Chemical Analysis Report

WQAP-2023-01-25-01

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

Event Description: **Algal Bloom Response - CEROC**
Request ID: **RQ-2023-01-23-55**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 14-FEB-2023 10:01

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 Sue - NW Shore **Collection Date/Time: 01/24/2023 10:18**

Field ID: HABCE0166_LakeSue3 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382710	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P424881	
		Cylindrospermopsin	0.10	U	ug/L	P424880	
		Desmethyl microcystin LR	0.25	U	ug/L	P424880	
		Microcystin HilR	0.25	U	ug/L	P424880	
		Microcystin HtyR	0.25	U	ug/L	P424880	
		Microcystin LA	0.19	I	ug/L	P424880	
		Microcystin LF	0.10	U	ug/L	P424880	
		Microcystin LR	0.25	U	ug/L	P424880	
		Microcystin LW	0.25	U	ug/L	P424880	
		Microcystin LY	0.10	U	ug/L	P424880	
		Microcystin RR	0.10	U	ug/L	P424880	
		Microcystin WR	0.50	U	ug/L	P424880	
		Neosaxitoxin	0.50	U	ug/L	P424881	
		Microcystin YR	0.25	U	ug/L	P424880	
		Saxitoxin	0.50	U	ug/L	P424881	
		Nodularin-R	0.10	U	ug/L	P424880	
2382712	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P425539	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P425063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.072		mg N/L	P425143	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P425133	
2382713	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P424990	

Sample Location: Lake Sue - NW Shore **Collection Date/Time: 01/24/2023 10:51**

Field ID: FB_01242023 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382711	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P424881	
		Cylindrospermopsin	0.10	U	ug/L	P424880	
		Desmethyl microcystin LR	0.25	U	ug/L	P424880	
		Microcystin HilR	0.25	U	ug/L	P424880	
		Microcystin HtyR	0.25	U	ug/L	P424880	
		Microcystin LA	0.10	U	ug/L	P424880	
		Microcystin LF	0.10	U	ug/L	P424880	
		Microcystin LR	0.25	U	ug/L	P424880	
		Microcystin LW	0.25	U	ug/L	P424880	
		Microcystin LY	0.10	U	ug/L	P424880	
		Microcystin RR	0.10	U	ug/L	P424880	
		Microcystin WR	0.50	U	ug/L	P424880	
		Neosaxitoxin	0.50	U	ug/L	P424881	
		Microcystin YR	0.25	U	ug/L	P424880	
		Saxitoxin	0.50	U	ug/L	P424881	
		Nodularin-R	0.10	U	ug/L	P424880	
2382714	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P425539	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P425063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P425143	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P425133	
2382715	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P424990	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425539

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425063

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425143

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425133

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424990

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

Reference Method: EPA 8321B
Batch ID: P424880

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: P424881

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: P425539

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425063

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: P425143

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425133

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: P424990

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.7		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P424880

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cylindrospermopsin	102		P	40 - 150
Desmethyl microcystin LR	105		P	40 - 150
Microcystin HilR	97.8		P	40 - 150
Microcystin HtyR	101		P	40 - 150
Microcystin LA	99.4		P	40 - 150
Microcystin LF	91.2		P	40 - 150
Microcystin LR	98.0		P	40 - 150
Microcystin LW	104		P	40 - 150
Microcystin LY	86.0		P	40 - 150
Microcystin RR	96.4		P	40 - 150
Microcystin WR	96.1		P	40 - 150
Microcystin YR	94.1		P	40 - 150
Nodularin-R	95.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424881

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	97.4		P	40 - 150
Neosaxitoxin	107		P	40 - 150
Saxitoxin	86.2		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425539

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382687	Ammonia-N	94.6	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382712	Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382687	NO2NO3-N	96.9	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382601	Total-P	106	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424990

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382713	O-Phosphate-P	98.0	98.1	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P424880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381993	Cylindrospermopsin	99.9	105	P/P	40 - 150
2381993	Desmethyl microcystin LR	132	134	P/P	40 - 150
2381993	Microcystin HilR	125	121	P/P	40 - 150
2381993	Microcystin HtyR	116	117	P/P	40 - 150
2381993	Microcystin LA	101	90.2	P/P	40 - 150
2381993	Microcystin LF	111	112	P/P	40 - 150
2381993	Microcystin LR	125	125	P/P	40 - 150
2381993	Microcystin LW	113	129	P/P	40 - 150
2381993	Microcystin LY	110	102	P/P	40 - 150
2381993	Microcystin RR	102	105	P/P	40 - 150
2381993	Microcystin WR	113	115	P/P	40 - 150
2381993	Microcystin YR	110	112	P/P	40 - 150
2381993	Nodularin-R	113	113	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2381993	Anatoxin-a	90.0	90.0	P/P	40 - 150
2381993	Neosaxitoxin	61.9	58.7	P/P	40 - 150
2381993	Saxitoxin	53.3	53.2	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382687	Ammonia-N	1.28	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382712	Kjeldahl Nitrogen	0.916	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382687	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382601	Total-P	1.48	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382713	O-Phosphate-P	0.102	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P424880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381993	Cylindrospermopsin	5.40	Spike	P	0 - 30
2381993	Desmethyl microcystin LR	1.50	Spike	P	0 - 30
2381993	Microcystin HilR	3.51	Spike	P	0 - 30
2381993	Microcystin HtyR	1.23	Spike	P	0 - 30
2381993	Microcystin LA	11.5	Spike	P	0 - 30
2381993	Microcystin LF	0.473	Spike	P	0 - 30
2381993	Microcystin LR	0.128	Spike	P	0 - 30
2381993	Microcystin LW	13.1	Spike	P	0 - 30
2381993	Microcystin LY	8.09	Spike	P	0 - 30
2381993	Microcystin RR	2.63	Spike	P	0 - 30
2381993	Microcystin WR	1.67	Spike	P	0 - 30
2381993	Microcystin YR	1.74	Spike	P	0 - 30
2381993	Nodularin-R	0.650	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P424881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2381993	Anatoxin-a	0.0754	Spike	P	0 - 30
2381993	Neosaxitoxin	5.35	Spike	P	0 - 30
2381993	Saxitoxin	0.348	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2382710
Field Sample ID: HABCE0166_LakeSue3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	81.1	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	119	P	30 - 160

Lab Sample ID: 2382711
Field Sample ID: FB_01242023

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR ethyl-d5	74.6	P	30 - 160
EPA 8321B	Neosaxitoxin-15N7	55.4	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A117098
Included Lab Sample IDs: 2382713, 2382715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	99.4	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A117101
Included Lab Sample IDs: 2382710, 2382711

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cylindrospermopsin	109	105	P/P	50 - 160
Desmethyl microcystin LR	113	108	P/P	50 - 160
Microcystin HilR	109	106	P/P	50 - 160
Microcystin HtyR	106	104	P/P	50 - 160
Microcystin LA	94.5	92.9	P/P	50 - 160
Microcystin LF	110	105	P/P	50 - 160
Microcystin LR	102	106	P/P	50 - 160
Microcystin LW	102	97.5	P/P	50 - 160
Microcystin LY	115	99.9	P/P	50 - 160
Microcystin RR	99.9	107	P/P	50 - 160
Microcystin WR	103	110	P/P	50 - 160
Microcystin YR	97.5	99.2	P/P	50 - 160
Nodularin-R	103	102	P/P	50 - 160

Reference Method: EPA 8321B
Run ID: A117112
Included Lab Sample IDs: 2382710, 2382711

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	107	95.8	P/P	50 - 160
Neosaxitoxin	116	106	P/P	50 - 160
Saxitoxin	88.3	86.9	P/P	50 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A117158
Included Lab Sample IDs: 2382712, 2382714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	95.5	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A117161
Included Lab Sample IDs: 2382712, 2382714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.4	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A117189
Included Lab Sample IDs: 2382712, 2382714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	101	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A117327
Included Lab Sample IDs: 2382712, 2382714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	97.7	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	99.0	94.6	96.2			1.28
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	105	104			0.916
EPA 353.2 Rev. 2.0	NO2NO3-N	96.0	96.9	96.4			0.499
EPA 365.1 Rev. 2.0	Total-P	103	106	104			1.48
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7	98.0	98.1			0.102
EPA 8321B	Anatoxin-a	97.4	90.0	90.0			0.0754
	Cylindrospermopsin	102	99.9	105			5.40
	Desmethyl microcystin LR	105	132	134			1.50
	Microcystin HilR	97.8	125	121			3.51
	Microcystin HtyR	101	116	117			1.23
	Microcystin LA	99.4	101	90.2			11.5
	Microcystin LF	91.2	111	112			0.473
	Microcystin LR	98.0	125	125			0.128
	Microcystin LW	104	113	129			13.1
	Microcystin LY	86.0	110	102			8.09
	Microcystin RR	96.4	102	105			2.63
	Microcystin WR	96.1	113	115			1.67
	Microcystin YR	94.1	110	112			1.74
	Neosaxitoxin	107	61.9	58.7			5.35
	Nodularin-R	95.7	113	113			0.650
	Saxitoxin	86.2	53.3	53.2			0.348

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2382712, 2382714
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2382712, 2382714
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2382712, 2382714
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2382712, 2382714
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2382713, 2382715
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2382710, 2382711
EPA 8321B	Saxitoxin in water matrices by HPLC/MS/MS	2382710, 2382711

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	01/25/2023			02/08/2023 13:07	Ping Hua	2382712
	01/25/2023			02/08/2023 13:14	Ping Hua	2382714
EPA 351.2 Rev. 2.0	01/25/2023	01/27/2023 11:50	Simonne.V. Calhoun	01/30/2023 13:59	Samantha L Bates	2382712
	01/25/2023	01/27/2023 11:50	Simonne.V. Calhoun	01/30/2023 14:04	Samantha L Bates	2382714
EPA 353.2 Rev. 2.0	01/25/2023			01/30/2023 11:23	Beverly Y. Sanders	2382712
	01/25/2023			01/30/2023 11:24	Beverly Y. Sanders	2382714
EPA 365.1 Rev. 2.0	01/25/2023	01/30/2023 14:03	Adam P Silver	01/31/2023 15:05	James L Waggerby	2382714
	01/25/2023	01/30/2023 14:03	Adam P Silver	01/31/2023 15:08	James L Waggerby	2382712
EPA 365.1 Rev. 2.0 dissolved	01/25/2023			01/25/2023 15:13	Elise M. Gillis	2382713
	01/25/2023			01/25/2023 15:18	Elise M. Gillis	2382715
EPA 8321B	01/25/2023	01/25/2023 12:00	Manjita Shrestha	01/25/2023 21:11	Manjita Shrestha	2382710
	01/25/2023	01/25/2023 12:00	Manjita Shrestha	01/25/2023 21:28	Manjita Shrestha	2382711
	01/25/2023	01/25/2023 12:00	Manjita Shrestha	01/26/2023 05:13	Manjita Shrestha	2382710
	01/25/2023	01/25/2023 12:00	Manjita Shrestha	01/26/2023 05:27	Manjita Shrestha	2382711