Chemical Analysis Report

WQAP-2023-02-15-02

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-2023-02-13-15**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 07-MAR-2023 09:40

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: George's Lake @ Center HAB **Collection Date/Time: 02/14/2023 09:55**

Field ID: NEHAB0098 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387605	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P425648	
		Cylindrospermopsin	0.10	U	ug/L	P425647	
		Desmethyl microcystin LR	1.5		ug/L	P425647	
		Microcystin HilR	0.33	I	ug/L	P425647	
		Microcystin HtyR	0.25	U	ug/L	P425647	
		Microcystin LA	0.10	U	ug/L	P425647	
		Microcystin LF	0.10	U	ug/L	P425647	
		Microcystin LR	16		ug/L	P425647	
		Microcystin LW	0.25	U	ug/L	P425647	
		Microcystin LY	0.10	U	ug/L	P425647	
		Microcystin RR	30		ug/L	P425647	
		Microcystin WR	0.50	U	ug/L	P425647	
		Neosaxitoxin	0.50	U	ug/L	P425648	
		Microcystin YR	1.6		ug/L	P425647	
		Saxitoxin	0.50	U	ug/L	P425648	
		Nodularin-R	0.10	U	ug/L	P425647	
2387607	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P426282	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P426211	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.065		mg N/L	P426129	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P425994	
2387609	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P425888	

Sample Location: George's Lake @ Boat **Collection Date/Time: 02/14/2023 10:20**

Field ID: NEHAB0099 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387606	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P425648	
		Cylindrospermopsin	0.10	U	ug/L	P425647	
		Desmethyl microcystin LR	4.8		ug/L	P425647	
		Microcystin HilR	1.5		ug/L	P425647	
		Microcystin HtyR	0.25	U	ug/L	P425647	
		Microcystin LA	0.10	U	ug/L	P425647	
		Microcystin LF	0.10	U	ug/L	P425647	
		Microcystin LR	35		ug/L	P425647	
		Microcystin LW	0.25	U	ug/L	P425647	
		Microcystin LY	0.10	U	ug/L	P425647	
		Microcystin RR	58		ug/L	P425647	
		Microcystin WR	0.50	U	ug/L	P425647	
		Neosaxitoxin	0.50	U	ug/L	P425648	
		Microcystin YR	5.9		ug/L	P425647	
		Saxitoxin	0.50	U	ug/L	P425648	
		Nodularin-R	0.10	U	ug/L	P425647	
2387608	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P426282	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.99		mg N/L	P426211	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.064		mg N/L	P426129	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P425994	
2387610	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P425888	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426282

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426211

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426129

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425994

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425888

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

Reference Method: EPA 8321B
Batch ID: P425647

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

Reference Method: EPA 8321B
Batch ID: P425648

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: P426282

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426211

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426129

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: P425994

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425888

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

Reference Method: EPA 8321B
Batch ID: P425647

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	90.4		P	40 - 150
Desmethyl microcystin LR	94.7		P	40 - 150
Microcystin HilR	82.3		P	40 - 150
Microcystin HtyR	88.8		P	40 - 150
Microcystin LA	99.3		P	40 - 150
Microcystin LF	97.2		P	40 - 150
Microcystin LR	88.1		P	40 - 150
Microcystin LW	95.4		P	40 - 150
Microcystin LY	91.5		P	40 - 150
Microcystin RR	80.7		P	40 - 150
Microcystin WR	84.6		P	40 - 150
Microcystin YR	83.5		P	40 - 150
Nodularin-R	83.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P425648

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	71.0		P	40 - 150
Neosaxitoxin	71.6		P	40 - 150
Saxitoxin	63.6		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387593	Ammonia-N	102	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387598	Kjeldahl Nitrogen	103	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426129

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387593	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387595	Total-P	100	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387603	O-Phosphate-P	98.4	98.9	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P425647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386603	Cylindrospermopsin	90.0	99.4	P/P	40 - 150
2386603	Desmethyl microcystin LR	106	103	P/P	40 - 150
2386603	Microcystin HilR	99.0	104	P/P	40 - 150
2386603	Microcystin HtyR	99.0	110	P/P	40 - 150
2386603	Microcystin LA	100	112	P/P	40 - 150
2386603	Microcystin LF	108	101	P/P	40 - 150
2386603	Microcystin LR	107	110	P/P	40 - 150
2386603	Microcystin LW	89.4	90.7	P/P	40 - 150
2386603	Microcystin LY	90.7	105	P/P	40 - 150
2386603	Microcystin RR	81.5	86.9	P/P	40 - 150
2386603	Microcystin WR	96.1	103	P/P	40 - 150
2386603	Microcystin YR	98.5	108	P/P	40 - 150
2386603	Nodularin-R	93.8	105	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P425648

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386603	Anatoxin-a	77.7	77.7	P/P	40 - 150
2386603	Neosaxitoxin	65.9	64.2	P/P	40 - 150
2386603	Saxitoxin	61.6	61.9	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387593	Ammonia-N	4.90	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387598	Kjeldahl Nitrogen	3.18	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387593	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387595	Total-P	2.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387603	O-Phosphate-P	0.507	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P425647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386603	Cylindrospermopsin	9.96	Spike	P	0 - 30
2386603	Desmethyl microcystin LR	2.26	Spike	P	0 - 30
2386603	Microcystin HilR	4.92	Spike	P	0 - 30
2386603	Microcystin HtyR	10.1	Spike	P	0 - 30
2386603	Microcystin LA	11.4	Spike	P	0 - 30
2386603	Microcystin LF	6.98	Spike	P	0 - 30
2386603	Microcystin LR	2.73	Spike	P	0 - 30
2386603	Microcystin LW	1.37	Spike	P	0 - 30
2386603	Microcystin LY	14.1	Spike	P	0 - 30
2386603	Microcystin RR	6.35	Spike	P	0 - 30
2386603	Microcystin WR	6.55	Spike	P	0 - 30
2386603	Microcystin YR	8.90	Spike	P	0 - 30
2386603	Nodularin-R	11.5	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P425648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386603	Anatoxin-a	0.0387	Spike	P	0 - 30
2386603	Neosaxitoxin	2.63	Spike	P	0 - 30
2386603	Saxitoxin	0.497	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2387605
Field Sample ID: NEHAB0098

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	107	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	43.2	P	30 - 160

Lab Sample ID: 2387606
Field Sample ID: NEHAB0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	91.2	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	44.8	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A117468
Included Lab Sample IDs: 2387609, 2387610

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	99.2	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A117470
Included Lab Sample IDs: 2387605, 2387606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	65.8	63.7	P/P	50 - 160
Neosaxitoxin	68.9	66.9	P/P	50 - 160
Saxitoxin	62.8	62.9	P/P	50 - 160

Reference Method: EPA 8321B
Run ID: A117478
Included Lab Sample IDs: 2387605, 2387606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	94.3	98.2	P/P	50 - 160
Desmethyl microcystin LR	102	98.3	P/P	50 - 160
Microcystin HilR	93.0	91.4	P/P	50 - 160
Microcystin HtyR	97.9	93.0	P/P	50 - 160
Microcystin LA	110	103	P/P	50 - 160
Microcystin LF	102	94.8	P/P	50 - 160
Microcystin LR	96.5	99.4	P/P	50 - 160
Microcystin LW	106	88.7	P/P	50 - 160
Microcystin LY	98.7	95.4	P/P	50 - 160
Microcystin RR	89.6	83.0	P/P	50 - 160
Microcystin WR	95.2	91.3	P/P	50 - 160
Microcystin YR	96.0	92.7	P/P	50 - 160
Nodularin-R	92.3	92.9	P/P	50 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A117560
Included Lab Sample IDs: 2387607, 2387608

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: A117564
Included Lab Sample IDs: 2387607, 2387608

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A117623
Included Lab Sample IDs: 2387607, 2387608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	98.9	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A117783
Included Lab Sample IDs: 2387607, 2387608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.1	98.5	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	101	102	96.4			4.90
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	103	99.0			3.18
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	102	100	103			2.22
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	98.4	98.9			0.507
EPA 8321B	Anatoxin-a	71.0	77.7	77.7			0.0387
	Cylindrospermopsin	90.4	90.0	99.4			9.96
	Desmethyl microcystin LR	94.7	106	103			2.26
	Microcystin HilR	82.3	99.0	104			4.92
	Microcystin HtyR	88.8	99.0	110			10.1
	Microcystin LA	99.3	100	112			11.4
	Microcystin LF	97.2	108	101			6.98
	Microcystin LR	88.1	107	110			2.73
	Microcystin LW	95.4	89.4	90.7			1.37
	Microcystin LY	91.5	90.7	105			14.1
	Microcystin RR	80.7	81.5	86.9			6.35
	Microcystin WR	84.6	96.1	103			6.55
	Microcystin YR	83.5	98.5	108			8.90
	Neosaxitoxin	71.6	65.9	64.2			2.63
	Nodularin-R	83.1	93.8	105			11.5
	Saxitoxin	63.6	61.6	61.9			0.497

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2387607, 2387608
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2387607, 2387608
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2387607, 2387608
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2387607, 2387608
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2387609, 2387610
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2387605, 2387606
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2387605, 2387606

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	02/15/2023			02/23/2023 12:02	Ping Hua	2387607
	02/15/2023			02/23/2023 12:03	Ping Hua	2387608
EPA 351.2 Rev. 2.0	02/15/2023	02/22/2023 13:15	Simonne.V. Calhoun	03/03/2023 12:27	Judith K. Clark	2387607
	02/15/2023	02/22/2023 13:15	Simonne.V. Calhoun	03/03/2023 12:28	Judith K. Clark	2387608
EPA 353.2 Rev. 2.0	02/15/2023			02/20/2023 10:33	Beverly Y. Sanders	2387607
	02/15/2023			02/20/2023 10:34	Beverly Y. Sanders	2387608
EPA 365.1 Rev. 2.0	02/15/2023	02/17/2023 12:21	Adam P Silver	02/21/2023 10:38	James L Waggerby	2387607
	02/15/2023	02/17/2023 12:21	Adam P Silver	02/21/2023 10:39	James L Waggerby	2387608
EPA 365.1 Rev. 2.0 dissolved	02/15/2023			02/15/2023 15:33	Elise M. Gillis	2387609, 2387610
EPA 8321B	02/15/2023	02/15/2023 13:00	Manjita Shrestha	02/15/2023 21:40	Manjita Shrestha	2387605
	02/15/2023	02/15/2023 13:00	Manjita Shrestha	02/15/2023 21:54	Manjita Shrestha	2387606
	02/15/2023	02/15/2023 13:00	Manjita Shrestha	02/16/2023 09:31	Manjita Shrestha	2387605
	02/15/2023	02/15/2023 13:00	Manjita Shrestha	02/16/2023 09:48	Manjita Shrestha	2387606
	02/15/2023	02/15/2023 13:00	Manjita Shrestha	02/16/2023 10:22	Manjita Shrestha	2387606