

Chemical Analysis Report

NW-DIST-2018-09-18-01

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

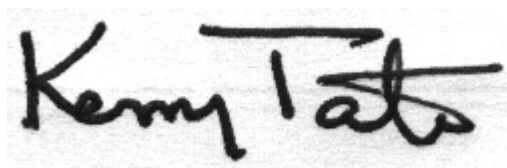
Event Description: **Dune Lakes Run**
Request ID: **RQ-2018-09-10-33**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
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Pensacola, FL 32502-5794
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 04-OCT-2018 11:04

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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 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: FULLER LAKE (MIDDLE)

Collection Date/Time: 09/17/2018 10:40

Field ID: G3NW0084

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025766	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P351864	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P352256	
		Sulfate	3.8		mg SO4/L	P352259	
	SM 2120 B	Color (true)	160		PCU	P351827	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P352049	
	SM 2540 C-97	TDS	65		mg/L	P352287	
	SM 2540 D-97	TSS	3	I	mg/L	P352448	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P352051	
2025768	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P352035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P351952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352001	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P351896	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P352093	
2025770	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P351846	

Sample Location: MORRIS LAKE

Collection Date/Time: 09/17/2018 11:15

Field ID: G3NW0126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025781	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P351866	
	SM 2320 B-97	Total Alkalinity	1.6	I	mg CaCO3/L	P352050	
	SM 2540 D-97	TSS	3	I	mg/L	P352454	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P352232	
2025782	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P352035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P351952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352001	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P351896	
	SM 5310 B-00	Organic Carbon	9.0		mg C/L	P352124	
2025783	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P351846	

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: Stallworth Lake (Center)

Collection Date/Time: 09/17/2018 11:50

Field ID: G3NW0083

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025772	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P351864	
	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P352050	
	SM 2540 D-97	TSS	2	I	mg/L	P352454	
	SM 4500 F-C-97	Fluoride	0.096	I	mg F/L	P352232	
2025775	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P352035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P351952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352001	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P351896	
	SM 5310 B-00	Organic Carbon	7.4		mg C/L	P352093	
2025778	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P351846	

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: ALLEN LAKE (MIDDLE)

Collection Date/Time: 09/17/2018 12:15

Field ID: G3NW0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025767	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P351864	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P352256	
		Sulfate	3.3		mg SO4/L	P352259	
	SM 2120 B	Color (true)	160		PCU	P351827	
	SM 2320 B-97	Total Alkalinity	1.6	I	mg CaCO3/L	P352050	
	SM 2540 C-97	TDS	69		mg/L	P352287	
	SM 2540 D-97	TSS	3	I	mg/L	P352448	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P352232	
2025769	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P352035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P351952	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352001	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P351896	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P352093	
2025771	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P351846	

Sample Location: OYSTER LAKE CENTER

Collection Date/Time: 09/17/2018 13:00

Field ID: G3NW0165

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025773	EPA 180.1 Rev. 2.0	Turbidity	8.7	A	NTU	P351866	
	SM 2320 B-97	Total Alkalinity	59		mg CaCO3/L	P352050	
	SM 2540 D-97	TSS	8	I	mg/L	P352454	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P352232	
2025776	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P352036	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.1		mg N/L	P351956	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352073	
	EPA 365.1 Rev. 2.0	Total-P	0.055		mg P/L	P351942	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P352124	
2025779	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P351849	

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: Eastern Lake off of Center Avenue

Collection Date/Time: 09/17/2018 13:25

Field ID: G3NW0124

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2025774	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P351866	
	SM 2320 B-97	Total Alkalinity	64		mg CaCO3/L	P352058	
	SM 2540 D-97	TSS	4	IA	mg/L	P352282	
	SM 4500 F-C-97	Fluoride	0.57		mg F/L	P352061	
2025777	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P352036	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P351956	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352073	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P351942	
	SM 5310 B-00	Organic Carbon	9.0		mg C/L	P352126	
2025780	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P351849	

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: P351864

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351866

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352256

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352259

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352035

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351952

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352001

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352073

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351896

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351942

Component	Result	Code	Units
Total-P	0.002	U	

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351846

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351849

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

Reference Method: SM 2120 B
Batch ID: P351827

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P352049

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

Reference Method: SM 2320 B-97
Batch ID: P352050

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

Reference Method: SM 2320 B-97
Batch ID: P352058

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P352287

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P352282

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P352448

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P352454

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P352051

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P352061

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P352232

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P352093

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

Reference Method: SM 5310 B-00
Batch ID: P352124

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P352126

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: P352256

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352259

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352035

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351952

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

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: P352001

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: P352073

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351896

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351942

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351846

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351849

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

Reference Method: SM 2120 B
Batch ID: P351827

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.4		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P352049

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

Reference Method: SM 2320 B-97
Batch ID: P352050

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

Reference Method: SM 2320 B-97
Batch ID: P352058

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

Reference Method: SM 4500 F-C-97
Batch ID: P352051

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P352061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.7		P	91 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P352232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.3		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P352124

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P352126

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025720	Chloride	95.7		P	90 - 110
2025825	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025720	Sulfate	96.2		P	90 - 110
2025825	Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025724	Ammonia-N	102	96.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024932	Ammonia-N	97.0	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351952

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025775	Kjeldahl Nitrogen	95.3	95.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025963	Kjeldahl Nitrogen	104	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025725	NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025988	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025827	Total-P	103	99.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025966	Total-P	93.8	90.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025895	O-Phosphate-P	95.6	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351849

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025780	O-Phosphate-P	98.0	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P352051

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026019	Fluoride	98.7	99.2	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P352061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024657	Fluoride	98.2	98.9	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P352232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025892	Fluoride	103	104	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025542	Organic Carbon	98.4	96.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P352124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025782	Organic Carbon	99.1	98.2	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P352126

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2025777	Organic Carbon	92.7	93.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025716	Turbidity	3.92	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P351866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025773	Turbidity	0.115	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025720	Chloride	0.729	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025720	Sulfate	0.342	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025724	Ammonia-N	4.20	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352036

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024932	Ammonia-N	4.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025775	Kjeldahl Nitrogen	0.0258	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025963	Kjeldahl Nitrogen	5.21	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025725	NO2NO3-N	0.303	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025988	NO2NO3-N	0.853	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025827	Total-P	3.20	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025966	Total-P	3.31	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025895	O-Phosphate-P	2.35	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351849

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025780	O-Phosphate-P	1.22	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P351827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025716	Color (true)	1.34	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P352049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026019	Total Alkalinity	0.645	Sample	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P352050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025892	Total Alkalinity	0.0542	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P352058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026445	Total Alkalinity	0.684	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P352287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025720	TDS	2.74	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P352448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025720	TSS	5.88	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P352051

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026019	Fluoride	0.484	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P352061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024657	Fluoride	0.473	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P352232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025892	Fluoride	0.487	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P352093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025542	Organic Carbon	1.11	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P352124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025782	Organic Carbon	0.662	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P352126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2025777	Organic Carbon	0.778	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: SM 2120 B

Run ID: A86560

Included Lab Sample IDs: 2025766, 2025767

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86562

Included Lab Sample IDs: 2025770, 2025771, 2025778, 2025779, 2025780, 2025783

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.8	P/P	90 - 110
O-Phosphate-P	98.6	98.8	P/P	90 - 110
O-Phosphate-P	98.7	100	P/P	90 - 110
O-Phosphate-P	98.8	98.6	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86567

Included Lab Sample IDs: 2025766, 2025767, 2025772, 2025773, 2025774, 2025781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105
Turbidity	99.5	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86610

Included Lab Sample IDs: 2025768, 2025769, 2025775, 2025782

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86615

Included Lab Sample IDs: 2025768, 2025769, 2025775, 2025782

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86626

Included Lab Sample IDs: 2025768, 2025769, 2025775, 2025776, 2025777, 2025782

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	103	P/P	90 - 110
Ammonia-N	103	102	P/P	90 - 110
Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86630

Included Lab Sample IDs: 2025768, 2025769, 2025775, 2025782

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A86631

Included Lab Sample IDs: 2025766, 2025767, 2025772, 2025773, 2025781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	99.4	P/P	90 - 110
Total Alkalinity	99.4	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86631

Included Lab Sample IDs: 2025766

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

Reference Method: SM 2320 B-97

Run ID: A86635

Included Lab Sample IDs: 2025774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.8	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86635

Included Lab Sample IDs: 2025774

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86639

Included Lab Sample IDs: 2025776, 2025777

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: A86641

Included Lab Sample IDs: 2025776, 2025777

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	103	P/P	90 - 110
Kjeldahl Nitrogen	103	105	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A86647

Included Lab Sample IDs: 2025768, 2025769, 2025775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	93.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86653

Included Lab Sample IDs: 2025776, 2025777

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86653

Included Lab Sample IDs: 2025776, 2025777

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A86661

Included Lab Sample IDs: 2025776, 2025777, 2025782

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.3	94.6	P/P	90 - 110
Organic Carbon	97.5	97.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A86715

Included Lab Sample IDs: 2025767, 2025772, 2025773, 2025781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.7	98.0	P/P	90 - 110
Fluoride	98.5	96.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A86718

Included Lab Sample IDs: 2025766, 2025767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.4	99.8	P/P	90 - 110
Chloride	99.8	100	P/P	90 - 110
Sulfate	99.3	99.8	P/P	90 - 110
Sulfate	99.8	99.8	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				3.92	
	Turbidity				0.115	
EPA 300.0 Rev. 2.1	Chloride	97.8	95.7	97.2	0.729	
	Sulfate	95.3	96.2	95.7	0.342	
EPA 350.1 Rev. 2.0	Ammonia-N	98.2	102	96.8		4.20
	Ammonia-N	97.8	97.0	106		4.63
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	95.3	95.3		0.0258
	Kjeldahl Nitrogen	102	104	97.5		5.21
EPA 353.2 Rev. 2.0	NO2NO3-N	100	99.0	99.5		0.303
	NO2NO3-N	99.5	102	103		0.853
EPA 365.1 Rev. 2.0	Total-P	98.7	103	99.8		3.20
	Total-P	96.9	93.8	90.7		3.31
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	95.6	99.0		2.35
	O-Phosphate-P	100	98.0	99.2		1.22
SM 2120 B	Color (true)	97.4			1.34	
SM 2320 B-97	Total Alkalinity	102			0.645	
	Total Alkalinity	102			0.0542	
	Total Alkalinity	102			0.684	
SM 2540 C-97	TDS				2.74	
SM 2540 D-97	TSS				5.88	
SM 4500 F-C-97	Fluoride	98.2	98.7	99.2		0.484
	Fluoride	99.7	98.2	98.9		0.473
	Fluoride	96.1	103	104		0.487
SM 5310 B-00	Organic Carbon	97.3	98.4	96.8		1.11
	Organic Carbon	96.8	99.1	98.2		0.662
	Organic Carbon	93.2	92.7	93.6		0.778

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2025766, 2025767, 2025772, 2025773, 2025774, 2025781
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2025766, 2025767
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2025766, 2025767
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2025768, 2025769, 2025775, 2025776, 2025777, 2025782
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2025768, 2025769, 2025775, 2025776, 2025777, 2025782
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2025768, 2025769, 2025775, 2025776, 2025777, 2025782
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2025768, 2025769, 2025775, 2025776, 2025777, 2025782
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2025770, 2025771, 2025778, 2025779, 2025780, 2025783
SM 2120 B / E31780	True Color measured at 450 nm	2025766, 2025767
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2025766, 2025767, 2025772, 2025773, 2025774, 2025781
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2025766, 2025767
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2025766, 2025767, 2025772, 2025773, 2025774, 2025781
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2025766, 2025767, 2025772, 2025773, 2025774, 2025781

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2025768, 2025769, 2025775, 2025776, 2025777, 2025782

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	09/18/2018			09/18/2018 16:36	Blanca Fach	2025766, 2025767, 2025772, 2025773, 2025774, 2025781
EPA 300.0 Rev. 2.1	09/18/2018			09/25/2018 17:46	Lipi Saha	2025766
	09/18/2018			09/25/2018 18:22	Lipi Saha	2025767
EPA 350.1 Rev. 2.0	09/18/2018			09/20/2018 12:22	Ping Hua	2025768
	09/18/2018			09/20/2018 12:23	Ping Hua	2025769
	09/18/2018			09/20/2018 12:25	Ping Hua	2025775
	09/18/2018			09/20/2018 12:26	Ping Hua	2025782
	09/18/2018			09/20/2018 12:46	Ping Hua	2025777
	09/18/2018			09/20/2018 14:03	Ping Hua	2025776
EPA 351.2 Rev. 2.0	09/18/2018	09/20/2018 10:50	Adrian Shelby	09/21/2018 10:01	Joseph Suarez	2025768
	09/18/2018	09/20/2018 10:50	Adrian Shelby	09/21/2018 10:02	Joseph Suarez	2025769
	09/18/2018	09/20/2018 10:50	Adrian Shelby	09/21/2018 10:04	Joseph Suarez	2025775
	09/18/2018	09/20/2018 10:50	Adrian Shelby	09/21/2018 10:09	Joseph Suarez	2025782
	09/18/2018	09/20/2018 15:00	Adrian Shelby	09/21/2018 12:40	Joseph Suarez	2025776
	09/18/2018	09/20/2018 15:00	Adrian Shelby	09/21/2018 12:44	Joseph Suarez	2025777
EPA 353.2 Rev. 2.0	09/18/2018			09/20/2018 14:08	Lauren Bottorf	2025768
	09/18/2018			09/20/2018 14:09	Lauren Bottorf	2025769
	09/18/2018			09/20/2018 14:10	Lauren Bottorf	2025775
	09/18/2018			09/20/2018 14:12	Lauren Bottorf	2025782
	09/18/2018			09/21/2018 11:35	Lauren Bottorf	2025776
	09/18/2018			09/21/2018 11:36	Lauren Bottorf	2025777
EPA 365.1 Rev. 2.0	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 12:56	Beverly Y. Sanders	2025768
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 12:57	Beverly Y. Sanders	2025769
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 13:05	Beverly Y. Sanders	2025775
	09/18/2018	09/19/2018 12:55	Sima Feizi	09/20/2018 13:06	Beverly Y. Sanders	2025782
	09/18/2018	09/20/2018 13:10	Sima Feizi	09/21/2018 14:02	Beverly Y. Sanders	2025776
	09/18/2018	09/20/2018 13:10	Sima Feizi	09/21/2018 14:03	Beverly Y. Sanders	2025777
EPA 365.1 Rev. 2.0 dissolved	09/18/2018			09/18/2018 17:21	Julia Storbeck	2025780
	09/18/2018			09/18/2018 17:35	Julia Storbeck	2025770
	09/18/2018			09/18/2018 17:36	Julia Storbeck	2025771
	09/18/2018			09/18/2018 17:41	Julia Storbeck	2025778
	09/18/2018			09/18/2018 17:42	Julia Storbeck	2025783
	09/18/2018			09/18/2018 17:57	Julia Storbeck	2025779
SM 2120 B	09/18/2018			09/18/2018 16:03	DeAsia Armster	2025766
	09/18/2018			09/18/2018 16:04	DeAsia Armster	2025767
SM 2320 B-97	09/18/2018			09/20/2018 00:14	Dale L. Simmons	2025766
	09/18/2018			09/20/2018 01:27	Dale L. Simmons	2025781
	09/18/2018			09/20/2018 04:31	Dale L. Simmons	2025767
	09/18/2018			09/20/2018 04:42	Dale L. Simmons	2025772

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	09/18/2018			09/20/2018 04:52	Dale L. Simmons	2025773
	09/18/2018			09/21/2018 03:46	Dale L. Simmons	2025774
SM 2540 C-97	09/18/2018			09/21/2018 16:15	Yijie Li	2025766, 2025767
SM 2540 D-97	09/18/2018			09/21/2018 16:15	Yijie Li	2025766, 2025767, 2025772, 2025773, 2025774, 2025781
SM 4500 F-C-97	09/18/2018			09/20/2018 00:14	Dale L. Simmons	2025766
	09/18/2018			09/21/2018 02:19	Dale L. Simmons	2025774
	09/18/2018			09/25/2018 20:36	Dale L. Simmons	2025767
	09/18/2018			09/25/2018 20:41	Dale L. Simmons	2025781
	09/18/2018			09/25/2018 22:05	Dale L. Simmons	2025772
SM 5310 B-00	09/18/2018			09/25/2018 22:09	Dale L. Simmons	2025773
	09/18/2018			09/21/2018 06:58	Megan Treadwell	2025782
	09/18/2018			09/21/2018 08:11	Megan Treadwell	2025776
	09/18/2018			09/21/2018 10:44	Megan Treadwell	2025768
	09/18/2018			09/21/2018 10:56	Megan Treadwell	2025769
	09/18/2018			09/21/2018 11:08	Megan Treadwell	2025775
	09/18/2018			09/22/2018 07:25	Megan Treadwell	2025777