Chemical Analysis Report

WQAP-2021-03-05-03

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

Event Description: **Algal Bloom Response - CEROC**
Request ID: **RQ-2021-02-08-17**
Customer: **WQAP**
Project ID: **BLOOM-RESP**

Send Reports to:
FL Dept. of Environmental Protection
3319 Maguire Blvd Ste 232
Orlando, FL 32803
Attn: Natalie Ayala

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: 24-MAR-2021 09:53

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 Eustis @ NW Corner **Collection Date/Time: 03/04/2021 11:10**

Field ID: HABCE0075_LakeEustis Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2229485	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P394538	
		Cylindrospermopsin	0.25	U	ug/L	P394538	
		Desmethyl microcystin LR	0.25	U	ug/L	P394538	
		Microcystin HilR**	0.25	U	ug/L	P394538	
		Microcystin HtyR**	0.25	U	ug/L	P394538	
		Microcystin LA	0.25	U	ug/L	P394538	
		Microcystin LF	0.25	U	ug/L	P394538	
		Microcystin LR	0.35	I	ug/L	P394538	
		Microcystin LW	0.25	U	ug/L	P394538	
		Microcystin LY	0.25	U	ug/L	P394538	
		Microcystin RR	0.25	U	ug/L	P394538	
		Microcystin WR	0.50	U	ug/L	P394538	
		Microcystin YR	0.25	U	ug/L	P394538	
2229487	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P394583	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P394613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P394621	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P394654	MS
2229489	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P394570	

Sample Location: Lake Weir @ N Shore **Collection Date/Time: 03/04/2021 12:27**

Field ID: HABCE0076_LakeWeir3 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2229486	EPA 8321B	Anatoxin-a	0.25	U	ug/L	P394538	
		Cylindrospermopsin	0.25	U	ug/L	P394538	
		Desmethyl microcystin LR	0.25	U	ug/L	P394538	
		Microcystin HilR**	0.25	U	ug/L	P394538	
		Microcystin HtyR**	0.25	U	ug/L	P394538	
		Microcystin LA	0.25	U	ug/L	P394538	
		Microcystin LF	0.25	U	ug/L	P394538	
		Microcystin LR	0.25	U	ug/L	P394538	
		Microcystin LW	0.25	U	ug/L	P394538	
		Microcystin LY	0.25	U	ug/L	P394538	
		Microcystin RR	0.25	U	ug/L	P394538	
		Microcystin WR	0.50	U	ug/L	P394538	
		Microcystin YR	0.25	U	ug/L	P394538	
2229488	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P394583	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P394613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P394621	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P394655	
2229490	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P394570	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394583

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P394613

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394621

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394654

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394655

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394570

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

Reference Method: EPA 8321B
Batch ID: P394538

Component	Result	Code	Units
Anatoxin-a	0.25	U	ug/L
Cylindrospermopsin	0.25	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	0.25	U	ug/L
Microcystin LF	0.25	U	ug/L
Microcystin LR	0.25	U	ug/L
Microcystin LW	0.25	U	ug/L
Microcystin LY	0.25	U	ug/L
Microcystin RR	0.25	U	ug/L
Microcystin WR	0.50	U	ug/L
Microcystin YR	0.25	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394583

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P394613

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: P394621

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: P394654

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394655

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394570

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

Reference Method: EPA 8321B
Batch ID: P394538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Anatoxin-a	103		P	40 - 150
Cylindrospermopsin	105		P	40 - 150
Desmethyl microcystin LR	86.8		P	40 - 150
Microcystin HilR	106		P	40 - 150
Microcystin HtyR	100		P	40 - 150
Microcystin LA	105		P	40 - 150
Microcystin LF	103		P	40 - 150
Microcystin LR	88.4		P	40 - 150
Microcystin LW	108		P	40 - 150
Microcystin LY	113		P	40 - 150
Microcystin RR	95.9		P	40 - 150
Microcystin WR	101		P	40 - 150
Microcystin YR	92.3		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2228939	Ammonia-N	95.2	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P394613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2228351	Kjeldahl Nitrogen	96.0	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229465	NO2NO3-N	97.7	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229252	Total-P	114	110	F/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229488	Total-P	108	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394570

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229489	O-Phosphate-P	94.7	95.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P394538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229432	Anatoxin-a	118	124	P/P	40 - 150
2229432	Cylindrospermopsin	110	119	P/P	40 - 150
2229432	Desmethyl microcystin LR	105	110	P/P	40 - 150
2229432	Microcystin HilR	120	123	P/P	40 - 150
2229432	Microcystin HtyR	115	119	P/P	40 - 150
2229432	Microcystin LA	121	120	P/P	40 - 150
2229432	Microcystin LF	107	112	P/P	40 - 150
2229432	Microcystin LR	106	105	P/P	40 - 150
2229432	Microcystin LW	124	125	P/P	40 - 150
2229432	Microcystin LY	124	123	P/P	40 - 150
2229432	Microcystin RR	111	118	P/P	40 - 150
2229432	Microcystin WR	111	124	P/P	40 - 150
2229432	Microcystin YR	104	108	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2228939	Ammonia-N	2.88	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P394613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2228351	Kjeldahl Nitrogen	2.51	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229465	NO2NO3-N	0.980	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229252	Total-P	3.52	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229488	Total-P	1.32	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229489	O-Phosphate-P	0.736	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P394538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229432	Anatoxin-a	4.67	Spike	P	0 - 30
2229432	Cylindrospermopsin	8.13	Spike	P	0 - 30
2229432	Desmethyl microcystin LR	4.79	Spike	P	0 - 30
2229432	Microcystin HilR	1.98	Spike	P	0 - 30
2229432	Microcystin HtyR	3.64	Spike	P	0 - 30
2229432	Microcystin LA	0.771	Spike	P	0 - 30
2229432	Microcystin LF	4.15	Spike	P	0 - 30
2229432	Microcystin LR	1.27	Spike	P	0 - 30
2229432	Microcystin LW	1.02	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P394538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229432	Microcystin LY	0.252	Spike	P	0 - 30
2229432	Microcystin RR	6.12	Spike	P	0 - 30
2229432	Microcystin WR	11.1	Spike	P	0 - 30
2229432	Microcystin YR	4.43	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2229485
Field Sample ID: HABCE0075_LakeEustis

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR-d7	109	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	63.1	P	30 - 160

Lab Sample ID: 2229486
Field Sample ID: HABCE0076_LakeWeir3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Microcystin LR-d7	130	P	30 - 160
EPA 8321B	Microcystin LR ethyl-d5	76.1	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A103917
Included Lab Sample IDs: 2229489, 2229490

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	98.5	P/P	90 - 110
O-Phosphate-P	99.0	98.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A103921
Included Lab Sample IDs: 2229487, 2229488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	98.4	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A103923
Included Lab Sample IDs: 2229485, 2229486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Anatoxin-a	110	109	P/P	50 - 160
Cylindrospermopsin	107	116	P/P	60 - 160
Desmethyl microcystin LR	94.5	99.1	P/P	60 - 160
Microcystin HilR	104	112	P/P	60 - 160
Microcystin HtyR	105	104	P/P	60 - 160
Microcystin LA	105	109	P/P	50 - 160
Microcystin LF	112	108	P/P	50 - 160
Microcystin LR	88.8	92.4	P/P	60 - 160
Microcystin LW	128	122	P/P	60 - 160
Microcystin LY	114	116	P/P	60 - 160
Microcystin RR	103	107	P/P	60 - 160
Microcystin WR	106	112	P/P	60 - 160
Microcystin YR	89.7	91.5	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A103943
Included Lab Sample IDs: 2229487, 2229488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A103966
Included Lab Sample IDs: 2229487, 2229488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A103985
Included Lab Sample IDs: 2229487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.5	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A103987
Included Lab Sample IDs: 2229488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	99.2	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	99.4	95.2	98.4			2.88
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	96.0	101			2.51
EPA 353.2 Rev. 2.0	NO2NO3-N	100	97.7	98.7			0.980
EPA 365.1 Rev. 2.0	Total-P	106	114	110			3.52
	Total-P	109	108	106			1.32
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.4	94.7	95.4			0.736
EPA 8321B	Anatoxin-a	103	118	124			4.67
	Cylindrospermopsin	105	110	119			8.13
	Desmethyl microcystin LR	86.8	105	110			4.79
	Microcystin HilR	106	120	123			1.98
	Microcystin HtyR	100	115	119			3.64
	Microcystin LA	105	121	120			0.771
	Microcystin LF	103	107	112			4.15
	Microcystin LR	88.4	106	105			1.27
	Microcystin LW	108	124	125			1.02
	Microcystin LY	113	124	123			0.252
	Microcystin RR	95.9	111	118			6.12
	Microcystin WR	101	111	124			11.1
	Microcystin YR	92.3	104	108			4.43

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2229487, 2229488
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2229487, 2229488
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2229487, 2229488
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2229487, 2229488
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2229489, 2229490
EPA 8321B	Microcystins in water matrices by HPLC/MS/MS	2229485, 2229486

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	03/05/2021			03/05/2021 17:14	Ping Hua	2229487
	03/05/2021			03/05/2021 17:16	Ping Hua	2229488
EPA 351.2 Rev. 2.0	03/05/2021	03/08/2021 12:04	Benjamin T. Nordmann	03/09/2021 11:45	Virginia P. Brown	2229487
	03/05/2021	03/08/2021 12:04	Benjamin T. Nordmann	03/09/2021 11:47	Virginia P. Brown	2229488
EPA 353.2 Rev. 2.0	03/05/2021			03/08/2021 11:52	Beverly Y. Sanders	2229487
	03/05/2021			03/08/2021 11:53	Beverly Y. Sanders	2229488
EPA 365.1 Rev. 2.0	03/05/2021	03/09/2021 11:56	Yen Ta	03/10/2021 12:46	Shengyu Ding	2229487
	03/05/2021	03/09/2021 11:56	Yen Ta	03/10/2021 13:59	Shengyu Ding	2229488
EPA 365.1 Rev. 2.0 dissolved	03/05/2021			03/05/2021 14:39	Patrick M. Roche	2229489
	03/05/2021			03/05/2021 14:48	Patrick M. Roche	2229490
EPA 8321B	03/05/2021	03/05/2021 11:30	Pramila Ghimire	03/05/2021 19:51	Chiran X. Ghimire	2229485
	03/05/2021	03/05/2021 11:30	Pramila Ghimire	03/05/2021 20:07	Chiran X. Ghimire	2229486