

Chemical Analysis Report

NE-DIST-2024-07-11-01

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

Event Description: **Algae Bloom Response NEROC-as needed**
Request ID: **RQ-2024-07-15-52**
Customer: **NE-DIST**
Project ID: **BLOOM-RESP**

Send Reports to:
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Certified by: Marek Topolski, Environmental Administrator

Date Certified: 24-JUL-2024 13:35

A handwritten signature in black ink, appearing to read "Marek Topolski", with a stylized, flowing script.

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.

Ref. Method and Comment:
DEP SOP: NU-094-1: The sample expired upon receipt.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: Doctors Lake - Wyndegate Dr

Collection Date/Time: 07/09/2024 09:20

Field ID: NEHAB0117

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2500572	DEP SOP: NU-094-1	Color (true)	58	Q	PCU	P447734	
2500574	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P448060	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P447819	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P448015	
	EPA 365.1 Rev. 2.0	Total-P	0.099		mg P/L	P447878	
2500576	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.061	Q	mg P/L	P447719	
2500578	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P447697	
		Cylindrospermopsin	0.10	U	ug/L	P447690	
		Desmethyl microcystin LR	0.25	U	ug/L	P447690	
		Microcystin HilR	0.25	U	ug/L	P447690	
		Microcystin HtyR	0.25	U	ug/L	P447690	
		Microcystin LA	0.10	U	ug/L	P447690	
		Microcystin LF	0.10	U	ug/L	P447690	
		Microcystin LR	1.8		ug/L	P447690	
		Microcystin LW	0.25	U	ug/L	P447690	
		Microcystin LY	0.10	U	ug/L	P447690	
		Microcystin RR	0.10	U	ug/L	P447690	
		Microcystin WR	0.50	U	ug/L	P447690	
		Neosaxitoxin	0.50	U	ug/L	P447697	
		Microcystin YR	0.25	U	ug/L	P447690	
		Saxitoxin	0.50	U	ug/L	P447697	
		Nodularin-R	0.10	U	ug/L	P447690	

Ref. Method and Comment:
 DEP SOP: NU-094-1: The sample expired upon receipt.
 EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P447734

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P448060

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447819

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P448015

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447877

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447878

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447719

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

Reference Method: EPA 8321B
Batch ID: P447690

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: P447690

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: P447697

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: P447734

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P448060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447819

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P448015

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447877

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447878

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	100		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P447690

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	91.0		P	40 - 160
Desmethyl microcystin LR	94.7		P	40 - 160
Microcystin HILR	89.3		P	40 - 160
Microcystin HtyR	93.7		P	40 - 160
Microcystin LA	96.7		P	40 - 160
Microcystin LF	84.9		P	40 - 160
Microcystin LR	87.5		P	40 - 160
Microcystin LW	89.2		P	40 - 160
Microcystin LY	99.0		P	40 - 160
Microcystin RR	89.0		P	40 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P447690

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Microcystin WR	88.6		P	40 - 160
Microcystin YR	95.4		P	40 - 160
Nodularin-R	92.4		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P447697

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	88.2		P	40 - 150
Neosaxitoxin	90.3		P	40 - 150
Saxitoxin	95.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P448060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2500094	Ammonia-N	96.6	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2500574	Kjeldahl Nitrogen	107	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P448015

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2499756	NO2NO3-N	97.1	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2500095	Total-P	98.8	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2500757	Total-P	93.3	93.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2500575	O-Phosphate-P	98.1	98.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P447690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2500527	Cylindrospermopsin	78.4	80.2	P/P	40 - 160
2500527	Desmethyl microcystin LR	92.2	95.6	P/P	40 - 160
2500527	Microcystin H1R	85.2	83.4	P/P	40 - 160
2500527	Microcystin HtyR	82.1	91.1	P/P	40 - 160
2500527	Microcystin LA	87.8	91.7	P/P	40 - 160
2500527	Microcystin LF	89.7	91.7	P/P	40 - 160
2500527	Microcystin LR	87.2	88.7	P/P	40 - 160
2500527	Microcystin LW	88.0	87.9	P/P	40 - 160
2500527	Microcystin LY	85.6	91.4	P/P	40 - 160
2500527	Microcystin RR	90.9	89.2	P/P	40 - 160
2500527	Microcystin WR	77.7	84.8	P/P	40 - 160
2500527	Microcystin YR	91.4	93.0	P/P	40 - 160
2500527	Nodularin-R	91.0	87.3	P/P	40 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P447697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2500527	Anatoxin-a	79.3	81.4	P/P	40 - 150
2500527	Neosaxitoxin	62.0	61.7	P/P	40 - 150
2500527	Saxitoxin	71.5	68.0	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P447734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500512	Color (true)	1.93	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P448060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500094	Ammonia-N	1.26	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500574	Kjeldahl Nitrogen	1.32	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P448015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2499756	NO2NO3-N	0.514	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500095	Total-P	0.0473	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500757	Total-P	0.149	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500575	O-Phosphate-P	0.404	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P447690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500527	Cylindrospermopsin	2.16	Spike	P	0 - 30
2500527	Desmethyl microcystin LR	3.60	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P447690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500527	Microcystin HII R	2.15	Spike	P	0 - 30
2500527	Microcystin Hty R	10.5	Spike	P	0 - 30
2500527	Microcystin LA	4.29	Spike	P	0 - 30
2500527	Microcystin LF	2.28	Spike	P	0 - 30
2500527	Microcystin LR	1.78	Spike	P	0 - 30
2500527	Microcystin LW	0.144	Spike	P	0 - 30
2500527	Microcystin LY	6.63	Spike	P	0 - 30
2500527	Microcystin RR	1.83	Spike	P	0 - 30
2500527	Microcystin WR	8.73	Spike	P	0 - 30
2500527	Microcystin YR	1.77	Spike	P	0 - 30
2500527	Nodularin-R	4.06	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P447697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2500527	Anatoxin-a	2.60	Spike	P	0 - 30
2500527	Neosaxitoxin	0.477	Spike	P	0 - 30
2500527	Saxitoxin	5.14	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2500577
Field Sample ID: NEHAB0057

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	65.3	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	96.9	P	30 - 160

Lab Sample ID: 2500578
Field Sample ID: NEHAB0117

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	66.0	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	90.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A126597

Included Lab Sample IDs: 2500577, 2500578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	86.9	83.0	P/P	50 - 160
Neosaxitoxin	94.8	89.3	P/P	50 - 160
Saxitoxin	103	102	P/P	50 - 160

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A126616

Included Lab Sample IDs: 2500575, 2500576

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	99.6	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A126622

Included Lab Sample IDs: 2500571, 2500572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.1	99.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A126626

Included Lab Sample IDs: 2500577, 2500578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	82.4	81.1	P/P	60 - 160
Desmethyl microcystin LR	91.0	94.0	P/P	60 - 160
Microcystin HILR	90.3	83.6	P/P	60 - 160
Microcystin HtyR	90.8	90.6	P/P	60 - 160
Microcystin LA	95.2	99.3	P/P	50 - 160
Microcystin LF	91.4	94.7	P/P	50 - 160
Microcystin LR	86.7	87.6	P/P	60 - 160
Microcystin LW	95.7	94.3	P/P	60 - 160
Microcystin LY	98.6	94.9	P/P	60 - 160
Microcystin RR	92.0	88.8	P/P	60 - 160
Microcystin WR	86.2	83.8	P/P	60 - 160
Microcystin YR	89.8	93.8	P/P	60 - 160
Nodularin-R	88.3	85.2	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A126708

Included Lab Sample IDs: 2500573, 2500574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A126711

Included Lab Sample IDs: 2500573

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	103	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A126715

Included Lab Sample IDs: 2500574

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A126733

Included Lab Sample IDs: 2500573, 2500574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A126754

Included Lab Sample IDs: 2500573, 2500574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	98.3	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	MS
					SMP	
DEP SOP: NU-094-1	Color (true)	98.2			1.93	
EPA 350.1 Rev. 2.0	Ammonia-N	94.0	96.6	98.0		1.26
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	107	105		1.32
EPA 353.2 Rev. 2.0	NO2NO3-N	102	97.1	97.6		0.514
EPA 365.1 Rev. 2.0	Total-P	102	98.8	98.8		0.0473
	Total-P	100	93.3	93.2		0.149
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	98.1	98.7		0.404
EPA 8321B	Anatoxin-a	88.2	79.3	81.4		2.60
	Cylindrospermopsin	91.0	78.4	80.2		2.16
	Desmethyl microcystin LR	94.7	92.2	95.6		3.60
	Microcystin HiLR	89.3	85.2	83.4		2.15
	Microcystin HtyR	93.7	82.1	91.1		10.5
	Microcystin LA	96.7	87.8	91.7		4.29
	Microcystin LF	84.9	89.7	91.7		2.28
	Microcystin LR	87.5	87.2	88.7		1.78
	Microcystin LW	89.2	88.0	87.9		0.144
	Microcystin LY	99.0	85.6	91.4		6.63
	Microcystin RR	89.0	90.9	89.2		1.83
	Microcystin WR	88.6	77.7	84.8		8.73
	Microcystin YR	95.4	91.4	93.0		1.77
	Neosaxitoxin	90.3	62.0	61.7		0.477
	Nodularin-R	92.4	91.0	87.3		4.06
	Saxitoxin	95.2	71.5	68.0		5.14

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2500571, 2500572
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2500573, 2500574
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2500573, 2500574
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2500573, 2500574
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2500573, 2500574
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2500575, 2500576
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2500577, 2500578
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2500577, 2500578

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	07/11/2024			07/11/2024 15:23	Anna M. Plaviak	2500571
	07/11/2024			07/11/2024 15:24	Anna M. Plaviak	2500572
EPA 350.1 Rev. 2.0	07/11/2024			07/18/2024 11:44	Robyn Blevins	2500573
	07/11/2024			07/18/2024 11:45	Robyn Blevins	2500574
EPA 351.2 Rev. 2.0	07/11/2024	07/15/2024 08:24	Simonne.V. Calhoun	07/16/2024 11:34	Ping Hua	2500573
	07/11/2024	07/15/2024 08:24	Simonne.V. Calhoun	07/16/2024 11:36	Ping Hua	2500574
EPA 353.2 Rev. 2.0	07/11/2024			07/17/2024 12:57	Fadila Guebre	2500573
	07/11/2024			07/17/2024 12:59	Fadila Guebre	2500574
EPA 365.1 Rev. 2.0	07/11/2024	07/16/2024 13:43	Simonne.V. Calhoun	07/17/2024 07:56	Simonne.V. Calhoun	2500573
	07/11/2024	07/16/2024 13:43	Simonne.V. Calhoun	07/17/2024 09:03	Simonne.V. Calhoun	2500574
EPA 365.1 Rev. 2.0 dissolved	07/11/2024			07/11/2024 14:24	Elise M. Gillis	2500575
	07/11/2024			07/11/2024 14:26	Elise M. Gillis	2500576
EPA 8321B	07/11/2024	07/11/2024 12:00	Hana Lee	07/11/2024 19:03	Hana Lee	2500577
	07/11/2024	07/11/2024 12:00	Hana Lee	07/11/2024 19:20	Hana Lee	2500578
	07/11/2024	07/11/2024 12:00	Hana Lee	07/12/2024 03:11	Hana Lee	2500577
	07/11/2024	07/11/2024 12:00	Hana Lee	07/12/2024 03:25	Hana Lee	2500578