Chemical Analysis Report

WQAP-2022-07-13-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Algal Bloom Response - Orange Co**
Request ID: **RQ-2022-07-11-64**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

Send Reports to:
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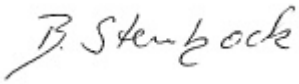
Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 26-JUL-2022 17:06



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: Cypress Lake - West Lobe **Collection Date/Time: 07/12/2022 09:45**

Field ID: HABOC0008_CypressLake2 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2340807	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P416466	
		Cylindrospermopsin	0.10	U	ug/L	P416465	
		Desmethyl microcystin LR	0.25	U	ug/L	P416465	
		Microcystin HilR	0.25	U	ug/L	P416465	
		Microcystin HtyR	0.25	U	ug/L	P416465	
		Microcystin LA	0.10	U	ug/L	P416465	
		Microcystin LF	0.10	U	ug/L	P416465	
		Microcystin LR	0.25	U	ug/L	P416465	
		Microcystin LW	0.25	U	ug/L	P416465	
		Microcystin LY	0.10	U	ug/L	P416465	
		Microcystin RR	0.10	U	ug/L	P416465	
		Microcystin WR	0.50	U	ug/L	P416465	
		Microcystin YR	0.25	U	ug/L	P416465	
		Nodularin-R	0.10	U	ug/L	P416465	
2340808	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P416784	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P416773	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P416743	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P416694	
2340809	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P416639	

Sample Location: LK Cypress boat ramp **Collection Date/Time: 07/12/2022 10:05**

Field ID: FB_07122022 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2340801	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P416466	
		Cylindrospermopsin	0.10	U	ug/L	P416465	
		Desmethyl microcystin LR	0.25	U	ug/L	P416465	
		Microcystin HilR	0.25	U	ug/L	P416465	
		Microcystin HtyR	0.25	U	ug/L	P416465	
		Microcystin LA	0.10	U	ug/L	P416465	
		Microcystin LF	0.10	U	ug/L	P416465	
		Microcystin LR	0.25	U	ug/L	P416465	
		Microcystin LW	0.25	U	ug/L	P416465	
		Microcystin LY	0.10	U	ug/L	P416465	
		Microcystin RR	0.10	U	ug/L	P416465	
		Microcystin WR	0.50	U	ug/L	P416465	
		Microcystin YR	0.25	U	ug/L	P416465	
		Nodularin-R	0.10	U	ug/L	P416465	
2340802	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P416784	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P416775	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P416743	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P416694	
2340803	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P416639	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416784

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416773

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416775

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416743

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416694

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416639

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

Reference Method: EPA 8321B
Batch ID: P416465

Component	Result	Code	Units
Cylindrospermopsin	0.10	U	ug/L
Desmethyl microcystin LR	0.25	U	ug/L
Microcystin HilR	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: P416466

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: P416784

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416773

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416775

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416743

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: P416694

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: P416639

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

Reference Method: EPA 8321B
Batch ID: P416465

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	98.6		P	40 - 150
Desmethyl microcystin LR	88.9		P	40 - 150
Microcystin HilR	87.6		P	40 - 150
Microcystin HtyR	99.0		P	40 - 150
Microcystin LA	105		P	40 - 150
Microcystin LF	101		P	40 - 150
Microcystin LR	82.6		P	40 - 150
Microcystin LW	107		P	40 - 150
Microcystin LY	94.2		P	40 - 150
Microcystin RR	87.1		P	40 - 150
Microcystin WR	93.4		P	40 - 150
Microcystin YR	103		P	40 - 150
Nodularin-R	86.4		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P416466

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	98.2		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341010	Ammonia-N	95.2	95.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340808	Kjeldahl Nitrogen	102	93.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340689	Kjeldahl Nitrogen	99.9	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340808	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340814	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416639

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340693	O-Phosphate-P	90.4	90.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P416465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340301	Cylindrospermopsin	91.7	95.0	P/P	40 - 150
2340301	Desmethyl microcystin LR	88.5	88.1	P/P	40 - 150
2340301	Microcystin HilR	88.2	89.3	P/P	40 - 150
2340301	Microcystin HtyR	94.5	94.8	P/P	40 - 150
2340301	Microcystin LA	99.8	104	P/P	40 - 150
2340301	Microcystin LF	96.8	90.2	P/P	40 - 150
2340301	Microcystin LR	78.7	81.5	P/P	40 - 150
2340301	Microcystin LW	90.6	89.9	P/P	40 - 150
2340301	Microcystin LY	92.1	90.1	P/P	40 - 150
2340301	Microcystin RR	86.8	84.7	P/P	40 - 150
2340301	Microcystin WR	86.5	84.7	P/P	40 - 150
2340301	Microcystin YR	97.6	101	P/P	40 - 150
2340301	Nodularin-R	87.7	86.0	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P416466

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340301	Anatoxin-a	101	101	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341010	Ammonia-N	0.399	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340808	Kjeldahl Nitrogen	4.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340689	Kjeldahl Nitrogen	1.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340808	NO2NO3-N	0.976	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340814	Total-P	2.09	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416639

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340693	O-Phosphate-P	0.0962	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P416465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340301	Cylindrospermopsin	3.63	Spike	P	0 - 30
2340301	Desmethyl microcystin LR	0.458	Spike	P	0 - 30
2340301	Microcystin HilR	1.26	Spike	P	0 - 30
2340301	Microcystin HtyR	0.232	Spike	P	0 - 30
2340301	Microcystin LA	4.27	Spike	P	0 - 30
2340301	Microcystin LF	7.11	Spike	P	0 - 30
2340301	Microcystin LR	3.51	Spike	P	0 - 30
2340301	Microcystin LW	0.768	Spike	P	0 - 30
2340301	Microcystin LY	2.22	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P416465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340301	Microcystin RR	2.43	Spike	P	0 - 30
2340301	Microcystin WR	2.03	Spike	P	0 - 30
2340301	Microcystin YR	3.49	Spike	P	0 - 30
2340301	Nodularin-R	1.99	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P416466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340301	Anatoxin-a	0.245	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2340801
Field Sample ID: FB_07122022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	82.1	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	82.6	P	30 - 160

Lab Sample ID: 2340807
Field Sample ID: HABOC0008_CypressLake2

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	90.1	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	99.8	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A113495
Included Lab Sample IDs: 2340803, 2340809

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	98.8	P/P	90 - 110
O-Phosphate-P	103	101	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A113512
Included Lab Sample IDs: 2340801, 2340807

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	93.6	90.4	P/P	50 - 160

Reference Method: EPA 8321B
Run ID: A113513
Included Lab Sample IDs: 2340801, 2340807

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	88.5	97.8	P/P	60 - 160
Desmethyl microcystin LR	80.1	68.8	P/P	60 - 160
Microcystin HilR	81.5	72.7	P/P	60 - 160
Microcystin HtyR	86.5	80.8	P/P	60 - 160
Microcystin LA	97.0	89.6	P/P	50 - 160
Microcystin LF	73.9	62.1	P/P	60 - 160
Microcystin LR	73.2	63.2	P/P	60 - 160
Microcystin LW	94.8	75.3	P/P	60 - 160
Microcystin LY	90.8	76.7	P/P	60 - 160
Microcystin RR	81.5	75.1	P/P	60 - 160
Microcystin WR	86.3	81.2	P/P	60 - 160
Microcystin YR	91.3	80.7	P/P	60 - 160
Nodularin-R	77.1	72.7	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113536
Included Lab Sample IDs: 2340802, 2340808

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A113563
Included Lab Sample IDs: 2340802, 2340808

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A113583
Included Lab Sample IDs: 2340802, 2340808

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.8	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A113613
Included Lab Sample IDs: 2340808

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.2	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A113630
Included Lab Sample IDs: 2340802

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.9	96.6	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	96.6	95.2	95.6			0.399
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	102	93.7			4.33
	Kjeldahl Nitrogen	98.1	99.9	101			1.01
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	103			0.976
EPA 365.1 Rev. 2.0	Total-P	103	104	106			2.09
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	90.4	90.3			0.0962
EPA 8321B	Anatoxin-a	98.2	101	101			0.245
	Cylindrospermopsin	98.6	91.7	95.0			3.63
	Desmethyl microcystin LR	88.9	88.5	88.1			0.458
	Microcystin HilR	87.6	88.2	89.3			1.26
	Microcystin HtyR	99.0	94.5	94.8			0.232
	Microcystin LA	105	99.8	104			4.27
	Microcystin LF	101	96.8	90.2			7.11
	Microcystin LR	82.6	78.7	81.5			3.51
	Microcystin LW	107	90.6	89.9			0.768
	Microcystin LY	94.2	92.1	90.1			2.22
	Microcystin RR	87.1	86.8	84.7			2.43
	Microcystin WR	93.4	86.5	84.7			2.03
	Microcystin YR	103	97.6	101			3.49
	Nodularin-R	86.4	87.7	86.0			1.99

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2340802, 2340808
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2340802, 2340808
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2340802, 2340808
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2340802, 2340808
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2340803, 2340809
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2340801, 2340807
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2340801, 2340807

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	07/13/2022			07/18/2022 11:41	Ping Hua	2340808
	07/13/2022			07/18/2022 11:42	Ping Hua	2340802
EPA 351.2 Rev. 2.0	07/13/2022	07/19/2022 11:12	Samantha L Bates	07/20/2022 11:17	Alexandra J Mattheus	2340808
	07/13/2022	07/19/2022 11:12	Samantha L Bates	07/20/2022 16:05	Alexandra J Mattheus	2340802
EPA 353.2 Rev. 2.0	07/13/2022			07/15/2022 12:54	Judith K. Clark	2340808
	07/13/2022			07/15/2022 13:04	Judith K. Clark	2340802
EPA 365.1 Rev. 2.0	07/13/2022	07/18/2022 14:52	Adam P Silver	07/19/2022 14:14	James L Waggerby	2340802
	07/13/2022	07/18/2022 14:52	Adam P Silver	07/19/2022 14:17	James L Waggerby	2340808
EPA 365.1 Rev. 2.0 dissolved	07/13/2022			07/14/2022 08:26	Chandler E Cox	2340803
	07/13/2022			07/14/2022 08:31	Chandler E Cox	2340809
EPA 8321B	07/13/2022	07/14/2022 09:00	Manjita Shrestha	07/14/2022 14:05	Manjita Shrestha	2340801
	07/13/2022	07/14/2022 09:00	Manjita Shrestha	07/14/2022 14:18	Manjita Shrestha	2340807
	07/13/2022	07/14/2022 09:00	Umesh Chiluwal	07/14/2022 15:06	Umesh Chiluwal	2340801
	07/13/2022	07/14/2022 09:00	Umesh Chiluwal	07/14/2022 15:23	Umesh Chiluwal	2340807