

Chemical Analysis Report

WQAP-2022-08-24-02

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

Event Description: **Algal Bloom Response - CEROC**
Request ID: **RQ-2022-08-08-12**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

Send Reports to:
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Date Certified: 07-SEP-2022 17:51



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 Washington - Boat Ramp

Collection Date/Time: 08/23/2022 12:21

Field ID: HABCE0139_LakeWashington2

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2351625	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P418570	
		Cylindrospermopsin	0.10	U	ug/L	P418569	
		Desmethyl microcystin LR	0.25	U	ug/L	P418569	
		Microcystin HIR	0.25	U	ug/L	P418569	
		Microcystin HtyR	0.25	U	ug/L	P418569	
		Microcystin LA	0.10	U	ug/L	P418569	
		Microcystin LF	0.10	U	ug/L	P418569	
		Microcystin LR	0.25	U	ug/L	P418569	
		Microcystin LW	0.25	U	ug/L	P418569	
		Microcystin LY	0.10	U	ug/L	P418569	
		Microcystin RR	0.10	U	ug/L	P418569	
		Microcystin WR	0.50	U	ug/L	P418569	
		Microcystin YR	0.25	U	ug/L	P418569	
		Nodularin-R	0.10	U	ug/L	P418569	
2351633	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P418803	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	4.0		mg N/L	P418818	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418936	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P418716	
2351635	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P418639	

Sample Location: Lake Washington - Center

Collection Date/Time: 08/23/2022 12:03

Field ID: HABCE0138_LakeWashington1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2351626	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P418570	
		Cylindrospermopsin	0.10	U	ug/L	P418569	
		Desmethyl microcystin LR	0.25	U	ug/L	P418569	
		Microcystin HIR	0.25	U	ug/L	P418569	
		Microcystin HtyR	0.25	U	ug/L	P418569	
		Microcystin LA	0.10	U	ug/L	P418569	
		Microcystin LF	0.10	U	ug/L	P418569	
		Microcystin LR	0.25	U	ug/L	P418569	
		Microcystin LW	0.25	U	ug/L	P418569	
		Microcystin LY	0.10	U	ug/L	P418569	
		Microcystin RR	0.10	U	ug/L	P418569	
		Microcystin WR	0.50	U	ug/L	P418569	
		Microcystin YR	0.25	U	ug/L	P418569	
		Nodularin-R	0.10	U	ug/L	P418569	
2351634	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P419068	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.7		mg N/L	P418908	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418936	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P418716	
2351636	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P418639	

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418803

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419068

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418818

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418908

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418936

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418716

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P418639

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

Reference Method: EPA 8321B
Batch ID: P418569

Component	Result	Code	Units
Cylindrospermopsin	0.10	U	ug/L
Desmethyl microcystin LR	0.25	U	ug/L
Microcystin HtIR	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: P418569

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: P418570

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418803

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418818

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418908

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: P418936

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: P418716

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: P418639

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	106		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P418569

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	79.8		P	40 - 150
Desmethyl microcystin LR	73.2		P	40 - 150
Microcystin HIR	77.2		P	40 - 150
Microcystin HtyR	78.1		P	40 - 150
Microcystin LA	80.6		P	40 - 150
Microcystin LF	66.4		P	40 - 150
Microcystin LR	76.4		P	40 - 150
Microcystin LW	64.4		P	40 - 150
Microcystin LY	66.1		P	40 - 150
Microcystin RR	77.1		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P418569

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Microcystin WR	73.7		P	40 - 150
Microcystin YR	80.0		P	40 - 150
Nodularin-R	80.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P418570

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	75.5		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351370	Ammonia-N	96.6	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352902	Ammonia-N	96.6	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418818

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351514	Kjeldahl Nitrogen	93.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351474	Kjeldahl Nitrogen	108	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418936

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351629	NO2NO3-N	98.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418716

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351629	Total-P	103	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P418639

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351614	O-Phosphate-P	102	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P418569

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351625	Cylindrospermopsin	91.4	88.2	P/P	40 - 150
2351625	Desmethyl microcystin LR	106	112	P/P	40 - 150
2351625	Microcystin H1LR	129	136	P/P	40 - 150
2351625	Microcystin HtyR	108	115	P/P	40 - 150
2351625	Microcystin LA	98.8	94.2	P/P	40 - 150
2351625	Microcystin LF	77.2	82.0	P/P	40 - 150
2351625	Microcystin LR	110	115	P/P	40 - 150
2351625	Microcystin LW	94.1	98.5	P/P	40 - 150
2351625	Microcystin LY	94.5	84.8	P/P	40 - 150
2351625	Microcystin RR	102	107	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P418569

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351625	Microcystin WR	107	115	P/P	40 - 150
2351625	Microcystin YR	110	116	P/P	40 - 150
2351625	Nodularin-R	115	118	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P418570

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351625	Anatoxin-a	82.8	81.5	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351370	Ammonia-N	3.72	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352902	Ammonia-N	1.45	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351514	Kjeldahl Nitrogen	6.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351474	Kjeldahl Nitrogen	2.95	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418936

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351629	NO2NO3-N	0.508	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351629	Total-P	4.20	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P418639

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351614	O-Phosphate-P	1.87	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P418569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351625	Cylindrospermopsin	3.49	Spike	P	0 - 30
2351625	Desmethyl microcystin LR	5.15	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P418569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351625	Microcystin HllR	5.47	Spike	P	0 - 30
2351625	Microcystin HtyR	5.96	Spike	P	0 - 30
2351625	Microcystin LA	4.76	Spike	P	0 - 30
2351625	Microcystin LF	6.09	Spike	P	0 - 30
2351625	Microcystin LR	3.94	Spike	P	0 - 30
2351625	Microcystin LW	4.58	Spike	P	0 - 30
2351625	Microcystin LY	10.8	Spike	P	0 - 30
2351625	Microcystin RR	4.42	Spike	P	0 - 30
2351625	Microcystin WR	7.17	Spike	P	0 - 30
2351625	Microcystin YR	4.96	Spike	P	0 - 30
2351625	Nodularin-R	3.05	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P418570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351625	Anatoxin-a	1.55	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2351625

Field Sample ID: HABCE0139_LakeWashington2

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	104	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	51.1	P	30 - 160

Lab Sample ID: 2351626

Field Sample ID: HABCE0138_LakeWashington1

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	113	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	53.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A114320

Included Lab Sample IDs: 2351635, 2351636

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

Reference Method: EPA 8321B

Run ID: A114331

Included Lab Sample IDs: 2351625, 2351626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	80.5	75.7	P/P	50 - 160
Anatoxin-a	81.5	80.5	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A114353

Included Lab Sample IDs: 2351625, 2351626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	88.8	87.8	P/P	50 - 160
Desmethyl microcystin LR	79.6	76.5	P/P	50 - 160
Microcystin HtIR	79.9	84.2	P/P	50 - 160
Microcystin HtyR	77.1	83.3	P/P	50 - 160
Microcystin LA	87.4	79.6	P/P	50 - 160
Microcystin LF	74.6	77.3	P/P	50 - 160
Microcystin LR	84.3	85.2	P/P	50 - 160
Microcystin LW	60.8	73.4	P/P	50 - 160
Microcystin LY	70.2	79.7	P/P	50 - 160
Microcystin RR	81.5	79.0	P/P	50 - 160
Microcystin WR	73.1	78.4	P/P	50 - 160
Microcystin YR	79.2	77.5	P/P	50 - 160
Nodularin-R	88.7	94.0	P/P	50 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114406

Included Lab Sample IDs: 2351633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114407

Included Lab Sample IDs: 2351633, 2351634

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114456

Included Lab Sample IDs: 2351633, 2351634

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114469

Included Lab Sample IDs: 2351633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114515

Included Lab Sample IDs: 2351634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.5	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114517

Included Lab Sample IDs: 2351634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	99.1	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	SMP	MS
EPA 350.1 Rev. 2.0	Ammonia-N	101	96.6	101			3.72
	Ammonia-N	95.0	96.6	95.0			1.45
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	93.2	101			6.74
	Kjeldahl Nitrogen	107	108	104			2.95
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	98.5	99.5			0.508
EPA 365.1 Rev. 2.0	Total-P	104	103	109			4.20
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	106	102	99.5			1.87
EPA 8321B	Anatoxin-a	75.5	82.8	81.5			1.55
	Cylindrospermopsin	79.8	91.4	88.2			3.49
	Desmethyl microcystin LR	73.2	106	112			5.15
	Microcystin H ₁ R	77.2	129	136			5.47
	Microcystin H ₂ R	78.1	108	115			5.96
	Microcystin LA	80.6	98.8	94.2			4.76
	Microcystin LF	66.4	77.2	82.0			6.09
	Microcystin LR	76.4	110	115			3.94
	Microcystin LW	64.4	94.1	98.5			4.58
	Microcystin LY	66.1	94.5	84.8			10.8
	Microcystin RR	77.1	102	107			4.42
	Microcystin WR	73.7	107	115			7.17
	Microcystin YR	80.0	110	116			4.96
	Nodularin-R	80.8	115	118			3.05

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2351633, 2351634
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2351633, 2351634
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2351633, 2351634
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2351633, 2351634
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2351635, 2351636
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2351625, 2351626
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2351625, 2351626

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	08/24/2022			08/29/2022 11:40	Ping Hua	2351633
	08/24/2022			09/02/2022 11:50	Ping Hua	2351634
EPA 351.2 Rev. 2.0	08/24/2022	08/30/2022 14:31	Samantha L Bates	08/31/2022 16:10	Alexandra J Mattheus	2351633
	08/24/2022	08/31/2022 14:32	Samantha L Bates	09/02/2022 11:46	Alexandra J Mattheus	2351634
EPA 353.2 Rev. 2.0	08/24/2022			08/31/2022 11:40	Beverly Y. Sanders	2351633
	08/24/2022			08/31/2022 11:41	Beverly Y. Sanders	2351634
EPA 365.1 Rev. 2.0	08/24/2022	08/26/2022 08:28	Simonne.V. Calhoun	08/29/2022 15:10	James L Waggerby	2351633
	08/24/2022	08/26/2022 08:28	Simonne.V. Calhoun	08/29/2022 15:11	James L Waggerby	2351634
EPA 365.1 Rev. 2.0 dissolved	08/24/2022			08/24/2022 17:50	Chandler E Cox	2351635
	08/24/2022			08/24/2022 17:56	Chandler E Cox	2351636
EPA 8321B	08/24/2022	08/25/2022 09:00	Manjita Shrestha	08/25/2022 10:17	Manjita Shrestha	2351625
	08/24/2022	08/25/2022 09:00	Manjita Shrestha	08/25/2022 10:45	Manjita Shrestha	2351626
	08/24/2022	08/25/2022 13:00	Manjita Shrestha	08/25/2022 16:13	Manjita Shrestha	2351625
	08/24/2022	08/25/2022 13:00	Manjita Shrestha	08/25/2022 16:30	Manjita Shrestha	2351626