

Chemical Analysis Report

SO-DIST-2023-12-05-01

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

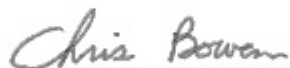
Event Description: **SCCF ALGAL STUDY**
Request ID: **RQ-2023-10-23-40**
Customer: **SO-DIST**
Project ID: **DISCRTNARY**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
Attn: John Barrington

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
Kerry Tate, Ph.D.
Marek Topolski, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Chris Bowen, Environmental Administrator

Date Certified: 28-DEC-2023 09:27



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 group are included in this report: Nutrients.

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: 26.71393, -81.56266

Collection Date/Time: 12/04/2023 08:20

Field ID: CLEW 04

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454253	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P439061	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P438526	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P438674	
	EPA 365.1 Rev. 2.0	Total-P	0.085		mg P/L	P438579	
2454258	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.026		mg N/L	P438839	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.3		mg N/L	P438526	
2454263	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.067		mg P/L	P438517	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: The result was confirmed on 12/15/2023.

EPA 350.1 Rev. 2.0 dissolved: The result was confirmed on 12/15/2023.

Sample Location: 26.69315, 81.79630

Collection Date/Time: 12/04/2023 10:20

Field ID: ORANGE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454254	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P439061	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P438526	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P438675	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P438579	
2454259	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.024		mg N/L	P438839	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.2		mg N/L	P438526	
2454264	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.072		mg P/L	P438517	

Sample Location: 26.70324, 81.80525

Collection Date/Time: 12/04/2023 10:45

Field ID: POPASH

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454255	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P439061	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P438526	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.31		mg N/L	P438675	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P438579	
2454260	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.021		mg N/L	P438839	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.2		mg N/L	P438526	
2454265	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.071		mg P/L	P438517	

Sample Location: 26.65737, 81.89425

Collection Date/Time: 12/04/2023 11:45

Field ID: HANCOCK

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454256	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P438571	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P438651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P439224	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P438558	
2454261	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.055		mg N/L	P438843	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.3		mg N/L	P438747	
2454266	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.096		mg P/L	P438518	

Sample Location: 26.64467, -81.87899

Collection Date/Time: 12/04/2023 12:05

Field ID: CLEW07

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454257	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P439062	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95		mg N/L	P438651	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P439224	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P438558	
2454262	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.027		mg N/L	P438843	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.98		mg N/L	P438747	
2454267	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.079		mg P/L	P438518	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: The result was confirmed on 12/15/2023.

EPA 350.1 Rev. 2.0 dissolved: The result was confirmed on 12/15/2023.

Sample Location: 26.57761, -81.89881

Collection Date/Time: 12/04/2023 10:30

Field ID: WHISKEY

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454268	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P439062	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P439106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P439224	
	EPA 365.1 Rev. 2.0	Total-P	0.090		mg P/L	P439006	
2454272	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.057		mg N/L	P438839	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.1		mg N/L	P439106	
2454276	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.069		mg P/L	P438517	

Sample Location: 26.54335, -81.94011

Collection Date/Time: 12/04/2023 11:15

Field ID: CLEW09

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454269	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P439062	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P439106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P439224	
	EPA 365.1 Rev. 2.0	Total-P	0.079		mg P/L	P439006	
2454273	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.026		mg N/L	P438839	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.93		mg N/L	P439106	
2454277	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.067		mg P/L	P438517	

Sample Location: 26.52328, -82.00864

Collection Date/Time: 12/04/2023 12:10

Field ID: CLEW10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454270	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P439062	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P439106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P439224	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P439006	
2454274	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.025		mg N/L	P439062	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.74		mg N/L	P439106	
2454278	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.054		mg P/L	P438517	

Sample Location: 26.47219, -82.01621

Collection Date/Time: 12/04/2023 12:50

Field ID: CLEW11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2454271	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P439062	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P439106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.036		mg N/L	P439224	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P439006	
2454275	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.022		mg N/L	P439062	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.55		mg N/L	P439106	
2454279	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P438517	

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439061

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439062

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438839

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438843

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P439062

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438526

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438651

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439106

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P438526

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P438747

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P439106

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438674

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438675

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439224

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438558

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438579

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439006

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438517

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438518

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439061

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439062

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438839

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P439062

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: P438526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438651

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439106

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P438526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P438747

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P439106

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438674

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438675

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439224

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: P438558

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438579

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: P439006

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438517

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438518

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453982	Ammonia-N	94.4	96.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454259	Ammonia-N	97.4	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439062

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454271	Ammonia-N	99.8	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454258	Ammonia-N	96.2	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2455303	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P439062

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454271	Ammonia-N	99.8	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454259	Kjeldahl Nitrogen	97.8	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454499	Kjeldahl Nitrogen	99.6	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457013	Kjeldahl Nitrogen	97.2	95.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P438526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454259	Kjeldahl Nitrogen	97.8	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P438747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454262	Kjeldahl Nitrogen	105	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P439106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457013	Kjeldahl Nitrogen	97.2	95.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438674

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453119	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454254	NO2NO3-N	96.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439224

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454271	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454066	Total-P	96.7	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454269	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439006

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456140	Total-P	102	101	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454240	O-Phosphate-P	95.1	94.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2454266	O-Phosphate-P	97.4	96.4	P/P	90 - 110

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453982	Ammonia-N	1.41	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454259	Ammonia-N	0.685	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439062

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454271	Ammonia-N	2.15	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454258	Ammonia-N	2.28	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P438843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2455303	Ammonia-N	0.657	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P439062

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454271	Ammonia-N	2.15	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454259	Kjeldahl Nitrogen	4.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454499	Kjeldahl Nitrogen	1.52	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P439106

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457013	Kjeldahl Nitrogen	1.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P438526

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454259	Kjeldahl Nitrogen	4.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P438747

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454262	Kjeldahl Nitrogen	4.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P439106

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457013	Kjeldahl Nitrogen	1.22	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P438674

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453119	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P438675

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454254	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P439224

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454271	NO2NO3-N	0.844	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438558

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454066	Total-P	1.84	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454269	Total-P	0.650	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439006

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456140	Total-P	1.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454240	O-Phosphate-P	0.401	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2454266	O-Phosphate-P	0.518	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A123031

Included Lab Sample IDs: 2454263, 2454264, 2454265, 2454266, 2454267, 2454276, 2454277, 2454278, 2454279

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.6	98.7	P/P	90 - 110
O-Phosphate-P	98.7	98.7	P/P	90 - 110
O-Phosphate-P	98.7	99.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123057

Included Lab Sample IDs: 2454256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	95.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123082

Included Lab Sample IDs: 2454253, 2454254, 2454255, 2454256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	97.8	P/P	90 - 110
Total-P	99.5	97.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123085

Included Lab Sample IDs: 2454257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123088

Included Lab Sample IDs: 2454253, 2454254, 2454255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123101

Included Lab Sample IDs: 2454253, 2454254, 2454255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.5	98.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A123101

Included Lab Sample IDs: 2454258, 2454259, 2454260

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.5	98.3	P/P	90 - 110
Kjeldahl Nitrogen	98.3	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Run ID: A123162

Included Lab Sample IDs: 2454258, 2454259, 2454260, 2454261, 2454262, 2454272, 2454273

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	99.8	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123168

Included Lab Sample IDs: 2454256, 2454257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.3	96.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A123174

Included Lab Sample IDs: 2454261, 2454262

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.5	95.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123264

Included Lab Sample IDs: 2454253, 2454254, 2454255, 2454257, 2454268, 2454269, 2454270, 2454271

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.4	97.7	P/P	90 - 110
Ammonia-N	98.8	97.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Run ID: A123264

Included Lab Sample IDs: 2454274, 2454275

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.4	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123291

Included Lab Sample IDs: 2454268, 2454269, 2454270, 2454271

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123328

Included Lab Sample IDs: 2454256, 2454257, 2454268, 2454269, 2454270, 2454271

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123368

Included Lab Sample IDs: 2454268, 2454269, 2454270, 2454271

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123368

Included Lab Sample IDs: 2454268, 2454269, 2454270, 2454271

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.1	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A123368

Included Lab Sample IDs: 2454272, 2454273, 2454274, 2454275

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	99.3	P/P	90 - 110
Kjeldahl Nitrogen	99.1	104	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	MS
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	94.4	96.6		1.41
	Ammonia-N	96.0	97.4	98.4		0.685
	Ammonia-N	95.6	99.8	103		2.15
EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	100	96.2	99.6		2.28
	Ammonia-N	96.8	102	103		0.657
	Ammonia-N	95.6	99.8	103		2.15
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.8	97.8	105		4.17
	Kjeldahl Nitrogen	99.4	99.6	101		1.52
	Kjeldahl Nitrogen	102	97.2	95.7		1.22
EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	99.8	97.8	105		4.17
	Kjeldahl Nitrogen	106	105	99.6		4.35
	Kjeldahl Nitrogen	102	97.2	95.7		1.22
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	101	101		0.0
	NO2NO3-N	99.5	96.0			0.0
	NO2NO3-N	100	101	100		0.844
EPA 365.1 Rev. 2.0	Total-P	104	96.7	98.5		1.84
	Total-P	106	105	106		0.650
	Total-P	103	102	101		1.03
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.1	95.1	94.7		0.401
	O-Phosphate-P	99.2	97.4	96.4		0.518

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2454253, 2454254, 2454255, 2454256, 2454257, 2454268, 2454269, 2454270, 2454271
EPA 350.1 Rev. 2.0 dissolved	Ammonia, dissolved, in filtered, aqueous matrices as mg N/L	2454258, 2454259, 2454260, 2454261, 2454262, 2454272, 2454273, 2454274, 2454275
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2454253, 2454254, 2454255, 2454256, 2454257, 2454268, 2454269, 2454270, 2454271
EPA 351.2 Rev. 2.0 dissolved	Total Kjeldahl Nitrogen, dissolved, in filtered, aqueous matrices	2454258, 2454259, 2454260, 2454261, 2454262, 2454272, 2454273, 2454274, 2454275
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2454253, 2454254, 2454255, 2454256, 2454257, 2454268, 2454269, 2454270, 2454271
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2454253, 2454254, 2454255, 2454256, 2454257, 2454268, 2454269, 2454270, 2454271
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2454263, 2454264, 2454265, 2454266, 2454267, 2454276, 2454277, 2454278, 2454279

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	12/05/2023			12/06/2023 13:13	Ping Hua	2454256
	12/05/2023			12/15/2023 12:33	Ping Hua	2454253
	12/05/2023			12/15/2023 12:34	Ping Hua	2454254
	12/05/2023			12/15/2023 12:35	Ping Hua	2454255
	12/05/2023			12/15/2023 12:54	Ping Hua	2454271
	12/05/2023			12/15/2023 12:59	Ping Hua	2454257
	12/05/2023			12/15/2023 13:02	Ping Hua	2454268
	12/05/2023			12/15/2023 13:05	Ping Hua	2454269
	12/05/2023			12/15/2023 13:07	Ping Hua	2454270
	12/05/2023			12/12/2023 11:41	Khloe J Berg	2454258
EPA 350.1 Rev. 2.0 dissolved	12/05/2023			12/12/2023 11:48	Khloe J Berg	2454259
	12/05/2023			12/12/2023 11:49	Khloe J Berg	2454260
	12/05/2023			12/12/2023 11:50	Khloe J Berg	2454272
	12/05/2023			12/12/2023 11:52	Khloe J Berg	2454273
	12/05/2023			12/12/2023 13:45	Khloe J Berg	2454261
	12/05/2023			12/12/2023 13:46	Khloe J Berg	2454262
	12/05/2023			12/15/2023 12:58	Ping Hua	2454275
	12/05/2023			12/15/2023 13:09	Ping Hua	2454274
	12/05/2023	12/06/2023 11:57	Simonne.V. Calhoun	12/07/2023 15:37	Ping Hua	2454253
	12/05/2023	12/06/2023 11:57	Simonne.V. Calhoun	12/07/2023 15:39	Ping Hua	2454254
EPA 351.2 Rev. 2.0	12/05/2023	12/06/2023 11:57	Simonne.V. Calhoun	12/07/2023 15:40	Ping Hua	2454255
	12/05/2023	12/08/2023 10:33	Ping Hua	12/12/2023 12:01	Samantha L Bates	2454256
	12/05/2023	12/08/2023 10:33	Ping Hua	12/12/2023 12:03	Samantha L Bates	2454257
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:43	Samantha L Bates	2454268
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:45	Samantha L Bates	2454269
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:46	Samantha L Bates	2454270
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:48	Samantha L Bates	2454271
	12/05/2023	12/06/2023 11:57	Simonne.V. Calhoun	12/07/2023 15:42	Ping Hua	2454258
	12/05/2023	12/06/2023 11:57	Simonne.V. Calhoun	12/07/2023 15:47	Ping Hua	2454259
	12/05/2023	12/06/2023 11:57	Simonne.V. Calhoun	12/07/2023 15:52	Ping Hua	2454260
EPA 351.2 Rev. 2.0 dissolved	12/05/2023	12/11/2023 13:10	Simonne.V. Calhoun	12/12/2023 15:24	Samantha L Bates	2454261
	12/05/2023	12/11/2023 13:10	Simonne.V. Calhoun	12/12/2023 15:25	Samantha L Bates	2454262
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:49	Samantha L Bates	2454272
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:50	Samantha L Bates	2454273
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:54	Samantha L Bates	2454274
	12/05/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:56	Samantha L Bates	2454275
	12/05/2023			12/07/2023 13:14	Fadila Guebre	2454253
	12/05/2023			12/07/2023 13:21	Fadila Guebre	2454254
	12/05/2023			12/07/2023 13:27	Fadila Guebre	2454255
	12/05/2023			12/19/2023 16:03	Fadila Guebre	2454271
EPA 353.2 Rev. 2.0	12/05/2023					
	12/05/2023					
	12/05/2023					
	12/05/2023					

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 353.2 Rev. 2.0	12/05/2023			12/19/2023 16:09	Fadila Guebre	2454256
	12/05/2023			12/19/2023 16:10	Fadila Guebre	2454257
	12/05/2023			12/19/2023 16:11	Fadila Guebre	2454268
	12/05/2023			12/19/2023 16:12	Fadila Guebre	2454269
	12/05/2023			12/19/2023 16:13	Fadila Guebre	2454270
EPA 365.1 Rev. 2.0	12/05/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 10:42	Chandler E Cox	2454256
	12/05/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 11:37	Chandler E Cox	2454253
	12/05/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 11:38	Chandler E Cox	2454254
	12/05/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 11:39	Chandler E Cox	2454255
	12/05/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 11:53	Chandler E Cox	2454257
	12/05/2023	12/15/2023 12:55	Adam P Silver	12/18/2023 12:27	Elise M. Gillis	2454268
	12/05/2023	12/15/2023 12:55	Adam P Silver	12/18/2023 12:28	Elise M. Gillis	2454269
	12/05/2023	12/15/2023 12:55	Adam P Silver	12/18/2023 12:29	Elise M. Gillis	2454270
EPA 365.1 Rev. 2.0 dissolved	12/05/2023	12/15/2023 12:55	Adam P Silver	12/18/2023 12:30	Elise M. Gillis	2454271
	12/05/2023			12/05/2023 15:46	Elise M. Gillis	2454263
	12/05/2023			12/05/2023 15:47	Elise M. Gillis	2454264
	12/05/2023			12/05/2023 15:48	Elise M. Gillis	2454265
	12/05/2023			12/05/2023 15:49	Elise M. Gillis	2454276
	12/05/2023			12/05/2023 15:50	Elise M. Gillis	2454277
	12/05/2023			12/05/2023 15:55	Elise M. Gillis	2454278
	12/05/2023			12/05/2023 15:56	Elise M. Gillis	2454279
	12/05/2023			12/05/2023 16:05	Elise M. Gillis	2454266
	12/05/2023			12/05/2023 16:08	Elise M. Gillis	2454267