

Chemical Analysis Report

NW-DIST-2019-03-06-01

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

Event Description: **NW RUN**
Request ID: **RQ-2019-03-04-38**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 25-MAR-2019 15:26

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical 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: MCDAVID CREEK 100M UPSTREAM SR99

Collection Date/Time: 03/05/2019 10:15

Field ID: G5NW0150

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2067504	EPA 180.1 Rev. 2.0	Turbidity	20		NTU	P360013	
	EPA 300.0 Rev. 2.1	Chloride	3.7		mg Cl/L	P360556	
		Sulfate	1.2		mg SO4/L	P360560	
	SM 2120 B	Color (true)	44	A	PCU	P360019	
	SM 2320 B-97	Total Alkalinity	0.95	I	mg CaCO3/L	P360342	
	SM 2540 C-97	TDS	28		mg/L	P360373	
	SM 2540 D-97	TSS	8	I	mg/L	P360264	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360344	
2067509	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P360254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34		mg N/L	P360226	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P360339	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P360307	
	SM 5310 B-00	Organic Carbon	5.4		mg C/L	P360497	
2067514	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P360032	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LITTLE PINE BARREN CREEK ABOVE CR99

Collection Date/Time: 03/05/2019 10:50

Field ID: G4NW0420

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2067505	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P360013	
	EPA 300.0 Rev. 2.1	Chloride	5.9		mg Cl/L	P360557	
		Sulfate	0.99		mg SO4/L	P360561	
	SM 2120 B	Color (true)	38	A	PCU	P360017	
	SM 2320 B-97	Total Alkalinity	5.3		mg CaCO3/L	P360342	
	SM 2540 C-97	TDS	27		mg/L	P360373	
	SM 2540 D-97	TSS	4	I	mg/L	P360264	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360344	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P360254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P360226	
2067510	EPA 353.2 Rev. 2.0	NO2NO3-N	0.70		mg N/L	P360354	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P360308	
	SM 5310 B-00	Organic Carbon	2.4		mg C/L	P360497	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.005	I	mg P/L	P360032	
	dissolved						

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BIG ESCAMBIA CREEK DOWNSTREAM OF FANNIE RD

Collection Date/Time: 03/05/2019 11:30

Field ID: G4NW0421

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2067506	EPA 180.1 Rev. 2.0	Turbidity	16		NTU	P360013	
	EPA 300.0 Rev. 2.1	Chloride	4.0		mg Cl/L	P360557	
		Sulfate	1.1		mg SO4/L	P360561	
	SM 2120 B	Color (true)	34		PCU	P360019	
	SM 2320 B-97	Total Alkalinity	3.1		mg CaCO3/L	P360342	
	SM 2540 C-97	TDS	27		mg/L	P360373	
	SM 2540 D-97	TSS	15		mg/L	P360264	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360344	
2067511	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P360255	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P360226	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.33		mg N/L	P360354	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P360308	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P360497	
2067516	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P360032	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BIG ESCAMBIA CREEK DOWNSTREAM OF FANNIE RD

Collection Date/Time: 03/05/2019 11:35

Field ID: G4NW0421_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2067507	EPA 180.1 Rev. 2.0	Turbidity	16		NTU	P360014	
	EPA 300.0 Rev. 2.1	Chloride	4.0		mg Cl/L	P360557	
		Sulfate	1.1		mg SO4/L	P360561	
	SM 2120 B	Color (true)	34		PCU	P360019	
	SM 2320 B-97	Total Alkalinity	3.4		mg CaCO3/L	P360343	
	SM 2540 C-97	TDS	32		mg/L	P360373	
	SM 2540 D-97	TSS	16		mg/L	P360264	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360345	
2067512	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P360255	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P360226	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.33		mg N/L	P360354	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P360308	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P360568	
2067517	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P360032	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BIG ESCAMBIA CREEK DOWNSTREAM OF FANNIE RD

Collection Date/Time: 03/05/2019 11:30

Field ID: FB_03052019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2067519	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P360014	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P360557	
		Sulfate	0.20	U	mg SO4/L	P360561	
	SM 2120 B	Color (true)	2.5	U	PCU	P360017	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P360343	
	SM 2540 C-97	TDS	15	U	mg/L	P360369	
	SM 2540 D-97	TSS	2	U	mg/L	P360260	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360345	
2067520	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P360255	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P360226	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P360354	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P360308	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P360568	
2067521	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P360032	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: WIGGINS BRANCH BELOW HIGHWAY 29

Collection Date/Time: 03/05/2019 12:00

Field ID: G4NW0163

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2067508	EPA 180.1 Rev. 2.0	Turbidity	6.5	A	NTU	P360014	
	EPA 300.0 Rev. 2.1	Chloride	2.9		mg Cl/L	P360557	
		Sulfate	1.7		mg SO4/L	P360561	
	SM 2120 B	Color (true)	45		PCU	P360017	
	SM 2320 B-97	Total Alkalinity	5.2		mg CaCO3/L	P360343	
	SM 2540 C-97	TDS	24	I	mg/L	P360374	
	SM 2540 D-97	TSS	4	I	mg/L	P360265	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360345	
2067513	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P360255	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P360226	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P360354	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P360308	
	SM 5310 B-00	Organic Carbon	4.9		mg C/L	P360568	
2067518	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P360034	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360013

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360014

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360556

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360557

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360560

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360561

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360254

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360255

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360226

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360339

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360354

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360307

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360308

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360032

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360034

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

Reference Method: SM 2120 B
Batch ID: P360017

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P360019

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P360342

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P360343

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

Reference Method: SM 2540 C-97
Batch ID: P360369

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P360373

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P360374

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P360260

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P360264

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P360265

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P360344

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P360345

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P360497

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

Reference Method: SM 5310 B-00
Batch ID: P360568

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: P360556

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360557

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360560

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360561

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360254

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360255

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360226

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360339

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360354

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360307

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360308

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360032

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360034

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

Reference Method: SM 2120 B
Batch ID: P360017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P360019

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

Reference Method: SM 2320 B-97
Batch ID: P360342

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P360343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	106		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P360344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	91 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P360345

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.2		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P360568

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067176	Chloride	102		P	90 - 110
2067456	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067505	Chloride	100		P	90 - 110
2067601	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067176	Sulfate	103		P	90 - 110
2067456	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067505	Sulfate	105		P	90 - 110
2067601	Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360254

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067462	Ammonia-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360255

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067511	Ammonia-N	94.0	95.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067510	Kjeldahl Nitrogen	98.8	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360339

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067509	NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067586	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067462	Total-P	106	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067510	Total-P	102	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360032

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067514	O-Phosphate-P	96.5	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067518	O-Phosphate-P	96.1	96.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P360344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067585	Fluoride	96.4	95.8	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P360345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068230	Fluoride	97.9	97.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067426	Organic Carbon	95.4		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P360568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2067513	Organic Carbon	96.5	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067490	Turbidity	0.730	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067508	Turbidity	2.63	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067176	Chloride	0.417	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067601	Chloride	0.243	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067176	Sulfate	0.0531	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067601	Sulfate	0.445	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360254

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067462	Ammonia-N	0.0144	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360255

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067511	Ammonia-N	1.15	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067510	Kjeldahl Nitrogen	1.24	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067509	NO2NO3-N	0.278	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067586	NO2NO3-N	1.45	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067462	Total-P	7.10	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067510	Total-P	2.36	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067514	O-Phosphate-P	0.853	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067518	O-Phosphate-P	0.0998	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P360017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067505	Color (true)	4.10	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P360019

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067504	Color (true)	11.2	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P360342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067585	Total Alkalinity	0.0114	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P360343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068230	Total Alkalinity	1.33	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P360369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2066906	TDS	5.56	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P360373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067459	TDS	2.86	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P360374

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067605	TDS	4.31	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P360344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067585	Fluoride	0.477	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P360345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068230	Fluoride	0.473	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P360497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067426	Organic Carbon	1.08	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P360568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2067513	Organic Carbon	0.748	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A89847

Included Lab Sample IDs: 2067504, 2067505, 2067506, 2067507, 2067508, 2067519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A89848

Included Lab Sample IDs: 2067504, 2067505, 2067506, 2067507, 2067508, 2067519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.8	100	P/P	90 - 115
Color (true)	99.6	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A89850

Included Lab Sample IDs: 2067514, 2067515, 2067516, 2067517, 2067518, 2067521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.7	96.5	P/P	90 - 110
O-Phosphate-P	98.0	96.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A89946

Included Lab Sample IDs: 2067509

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A89949

Included Lab Sample IDs: 2067509, 2067510, 2067511, 2067512, 2067513, 2067520

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A89967

Included Lab Sample IDs: 2067509, 2067510, 2067511, 2067512, 2067513, 2067520

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

Reference Method: SM 2320 B-97

Run ID: A89979

Included Lab Sample IDs: 2067504, 2067505, 2067506, 2067507, 2067508, 2067519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	104	P/P	90 - 110
Total Alkalinity	102	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A89979

Included Lab Sample IDs: 2067504, 2067505, 2067506, 2067507, 2067508, 2067519

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A89981

Included Lab Sample IDs: 2067510, 2067511, 2067512, 2067513, 2067520

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A89999

Included Lab Sample IDs: 2067504, 2067505, 2067506, 2067507, 2067508, 2067519

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90020

Included Lab Sample IDs: 2067509, 2067510, 2067511, 2067512, 2067513, 2067520

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

Reference Method: SM 5310 B-00

Run ID: A90030

Included Lab Sample IDs: 2067509, 2067510, 2067511

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	91.6	94.3	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A90053

Included Lab Sample IDs: 2067512, 2067513, 2067520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.3	95.5	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				0.730	
	Turbidity				2.63	
EPA 300.0 Rev. 2.1	Chloride	100	102	101	0.417	
	Chloride	104	102	100	0.243	
	Sulfate	101	103	102	0.0531	
	Sulfate	105	105	104	0.445	
EPA 350.1 Rev. 2.0	Ammonia-N	99.1	98.5	98.5		0.0144
	Ammonia-N	101	94.0	95.5		1.15
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	98.8	100		1.24
EPA 353.2 Rev. 2.0	NO2NO3-N	101	99.0	99.5		0.278
	NO2NO3-N	100	102	104		1.45
EPA 365.1 Rev. 2.0	Total-P	102	106	96.9		7.10
	Total-P	102	102	105		2.36
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5	96.5	97.4		0.853
	O-Phosphate-P	99.6	96.1	96.2		0.0998
SM 2120 B	Color (true)	101			4.10	
	Color (true)	100			11.2	
SM 2320 B-97	Total Alkalinity	102			0.0114	
	Total Alkalinity	106			1.33	
SM 2540 C-97	TDS				5.56	
	TDS				2.86	
	TDS				4.31	
SM 4500 F-C-97	Fluoride	97.1	96.4	95.8		0.477
	Fluoride	96.2	97.9	97.3		0.473
SM 5310 B-00	Organic Carbon	95.8	95.4			1.08
	Organic Carbon	95.4	96.5	95.6		0.748

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2067509, 2067510, 2067511, 2067512, 2067513, 2067520
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2067509, 2067510, 2067511, 2067512, 2067513, 2067520
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2067509, 2067510, 2067511, 2067512, 2067513, 2067520
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2067509, 2067510, 2067511, 2067512, 2067513, 2067520
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2067514, 2067515, 2067516, 2067517, 2067518, 2067521
SM 2120 B / E31780	True Color measured at 450 nm	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2067504, 2067505, 2067506, 2067507, 2067508, 2067519

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2067509, 2067510, 2067511, 2067512, 2067513, 2067520

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	03/06/2019			03/06/2019 16:16	Adrian Shelby	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
EPA 300.0 Rev. 2.1	03/06/2019			03/16/2019 01:13	Lipi Saha	2067504
	03/06/2019			03/16/2019 03:11	Lipi Saha	2067505
	03/06/2019			03/16/2019 03:40	Lipi Saha	2067506
	03/06/2019			03/16/2019 03:55	Lipi Saha	2067507
	03/06/2019			03/16/2019 04:10	Lipi Saha	2067508
	03/06/2019			03/16/2019 04:25	Lipi Saha	2067519
EPA 350.1 Rev. 2.0	03/06/2019			03/11/2019 11:45	Ping Hua	2067509
	03/06/2019			03/11/2019 11:47	Ping Hua	2067510
	03/06/2019			03/11/2019 11:51	Ping Hua	2067511
	03/06/2019			03/11/2019 11:56	Ping Hua	2067520
	03/06/2019			03/11/2019 12:03	Ping Hua	2067512
	03/06/2019			03/11/2019 12:05	Ping Hua	2067513
EPA 351.2 Rev. 2.0	03/06/2019	03/11/2019 13:00	Adrian Shelby	03/12/2019 14:40	Joseph Suarez	2067509
	03/06/2019	03/11/2019 13:00	Adrian Shelby	03/12/2019 14:41	Joseph Suarez	2067510
	03/06/2019	03/11/2019 13:00	Adrian Shelby	03/12/2019 14:46	Joseph Suarez	2067511
	03/06/2019	03/11/2019 13:00	Adrian Shelby	03/12/2019 14:48	Joseph Suarez	2067512
	03/06/2019	03/11/2019 13:00	Adrian Shelby	03/12/2019 14:49	Joseph Suarez	2067513
	03/06/2019	03/11/2019 13:00	Adrian Shelby	03/12/2019 14:51	Joseph Suarez	2067520
EPA 353.2 Rev. 2.0	03/06/2019			03/12/2019 12:19	Beverly Y. Sanders	2067509
	03/06/2019			03/13/2019 09:15	Beverly Y. Sanders	2067510
	03/06/2019			03/13/2019 09:21	Beverly Y. Sanders	2067511
	03/06/2019			03/13/2019 09:22	Beverly Y. Sanders	2067512
	03/06/2019			03/13/2019 09:23	Beverly Y. Sanders	2067513
	03/06/2019			03/13/2019 09:24	Beverly Y. Sanders	2067520
EPA 365.1 Rev. 2.0	03/06/2019	03/12/2019 13:45	Sima Feizi	03/14/2019 16:55	Rosalyn Ballman	2067509
	03/06/2019	03/12/2019 13:45	Sima Feizi	03/14/2019 16:57	Rosalyn Ballman	2067510
	03/06/2019	03/12/2019 13:45	Sima Feizi	03/14/2019 16:58	Rosalyn Ballman	2067511
	03/06/2019	03/12/2019 13:45	Sima Feizi	03/14/2019 16:59	Rosalyn Ballman	2067512
	03/06/2019	03/12/2019 13:45	Sima Feizi	03/14/2019 17:00	Rosalyn Ballman	2067513
	03/06/2019	03/12/2019 13:45	Sima Feizi	03/14/2019 17:08	Rosalyn Ballman	2067520
EPA 365.1 Rev. 2.0 dissolved	03/06/2019			03/06/2019 19:40	Jhamieka S. Greenwood	2067514
	03/06/2019			03/06/2019 19:52	Jhamieka S. Greenwood	2067518
	03/06/2019			03/06/2019 19:55	Jhamieka S. Greenwood	2067521
	03/06/2019			03/06/2019 19:57	Jhamieka S. Greenwood	2067516, 2067517
	03/06/2019			03/06/2019 19:58	Jhamieka S. Greenwood	2067515
SM 2120 B	03/06/2019			03/06/2019 16:08	Chelsea Hernandez	2067505
	03/06/2019			03/06/2019 16:10	Chelsea Hernandez	2067508
	03/06/2019			03/06/2019 16:11	Chelsea Hernandez	2067519

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B	03/06/2019			03/06/2019 16:29	Chelsea Hernandez	2067504
	03/06/2019			03/06/2019 16:30	Chelsea Hernandez	2067506, 2067507
SM 2320 B-97	03/06/2019			03/13/2019 01:31	Dale L. Simmons	2067504
	03/06/2019			03/13/2019 01:44	Dale L. Simmons	2067505
	03/06/2019			03/13/2019 01:58	Dale L. Simmons	2067506
	03/06/2019			03/13/2019 04:24	Dale L. Simmons	2067507
	03/06/2019			03/13/2019 04:38	Dale L. Simmons	2067508
	03/06/2019			03/13/2019 04:53	Dale L. Simmons	2067519
	03/06/2019			03/08/2019 15:41	Yijie Li	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
SM 2540 D-97	03/06/2019			03/08/2019 15:41	Yijie Li	2067504, 2067505, 2067506, 2067507, 2067508, 2067519
SM 4500 F-C-97	03/06/2019			03/13/2019 01:31	Dale L. Simmons	2067504
	03/06/2019			03/13/2019 01:44	Dale L. Simmons	2067505
	03/06/2019			03/13/2019 01:58	Dale L. Simmons	2067506
	03/06/2019			03/13/2019 04:24	Dale L. Simmons	2067507
	03/06/2019			03/13/2019 04:38	Dale L. Simmons	2067508
	03/06/2019			03/13/2019 04:53	Dale L. Simmons	2067519
	03/06/2019			03/15/2019 03:38	Chelsea Hernandez	2067509
SM 5310 B-00	03/06/2019			03/15/2019 03:56	Chelsea Hernandez	2067510
	03/06/2019			03/15/2019 04:09	Chelsea Hernandez	2067511
	03/06/2019			03/15/2019 06:34	Lauren Lees	2067513
	03/06/2019			03/15/2019 08:00	Lauren Lees	2067512
	03/06/2019			03/15/2019 08:16	Lauren Lees	2067520