

Chemical Analysis Report

SO-DIST-2024-04-24-01

Florida DEP Laboratory
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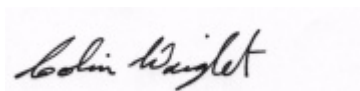
Event Description: **Algal Bloom Response -SOROC**
Request ID: **RQ-2023-10-02-35**
Customer: **SO-DIST**
Project ID: **BLOOM-RESP**

Send Reports to:
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FLDEP South District Office
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Certified by: Colin Wright, Program Administrator

Date Certified: 21-MAY-2024 11:49



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 Placid: Boat Ramp

Collection Date/Time: 04/23/2024 11:40

Field ID: HAB-HC-042324-1140

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2484419	DEP SOP: NU-094-1	Color (true)	13		PCU	P444737	
2484421	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P445159	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P445317	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P444889	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P444857	
2484423	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P444749	
2484425	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P444652	
		Cylindrospermopsin	0.10	U	ug/L	P444651	
		Desmethyl microcystin LR	0.25	U	ug/L	P444651	
		Microcystin HilR	0.25	U	ug/L	P444651	
		Microcystin HtyR	0.25	U	ug/L	P444651	
		Microcystin LA	0.10	U	ug/L	P444651	
		Microcystin LF	0.10	U	ug/L	P444651	
		Microcystin LR	0.25	U	ug/L	P444651	
		Microcystin LW	0.25	U	ug/L	P444651	
		Microcystin LY	0.10	U	ug/L	P444651	
		Microcystin RR	0.10	U	ug/L	P444651	
		Microcystin WR	0.50	U	ug/L	P444651	
		Neosaxitoxin	0.50	U	ug/L	P444652	
		Microcystin YR	0.25	U	ug/L	P444651	
		Saxitoxin	0.50	U	ug/L	P444652	
		Nodularin-R	0.10	U	ug/L	P444651	

Sample Location: Lake Glenada: Boat Ramp

Collection Date/Time: 04/23/2024 13:00

Field ID: HAB-HC-042324-1300

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2484420	DEP SOP: NU-094-1	Color (true)	46		PCU	P444737	
2484422	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P445159	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P445317	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P444889	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P444857	
2484424	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P444749	
2484426	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P444652	
		Cylindrospermopsin	0.10	U	ug/L	P444651	
		Desmethyl microcystin LR	0.25	U	ug/L	P444651	
		Microcystin HilR	0.25	U	ug/L	P444651	
		Microcystin HtyR	0.25	U	ug/L	P444651	
		Microcystin LA	0.10	U	ug/L	P444651	
		Microcystin LF	0.10	U	ug/L	P444651	
		Microcystin LR	0.47	I	ug/L	P444651	
		Microcystin LW	0.25	U	ug/L	P444651	
		Microcystin LY	0.10	U	ug/L	P444651	
		Microcystin RR	0.10	U	ug/L	P444651	
		Microcystin WR	0.50	U	ug/L	P444651	
		Neosaxitoxin	0.50	U	ug/L	P444652	
		Microcystin YR	0.25	U	ug/L	P444651	
		Saxitoxin	0.50	U	ug/L	P444652	
		Nodularin-R	0.10	U	ug/L	P444651	

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P444737

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445159

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445317

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444889

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444857

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P444749

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

Reference Method: EPA 8321B
Batch ID: P444651

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: P444652

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: P444737

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445159

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: P445317

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444889

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444857

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P444749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.6		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P444651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	84.2		P	40 - 160
Desmethyl microcystin LR	90.5		P	40 - 160
Microcystin H1LR	89.9		P	40 - 160
Microcystin HtyR	81.7		P	40 - 160
Microcystin LA	92.5		P	40 - 160
Microcystin LF	79.4		P	40 - 160
Microcystin LR	86.5		P	40 - 160
Microcystin LW	81.8		P	40 - 160
Microcystin LY	92.6		P	40 - 160
Microcystin RR	87.3		P	40 - 160
Microcystin WR	90.7		P	40 - 160
Microcystin YR	81.0		P	40 - 160
Nodularin-R	83.1		P	40 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P444652

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	93.1		P	40 - 150
Neosaxitoxin	75.4		P	40 - 150
Saxitoxin	84.6		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445159

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2484325	Ammonia-N	99.2	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2484436	Kjeldahl Nitrogen	103	111	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2481419	NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2484461	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P444749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2484423	O-Phosphate-P	91.7	93.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P444651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2484038	Cylindrospermopsin	93.2	97.9	P/P	40 - 160
2484038	Desmethyl microcystin LR	96.5	96.8	P/P	40 - 160
2484038	Microcystin HiLR	93.1	95.4	P/P	40 - 160
2484038	Microcystin HtyR	81.7	84.6	P/P	40 - 160
2484038	Microcystin LA	81.9	92.8	P/P	40 - 160
2484038	Microcystin LF	94.3	92.6	P/P	40 - 160
2484038	Microcystin LR	91.4	94.2	P/P	40 - 160
2484038	Microcystin LW	87.6	86.0	P/P	40 - 160
2484038	Microcystin LY	88.4	93.1	P/P	40 - 160
2484038	Microcystin RR	90.4	91.7	P/P	40 - 160
2484038	Microcystin WR	93.1	93.9	P/P	40 - 160
2484038	Microcystin YR	88.9	86.3	P/P	40 - 160
2484038	Nodularin-R	88.8	89.2	P/P	40 - 160

Reference Method: EPA 8321B
Batch ID: P444652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2484038	Anatoxin-a	104	104	P/P	40 - 150
2484038	Neosaxitoxin	67.0	67.4	P/P	40 - 150
2484038	Saxitoxin	81.5	82.0	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P444737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484435	Color (true)	1.27	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484325	Ammonia-N	0.870	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484436	Kjeldahl Nitrogen	5.17	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2481419	NO2NO3-N	0.496	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484461	Total-P	1.23	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P444749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484423	O-Phosphate-P	1.62	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P444651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484038	Cylindrospermopsin	5.00	Spike	P	0 - 30
2484038	Desmethyl microcystin LR	0.319	Spike	P	0 - 30
2484038	Microcystin HtIR	2.40	Spike	P	0 - 30
2484038	Microcystin HtyR	3.45	Spike	P	0 - 30
2484038	Microcystin LA	12.5	Spike	P	0 - 30
2484038	Microcystin LF	1.87	Spike	P	0 - 30
2484038	Microcystin LR	2.97	Spike	P	0 - 30
2484038	Microcystin LW	1.79	Spike	P	0 - 30
2484038	Microcystin LY	5.22	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P444651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484038	Microcystin RR	1.35	Spike	P	0 - 30
2484038	Microcystin WR	0.808	Spike	P	0 - 30
2484038	Microcystin YR	3.00	Spike	P	0 - 30
2484038	Nodularin-R	0.433	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P444652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484038	Anatoxin-a	0.643	Spike	P	0 - 30
2484038	Neosaxitoxin	0.617	Spike	P	0 - 30
2484038	Saxitoxin	0.531	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2484425
Field Sample ID: HAB-HC-042324-1140

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	101	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	94.8	P	30 - 160

Lab Sample ID: 2484426
Field Sample ID: HAB-HC-042324-1300

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	95.1	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	103	P	30 - 160

Quality Assurance Report

Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A125495
Included Lab Sample IDs: 2484419, 2484420

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A125499
Included Lab Sample IDs: 2484423, 2484424

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.5	97.0	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A125506
Included Lab Sample IDs: 2484425, 2484426

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	87.5	87.0	P/P	60 - 160
Desmethyl microcystin LR	94.1	96.6	P/P	50 - 160
Microcystin HiiR	93.6	97.3	P/P	60 - 160
Microcystin HtyR	82.1	80.9	P/P	60 - 160
Microcystin LA	92.3	89.0	P/P	50 - 160
Microcystin LF	97.0	85.0	P/P	60 - 160
Microcystin LR	86.1	86.1	P/P	60 - 160
Microcystin LW	86.5	84.3	P/P	60 - 160
Microcystin LY	93.6	91.7	P/P	60 - 160
Microcystin RR	90.7	96.6	P/P	60 - 160
Microcystin WR	96.1	95.0	P/P	60 - 160
Microcystin YR	82.5	83.4	P/P	60 - 160
Nodularin-R	85.3	88.0	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A125517
Included Lab Sample IDs: 2484425, 2484426

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	110	106	P/P	50 - 160
Neosaxitoxin	93.9	91.3	P/P	50 - 160
Saxitoxin	104	102	P/P	50 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A125563
Included Lab Sample IDs: 2484421, 2484422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A125587
Included Lab Sample IDs: 2484421, 2484422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	98.0	P/P	90 - 110
Total-P	98.0	95.0	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A125646
Included Lab Sample IDs: 2484421, 2484422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A125763
Included Lab Sample IDs: 2484421, 2484422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	101	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		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	98.1			1.27	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	99.2	97.6		0.870
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	103	111		5.17
EPA 353.2 Rev. 2.0	NO2NO3-N	101	100	101		0.496
EPA 365.1 Rev. 2.0	Total-P	101	104	102		1.23
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.6	91.7	93.2		1.62
EPA 8321B	Anatoxin-a	93.1	104	104		0.643
	Cylindrospermopsin	84.2	93.2	97.9		5.00
	Desmethyl microcystin LR	90.5	96.5	96.8		0.319
	Microcystin HILR	89.9	93.1	95.4		2.40
	Microcystin HtyR	81.7	81.7	84.6		3.45
	Microcystin LA	92.5	81.9	92.8		12.5
	Microcystin LF	79.4	94.3	92.6		1.87
	Microcystin LR	86.5	91.4	94.2		2.97
	Microcystin LW	81.8	87.6	86.0		1.79
	Microcystin LY	92.6	88.4	93.1		5.22
	Microcystin RR	87.3	90.4	91.7		1.35
	Microcystin WR	90.7	93.1	93.9		0.808
	Microcystin YR	81.0	88.9	86.3		3.00
	Neosaxitoxin	75.4	67.0	67.4		0.617
	Nodularin-R	83.1	88.8	89.2		0.433
	Saxitoxin	84.6	81.5	82.0		0.531

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2484419, 2484420
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2484421, 2484422
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2484421, 2484422
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2484421, 2484422
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2484421, 2484422
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2484423, 2484424
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2484425, 2484426
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2484425, 2484426

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	04/24/2024			04/24/2024 13:07	Jessica K Wilks	2484419
	04/24/2024			04/24/2024 13:08	Jessica K Wilks	2484420
EPA 350.1 Rev. 2.0	04/24/2024			05/02/2024 11:36	Khloe J Berg	2484421
	04/24/2024			05/02/2024 11:37	Khloe J Berg	2484422
EPA 351.2 Rev. 2.0	04/24/2024	05/07/2024 12:15	Robyn Blevins	05/08/2024 13:34	Samantha L Bates	2484421
	04/24/2024	05/07/2024 12:15	Robyn Blevins	05/08/2024 13:36	Samantha L Bates	2484422
EPA 353.2 Rev. 2.0	04/24/2024			04/25/2024 13:41	Fadila Guebre	2484421
	04/24/2024			04/25/2024 13:42	Fadila Guebre	2484422
EPA 365.1 Rev. 2.0	04/24/2024	04/26/2024 13:02	Adam P Silver	04/30/2024 12:18	Elise M. Gillis	2484421
	04/24/2024	04/26/2024 13:02	Adam P Silver	04/30/2024 12:26	Elise M. Gillis	2484422
EPA 365.1 Rev. 2.0 dissolved	04/24/2024			04/24/2024 14:45	Elise M. Gillis	2484423
	04/24/2024			04/24/2024 14:50	Elise M. Gillis	2484424
EPA 8321B	04/24/2024	04/24/2024 11:20	Hana Lee	04/24/2024 21:07	Hana Lee	2484425
	04/24/2024	04/24/2024 11:20	Hana Lee	04/24/2024 21:24	Hana Lee	2484426
	04/24/2024	04/24/2024 11:20	Hana Lee	04/24/2024 22:24	Hana Lee	2484425
	04/24/2024	04/24/2024 11:20	Hana Lee	04/24/2024 22:37	Hana Lee	2484426