

Chemical Analysis Report

NE-DIST-2024-07-02-01

Florida DEP Laboratory
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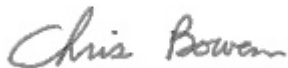
Event Description: **Algae Bloom Response NEROC-as needed**
Request ID: **RQ-2024-03-04-72**
Customer: **NE-DIST**
Project ID: **BLOOM-RESP**

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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 17-JUL-2024 08:39



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: Doctors Lake - Wyndegate Dr

Collection Date/Time: 07/01/2024 11:10

Field ID: NEHAB0117

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2498641	DEP SOP: NU-094-1	Color (true)	60		PCU	P447378	
2498643	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P447709	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P447476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P447491	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P447551	
2498645	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.053		mg P/L	P447373	
2498656	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P447337	
		Cylindrospermopsin	0.10	U	ug/L	P447336	
		Desmethyl microcystin LR	0.25	U	ug/L	P447336	
		Microcystin HiLR	0.25	U	ug/L	P447336	
		Microcystin HtyR	0.25	U	ug/L	P447336	
		Microcystin LA	0.10	U	ug/L	P447336	
		Microcystin LF	0.10	U	ug/L	P447336	
		Microcystin LR	0.65	I	ug/L	P447336	
		Microcystin LW	0.25	U	ug/L	P447336	
		Microcystin LY	0.10	U	ug/L	P447336	
		Microcystin RR	0.10	U	ug/L	P447336	
		Microcystin WR	0.50	U	ug/L	P447336	
		Neosaxitoxin	0.50	U	ug/L	P447337	
		Microcystin YR	0.25	U	ug/L	P447336	
		Saxitoxin	0.50	U	ug/L	P447337	
		Nodularin-R	0.10	U	ug/L	P447336	

Sample Location: Doctors Lake - Mill Cove

Collection Date/Time: 07/01/2024 11:30

Field ID: NEHAB0057

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2498640	DEP SOP: NU-094-1	Color (true)	62		PCU	P447378	
2498642	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P447709	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P447476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P447491	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P447465	
2498644	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.041		mg P/L	P447373	
2498655	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P447337	
		Cylindrospermopsin	0.10	U	ug/L	P447336	
		Desmethyl microcystin LR	0.25	U	ug/L	P447336	
		Microcystin HilR	0.25	U	ug/L	P447336	
		Microcystin HtyR	0.25	U	ug/L	P447336	
		Microcystin LA	0.10	U	ug/L	P447336	
		Microcystin LF	0.10	U	ug/L	P447336	
		Microcystin LR	1.4		ug/L	P447336	
		Microcystin LW	0.25	U	ug/L	P447336	
		Microcystin LY	0.10	U	ug/L	P447336	
		Microcystin RR	0.10	U	ug/L	P447336	
		Microcystin WR	0.50	U	ug/L	P447336	
		Neosaxitoxin	0.50	U	ug/L	P447337	
		Microcystin YR	0.25	U	ug/L	P447336	
		Saxitoxin	0.50	U	ug/L	P447337	
		Nodularin-R	0.10	U	ug/L	P447336	

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P447378

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P447709

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447476

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P447491

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447465

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447551

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447373

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

Reference Method: EPA 8321B
Batch ID: P447336

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P447336

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: P447337

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: P447378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P447709

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	92.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447476

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P447491

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: P447465

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447551

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447373

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

Reference Method: EPA 8321B
Batch ID: P447336

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	65.0		P	40 - 160
Desmethyl microcystin LR	95.1		P	40 - 160
Microcystin H1IR	91.4		P	40 - 160
Microcystin HtyR	92.5		P	40 - 160
Microcystin LA	76.0		P	40 - 160
Microcystin LF	99.5		P	40 - 160
Microcystin LR	90.1		P	40 - 160
Microcystin LW	118		P	40 - 160
Microcystin LY	94.5		P	40 - 160
Microcystin RR	91.3		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P447336

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Microcystin WR	90.4		P	40 - 160
Microcystin YR	64.7		P	40 - 160
Nodularin-R	92.5		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P447337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	104		P	40 - 150
Neosaxitoxin	115		P	40 - 150
Saxitoxin	94.2		P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P447709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2498005	Ammonia-N	93.8	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2498108	Kjeldahl Nitrogen	99.9	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P447491

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2497585	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2497583	Total-P	95.6	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2498864	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2499011	O-Phosphate-P	96.4	98.6	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P447336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2498555	Cylindrospermopsin	67.8	63.8	P/P	40 - 160
2498555	Desmethyl microcystin LR	102	99.0	P/P	40 - 160
2498555	Microcystin H1LR	99.7	91.1	P/P	40 - 160
2498555	Microcystin HtyR	97.4	93.8	P/P	40 - 160
2498555	Microcystin LA	77.6	75.5	P/P	40 - 160
2498555	Microcystin LF	108	108	P/P	40 - 160
2498555	Microcystin LR	97.1	90.0	P/P	40 - 160
2498555	Microcystin LW	125	125	P/P	40 - 160
2498555	Microcystin LY	96.8	95.7	P/P	40 - 160
2498555	Microcystin RR	96.4	95.2	P/P	40 - 160
2498555	Microcystin WR	93.6	94.1	P/P	40 - 160
2498555	Microcystin YR	69.0	61.7	P/P	40 - 160
2498555	Nodularin-R	104	94.9	P/P	40 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P447337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2498555	Anatoxin-a	113	107	P/P	40 - 150
2498555	Neosaxitoxin	90.8	78.0	P/P	40 - 150
2498555	Saxitoxin	84.5	77.3	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P447378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2498571	Color (true)	4.91	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P447709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2498005	Ammonia-N	2.15	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P447476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2498108	Kjeldahl Nitrogen	1.76	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P447491

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2497585	NO2NO3-N	0.484	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2497583	Total-P	2.37	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P447551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2498864	Total-P	0.668	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P447373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2499011	O-Phosphate-P	1.82	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P447336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2498555	Cylindrospermopsin	6.11	Spike	P	0 - 30
2498555	Desmethyl microcystin LR	2.47	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P447336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2498555	Microcystin HII R	9.00	Spike	P	0 - 30
2498555	Microcystin Hty R	3.75	Spike	P	0 - 30
2498555	Microcystin LA	2.70	Spike	P	0 - 30
2498555	Microcystin LF	0.334	Spike	P	0 - 30
2498555	Microcystin LR	7.53	Spike	P	0 - 30
2498555	Microcystin LW	0.281	Spike	P	0 - 30
2498555	Microcystin LY	1.11	Spike	P	0 - 30
2498555	Microcystin RR	1.21	Spike	P	0 - 30
2498555	Microcystin WR	0.495	Spike	P	0 - 30
2498555	Microcystin YR	11.3	Spike	P	0 - 30
2498555	Nodularin-R	9.11	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P447337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2498555	Anatoxin-a	5.74	Spike	P	0 - 30
2498555	Neosaxitoxin	15.2	Spike	P	0 - 30
2498555	Saxitoxin	8.89	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2498655
Field Sample ID: NEHAB0057

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	87.7	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	94.5	P	30 - 160

Lab Sample ID: 2498656
Field Sample ID: NEHAB0117

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	86.0	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	81.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A126467
Included Lab Sample IDs: 2498644, 2498645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	98.6	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1
Run ID: A126469
Included Lab Sample IDs: 2498640, 2498641

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.0	98.0	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A126473
Included Lab Sample IDs: 2498655, 2498656

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	101	92.1	P/P	60 - 160
Desmethyl microcystin LR	102	101	P/P	60 - 160
Microcystin HII R	96.5	90.2	P/P	60 - 160
Microcystin HtyR	93.5	91.1	P/P	60 - 160
Microcystin LA	100	102	P/P	50 - 160
Microcystin LF	100	95.8	P/P	50 - 160
Microcystin LR	89.5	87.8	P/P	60 - 160
Microcystin LW	94.6	96.0	P/P	60 - 160
Microcystin LY	86.2	90.8	P/P	60 - 160
Microcystin RR	87.5	91.1	P/P	60 - 160
Microcystin WR	91.6	88.8	P/P	60 - 160
Microcystin YR	90.9	88.8	P/P	60 - 160
Nodularin-R	88.5	87.3	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A126474
Included Lab Sample IDs: 2498655, 2498656

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	111	109	P/P	50 - 160
Neosaxitoxin	113	111	P/P	50 - 160
Saxitoxin	109	112	P/P	50 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A126510
Included Lab Sample IDs: 2498642, 2498643

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: A126520
Included Lab Sample IDs: 2498642

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: A126560
Included Lab Sample IDs: 2498643

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A126568
Included Lab Sample IDs: 2498642, 2498643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.5	94.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A126615
Included Lab Sample IDs: 2498642, 2498643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	98.9	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)	99.0			4.91	
EPA 350.1 Rev. 2.0	Ammonia-N	92.0	93.8	96.0		2.15
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	99.9	102		1.76
EPA 353.2 Rev. 2.0	NO2NO3-N	102	104	103		0.484
EPA 365.1 Rev. 2.0	Total-P	100	95.6	97.9		2.37
	Total-P	102	103	104		0.668
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	96.4	98.6		1.82
EPA 8321B	Anatoxin-a	104	113	107		5.74
	Cylindrospermopsin	65.0	67.8	63.8		6.11
	Desmethyl microcystin LR	95.1	102	99.0		2.47
	Microcystin HiLR	91.4	99.7	91.1		9.00
	Microcystin HtyR	92.5	97.4	93.8		3.75
	Microcystin LA	76.0	77.6	75.5		2.70
	Microcystin LF	99.5	108	108		0.334
	Microcystin LR	90.1	97.1	90.0		7.53
	Microcystin LW	118	125	125		0.281
	Microcystin LY	94.5	96.8	95.7		1.11
	Microcystin RR	91.3	96.4	95.2		1.21
	Microcystin WR	90.4	93.6	94.1		0.495
	Microcystin YR	64.7	69.0	61.7		11.3
	Neosaxitoxin	115	90.8	78.0		15.2
	Nodularin-R	92.5	104	94.9		9.11
	Saxitoxin	94.2	84.5	77.3		8.89

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2498640, 2498641
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2498642, 2498643
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2498642, 2498643
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2498642, 2498643
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2498642, 2498643
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2498644, 2498645
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2498655, 2498656
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2498655, 2498656

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	07/02/2024			07/02/2024 15:23	Chandler E Cox	2498640, 2498641
EPA 350.1 Rev. 2.0	07/02/2024			07/11/2024 11:01	Khloe J Berg	2498642
	07/02/2024			07/11/2024 11:02	Khloe J Berg	2498643
EPA 351.2 Rev. 2.0	07/02/2024	07/08/2024 11:08	Ping Hua	07/10/2024 10:58	Ping Hua	2498642
	07/02/2024	07/08/2024 11:08	Ping Hua	07/10/2024 10:59	Ping Hua	2498643
EPA 353.2 Rev. 2.0	07/02/2024			07/03/2024 14:10	Fadila Guebre	2498642
	07/02/2024			07/03/2024 14:12	Fadila Guebre	2498643
EPA 365.1 Rev. 2.0	07/02/2024	07/03/2024 16:36	Adam P Silver	07/08/2024 13:45	James L Waggerby	2498642
	07/02/2024	07/09/2024 14:02	Josephine W Gitau	07/10/2024 10:21	Elise M. Gillis	2498643
EPA 365.1 Rev. 2.0 dissolved	07/02/2024			07/02/2024 16:13	Adam P Silver	2498644, 2498645
EPA 8321B	07/02/2024	07/02/2024 12:30	Tae K Lee	07/02/2024 19:22	Tae K Lee	2498655
	07/02/2024	07/02/2024 12:30	Tae K Lee	07/02/2024 19:39	Tae K Lee	2498656
	07/02/2024	07/02/2024 12:30	Tae K Lee	07/02/2024 21:15	Tae K Lee	2498655
	07/02/2024	07/02/2024 12:30	Tae K Lee	07/02/2024 21:29	Tae K Lee	2498656