

Chemical Analysis Report

CEN-DIST-2023-09-26-01

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

Event Description: **Algal Bloom Response - CEROC**
Request ID: **RQ-2023-07-03-19**
Customer: **CEN-DIST**
Project ID: **BLOOM-RESP**

Send Reports to:
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Date Certified: 11-OCT-2023 09:32



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.

Sample Location: Lake Howell - Center

Collection Date/Time: 09/25/2023 11:32

Field ID: HABCE0214

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2439820	DEP SOP: NU-094-1	Color (true)	25	A	PCU	P435524	
2439822	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P435695	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P435938	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P436140	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P435689	
2439824	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P435521	
2439826	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P435489	
		Cylindrospermopsin	0.17	I	ug/L	P435488	
		Desmethyl microcystin LR	0.25	U	ug/L	P435488	
		Microcystin HiLR	0.25	U	ug/L	P435488	
		Microcystin HtyR	0.25	U	ug/L	P435488	
		Microcystin LA	0.10	U	ug/L	P435488	
		Microcystin LF	0.10	U	ug/L	P435488	
		Microcystin LR	0.25	U	ug/L	P435488	
		Microcystin LW	0.25	U	ug/L	P435488	
		Microcystin LY	0.10	U	ug/L	P435488	
		Microcystin RR	0.10	U	ug/L	P435488	
		Microcystin WR	0.50	U	ug/L	P435488	
		Neosaxitoxin	0.50	U	ug/L	P435489	
		Microcystin YR	0.25	U	ug/L	P435488	
		Saxitoxin	0.50	U	ug/L	P435489	
		Nodularin-R	0.10	U	ug/L	P435488	

Sample Location: Lake Minnehaha - E Dock

Collection Date/Time: 09/25/2023 12:49

Field ID: HABCE0194

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2439819	DEP SOP: NU-094-1	Color (true)	16		PCU	P435524	
2439821	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P435695	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P435938	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P436140	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P435689	
2439823	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P435520	
2439825	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P435489	
		Cylindrospermopsin	0.14	I	ug/L	P435488	
		Desmethyl microcystin LR	0.25	U	ug/L	P435488	
		Microcystin HiLR	0.25	U	ug/L	P435488	
		Microcystin HtyR	0.25	U	ug/L	P435488	
		Microcystin LA	0.10	U	ug/L	P435488	
		Microcystin LF	0.10	U	ug/L	P435488	
		Microcystin LR	0.25	U	ug/L	P435488	
		Microcystin LW	0.25	U	ug/L	P435488	
		Microcystin LY	0.10	U	ug/L	P435488	
		Microcystin RR	0.10	U	ug/L	P435488	
		Microcystin WR	0.50	U	ug/L	P435488	
		Neosaxitoxin	0.50	U	ug/L	P435489	
		Microcystin YR	0.25	U	ug/L	P435488	
		Saxitoxin	0.50	U	ug/L	P435489	
		Nodularin-R	0.10	U	ug/L	P435488	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P435524

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435695

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435938

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436140

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435689

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435520

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435521

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

Reference Method: EPA 8321B
Batch ID: P435488

Component	Result	Code	Units
Cylindrospermopsin	0.10	U	ug/L
Desmethyl microcystin LR	0.25	U	ug/L
Microcystin H1R	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P435488

Component	Result	Code	Units
Microcystin WR	0.50	U	ug/L
Microcystin YR	0.25	U	ug/L
Nodularin-R	0.10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P435489

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: P435524

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435938

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436140

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.7		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P435488

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	99.9		P	40 - 160
Desmethyl microcystin LR	119		P	40 - 160
Microcystin H1R	108		P	40 - 160
Microcystin HtyR	110		P	40 - 160
Microcystin LA	107		P	40 - 160
Microcystin LF	99.2		P	40 - 160
Microcystin LR	106		P	40 - 160
Microcystin LW	93.6		P	40 - 160
Microcystin LY	94.2		P	40 - 160
Microcystin RR	105		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P435488

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Microcystin WR	105		P	40 - 160
Microcystin YR	104		P	40 - 160
Nodularin-R	106		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P435489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	105		P	40 - 150
Neosaxitoxin	96.3		P	40 - 150
Saxitoxin	97.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435695

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439799	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435938

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439821	Kjeldahl Nitrogen	106	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437931	NO2NO3-N	98.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439868	Total-P	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439776	O-Phosphate-P	98.5	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439824	O-Phosphate-P	98.3	98.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P435488

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439756	Cylindrospermopsin	89.1	109	P/P	40 - 160
2439756	Desmethyl microcystin LR	120	124	P/P	40 - 160
2439756	Microcystin HilR	108	112	P/P	40 - 160
2439756	Microcystin HtyR	105	112	P/P	40 - 160
2439756	Microcystin LA	102	109	P/P	40 - 160
2439756	Microcystin LF	115	122	P/P	40 - 160
2439756	Microcystin LR	98.6	104	P/P	40 - 160
2439756	Microcystin LW	93.4	102	P/P	40 - 160
2439756	Microcystin LY	103	93.9	P/P	40 - 160
2439756	Microcystin RR	98.7	106	P/P	40 - 160
2439756	Microcystin WR	103	111	P/P	40 - 160
2439756	Microcystin YR	100	106	P/P	40 - 160
2439756	Nodularin-R	99.2	109	P/P	40 - 160

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P435489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439756	Anatoxin-a	107	110	P/P	40 - 150
2439756	Neosaxitoxin	70.0	72.6	P/P	40 - 150
2439756	Saxitoxin	59.4	62.1	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P435524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439820	Color (true)	1.74	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439799	Ammonia-N	0.393	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435938

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439821	Kjeldahl Nitrogen	1.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437931	NO2NO3-N	1.51	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439868	Total-P	1.67	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439776	O-Phosphate-P	0.251	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P435521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439824	O-Phosphate-P	0.406	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P435488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439756	Cylindrospermopsin	19.7	Spike	P	0 - 30
2439756	Desmethyl microcystin LR	4.00	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P435488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439756	Microcystin HllR	4.05	Spike	P	0 - 30
2439756	Microcystin HtyR	6.72	Spike	P	0 - 30
2439756	Microcystin LA	7.17	Spike	P	0 - 30
2439756	Microcystin LF	5.37	Spike	P	0 - 30
2439756	Microcystin LR	5.56	Spike	P	0 - 30
2439756	Microcystin LW	8.73	Spike	P	0 - 30
2439756	Microcystin LY	9.12	Spike	P	0 - 30
2439756	Microcystin RR	6.98	Spike	P	0 - 30
2439756	Microcystin WR	6.87	Spike	P	0 - 30
2439756	Microcystin YR	5.90	Spike	P	0 - 30
2439756	Nodularin-R	8.99	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P435489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439756	Anatoxin-a	2.31	Spike	P	0 - 30
2439756	Neosaxitoxin	3.54	Spike	P	0 - 30
2439756	Saxitoxin	4.33	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2439825
Field Sample ID: HABCE0194

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	110	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	89.8	P	30 - 160

Lab Sample ID: 2439826
Field Sample ID: HABCE0214

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	103	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	84.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A121772

Included Lab Sample IDs: 2439823, 2439824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	98.4	P/P	90 - 110
O-Phosphate-P	98.4	98.6	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A121773

Included Lab Sample IDs: 2439819, 2439820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121803

Included Lab Sample IDs: 2439825, 2439826

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	99.6	100	P/P	60 - 160
Desmethyl microcystin LR	108	111	P/P	50 - 160
Microcystin HILR	99.5	98.1	P/P	60 - 160
Microcystin HtyR	102	96.4	P/P	60 - 160
Microcystin LA	96.3	95.8	P/P	50 - 160
Microcystin LF	103	98.4	P/P	60 - 160
Microcystin LR	98.6	90.6	P/P	60 - 160
Microcystin LW	86.4	78.2	P/P	60 - 160
Microcystin LY	98.7	90.1	P/P	60 - 160
Microcystin RR	95.8	98.4	P/P	60 - 160
Microcystin WR	99.1	93.1	P/P	60 - 160
Microcystin YR	97.5	85.6	P/P	60 - 160
Nodularin-R	98.7	96.1	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121829

Included Lab Sample IDs: 2439821, 2439822

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	98.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121836

Included Lab Sample IDs: 2439825, 2439826

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	106	112	P/P	50 - 160
Neosaxitoxin	106	111	P/P	50 - 160
Saxitoxin	110	113	P/P	50 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121850

Included Lab Sample IDs: 2439821, 2439822

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122012

Included Lab Sample IDs: 2439821, 2439822

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122024

Included Lab Sample IDs: 2439821, 2439822

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	96.4	P/P	90 - 110
Kjeldahl Nitrogen	107	105	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)	102				1.74	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	102	102			0.393
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	106	105			1.06
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	98.5	100			1.51
EPA 365.1 Rev. 2.0	Total-P	105	106	108			1.67
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5	98.5	98.2			0.251
	O-Phosphate-P	99.7	98.3	98.7			0.406
EPA 8321B	Anatoxin-a	105	107	110			2.31
	Cylindrospermopsin	99.9	89.1	109			19.7
	Desmethyl microcystin LR	119	120	124			4.00
	Microcystin HilR	108	108	112			4.05
	Microcystin HtyR	110	105	112			6.72
	Microcystin LA	107	102	109			7.17
	Microcystin LF	99.2	115	122			5.37
	Microcystin LR	106	98.6	104			5.56
	Microcystin LW	93.6	93.4	102			8.73
	Microcystin LY	94.2	103	93.9			9.12
	Microcystin RR	105	98.7	106			6.98
	Microcystin WR	105	103	111			6.87
	Microcystin YR	104	100	106			5.90
	Neosaxitoxin	96.3	70.0	72.6			3.54
	Nodularin-R	106	99.2	109			8.99
	Saxitoxin	97.2	59.4	62.1			4.33

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2439819, 2439820
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2439821, 2439822
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2439821, 2439822
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2439821, 2439822
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2439821, 2439822
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2439823, 2439824
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2439825, 2439826
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2439825, 2439826

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	09/26/2023			09/26/2023 15:34	Alexis Price	2439819
	09/26/2023			09/26/2023 15:36	Alexis Price	2439820
EPA 350.1 Rev. 2.0	09/26/2023			09/28/2023 14:09	Ping Hua	2439821
	09/26/2023			09/28/2023 14:10	Ping Hua	2439822
EPA 351.2 Rev. 2.0	09/26/2023	10/04/2023 14:26	Simonne.V. Calhoun	10/09/2023 11:02	Samantha L Bates	2439821
	09/26/2023	10/04/2023 14:26	Simonne.V. Calhoun	10/09/2023 11:43	Samantha L Bates	2439822
EPA 353.2 Rev. 2.0	09/26/2023			10/06/2023 12:20	Fadila Guebre	2439821
	09/26/2023			10/06/2023 12:21	Fadila Guebre	2439822
EPA 365.1 Rev. 2.0	09/26/2023	09/28/2023 13:36	Alexis Price	09/29/2023 12:12	Chandler E Cox	2439821
	09/26/2023	09/28/2023 13:36	Alexis Price	09/29/2023 12:13	Chandler E Cox	2439822
EPA 365.1 Rev. 2.0 dissolved	09/26/2023			09/26/2023 15:08	Elise M. Gillis	2439823
	09/26/2023			09/26/2023 15:14	Elise M. Gillis	2439824
EPA 8321B	09/26/2023	09/27/2023 12:00	Hana Lee	09/27/2023 16:33	Tae K Lee	2439825
	09/26/2023	09/27/2023 12:00	Hana Lee	09/27/2023 16:49	Tae K Lee	2439826
	09/26/2023	09/27/2023 12:00	Hana Lee	09/28/2023 13:25	Tae K Lee	2439825
	09/26/2023	09/27/2023 12:00	Hana Lee	09/28/2023 13:39	Tae K Lee	2439826