Chemical Analysis Report

WQAP-2022-06-22-02

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

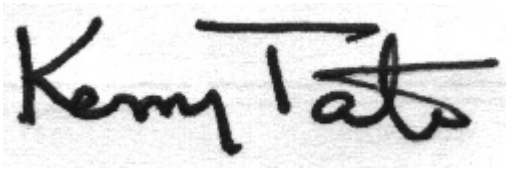
Event Description: **Algal Bloom Response -SOROC**
Request ID: **RQ-2022-06-13-47**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

Send Reports to:
FL Dept. of Environmental Protection
2295 Victoria AVE
Suite 364
Fort Myers, FL 33901
Attn: Kirby Wolfe

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 14-JUL-2022 09:14



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: Cosmic Canal **Collection Date/Time: 06/21/2022 10:00**

Field ID: HAB-SD-062122-1000 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2336301	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P415523	
		Cylindrospermopsin	0.10	U	ug/L	P415523	
		Desmethyl microcystin LR	0.25	U	ug/L	P415523	
		Microcystin HilR	0.25	U	ug/L	P415523	
		Microcystin HtyR	0.25	U	ug/L	P415523	
		Microcystin LA	0.10	U	ug/L	P415523	
		Microcystin LF	0.10	U	ug/L	P415523	
		Microcystin LR	0.25	U	ug/L	P415523	
		Microcystin LW	0.25	U	ug/L	P415523	
		Microcystin LY	0.10	U	ug/L	P415523	
		Microcystin RR	0.10	U	ug/L	P415523	
		Microcystin WR	0.50	U	ug/L	P415523	
		Microcystin YR	0.25	U	ug/L	P415523	
		Nodularin-R	0.10	U	ug/L	P415523	

Sample Location: Caloosahatchee River - Sebastian Canal **Collection Date/Time: 06/21/2022 08:25**

Field ID: HAB-SD-062122-0825 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2336302	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P415523	
		Cylindrospermopsin	0.10	U	ug/L	P415523	
		Desmethyl microcystin LR	0.25	U	ug/L	P415523	
		Microcystin HilR	0.25	U	ug/L	P415523	
		Microcystin HtyR	0.25	U	ug/L	P415523	
		Microcystin LA	0.10	U	ug/L	P415523	
		Microcystin LF	0.10	U	ug/L	P415523	
		Microcystin LR	0.25	U	ug/L	P415523	
		Microcystin LW	0.25	U	ug/L	P415523	
		Microcystin LY	0.10	U	ug/L	P415523	
		Microcystin RR	0.10	U	ug/L	P415523	
		Microcystin WR	0.50	U	ug/L	P415523	
		Microcystin YR	0.25	U	ug/L	P415523	
		Nodularin-R	0.10	U	ug/L	P415523	

Sample Location: Caloosahatchee River - Sebastian Canal **Collection Date/Time: 06/21/2022 08:25**

Field ID: HAB-SD-062122-0825 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2336403	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P415978	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P415788	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P415740	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P415932	
2336405	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P415592	

Sample Location: Cosmic Canal **Collection Date/Time: 06/21/2022 10:00**

Field ID: HAB-SD-062122-1000 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2336404	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P415978	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P415789	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P415740	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P415932	
2336406	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.029		mg P/L	P415592	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415978

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415788

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415789

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415740

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415932

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P415592

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

Reference Method: EPA 8321B
Batch ID: P415523

Component	Result	Code	Units
Anatoxin-a	0.25	U	ug/L
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
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415978

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415788

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415789

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: P415740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415932

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P415592

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.9		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P415523

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	67.8		P	40 - 150
Cylindrospermopsin	78.9		P	40 - 150
Desmethyl microcystin LR	83.2		P	40 - 150
Microcystin HilR	71.8		P	40 - 150
Microcystin HtyR	64.2		P	40 - 150
Microcystin LA	73.6		P	40 - 150
Microcystin LF	114		P	40 - 150
Microcystin LR	74.5		P	40 - 150
Microcystin LW	98.7		P	40 - 150
Microcystin LY	79.1		P	40 - 150
Microcystin RR	71.1		P	40 - 150
Microcystin WR	66.8		P	40 - 150
Microcystin YR	67.7		P	40 - 150
Nodularin-R	71.5		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336404	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335668	Kjeldahl Nitrogen	106	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336404	Kjeldahl Nitrogen	104	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335568	NO2NO3-N	96.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415932

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336487	Total-P	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P415592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336400	O-Phosphate-P	99.3	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P415523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336120	Anatoxin-a	85.2	82.6	P/P	40 - 150
2336120	Cylindrospermopsin	88.3	85.5	P/P	40 - 150
2336120	Desmethyl microcystin LR	93.1	86.6	P/P	40 - 150
2336120	Microcystin HilR	86.1	80.2	P/P	40 - 150
2336120	Microcystin HtyR	78.5	74.3	P/P	40 - 150
2336120	Microcystin LA	73.2	64.2	P/P	40 - 150
2336120	Microcystin LF	107	120	P/P	40 - 150
2336120	Microcystin LR	90.9	83.5	P/P	40 - 150
2336120	Microcystin LW	81.7	89.7	P/P	40 - 150
2336120	Microcystin LY	72.4	65.1	P/P	40 - 150
2336120	Microcystin RR	80.9	75.6	P/P	40 - 150
2336120	Microcystin WR	75.7	63.0	P/P	40 - 150
2336120	Microcystin YR	85.6	81.3	P/P	40 - 150
2336120	Nodularin-R	82.3	78.7	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336404	Ammonia-N	0.340	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335668	Kjeldahl Nitrogen	3.97	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336404	Kjeldahl Nitrogen	2.66	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335568	NO2NO3-N	4.58	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415932

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336487	Total-P	0.360	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P415592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336400	O-Phosphate-P	0.133	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P415523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336120	Anatoxin-a	3.05	Spike	P	0 - 30
2336120	Cylindrospermopsin	3.22	Spike	P	0 - 30
2336120	Desmethyl microcystin LR	7.17	Spike	P	0 - 30
2336120	Microcystin HilR	7.10	Spike	P	0 - 30
2336120	Microcystin HtyR	5.53	Spike	P	0 - 30
2336120	Microcystin LA	13.1	Spike	P	0 - 30
2336120	Microcystin LF	10.9	Spike	P	0 - 30
2336120	Microcystin LR	8.49	Spike	P	0 - 30
2336120	Microcystin LW	9.42	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P415523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336120	Microcystin LY	10.6	Spike	P	0 - 30
2336120	Microcystin RR	6.74	Spike	P	0 - 30
2336120	Microcystin WR	18.2	Spike	P	0 - 30
2336120	Microcystin YR	5.14	Spike	P	0 - 30
2336120	Nodularin-R	4.46	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2336301
Field Sample ID: HAB-SD-062122-1000

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	114	P	30 - 160

Lab Sample ID: 2336302
Field Sample ID: HAB-SD-062122-0825

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	128	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A112992
Included Lab Sample IDs: 2336405, 2336406

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	99.5	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A113023
Included Lab Sample IDs: 2336301, 2336302

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	72.4	75.6	P/P	50 - 160
Cylindrospermopsin	86.5	89.7	P/P	50 - 160
Desmethyl microcystin LR	84.0	88.0	P/P	50 - 160
Microcystin HilR	75.1	79.5	P/P	50 - 160
Microcystin HtyR	75.8	78.0	P/P	50 - 160
Microcystin LA	76.7	80.0	P/P	50 - 160
Microcystin LF	81.5	61.7	P/P	50 - 160
Microcystin LR	80.3	86.2	P/P	50 - 160
Microcystin LW	80.2	80.7	P/P	50 - 160
Microcystin LY	89.9	87.6	P/P	50 - 160
Microcystin RR	74.8	74.9	P/P	50 - 160
Microcystin WR	76.6	78.5	P/P	50 - 160
Microcystin YR	79.2	80.1	P/P	50 - 160
Nodularin-R	77.2	81.6	P/P	50 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113061
Included Lab Sample IDs: 2336403, 2336404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A113166
Included Lab Sample IDs: 2336403, 2336404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A113179
Included Lab Sample IDs: 2336403, 2336404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.6	101	P/P	90 - 110
Kjeldahl Nitrogen	98.9	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A113235
Included Lab Sample IDs: 2336403, 2336404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.6	98.6	P/P	90 - 110

Quality Assurance Report
Calibration Verification

* 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	100	100	100			0.340
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	106	99.2			3.97
	Kjeldahl Nitrogen	104	104	98.6			2.66
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	96.0	100			4.58
EPA 365.1 Rev. 2.0	Total-P	101	101	100			0.360
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.9	99.3	99.5			0.133
EPA 8321B	Anatoxin-a	67.8	85.2	82.6			3.05
	Cylindrospermopsin	78.9	88.3	85.5			3.22
	Desmethyl microcystin LR	83.2	93.1	86.6			7.17
	Microcystin HilR	71.8	86.1	80.2			7.10
	Microcystin HtyR	64.2	78.5	74.3			5.53
	Microcystin LA	73.6	73.2	64.2			13.1
	Microcystin LF	114	107	120			10.9
	Microcystin LR	74.5	90.9	83.5			8.49
	Microcystin LW	98.7	81.7	89.7			9.42
	Microcystin LY	79.1	72.4	65.1			10.6
	Microcystin RR	71.1	80.9	75.6			6.74
	Microcystin WR	66.8	75.7	63.0			18.2
	Microcystin YR	67.7	85.6	81.3			5.14
	Nodularin-R	71.5	82.3	78.7			4.46

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2336403, 2336404
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2336403, 2336404
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2336403, 2336404
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2336403, 2336404
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2336405, 2336406
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2336301, 2336302

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	06/22/2022			06/29/2022 13:53	Judith K. Clark	2336404
	06/22/2022			06/29/2022 13:57	Judith K. Clark	2336403
EPA 351.2 Rev. 2.0	06/22/2022	06/28/2022 09:59	Samantha L Bates	06/29/2022 15:38	Alexandra J Mattheus	2336403
	06/22/2022	06/28/2022 11:30	Simonne.V. Calhoun	06/29/2022 16:06	Alexandra J Mattheus	2336404
EPA 353.2 Rev. 2.0	06/22/2022			06/25/2022 17:37	Touraj Touran	2336403
	06/22/2022			06/25/2022 17:39	Touraj Touran	2336404
EPA 365.1 Rev. 2.0	06/22/2022	06/30/2022 14:54	Adam P Silver	07/01/2022 12:06	James L Waggerby	2336403
	06/22/2022	06/30/2022 14:54	Adam P Silver	07/01/2022 12:07	James L Waggerby	2336404
EPA 365.1 Rev. 2.0 dissolved	06/22/2022			06/22/2022 17:26	James L Waggerby	2336405
	06/22/2022			06/22/2022 17:27	James L Waggerby	2336406
EPA 8321B	06/22/2022	06/23/2022 09:30	Manjita Shrestha	06/23/2022 13:40	Manjita Shrestha	2336301
	06/22/2022	06/23/2022 09:30	Manjita Shrestha	06/23/2022 13:57	Manjita Shrestha	2336302