

Chemical Analysis Report

SO-DIST-2020-02-22-02

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

Event Description: **2020 SMP : Sebring Lakes**
Request ID: **RQ-2020-02-17-55**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Nicole Reistad

For additional information please contact
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 16-MAR-2020 16:59

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

NON-CONFORMANCE REPORT INCLUDED

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: Lake Damon @ Middle

Collection Date/Time: 02/20/2020 10:00

Field ID: G4SD0168

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2160190	EPA 180.1 Rev. 2.0	Turbidity	1.1	Q	NTU	P379399	
	EPA 300.0 Rev. 2.1	Chloride	17	A	mg Cl/L	P380075	
		Sulfate	35	A	mg SO4/L	P380077	
	SM 2120 B-2011	Color (true)	10	Q	PCU	P379397	
	SM 2320 B-2011	Total Alkalinity	24	A	mg CaCO3/L	P380173	
	SM 2540 C-2011	TDS	89		mg/L	P379924	
	SM 2540 D-2011	TSS	2	I	mg/L	P379827	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P380176	
2160196	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P379910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P379755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P380156	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P380037	
	SM 5310 B-2011	Organic Carbon	4.3		mg C/L	P379637	
2160202	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P379396	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B-2011: The sample expired upon receipt.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: Lake Glenada @ Center

Collection Date/Time: 02/20/2020 10:45

Field ID: G4SD0179

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2160191	EPA 180.1 Rev. 2.0	Turbidity	20	Q	NTU	P379399	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P380075	
		Sulfate	10		mg SO4/L	P380077	
	SM 2120 B-2011	Color (true)	32	AQ	PCU	P379398	
	SM 2320 B-2011	Total Alkalinity	42		mg CaCO3/L	P380173	
	SM 2540 C-2011	TDS	115		mg/L	P379924	
	SM 2540 D-2011	TSS	19		mg/L	P379827	
	SM 4500 F-C-2011	Fluoride	0.10		mg F/L	P380176	
2160197	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P379910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P379755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P380156	
	EPA 365.1 Rev. 2.0	Total-P	0.087		mg P/L	P380037	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P379928	
2160203	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	IQ	mg P/L	P379396	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B-2011: The sample expired upon receipt.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: Littke Bonnet Lake

Collection Date/Time: 02/20/2020 11:55

Field ID: G4SD0169

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2160192	EPA 180.1 Rev. 2.0	Turbidity	13	A	NTU	P379399	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P380075	
		Sulfate	32		mg SO4/L	P380077	
		Color (true)	13	A	PCU	P379397	
	SM 2320 B-2011	Total Alkalinity	37		mg CaCO3/L	P380174	
	SM 2540 C-2011	TDS	118		mg/L	P379924	
	SM 2540 D-2011	TSS	9	I	mg/L	P379827	
	SM 4500 F-C-2011	Fluoride	0.077	I	mg F/L	P380177	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P379910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P379755	
2160198	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P380156	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P380037	
	SM 5310 B-2011	Organic Carbon	9.1		mg C/L	P379928	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P379394	
	dissolved						
2160204	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P379394	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Lake Denton @ Center

Collection Date/Time: 02/20/2020 12:30

Field ID: G4SD0180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2160193	EPA 180.1 Rev. 2.0	Turbidity	0.35		NTU	P379399	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P380075	
		Sulfate	44		mg SO4/L	P380077	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P379397	
	SM 2320 B-2011	Total Alkalinity	42	A	mg CaCO3/L	P380174	
	SM 2540 C-2011	TDS	136	A	mg/L	P379924	
	SM 2540 D-2011	TSS	2	UA	mg/L	P379827	
	SM 4500 F-C-2011	Fluoride	0.22		mg F/L	P380177	
2160199	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P379911	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P379755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.4		mg N/L	P380156	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P380037	
	SM 5310 B-2011	Organic Carbon	1.6		mg C/L	P379928	
2160205	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379394	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LittleRedWaterLake@Mid

Collection Date/Time: 02/20/2020 13:10

Field ID: G4SD0171

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2160194	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P379399	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P380075	
		Sulfate	9.1		mg SO4/L	P380077	
	SM 2120 B-2011	Color (true)	54		PCU	P379397	
	SM 2320 B-2011	Total Alkalinity	5.4		mg CaCO3/L	P380174	
	SM 2540 C-2011	TDS	54		mg/L	P379924	
	SM 2540 D-2011	TSS	2	I	mg/L	P379827	
	SM 4500 F-C-2011	Fluoride	0.055	I	mg F/L	P380177	
2160200	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P379911	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P379755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P380156	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P380037	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P379928	
2160206	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379394	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LittleLakeJackson@Centr

Collection Date/Time: 02/20/2020 14:00

Field ID: G4SD0183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2160195	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P379399	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P380075	
		Sulfate	14		mg SO4/L	P380077	
		Color (true)	24		PCU	P379397	
	SM 2320 B-2011	Total Alkalinity	16		mg CaCO3/L	P380174	
	SM 2540 C-2011	TDS	67		mg/L	P379924	
	SM 2540 D-2011	TSS	3	I	mg/L	P379827	
	SM 4500 F-C-2011	Fluoride	0.084	I	mg F/L	P380177	
2160201	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P379911	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P379756	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P380157	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P380038	
	SM 5310 B-2011	Organic Carbon	8.0		mg C/L	P379928	
2160207	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379394	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 8205

Event(s)

SO-DIST-2020-02-22-02

Job(s)

Sample(s)

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Samples arrived late

Observation: Samples arrived one or more days late by FedEx, samples received within the acceptable temperature range.

Resolution: Customer contacted, email correspondence attached to sample submittal forms.

Authorized by/Date: Joshua Ayres 3/4/2020

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P379399

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380075

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380077

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379910

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379911

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379755

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379756

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380156

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380157

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380037

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380038

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379394

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379396

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

Reference Method: SM 2120 B-2011
Batch ID: P379397

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P379398

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P380173

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2320 B-2011
Batch ID: P380174

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P379924

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P379827

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P380176

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P380177

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P379637

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P379928

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380075

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380077

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379910

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379911

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379755

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380156

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380157

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380037

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380038

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379396

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

Reference Method: SM 2120 B-2011
Batch ID: P379397

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2120 B-2011
Batch ID: P379398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P380173

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 2320 B-2011
Batch ID: P380174

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P380176

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P380177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P379637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P379928

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160190	Chloride	99.9		P	90 - 110
2160192	Chloride	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160190	Sulfate	101		P	90 - 110
2160192	Sulfate	96.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160196	Ammonia-N	97.2	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160199	Ammonia-N	98.5	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160196	Kjeldahl Nitrogen	96.0	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160201	Kjeldahl Nitrogen	98.7	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380156

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160128	NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380157

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160201	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160130	Total-P	103	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160201	Total-P	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160137	O-Phosphate-P	95.3	95.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160202	O-Phosphate-P	95.9	97.6	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P380176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160190	Fluoride	103	102	P/P	89 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P380177

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160193	Fluoride	101	102	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P379637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159960	Organic Carbon	98.8		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P379928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160197	Organic Carbon	96.6	97.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P379399

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160192	Turbidity	4.65	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160190	Chloride	0.686	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160190	Sulfate	0.355	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160196	Ammonia-N	4.55	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160199	Ammonia-N	2.23	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160196	Kjeldahl Nitrogen	5.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160201	Kjeldahl Nitrogen	2.81	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380156

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160128	NO2NO3-N	0.501	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160201	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160130	Total-P	0.926	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380038

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160201	Total-P	0.0679	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160137	O-Phosphate-P	0.0706	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160202	O-Phosphate-P	1.76	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P379397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160192	Color (true)	4.91	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P379398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160191	Color (true)	0.768	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P380173

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160190	Total Alkalinity	0.713	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P380174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160193	Total Alkalinity	0.632	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P379924

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160193	TDS	0.738	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P380176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160190	Fluoride	0.947	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-2011
Batch ID: P380177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160193	Fluoride	0.513	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P379637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159960	Organic Carbon	1.14	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P379928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160197	Organic Carbon	0.374	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: A97733

Included Lab Sample IDs: 2160202, 2160203, 2160204, 2160205, 2160206, 2160207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	96.1	P/P	90 - 110
O-Phosphate-P	98.7	98.1	P/P	90 - 110
O-Phosphate-P	99.6	98.7	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A97735

Included Lab Sample IDs: 2160190, 2160191, 2160192, 2160193, 2160194, 2160195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	103	P/P	90 - 115
Color (true)	101	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97736

Included Lab Sample IDs: 2160190, 2160191, 2160192, 2160193, 2160194, 2160195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A97811

Included Lab Sample IDs: 2160196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97877

Included Lab Sample IDs: 2160196, 2160197, 2160198, 2160199, 2160200

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	99.2	P/P	90 - 110
Kjeldahl Nitrogen	96.6	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97905

Included Lab Sample IDs: 2160201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.2	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97928

Included Lab Sample IDs: 2160196, 2160197, 2160198, 2160199, 2160200, 2160201

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A97937

Included Lab Sample IDs: 2160197, 2160198, 2160199, 2160200, 2160201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	99.6	P/P	90 - 110
Organic Carbon	99.6	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97979

Included Lab Sample IDs: 2160196, 2160197, 2160198, 2160199, 2160200, 2160201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98001

Included Lab Sample IDs: 2160190, 2160191, 2160192, 2160193, 2160194, 2160195

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98011

Included Lab Sample IDs: 2160197

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98016

Included Lab Sample IDs: 2160196, 2160198, 2160199, 2160200

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

Reference Method: SM 2320 B-2011

Run ID: A98031

Included Lab Sample IDs: 2160190, 2160191, 2160192, 2160193, 2160194, 2160195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	105	P/P	90 - 110
Total Alkalinity	102	105	P/P	90 - 110
Total Alkalinity	105	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A98031

Included Lab Sample IDs: 2160190, 2160191, 2160192, 2160193, 2160194, 2160195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A98031

Included Lab Sample IDs: 2160190, 2160191, 2160192, 2160193, 2160194, 2160195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	101	P/P	90 - 110
Fluoride	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98071

Included Lab Sample IDs: 2160201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	102	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 180.1 Rev. 2.0	Turbidity				4.65	
EPA 300.0 Rev. 2.1	Chloride	102	99.9	95.8	0.686	
	Sulfate	102	101	96.0	0.355	
EPA 350.1 Rev. 2.0	Ammonia-N	102	97.2	102		4.55
	Ammonia-N	103	98.5	101		2.23
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.9	96.0	104		5.84
	Kjeldahl Nitrogen	96.9	98.7	103		2.81
EPA 353.2 Rev. 2.0	NO2NO3-N	100	100	99.5		0.501
	NO2NO3-N	102	100	100		0.0
EPA 365.1 Rev. 2.0	Total-P	105	103	102		0.926
	Total-P	105	103	103		0.0679
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	95.3	95.2		0.0706
	O-Phosphate-P	101	95.9	97.6		1.76
SM 2120 B-2011	Color (true)	100			4.91	
	Color (true)	100			0.768	
SM 2320 B-2011	Total Alkalinity	103			0.713	
	Total Alkalinity	104			0.632	
SM 2540 C-2011	TDS				0.738	
SM 4500 F-C-2011	Fluoride	101	103	102		0.947
	Fluoride	101	101	102		0.513
SM 5310 B-2011	Organic Carbon	99.2	98.8			1.14
	Organic Carbon	95.6	96.6	97.2		0.374

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2160196, 2160197, 2160198, 2160199, 2160200, 2160201
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2160196, 2160197, 2160198, 2160199, 2160200, 2160201
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2160196, 2160197, 2160198, 2160199, 2160200, 2160201
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2160196, 2160197, 2160198, 2160199, 2160200, 2160201
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2160202, 2160203, 2160204, 2160205, 2160206, 2160207
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2160196, 2160197, 2160198, 2160199, 2160200, 2160201

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	02/22/2020			02/22/2020 11:24	Julia Storbeck	2160192
	02/22/2020			02/22/2020 11:47	Julia Storbeck	2160190, 2160191, 2160193, 2160194, 2160195
EPA 300.0 Rev. 2.1	02/22/2020			03/04/2020 20:52	Lipi Saha	2160190
	02/22/2020			03/04/2020 21:17	Lipi Saha	2160192
	02/22/2020			03/04/2020 23:42	Lipi Saha	2160191
	02/22/2020			03/04/2020 23:54	Lipi Saha	2160193
	02/22/2020			03/05/2020 00:06	Lipi Saha	2160194
	02/22/2020			03/05/2020 00:18	Lipi Saha	2160195
EPA 350.1 Rev. 2.0	02/22/2020			03/02/2020 11:31	Ping Hua	2160196
	02/22/2020			03/02/2020 11:52	Ping Hua	2160197
	02/22/2020			03/02/2020 11:54	Ping Hua	2160198
	02/22/2020			03/02/2020 11:58	Ping Hua	2160199
	02/22/2020			03/02/2020 12:09	Ping Hua	2160200
	02/22/2020			03/02/2020 12:10	Ping Hua	2160201
EPA 351.2 Rev. 2.0	02/22/2020	02/27/2020 11:50	Sima Feizi	02/28/2020 08:21	Jhamieka S. Greenwood	2160196
	02/22/2020	02/27/2020 11:50	Sima Feizi	02/28/2020 08:36	Jhamieka S. Greenwood	2160197
	02/22/2020	02/27/2020 11:50	Sima Feizi	02/28/2020 08:38	Jhamieka S. Greenwood	2160198
	02/22/2020	02/27/2020 11:50	Sima Feizi	02/28/2020 08:39	Jhamieka S. Greenwood	2160199
	02/22/2020	02/27/2020 11:50	Sima Feizi	02/28/2020 08:41	Jhamieka S. Greenwood	2160200
	02/22/2020	02/27/2020 11:50	Sima Feizi	02/28/2020 11:23	Jhamieka S. Greenwood	2160201
EPA 353.2 Rev. 2.0	02/22/2020			03/04/2020 10:39	Beverly Y. Sanders	2160196
	02/22/2020			03/04/2020 10:40	Beverly Y. Sanders	2160197
	02/22/2020			03/04/2020 10:42	Beverly Y. Sanders	2160198
	02/22/2020			03/04/2020 10:51	Beverly Y. Sanders	2160201
	02/22/2020			03/04/2020 11:12	Beverly Y. Sanders	2160199
	02/22/2020			03/04/2020 11:13	Beverly Y. Sanders	2160200
EPA 365.1 Rev. 2.0	02/22/2020	03/04/2020 13:06	Yen Ta	03/05/2020 11:15	Benjamin T. Nordmann	2160197
	02/22/2020	03/04/2020 13:06	Yen Ta	03/05/2020 14:49	Benjamin T. Nordmann	2160196
	02/22/2020	03/04/2020 13:06	Yen Ta	03/05/2020 14:50	Benjamin T. Nordmann	2160198
	02/22/2020	03/04/2020 13:06	Yen Ta	03/05/2020 14:51	Benjamin T. Nordmann	2160199
	02/22/2020	03/04/2020 13:06	Yen Ta	03/05/2020 14:52	Benjamin T. Nordmann	2160200
	02/22/2020	03/04/2020 13:06	Yen Ta	03/09/2020 11:53	Benjamin T. Nordmann	2160201
EPA 365.1 Rev. 2.0 dissolved	02/22/2020			02/22/2020 11:42	Jhamieka S. Greenwood	2160204
	02/22/2020			02/22/2020 11:50	Jhamieka S. Greenwood	2160205
	02/22/2020			02/22/2020 11:51	Jhamieka S. Greenwood	2160206
	02/22/2020			02/22/2020 11:52	Jhamieka S. Greenwood	2160207
	02/22/2020			02/22/2020 12:07	Jhamieka S. Greenwood	2160202
	02/22/2020			02/22/2020 12:10	Jhamieka S. Greenwood	2160203
SM 2120 B-2011	02/22/2020			02/22/2020 11:28	Julia Storbeck	2160192

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B-2011	02/22/2020			02/22/2020 11:29	Julia Storbeck	2160193
	02/22/2020			02/22/2020 11:30	Julia Storbeck	2160194, 2160195
	02/22/2020			02/22/2020 11:31	Julia Storbeck	2160190
	02/22/2020			02/22/2020 11:56	Julia Storbeck	2160191
SM 2320 B-2011	02/22/2020			03/04/2020 23:04	Dale L. Simmons	2160190
	02/22/2020			03/05/2020 04:05	Dale L. Simmons	2160191
	02/22/2020			03/05/2020 04:54	Dale L. Simmons	2160193
	02/22/2020			03/05/2020 05:42	Dale L. Simmons	2160192
	02/22/2020			03/05/2020 05:53	Dale L. Simmons	2160194
	02/22/2020			03/05/2020 06:05	Dale L. Simmons	2160195
SM 2540 C-2011	02/22/2020			02/25/2020 13:41	Yijie Li	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
SM 2540 D-2011	02/22/2020			02/25/2020 13:41	Yijie Li	2160190, 2160191, 2160192, 2160193, 2160194, 2160195
SM 4500 F-C-2011	02/22/2020			03/04/2020 22:56	Dale L. Simmons	2160190
	02/22/2020			03/05/2020 04:05	Dale L. Simmons	2160191
	02/22/2020			03/05/2020 04:45	Dale L. Simmons	2160193
	02/22/2020			03/05/2020 05:42	Dale L. Simmons	2160192
	02/22/2020			03/05/2020 05:53	Dale L. Simmons	2160194
	02/22/2020			03/05/2020 06:05	Dale L. Simmons	2160195
SM 5310 B-2011	02/22/2020			02/26/2020 03:19	Lauren Lees	2160196
	02/22/2020			03/02/2020 15:19	Lauren Lees	2160197
	02/22/2020			03/02/2020 16:14	Lauren Lees	2160198
	02/22/2020			03/02/2020 18:22	Lauren Lees	2160199
	02/22/2020			03/02/2020 18:37	Lauren Lees	2160200
	02/22/2020			03/02/2020 18:50	Lauren Lees	2160201