304
	05/02/2024			05/23/2024 16:13	Fadila Guebre	2486303
EPA 365.1 Rev. 2.0	05/02/2024	05/03/2024 14:00	Josephine W Gitau	05/06/2024 14:35	Chandler E Cox	2486303
	05/02/2024	05/03/2024 14:00	Josephine W Gitau	05/06/2024 14:36	Chandler E Cox	2486304
EPA 365.1 Rev. 2.0 dissolved	05/02/2024			05/02/2024 14:46	Adam P Silver	2486305
	05/02/2024			05/02/2024 14:48	Adam P Silver	2486306
EPA 8321B	05/02/2024	05/02/2024 11:00	Tae K Lee	05/02/2024 15:34	Tae K Lee	2486297
	05/02/2024	05/02/2024 11:00	Tae K Lee	05/02/2024 15:51	Tae K Lee	2486298
	05/02/2024	05/02/2024 12:00	Tae K Lee	05/02/2024 21:06	Tae K Lee	2486297
	05/02/2024	05/02/2024 12:00	Tae K Lee	05/02/2024 21:20	Tae K Lee	2486298