

Chemical Analysis Report

SO-DIST-2024-03-19-01

Florida DEP Laboratory
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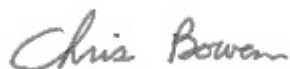
Event Description: **Algal Bloom Response -SOROC**
Request ID: **RQ-2023-10-02-35**
Customer: **SO-DIST**
Project ID: **BLOOM-RESP**

Send Reports to:
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FLDEP South District Office
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Fort Myers, FL 33901-3381
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 29-MAR-2024 10:46



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 Placid - Boat Ramp

Collection Date/Time: 03/18/2024 09:03

Field ID: HAB-HC-031824-0903

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476253	DEP SOP: NU-094-1	Color (true)	15		PCU	P442988	
2476255	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P443203	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P442978	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P443224	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P443139	
2476257	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P442986	
2476259	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P442985	
		Cylindrospermopsin	0.10	U	ug/L	P442984	
		Desmethyl microcystin LR	0.25	U	ug/L	P442984	
		Microcystin H1LR	0.25	U	ug/L	P442984	
		Microcystin HtyR	0.25	U	ug/L	P442984	
		Microcystin LA	0.10	U	ug/L	P442984	
		Microcystin LF	0.10	U	ug/L	P442984	
		Microcystin LR	0.25	U	ug/L	P442984	
		Microcystin LW	0.25	U	ug/L	P442984	
		Microcystin LY	0.10	U	ug/L	P442984	
		Microcystin RR	0.10	U	ug/L	P442984	
		Microcystin WR	0.50	U	ug/L	P442984	
		Neosaxitoxin	0.50	U	ug/L	P442985	
		Microcystin YR	0.25	U	ug/L	P442984	
		Saxitoxin	0.50	U	ug/L	P442985	
		Nodularin-R	0.10	U	ug/L	P442984	

Sample Location: Lake Glenada - Boat Ramp

Collection Date/Time: 03/18/2024 12:00

Field ID: HAB-HC-031824-1200

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476254	DEP SOP: NU-094-1	Color (true)	31		PCU	P442988	
2476256	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P443203	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P442993	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P443224	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P443139	
2476258	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P442986	
2476260	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P442985	
		Cylindrospermopsin	0.10	U	ug/L	P442984	
		Desmethyl microcystin LR	0.25	U	ug/L	P442984	
		Microcystin HilR	0.25	U	ug/L	P442984	
		Microcystin HtyR	0.25	U	ug/L	P442984	
		Microcystin LA	0.10	U	ug/L	P442984	
		Microcystin LF	0.10	U	ug/L	P442984	
		Microcystin LR	0.68	I	ug/L	P442984	
		Microcystin LW	0.25	U	ug/L	P442984	
		Microcystin LY	0.10	U	ug/L	P442984	
		Microcystin RR	0.10	U	ug/L	P442984	
		Microcystin WR	0.50	U	ug/L	P442984	
		Neosaxitoxin	0.50	U	ug/L	P442985	
		Microcystin YR	0.25	U	ug/L	P442984	
		Saxitoxin	0.50	U	ug/L	P442985	
		Nodularin-R	0.10	U	ug/L	P442984	

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P442988

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P443203

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442978

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442993

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P443224

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P443139

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P442986

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

Reference Method: EPA 8321B
Batch ID: P442984

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P442984

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: P442985

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: DEP SOP: NU-094-1
Batch ID: P442988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P443203

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442978

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P443224

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P443139

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: P442986

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

Reference Method: EPA 8321B
Batch ID: P442984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	90.3		P	40 - 150
Desmethyl microcystin LR	102		P	40 - 150
Microcystin HIR	103		P	40 - 150
Microcystin HtyR	98.3		P	40 - 150
Microcystin LA	96.9		P	40 - 150
Microcystin LF	102		P	40 - 150
Microcystin LR	96.1		P	40 - 150
Microcystin LW	110		P	40 - 150
Microcystin LY	106		P	40 - 150
Microcystin RR	85.7		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P442984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Microcystin WR	99.6		P	40 - 150
Microcystin YR	92.4		P	40 - 150
Nodularin-R	91.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P442985

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	105		P	40 - 150
Neosaxitoxin	92.3		P	40 - 150
Saxitoxin	105		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P443203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476221	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476009	Kjeldahl Nitrogen	103	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476219	Kjeldahl Nitrogen	98.6	93.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P443224

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476483	NO2NO3-N	92.3	94.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P443139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476262	Total-P	99.8	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P442986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476257	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P442984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476259	Cylindrospermopsin	91.3	86.7	P/P	40 - 150
2476259	Desmethyl microcystin LR	95.8	92.1	P/P	40 - 150
2476259	Microcystin HILR	102	96.0	P/P	40 - 150
2476259	Microcystin HtyR	105	101	P/P	40 - 150
2476259	Microcystin LA	97.5	93.7	P/P	40 - 150
2476259	Microcystin LF	111	109	P/P	40 - 150
2476259	Microcystin LR	84.7	87.9	P/P	40 - 150
2476259	Microcystin LW	104	98.9	P/P	40 - 150
2476259	Microcystin LY	100	100	P/P	40 - 150
2476259	Microcystin RR	86.5	81.9	P/P	40 - 150
2476259	Microcystin WR	103	95.6	P/P	40 - 150
2476259	Microcystin YR	101	99.6	P/P	40 - 150
2476259	Nodularin-R	94.0	89.5	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P442985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476259	Anatoxin-a	105	107	P/P	40 - 150
2476259	Neosaxitoxin	88.6	85.6	P/P	40 - 150
2476259	Saxitoxin	107	107	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P442988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476215	Color (true)	11.4	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P443203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476221	Ammonia-N	1.96	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476009	Kjeldahl Nitrogen	1.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476219	Kjeldahl Nitrogen	4.16	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P443224

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476483	NO2NO3-N	2.07	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P443139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476262	Total-P	2.47	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P442986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476257	O-Phosphate-P	0.200	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P442984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476259	Cylindrospermopsin	5.21	Spike	P	0 - 30
2476259	Desmethyl microcystin LR	3.90	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P442984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476259	Microcystin HllR	6.22	Spike	P	0 - 30
2476259	Microcystin HtyR	3.82	Spike	P	0 - 30
2476259	Microcystin LA	3.96	Spike	P	0 - 30
2476259	Microcystin LF	2.46	Spike	P	0 - 30
2476259	Microcystin LR	3.78	Spike	P	0 - 30
2476259	Microcystin LW	5.07	Spike	P	0 - 30
2476259	Microcystin LY	0.00796	Spike	P	0 - 30
2476259	Microcystin RR	5.43	Spike	P	0 - 30
2476259	Microcystin WR	7.05	Spike	P	0 - 30
2476259	Microcystin YR	0.955	Spike	P	0 - 30
2476259	Nodularin-R	4.94	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P442985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476259	Anatoxin-a	1.52	Spike	P	0 - 30
2476259	Neosaxitoxin	3.53	Spike	P	0 - 30
2476259	Saxitoxin	0.600	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2476259
Field Sample ID: HAB-HC-031824-0903

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	117	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	87.7	P	30 - 160

Lab Sample ID: 2476260
Field Sample ID: HAB-HC-031824-1200

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Anatoxin-a 13C4	115	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	98.0	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A124831
Included Lab Sample IDs: 2476257, 2476258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.3	99.8	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1
Run ID: A124833
Included Lab Sample IDs: 2476253, 2476254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	93.2	95.0	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A124893
Included Lab Sample IDs: 2476259, 2476260

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	104	105	P/P	50 - 160
Desmethyl microcystin LR	106	109	P/P	50 - 160
Microcystin HiiR	115	124	P/P	50 - 160
Microcystin HtyR	115	121	P/P	50 - 160
Microcystin LA	107	113	P/P	50 - 160
Microcystin LF	116	121	P/P	50 - 160
Microcystin LR	102	106	P/P	50 - 160
Microcystin LW	119	124	P/P	50 - 160
Microcystin LY	118	120	P/P	50 - 160
Microcystin RR	94.8	95.0	P/P	50 - 160
Microcystin WR	111	115	P/P	50 - 160
Microcystin YR	105	118	P/P	50 - 160
Nodularin-R	105	105	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A124898
Included Lab Sample IDs: 2476255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.5	98.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A124904
Included Lab Sample IDs: 2476256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	94.4	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A124908
Included Lab Sample IDs: 2476259, 2476260

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	111	104	P/P	50 - 160
Neosaxitoxin	112	96.6	P/P	50 - 160
Saxitoxin	120	116	P/P	50 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A124928
Included Lab Sample IDs: 2476256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A124932
Included Lab Sample IDs: 2476255, 2476256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A124942
Included Lab Sample IDs: 2476255

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A124943
Included Lab Sample IDs: 2476255, 2476256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.0	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
DEP SOP: NU-094-1	Color (true)	97.4				11.4
EPA 350.1 Rev. 2.0	Ammonia-N	94.4	101	103		1.96
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.8	103	106		1.63
	Kjeldahl Nitrogen	95.5	98.6	93.8		4.16
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	92.3	94.3		2.07
EPA 365.1 Rev. 2.0	Total-P	103	99.8	103		2.47
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	100	100		0.200
EPA 8321B	Anatoxin-a	105	105	107		1.52
	Cylindrospermopsin	90.3	91.3	86.7		5.21
	Desmethyl microcystin LR	102	95.8	92.1		3.90
	Microcystin HiIR	103	102	96.0		6.22
	Microcystin HtyR	98.3	105	101		3.82
	Microcystin LA	96.9	97.5	93.7		3.96
	Microcystin LF	102	111	109		2.46
	Microcystin LR	96.1	84.7	87.9		3.78
	Microcystin LW	110	104	98.9		5.07
	Microcystin LY	106	100	100		0.0079
	Microcystin RR	85.7	86.5	81.9		5.43
	Microcystin WR	99.6	103	95.6		7.05
	Microcystin YR	92.4	101	99.6		0.955
	Neosaxitoxin	92.3	88.6	85.6		3.53
	Nodularin-R	91.3	94.0	89.5		4.94
	Saxitoxin	105	107	107		0.600

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2476253, 2476254
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2476255, 2476256
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2476255, 2476256
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2476255, 2476256
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2476255, 2476256
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2476257, 2476258
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2476259, 2476260
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2476259, 2476260

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	03/19/2024			03/19/2024 14:37	Jessica K Wilks	2476253
	03/19/2024			03/19/2024 14:38	Jessica K Wilks	2476254
EPA 350.1 Rev. 2.0	03/19/2024			03/22/2024 11:33	Ping Hua	2476255
	03/19/2024			03/22/2024 11:34	Ping Hua	2476256
EPA 351.2 Rev. 2.0	03/19/2024	03/20/2024 11:15	Robyn Blevins	03/21/2024 14:55	Robyn Blevins	2476256
	03/19/2024	03/20/2024 11:28	Robyn Blevins	03/21/2024 12:15	Robyn Blevins	2476255
EPA 353.2 Rev. 2.0	03/19/2024			03/22/2024 14:40	Fadila Guebre	2476255
	03/19/2024			03/22/2024 14:41	Fadila Guebre	2476256
EPA 365.1 Rev. 2.0	03/19/2024	03/21/2024 15:05	Josephine W Gitau	03/22/2024 12:01	Elise M. Gillis	2476256
	03/19/2024	03/21/2024 15:05	Josephine W Gitau	03/22/2024 16:51	Elise M. Gillis	2476255
EPA 365.1 Rev. 2.0 dissolved	03/19/2024			03/19/2024 13:38	Victoria Ocasio-Reed	2476257
	03/19/2024			03/19/2024 13:41	Victoria Ocasio-Reed	2476258
EPA 8321B	03/19/2024	03/21/2024 10:30	Tae K Lee	03/21/2024 12:37	Tae K Lee	2476259
	03/19/2024	03/21/2024 10:30	Tae K Lee	03/21/2024 12:54	Tae K Lee	2476260
	03/19/2024	03/21/2024 10:30	Tae K Lee	03/21/2024 18:36	Tae K Lee	2476259
	03/19/2024	03/21/2024 10:30	Tae K Lee	03/21/2024 18:50	Tae K Lee	2476260