

Chemical Analysis Report

SW-DIST-2019-05-21-01

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

Event Description: **Algal Bloom Response - as needed**
Request ID: **RQ-2019-05-20-17**
Customer: **SW-DIST**
Project ID: **BLOOM-RESP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Matthew Bearden

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 03-JUN-2019 15:30

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored 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: ANNA MARIA ISLAND FOLLOW-UP BLOOM
RESPONSE**

Collection Date/Time: 05/20/2019 11:00

Field ID: ANNA MARIA ISLAND

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087600	EPA 8321B	Anatoxin-a**	0.25	U	ug/L	P364253	
		Cylindrospermopsin**	0.25	U	ug/L	P364253	
		Microcystin LA**	0.25	U	ug/L	P364253	
		Microcystin LF**	0.25	U	ug/L	P364253	
		Microcystin LR**	0.25	U	ug/L	P364253	
		Microcystin LY**	0.25	U	ug/L	P364253	
		Microcystin RR**	0.25	U	ug/L	P364253	
		Microcystin YR**	0.25	U	ug/L	P364253	
		Saxitoxin**	0.25	UJ	ug/L	P364253	MS

Ref. Method and Comment:

EPA 8321B: Method validation for saxitoxin is still in progress. Second source was not analyzed. Precision for saxitoxin is not available due to no recoveries in the duplicate matrix spikes.

**Sample Location: HOLMES BEACH FOLLOW-UP BLOOM
RESPONSE**

Collection Date/Time: 05/20/2019 11:25

Field ID: HOLMES BEACH

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087601	EPA 8321B	Anatoxin-a**	0.25	U	ug/L	P364253	
		Cylindrospermopsin**	0.25	U	ug/L	P364253	
		Microcystin LA**	0.25	U	ug/L	P364253	
		Microcystin LF**	0.25	U	ug/L	P364253	
		Microcystin LR**	0.25	U	ug/L	P364253	
		Microcystin LY**	0.25	U	ug/L	P364253	
		Microcystin RR**	0.25	U	ug/L	P364253	
		Microcystin YR**	0.25	U	ug/L	P364253	
		Saxitoxin**	0.25	UJ	ug/L	P364253	MS

Ref. Method and Comment:

EPA 8321B: Method validation for saxitoxin is still in progress. Second source was not analyzed. Precision for saxitoxin is not available due to no recoveries in the duplicate matrix spikes.

**Sample Location: PALMA SOLA BAY FOLLOW-UP BLOOM
RESPONSE**

Collection Date/Time: 05/20/2019 11:50

Field ID: PALMA SOLA BAY

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087602	EPA 8321B	Anatoxin-a**	0.25	U	ug/L	P364253	
		Cylindrospermopsin**	0.25	U	ug/L	P364253	
		Microcystin LA**	0.25	U	ug/L	P364253	
		Microcystin LF**	0.25	U	ug/L	P364253	
		Microcystin LR**	0.25	U	ug/L	P364253	
		Microcystin LY**	0.25	U	ug/L	P364253	
		Microcystin RR**	0.25	U	ug/L	P364253	
		Microcystin YR**	0.25	U	ug/L	P364253	
		Saxitoxin**	0.25	UJ	ug/L	P364253	MS

Ref. Method and Comment:

EPA 8321B: Method validation for saxitoxin is still in progress. Second source was not analyzed. Precision for saxitoxin is not available due to no recoveries in the duplicate matrix spikes.

**Sample Location: ANNA MARIA ISLAND FOLLOW-UP BLOOM
RESPONSE**

Collection Date/Time: 05/20/2019 11:00

Field ID: ANNA MARIA ISLAND

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087655	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P364705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P364565	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P364687	MS
2087658	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P364337	

**Sample Location: HOLMES BEACH FOLLOW-UP BLOOM
RESPONSE**

Collection Date/Time: 05/20/2019 11:25

Field ID: HOLMES BEACH

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087656	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P364705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P364565	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P364687	MS
2087659	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P364337	

**Sample Location: PALMA SOLA BAY FOLLOW-UP BLOOM
RESPONSE**

Collection Date/Time: 05/20/2019 11:50

Field ID: PALMA SOLA BAY

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087657	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P364705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P364565	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P364687	MS
2087660	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P364337	

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364548

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364705

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364565

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364687

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P364337

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

Reference Method: EPA 8321B
Batch ID: P364253

Component	Result	Code	Units
Anatoxin-a	0.25	U	ug/L
Cylindrospermopsin	0.25	U	ug/L
Microcystin LA	0.25	U	ug/L
Microcystin LF	0.25	U	ug/L
Microcystin LR	0.25	U	ug/L
Microcystin LY	0.25	U	ug/L
Microcystin RR	0.25	U	ug/L
Microcystin YR	0.25	U	ug/L
Saxitoxin	0.25	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P364548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P364705

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P364565

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P364687

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P364337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P364253

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	91.9		P	40 - 140
Cylindrospermopsin	94.9		P	40 - 140
Microcystin LA	113		P	40 - 140
Microcystin LF	97.3		P	40 - 140
Microcystin LR	99.0		P	40 - 140
Microcystin LY	103		P	40 - 140
Microcystin RR	94.4		P	40 - 140
Microcystin YR	102		P	40 - 140
Saxitoxin	45.6		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P364548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087655	Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P364705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087414	Kjeldahl Nitrogen	102	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P364565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087412	NO2NO3-N	96.8	96.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P364687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087414	Total-P	95.7	88.0	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P364337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087658	O-Phosphate-P	91.8	93.5	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P364253

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087126	Anatoxin-a	91.4	93.8	P/P	40 - 140
2087126	Cylindrospermopsin	88.0	93.0	P/P	40 - 140
2087126	Microcystin LA	106	91.5	P/P	40 - 140
2087126	Microcystin LF	79.3	104	P/P	40 - 140
2087126	Microcystin LR	99.0	106	P/P	40 - 140
2087126	Microcystin LY	94.6	82.6	P/P	40 - 140
2087126	Microcystin RR	92.9	97.7	P/P	40 - 140
2087126	Microcystin YR	101	111	P/P	40 - 140
2087126	Saxitoxin	0.0	0.0	F/F	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087655	Ammonia-N	0.134	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087414	Kjeldahl Nitrogen	3.11	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087412	NO2NO3-N	0.506	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087414	Total-P	8.35	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P364337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087658	O-Phosphate-P	1.83	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P364253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087126	Anatoxin-a	2.63	Spike	P	0 - 30
2087126	Cylindrospermopsin	5.50	Spike	P	0 - 30
2087126	Microcystin LA	14.9	Spike	P	0 - 30
2087126	Microcystin LF	27.0	Spike	P	0 - 30
2087126	Microcystin LR	7.02	Spike	P	0 - 30
2087126	Microcystin LY	13.6	Spike	P	0 - 30
2087126	Microcystin RR	5.04	Spike	P	0 - 30
2087126	Microcystin YR	9.17	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2087600

Field Sample ID: ANNA MARIA ISLAND

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	101	P	30 - 165

Lab Sample ID: 2087601

Field Sample ID: HOLMES BEACH

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	104	P	30 - 165

Lab Sample ID: 2087602

Field Sample ID: PALMA SOLA BAY

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	92.8	P	30 - 165

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A91571

Included Lab Sample IDs: 2087658, 2087659, 2087660

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.2	97.4	P/P	90 - 110
O-Phosphate-P	97.4	96.5	P/P	90 - 110
O-Phosphate-P	99.8	97.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A91591

Included Lab Sample IDs: 2087600, 2087601, 2087602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	95.7	92.1	P/P	50 - 160
Cylindrospermopsin	86.0	92.2	P/P	60 - 160
Microcystin LA	105	102	P/P	50 - 160
Microcystin LF	83.4	90.2	P/P	60 - 160
Microcystin LR	84.8	83.7	P/P	60 - 160
Microcystin LY	89.6	89.0	P/P	60 - 160
Microcystin RR	83.8	85.1	P/P	60 - 160
Microcystin YR	93.3	90.5	P/P	60 - 160
Saxitoxin	70.8	78.8	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A91667

Included Lab Sample IDs: 2087655, 2087656, 2087657

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91682

Included Lab Sample IDs: 2087655, 2087656, 2087657

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91760

Included Lab Sample IDs: 2087655, 2087656, 2087657

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91777

Included Lab Sample IDs: 2087655, 2087656, 2087657

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	103	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		LCS	Precision SMP	MS
EPA 350.1 Rev. 2.0	Ammonia-N	95.6	105	105			0.134
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	102	106			3.11
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	97.0	96.8	96.3			0.506
EPA 365.1 Rev. 2.0	Total-P	98.7	95.7	88.0			8.35
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	91.8	93.5			1.83
EPA 8321B	Anatoxin-a	91.9	91.4	93.8			2.63
	Cylindrospermopsin	94.9	88.0	93.0			5.50
	Microcystin LA	113	106	91.5			14.9
	Microcystin LF	97.3	79.3	104			27.0
	Microcystin LR	99.0	99.0	106			7.02
	Microcystin LY	103	94.6	82.6			13.6
	Microcystin RR	94.4	92.9	97.7			5.04
	Microcystin YR	102	101	111			9.17
	Saxitoxin	45.6	0.0	0.0			

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2087655, 2087656, 2087657
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2087655, 2087656, 2087657
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2087655, 2087656, 2087657
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2087655, 2087656, 2087657
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2087658, 2087659, 2087660
EPA 8321B / E31780	Microcystins in water matrices by HPLC/MS/MS	2087600, 2087601, 2087602

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	05/21/2019			05/23/2019 11:27	Ping Hua	2087655
	05/21/2019			05/23/2019 11:31	Ping Hua	2087657
	05/21/2019			05/23/2019 13:22	Ping Hua	2087656
EPA 351.2 Rev. 2.0	05/21/2019	05/30/2019 13:00	Adrian Shelby	05/31/2019 09:20	Joseph Suarez	2087655
	05/21/2019	05/30/2019 13:00	Adrian Shelby	05/31/2019 09:22	Joseph Suarez	2087656
	05/21/2019	05/30/2019 13:00	Adrian Shelby	05/31/2019 09:23	Joseph Suarez	2087657
EPA 353.2 Rev. 2.0	05/21/2019			05/28/2019 09:37	Beverly Y. Sanders	2087655
	05/21/2019			05/28/2019 09:38	Beverly Y. Sanders	2087656
	05/21/2019			05/28/2019 09:40	Beverly Y. Sanders	2087657
EPA 365.1 Rev. 2.0	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:23	Rosalyn Ballman	2087655
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:24	Rosalyn Ballman	2087656
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:25	Rosalyn Ballman	2087657
EPA 365.1 Rev. 2.0 dissolved	05/21/2019			05/21/2019 15:13	Jhamieka S. Greenwood	2087658
	05/21/2019			05/21/2019 15:26	Jhamieka S. Greenwood	2087659
	05/21/2019			05/21/2019 15:32	Jhamieka S. Greenwood	2087660
EPA 8321B	05/21/2019	05/22/2019 09:00	Juyoung Kim	05/22/2019 10:23	Juyoung Kim	2087600
	05/21/2019	05/22/2019 09:00	Juyoung Kim	05/22/2019 10:40	Juyoung Kim	2087601
	05/21/2019	05/22/2019 09:00	Juyoung Kim	05/22/2019 10:56	Juyoung Kim	2087602