

Chemical Analysis Report

WQAP-2022-09-02-01

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

Event Description: **Algal Bloom Response - CEROC**
Request ID: **RQ-2022-08-22-08**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

Send Reports to:
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Date Certified: 19-SEP-2022 11:01



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 Harris - S of Monkey Island

Collection Date/Time: 09/01/2022 12:53

Field ID: HABCE0123_LakeHarris1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353887	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P419013	
		Cylindrospermopsin	0.10	U	ug/L	P419012	
		Desmethyl microcystin LR	0.25	U	ug/L	P419012	
		Microcystin HILR	0.25	U	ug/L	P419012	
		Microcystin HtyR	0.25	U	ug/L	P419012	
		Microcystin LA	0.10	U	ug/L	P419012	
		Microcystin LF	0.10	U	ug/L	P419012	
		Microcystin LR	0.25	U	ug/L	P419012	
		Microcystin LW	0.25	U	ug/L	P419012	
		Microcystin LY	0.10	U	ug/L	P419012	
		Microcystin RR	0.10	U	ug/L	P419012	
		Microcystin WR	0.50	U	ug/L	P419012	
		Microcystin YR	0.25	U	ug/L	P419012	
		Nodularin-R	0.10	U	ug/L	P419012	
2353889	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P419145	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P419171	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P419296	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P419461	
2353891	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P419077	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Lake Griffin - South Lobe

Collection Date/Time: 09/01/2022 12:24

Field ID: HABCE0122_LakeGriffinLakeCo

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2353888	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P419013	
		Cylindrospermopsin	0.10	U	ug/L	P419012	
		Desmethyl microcystin LR	0.25	U	ug/L	P419012	
		Microcystin HILR	0.25	U	ug/L	P419012	
		Microcystin HtyR	0.25	U	ug/L	P419012	
		Microcystin LA	0.10	U	ug/L	P419012	
		Microcystin LF	0.10	U	ug/L	P419012	
		Microcystin LR	0.25	U	ug/L	P419012	
		Microcystin LW	0.25	U	ug/L	P419012	
		Microcystin LY	0.10	U	ug/L	P419012	
		Microcystin RR	0.10	U	ug/L	P419012	
		Microcystin WR	0.50	U	ug/L	P419012	
		Microcystin YR	0.25	U	ug/L	P419012	
		Nodularin-R	0.10	U	ug/L	P419012	
2353890	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P419145	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P419238	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P419296	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P419249	
2353892	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P419077	

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419145

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419171

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419238

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419296

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419249

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419461

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419077

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

Reference Method: EPA 8321B
Batch ID: P419012

Component	Result	Code	Units
Cylindrospermopsin	0.10	U	ug/L
Desmethyl microcystin LR	0.25	U	ug/L
Microcystin HIR	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: P419012

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: P419013

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: P419145

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419171

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419238

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: P419296

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419249

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419461

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419077

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

Reference Method: EPA 8321B
Batch ID: P419012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	101		P	40 - 150
Desmethyl microcystin LR	102		P	40 - 150
Microcystin HIR	103		P	40 - 150
Microcystin HtyR	100		P	40 - 150
Microcystin LA	110		P	40 - 150
Microcystin LF	117		P	40 - 150
Microcystin LR	99.5		P	40 - 150
Microcystin LW	106		P	40 - 150
Microcystin LY	105		P	40 - 150
Microcystin RR	103		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P419012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Microcystin WR	101		P	40 - 150
Microcystin YR	90.3		P	40 - 150
Nodularin-R	98.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P419013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	80.4		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P419145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353889	Ammonia-N	97.0	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P419238

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354140	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P419296

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353677	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353855	Total-P	109	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354413	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P419077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353901	O-Phosphate-P	98.1	96.7	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P419012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353848	Cylindrospermopsin	74.3	82.1	P/P	40 - 150
2353848	Desmethyl microcystin LR	85.2	90.4	P/P	40 - 150
2353848	Microcystin HtLR	87.3	93.2	P/P	40 - 150
2353848	Microcystin HtyR	83.4	84.9	P/P	40 - 150
2353848	Microcystin LA	86.6	91.6	P/P	40 - 150
2353848	Microcystin LF	84.5	93.4	P/P	40 - 150
2353848	Microcystin LR	79.5	80.7	P/P	40 - 150
2353848	Microcystin LW	77.6	86.0	P/P	40 - 150
2353848	Microcystin LY	88.1	90.2	P/P	40 - 150
2353848	Microcystin RR	88.6	91.6	P/P	40 - 150
2353848	Microcystin WR	83.6	86.5	P/P	40 - 150
2353848	Microcystin YR	75.5	80.3	P/P	40 - 150
2353848	Nodularin-R	81.0	88.1	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P419013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353848	Anatoxin-a	99.9	105	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353889	Ammonia-N	0.372	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353889	Kjeldahl Nitrogen	4.71	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354140	Kjeldahl Nitrogen	0.904	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353677	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353855	Total-P	1.37	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354413	Total-P	1.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353901	O-Phosphate-P	1.35	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P419012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353848	Cylindrospermopsin	9.95	Spike	P	0 - 30
2353848	Desmethyl microcystin LR	5.86	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P419012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353848	Microcystin HllR	6.58	Spike	P	0 - 30
2353848	Microcystin HtyR	1.81	Spike	P	0 - 30
2353848	Microcystin LA	5.56	Spike	P	0 - 30
2353848	Microcystin LF	10.0	Spike	P	0 - 30
2353848	Microcystin LR	1.49	Spike	P	0 - 30
2353848	Microcystin LW	10.2	Spike	P	0 - 30
2353848	Microcystin LY	2.33	Spike	P	0 - 30
2353848	Microcystin RR	3.38	Spike	P	0 - 30
2353848	Microcystin WR	3.43	Spike	P	0 - 30
2353848	Microcystin YR	6.16	Spike	P	0 - 30
2353848	Nodularin-R	8.34	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P419013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353848	Anatoxin-a	5.43	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2353887

Field Sample ID: HABCE0123_LakeHarris1

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	93.7	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	66.0	P	30 - 160

Lab Sample ID: 2353888

Field Sample ID: HABCE0122_LakeGriffinLakeCo

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	79.8	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	65.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A114525

Included Lab Sample IDs: 2353891, 2353892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	99.8	P/P	90 - 110
O-Phosphate-P	99.8	98.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A114533

Included Lab Sample IDs: 2353887, 2353888

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	95.6	92.9	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A114534

Included Lab Sample IDs: 2353887, 2353888

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	103	98.1	P/P	60 - 160
Desmethyl microcystin LR	110	104	P/P	60 - 160
Microcystin HII R	111	113	P/P	60 - 160
Microcystin HtyR	110	112	P/P	60 - 160
Microcystin LA	113	124	P/P	50 - 160
Microcystin LF	122	123	P/P	60 - 160
Microcystin LR	101	102	P/P	60 - 160
Microcystin LW	116	121	P/P	60 - 160
Microcystin LY	113	111	P/P	60 - 160
Microcystin RR	108	114	P/P	60 - 160
Microcystin WR	116	116	P/P	60 - 160
Microcystin YR	98.6	102	P/P	60 - 160
Nodularin-R	105	103	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114549

Included Lab Sample IDs: 2353889, 2353890

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	98.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114607

Included Lab Sample IDs: 2353889, 2353890

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114608

Included Lab Sample IDs: 2353889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.4	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114645

Included Lab Sample IDs: 2353890

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114650

Included Lab Sample IDs: 2353890

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114718

Included Lab Sample IDs: 2353889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.2	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	
EPA 350.1 Rev. 2.0	Ammonia-N	94.2	97.0	97.4			0.372
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100					4.71
	Kjeldahl Nitrogen	102	102	103			0.904
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	102	102			0.0
EPA 365.1 Rev. 2.0	Total-P	106	109	107			1.37
	Total-P	103	104	105			1.14
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	98.1	96.7			1.35
EPA 8321B	Anatoxin-a	80.4	99.9	105			5.43
	Cylindrospermopsin	101	74.3	82.1			9.95
	Desmethyl microcystin LR	102	85.2	90.4			5.86
	Microcystin H ₁ R	103	87.3	93.2			6.58
	Microcystin H ₂ R	100	83.4	84.9			1.81
	Microcystin LA	110	86.6	91.6			5.56
	Microcystin LF	117	84.5	93.4			10.0
	Microcystin LR	99.5	79.5	80.7			1.49
	Microcystin LW	106	77.6	86.0			10.2
	Microcystin LY	105	88.1	90.2			2.33
	Microcystin RR	103	88.6	91.6			3.38
	Microcystin WR	101	83.6	86.5			3.43
	Microcystin YR	90.3	75.5	80.3			6.16
	Nodularin-R	98.8	81.0	88.1			8.34

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2353889, 2353890
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2353889, 2353890
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2353889, 2353890
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2353889, 2353890
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2353891, 2353892
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2353887, 2353888
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2353887, 2353888

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	09/02/2022			09/06/2022 12:57	Ping Hua	2353889
	09/02/2022			09/06/2022 13:09	Ping Hua	2353890
EPA 351.2 Rev. 2.0	09/02/2022	09/07/2022 13:36	Samantha L Bates	09/08/2022 10:31	Samantha L Bates	2353889
	09/02/2022	09/08/2022 10:30	Alexandra J Mattheus	09/09/2022 09:56	Alexandra J Mattheus	2353890
EPA 353.2 Rev. 2.0	09/02/2022			09/08/2022 11:10	Beverly Y. Sanders	2353889
	09/02/2022			09/08/2022 11:11	Beverly Y. Sanders	2353890
EPA 365.1 Rev. 2.0	09/02/2022	09/08/2022 16:33	Adam P Silver	09/09/2022 14:24	James L Waggerby	2353890
	09/02/2022	09/13/2022 15:30	Simonne.V. Calhoun	09/14/2022 11:46	James L Waggerby	2353889
EPA 365.1 Rev. 2.0 dissolved	09/02/2022			09/02/2022 14:43	Elise M. Gillis	2353891
	09/02/2022			09/02/2022 14:48	Elise M. Gillis	2353892
EPA 8321B	09/02/2022	09/02/2022 12:00	Umesh Chiluwal	09/02/2022 15:28	Umesh Chiluwal	2353887
	09/02/2022	09/02/2022 12:00	Umesh Chiluwal	09/02/2022 15:45	Umesh Chiluwal	2353888
	09/02/2022	09/02/2022 13:00	Manjita Shrestha	09/02/2022 15:24	Manjita Shrestha	2353887
	09/02/2022	09/02/2022 13:00	Manjita Shrestha	09/02/2022 15:38	Manjita Shrestha	2353888