

Chemical Analysis Report

WQAP-2023-01-19-01

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

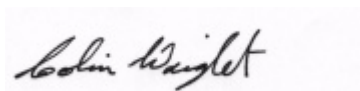
Event Description: **Algae Bloom Response NEROC-as needed**
Request ID: **RQ-2023-01-02-48**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way W
Suite 100
Tallahassee, FL 32399-2400
Attn: Brian G Davis

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: Colin Wright, Program Administrator

Date Certified: 06-FEB-2023 11:39

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink rectangular background.

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: Sampson River @ SW CR 225

Collection Date/Time: 01/18/2023 13:15

Field ID: Sampson River @ SW CR 225

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2381680	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P424660	
		Cylindrospermopsin	0.10	U	ug/L	P424659	
		Desmethyl microcystin LR	0.25	U	ug/L	P424659	
		Microcystin HILR	0.25	U	ug/L	P424659	
		Microcystin HtyR	0.25	U	ug/L	P424659	
		Microcystin LA	0.10	U	ug/L	P424659	
		Microcystin LF	0.10	U	ug/L	P424659	
		Microcystin LR	0.25	U	ug/L	P424659	
		Microcystin LW	0.25	U	ug/L	P424659	
		Microcystin LY	0.10	U	ug/L	P424659	
		Microcystin RR	0.10	U	ug/L	P424659	
		Microcystin WR	0.50	U	ug/L	P424659	
		Neosaxitoxin	0.50	U	ug/L	P424660	
		Microcystin YR	0.25	U	ug/L	P424659	
		Saxitoxin	0.50	U	ug/L	P424660	
		Nodularin-R	0.10	U	ug/L	P424659	
2381686	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P425215	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P425193	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P425029	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P424974	
2381688	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P424744	

Sample Location: George's Lake @ Center HAB

Collection Date/Time: 01/18/2023 10:50

Field ID: George's Lake @ Center HAB

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2381679	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P424660	
		Cylindrospermopsin	0.10	U	ug/L	P424659	
		Desmethyl microcystin LR	0.25	U	ug/L	P424659	
		Microcystin HILR	0.25	U	ug/L	P424659	
		Microcystin HtyR	0.25	U	ug/L	P424659	
		Microcystin LA	0.10	U	ug/L	P424659	
		Microcystin LF	0.10	U	ug/L	P424659	
		Microcystin LR	1.1		ug/L	P424659	
		Microcystin LW	0.25	U	ug/L	P424659	
		Microcystin LY	0.10	U	ug/L	P424659	
		Microcystin RR	1.6		ug/L	P424659	
		Microcystin WR	0.50	U	ug/L	P424659	
		Neosaxitoxin	0.50	U	ug/L	P424660	
		Microcystin YR	0.25	U	ug/L	P424659	
		Saxitoxin	0.50	U	ug/L	P424660	
		Nodularin-R	0.10	U	ug/L	P424659	
2381685	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P425215	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P425193	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P425029	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P424974	
2381687	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P424744	

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425215

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425193

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425029

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424974

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424744

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

Reference Method: EPA 8321B
Batch ID: P424659

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
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: P424660

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: EPA 350.1 Rev. 2.0

Batch ID: P425215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P425193

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P425029

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: P424974

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P424744

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

Reference Method: EPA 8321B

Batch ID: P424659

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	97.2		P	40 - 150
Desmethyl microcystin LR	79.7		P	40 - 150
Microcystin H1R	82.8		P	40 - 150
Microcystin HtyR	80.7		P	40 - 150
Microcystin LA	77.8		P	40 - 150
Microcystin LF	91.8		P	40 - 150
Microcystin LR	88.4		P	40 - 150
Microcystin LW	106		P	40 - 150
Microcystin LY	80.0		P	40 - 150
Microcystin RR	89.6		P	40 - 150
Microcystin WR	76.4		P	40 - 150
Microcystin YR	81.0		P	40 - 150
Nodularin-R	87.3		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P424660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	118		P	40 - 150
Neosaxitoxin	121		P	40 - 150
Saxitoxin	104		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381647	Ammonia-N	99.4	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381650	Kjeldahl Nitrogen	92.4	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381685	NO2NO3-N	99.8	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381673	Total-P	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424744

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381687	O-Phosphate-P	102	104	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P424659

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381528	Cylindrospermopsin	103	106	P/P	40 - 150
2381528	Desmethyl microcystin LR	110	107	P/P	40 - 150
2381528	Microcystin HiLR	109	110	P/P	40 - 150
2381528	Microcystin HtyR	102	102	P/P	40 - 150
2381528	Microcystin LA	87.4	87.3	P/P	40 - 150
2381528	Microcystin LF	107	95.0	P/P	40 - 150
2381528	Microcystin LR	122	120	P/P	40 - 150
2381528	Microcystin LW	96.9	107	P/P	40 - 150
2381528	Microcystin LY	107	89.9	P/P	40 - 150
2381528	Microcystin RR	95.8	98.6	P/P	40 - 150
2381528	Microcystin WR	96.0	98.8	P/P	40 - 150
2381528	Microcystin YR	107	106	P/P	40 - 150
2381528	Nodularin-R	121	110	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381528	Anatoxin-a	115	115	P/P	40 - 150
2381528	Neosaxitoxin	71.2	74.7	P/P	40 - 150
2381528	Saxitoxin	64.9	66.3	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P425215

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381647	Ammonia-N	2.05	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P425193

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381650	Kjeldahl Nitrogen	3.88	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P425029

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381685	NO2NO3-N	0.458	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P424974

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381673	Total-P	0.389	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P424744

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381687	O-Phosphate-P	1.56	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P424659

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381528	Cylindrospermopsin	2.66	Spike	P	0 - 30
2381528	Desmethyl microcystin LR	2.78	Spike	P	0 - 30
2381528	Microcystin H1LR	1.15	Spike	P	0 - 30
2381528	Microcystin HtyR	0.0686	Spike	P	0 - 30
2381528	Microcystin LA	0.161	Spike	P	0 - 30
2381528	Microcystin LF	11.8	Spike	P	0 - 30
2381528	Microcystin LR	1.62	Spike	P	0 - 30
2381528	Microcystin LW	9.63	Spike	P	0 - 30
2381528	Microcystin LY	17.5	Spike	P	0 - 30
2381528	Microcystin RR	2.89	Spike	P	0 - 30
2381528	Microcystin WR	2.92	Spike	P	0 - 30
2381528	Microcystin YR	0.824	Spike	P	0 - 30
2381528	Nodularin-R	9.16	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P424660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381528	Anatoxin-a	0.0548	Spike	P	0 - 30
2381528	Neosaxitoxin	4.71	Spike	P	0 - 30
2381528	Saxitoxin	2.15	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2381679

Field Sample ID: George's Lake @ Center HAB

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	73.5	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	71.0	P	30 - 160

Lab Sample ID: 2381680

Field Sample ID: Sampson River @ SW CR 225

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	84.9	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	63.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A116960

Included Lab Sample IDs: 2381679, 2381680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	98.9	96.1	P/P	50 - 160
Desmethyl microcystin LR	97.0	76.9	P/P	50 - 160
Microcystin HILR	103	88.0	P/P	50 - 160
Microcystin HtyR	102	83.6	P/P	50 - 160
Microcystin LA	109	108	P/P	50 - 160
Microcystin LF	97.6	106	P/P	50 - 160
Microcystin LR	106	93.2	P/P	50 - 160
Microcystin LW	92.6	111	P/P	50 - 160
Microcystin LY	125	82.0	P/P	50 - 160
Microcystin RR	101	96.8	P/P	50 - 160
Microcystin WR	92.3	83.8	P/P	50 - 160
Microcystin YR	107	82.2	P/P	50 - 160
Nodularin-R	99.5	93.1	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A116963

Included Lab Sample IDs: 2381679, 2381680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	109	106	P/P	50 - 160
Neosaxitoxin	112	117	P/P	50 - 160
Saxitoxin	93.8	93.7	P/P	50 - 160

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A116985

Included Lab Sample IDs: 2381687, 2381688

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117108

Included Lab Sample IDs: 2381685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.4	99.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117114

Included Lab Sample IDs: 2381685, 2381686

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117119

Included Lab Sample IDs: 2381686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117185

Included Lab Sample IDs: 2381685, 2381686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117207

Included Lab Sample IDs: 2381685, 2381686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.0	96.3	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
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	99.4	102		2.05
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	92.4	97.0		3.88
EPA 353.2 Rev. 2.0	NO2NO3-N	100	99.8	99.2		0.458
EPA 365.1 Rev. 2.0	Total-P	106	106	106		0.389
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	102	104		1.56
EPA 8321B	Anatoxin-a	118	115	115		0.0548
	Cylindrospermopsin	97.2	103	106		2.66
	Desmethyl microcystin LR	79.7	110	107		2.78
	Microcystin HiLR	82.8	109	110		1.15
	Microcystin HtyR	80.7	102	102		0.0686
	Microcystin LA	77.8	87.4	87.3		0.161
	Microcystin LF	91.8	107	95.0		11.8
	Microcystin LR	88.4	122	120		1.62
	Microcystin LW	106	96.9	107		9.63
	Microcystin LY	80.0	107	89.9		17.5
	Microcystin RR	89.6	95.8	98.6		2.89
	Microcystin WR	76.4	96.0	98.8		2.92
	Microcystin YR	81.0	107	106		0.824
	Neosaxitoxin	121	71.2	74.7		4.71
	Nodularin-R	87.3	121	110		9.16
	Saxitoxin	104	64.9	66.3		2.15

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2381685, 2381686
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2381685, 2381686
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2381685, 2381686
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2381685, 2381686
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2381687, 2381688
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2381679, 2381680
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2381679, 2381680

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	01/19/2023			01/31/2023 10:40	Judith K. Clark	2381685
	01/19/2023			01/31/2023 10:42	Judith K. Clark	2381686
EPA 351.2 Rev. 2.0	01/19/2023	01/31/2023 12:30	Simonne.V. Calhoun	02/01/2023 13:13	Judith K. Clark	2381685
	01/19/2023	01/31/2023 12:30	Simonne.V. Calhoun	02/01/2023 13:15	Judith K. Clark	2381686
EPA 353.2 Rev. 2.0	01/19/2023			01/26/2023 10:37	Beverly Y. Sanders	2381685
	01/19/2023			01/26/2023 10:44	Beverly Y. Sanders	2381686
EPA 365.1 Rev. 2.0	01/19/2023	01/25/2023 13:55	Adam P Silver	01/26/2023 09:13	James L Waggerby	2381685
	01/19/2023	01/25/2023 13:55	Adam P Silver	01/26/2023 13:40	James L Waggerby	2381686
EPA 365.1 Rev. 2.0 dissolved	01/19/2023			01/19/2023 13:33	Elise M. Gillis	2381687
	01/19/2023			01/19/2023 13:36	Elise M. Gillis	2381688
EPA 8321B	01/19/2023	01/19/2023 11:00	Manjita Shrestha	01/19/2023 14:24	Manjita Shrestha	2381679
	01/19/2023	01/19/2023 11:00	Manjita Shrestha	01/19/2023 14:41	Manjita Shrestha	2381680
	01/19/2023	01/19/2023 14:00	Manjita Shrestha	01/19/2023 18:36	Manjita Shrestha	2381679
	01/19/2023	01/19/2023 14:00	Manjita Shrestha	01/19/2023 18:50	Manjita Shrestha	2381680