

Chemical Analysis Report

NE-DIST-2019-09-11-01

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

Event Description: **GTM NERR-Guana River SMP = 7 Sites + 1 Field Blank**

Request ID: **RQ-2019-09-09-16**

Customer: **NE-DIST**

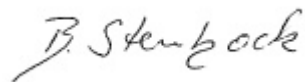
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 27-SEP-2019 17:33



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: DEPGR3

Collection Date/Time: 09/10/2019 08:30

Field ID: GTMGR3NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117701	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P370494	
	EPA 300.0	Bromide	58		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	118		mg CaCO3/L	P371103	
	SM 2540 D-97	TSS	9	I	mg/L	P370880	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P371107	
2117708	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P370666	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P370535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P370709	
	EPA 365.1 Rev. 2.0	Total-P	0.059		mg P/L	P370565	
	SM 5310 B-00	Organic Carbon	6.7		mg C/L	P370679	
2117715	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.51		mg N/L	P370535	

Sample Location: DEPGR2

Collection Date/Time: 09/10/2019 08:45

Field ID: GTMGRNUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117702	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P370494	
	EPA 300.0	Bromide	57		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	118		mg CaCO3/L	P371103	
	SM 2540 D-97	TSS	8	I	mg/L	P370880	
	SM 4500 F-C-97	Fluoride	1.0		mg F/L	P371107	
2117709	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P370666	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P370535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P370709	
	EPA 365.1 Rev. 2.0	Total-P	0.072		mg P/L	P370565	
	SM 5310 B-00	Organic Carbon	7.2		mg C/L	P370679	
2117716	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.60		mg N/L	P370535	

Sample Location: DEPGR1

Collection Date/Time: 09/10/2019 09:04

Field ID: GTMGR1NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117703	EPA 180.1 Rev. 2.0	Turbidity	9.1		NTU	P370494	
	EPA 300.0	Bromide	58		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P371103	
	SM 2540 D-97	TSS	22		mg/L	P370881	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P371107	
2117710	EPA 350.1 Rev. 2.0	Ammonia-N	0.074		mg N/L	P370667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P370535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P370709	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P370641	
	SM 5310 B-00	Organic Carbon	7.8		mg C/L	P370679	
2117717	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.69		mg N/L	P370598	

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: DEPGL4

Collection Date/Time: 09/10/2019 10:32

Field ID: GTMGL4NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117704	EPA 180.1 Rev. 2.0	Turbidity	17	A	NTU	P370494	
	EPA 300.0	Bromide	40		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	124		mg CaCO3/L	P371103	
	SM 2540 D-97	TSS	29		mg/L	P370881	
	SM 4500 F-C-97	Fluoride	0.79		mg F/L	P371107	
2117711	EPA 350.1 Rev. 2.0	Ammonia-N	0.26		mg N/L	P370667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P370535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P370709	
	EPA 365.1 Rev. 2.0	Total-P	0.069		mg P/L	P370641	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P370679	
2117718	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.7		mg N/L	P370598	

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: DEPGL3

Collection Date/Time: 09/10/2019 10:52

Field ID: GTMLMNUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117705	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P370495	
	EPA 300.0	Bromide	28		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	125		mg CaCO3/L	P371103	
	SM 2540 D-97	TSS	20		mg/L	P370881	
	SM 4500 F-C-97	Fluoride	0.62		mg F/L	P371107	
2117712	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P370667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P370535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370709	
	EPA 365.1 Rev. 2.0	Total-P	0.077		mg P/L	P370641	
	SM 5310 B-00	Organic Carbon	25		mg C/L	P370679	
2117719	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.7		mg N/L	P370598	

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: DEPL2

Collection Date/Time: 09/10/2019 11:29

Field ID: GTMGL2NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117706	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P370495	
	EPA 300.0	Bromide	6.4		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	128		mg CaCO3/L	P370694	
	SM 2540 D-97	TSS	22		mg/L	P370878	
	SM 4500 F-C-97	Fluoride	0.31		mg F/L	P370697	
2117713	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P370667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P370535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370709	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P370641	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P370678	
2117720	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.5		mg N/L	P370598	

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: DEPGL1

Collection Date/Time: 09/10/2019 12:15

Field ID: GTMGL1NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117707	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P370495	
	EPA 300.0	Bromide	0.28		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	127		mg CaCO3/L	P370694	
	SM 2540 D-97	TSS	2	I	mg/L	P370878	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P370697	
2117714	EPA 350.1 Rev. 2.0	Ammonia-N	0.070		mg N/L	P370673	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P370599	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370554	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P370566	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P370678	
2117721	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.1		mg N/L	P370599	

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: P370494

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370495

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P370689

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370666

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370667

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370673

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370535

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370599

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370535

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370598

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370599

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370554

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370709

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370565

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370566

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370641

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

Reference Method: SM 2320 B-97
Batch ID: P370694

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

Reference Method: SM 2320 B-97
Batch ID: P371103

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P370878

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P370880

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P370881

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P370697

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371107

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P370678

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

Reference Method: SM 5310 B-00
Batch ID: P370679

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
Batch ID: P370689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	94.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370666

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: P370667

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: P370673

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370599

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370598

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370599

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370554

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: P370709

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370565

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370566

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370641

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.4		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P370694

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

Reference Method: SM 2320 B-97
Batch ID: P371103

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

Reference Method: SM 4500 F-C-97
Batch ID: P370697

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P371107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.6		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P370678

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P370679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P370689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117129	Bromide	92.6	93.4	P/P	90 - 110
2117707	Bromide	92.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117519	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117713	Ammonia-N	96.4	97.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117566	Ammonia-N	93.7	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117597	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370599

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117932	Kjeldahl Nitrogen	106	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117597	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117717	Kjeldahl Nitrogen	93.8	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370599

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117932	Kjeldahl Nitrogen	106	107	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117714	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117531	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117519	Total-P	96.4	93.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117566	Total-P	96.0	93.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117710	Total-P	90.0	94.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P370697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117355	Fluoride	99.8	99.2	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117596	Fluoride	93.6	96.2	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P370678

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117872	Organic Carbon	106	105	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P370679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117597	Organic Carbon	104	104	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117704	Turbidity	2.33	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117931	Turbidity	3.42	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P370689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117129	Bromide	0.738	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117519	Ammonia-N	1.15	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117713	Ammonia-N	0.750	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117566	Ammonia-N	3.00	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117597	Kjeldahl Nitrogen	0.618	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117932	Kjeldahl Nitrogen	1.29	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117597	Kjeldahl Nitrogen	0.618	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117717	Kjeldahl Nitrogen	5.05	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P370599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117932	Kjeldahl Nitrogen	1.29	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117714	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117531	NO2NO3-N	0.370	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117519	Total-P	2.92	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117566	Total-P	2.26	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117710	Total-P	4.04	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P370694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117355	Total Alkalinity	0.666	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
 Batch ID: P371103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117596	Total Alkalinity	0.228	Sample	P	0 - 2.8

Reference Method: SM 2540 D-97
 Batch ID: P370880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117535	TSS	9.52	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P370697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117355	Fluoride	0.483	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
 Batch ID: P371107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117596	Fluoride	1.95	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
 Batch ID: P370678

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117872	Organic Carbon	0.520	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P370679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117597	Organic Carbon	0.451	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 300.0

Run ID: A94097

Included Lab Sample IDs: 2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	101	102	P/P	90 - 110
Bromide	99.1	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94136

Included Lab Sample IDs: 2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94154

Included Lab Sample IDs: 2117714

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94202

Included Lab Sample IDs: 2117714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94212

Included Lab Sample IDs: 2117708, 2117709, 2117710, 2117711, 2117712, 2117713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	99.0	P/P	90 - 110
Ammonia-N	98.4	97.5	P/P	90 - 110
Ammonia-N	99.0	98.4	P/P	90 - 110
Ammonia-N	99.1	96.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94214

Included Lab Sample IDs: 2117714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.1	97.7	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A94219

Included Lab Sample IDs: 2117708, 2117709, 2117710, 2117711, 2117712, 2117713, 2117714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	106	P/P	90 - 110
Organic Carbon	106	107	P/P	90 - 110
Organic Carbon	107	107	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A94232

Included Lab Sample IDs: 2117706, 2117707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	105	P/P	90 - 110
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94232

Included Lab Sample IDs: 2117706, 2117707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110
Fluoride	101	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94233

Included Lab Sample IDs: 2117708, 2117709, 2117710, 2117711, 2117712, 2117713

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94237

Included Lab Sample IDs: 2117708, 2117709

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94240

Included Lab Sample IDs: 2117708, 2117709, 2117710, 2117711, 2117712, 2117713, 2117714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	99.1	P/P	90 - 110
Kjeldahl Nitrogen	93.9	103	P/P	90 - 110
Kjeldahl Nitrogen	99.9	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A94240

Included Lab Sample IDs: 2117715, 2117716, 2117717, 2117718, 2117719, 2117720, 2117721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	99.1	P/P	90 - 110
Kjeldahl Nitrogen	99.1	99.9	P/P	90 - 110
Kjeldahl Nitrogen	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94244

Included Lab Sample IDs: 2117710, 2117711, 2117712

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94245

Included Lab Sample IDs: 2117713

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

Reference Method: SM 2320 B-97

Run ID: A94392

Included Lab Sample IDs: 2117701, 2117702, 2117703, 2117704, 2117705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94392

Included Lab Sample IDs: 2117701, 2117702, 2117703, 2117704, 2117705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.5	P/P	90 - 110
Fluoride	99.5	100	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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					2.33	
	Turbidity					3.42	
EPA 300.0	Bromide	94.8	92.6	93.4	92.5		0.738
EPA 350.1 Rev. 2.0	Ammonia-N	99.1	101	102			1.15
	Ammonia-N	99.1	96.4	97.2			0.750
	Ammonia-N	95.7	93.7	96.8			3.00
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.0	102	103			0.618
	Kjeldahl Nitrogen	102	106	107			1.29
EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	93.0	102	103			0.618
	Kjeldahl Nitrogen	98.6	93.8	100			5.05
	Kjeldahl Nitrogen	102	106	107			1.29
EPA 353.2 Rev. 2.0	NO2NO3-N	100	102	102			0.0
	NO2NO3-N	100	102	101			0.370
EPA 365.1 Rev. 2.0	Total-P	97.8	96.4	93.6			2.92
	Total-P	97.9	96.0	93.7			2.26
	Total-P	96.4	90.0	94.1			4.04
SM 2320 B-97	Total Alkalinity	104				0.666	
	Total Alkalinity	104				0.228	
SM 2540 D-97	TSS					9.52	
SM 4500 F-C-97	Fluoride	96.9	99.8	99.2			0.483
	Fluoride	96.6	93.6	96.2			1.95
SM 5310 B-00	Organic Carbon	104	106	105			0.520
	Organic Carbon	104	104	104			0.451

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707
EPA 300.0 / E31780	Bromide in aqueous matrices	2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2117708, 2117709, 2117710, 2117711, 2117712, 2117713, 2117714
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2117708, 2117709, 2117710, 2117711, 2117712, 2117713, 2117714
EPA 351.2 Rev. 2.0 dissolved / E31780	Total Kjeldahl Nitrogen, dissolved, in filtered, aqueous matrices	2117715, 2117716, 2117717, 2117718, 2117719, 2117720, 2117721
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2117708, 2117709, 2117710, 2117711, 2117712, 2117713, 2117714
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2117708, 2117709, 2117710, 2117711, 2117712, 2117713, 2117714
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2117708, 2117709, 2117710, 2117711, 2117712, 2117713, 2117714

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	09/11/2019			09/11/2019 16:13	Samantha Davila	2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707
EPA 300.0	09/11/2019			09/13/2019 13:29	Jhamieka S. Greenwood	2117707
	09/11/2019			09/13/2019 14:20	Jhamieka S. Greenwood	2117701
	09/11/2019			09/13/2019 14:37	Jhamieka S. Greenwood	2117702
	09/11/2019			09/13/2019 14:54	Jhamieka S. Greenwood	2117703
	09/11/2019			09/13/2019 15:46	Jhamieka S. Greenwood	2117704
	09/11/2019			09/13/2019 16:03	Jhamieka S. Greenwood	2117705
EPA 350.1 Rev. 2.0	09/11/2019			09/13/2019 16:20	Jhamieka S. Greenwood	2117706
	09/11/2019			09/13/2019 12:40	Ping Hua	2117708
	09/11/2019			09/13/2019 12:42	Ping Hua	2117709
	09/11/2019			09/13/2019 12:46	Ping Hua	2117710
	09/11/2019			09/13/2019 12:51	Ping Hua	2117714
	09/11/2019			09/13/2019 13:00	Ping Hua	2117713
EPA 351.2 Rev. 2.0	09/11/2019			09/13/2019 13:13	Ping Hua	2117712
	09/11/2019			09/13/2019 13:55	Ping Hua	2117711
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:00	Julia Storbeck	2117708
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:02	Julia Storbeck	2117709
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:06	Julia Storbeck	2117710
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:08	Julia Storbeck	2117711
EPA 351.2 Rev. 2.0 dissolved	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:10	Julia Storbeck	2117712
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:11	Julia Storbeck	2117713
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:51	Julia Storbeck	2117714
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:13	Julia Storbeck	2117715
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:14	Julia Storbeck	2117716
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:19	Julia Storbeck	2117717
EPA 353.2 Rev. 2.0	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:27	Julia Storbeck	2117718
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:28	Julia Storbeck	2117719
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:30	Julia Storbeck	2117720
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:53	Julia Storbeck	2117721
	09/11/2019			09/12/2019 09:52	Beverly Y. Sanders	2117714
	09/11/2019			09/16/2019 10:59	Beverly Y. Sanders	2117708
EPA 365.1 Rev. 2.0	09/11/2019			09/16/2019 11:00	Beverly Y. Sanders	2117709
	09/11/2019			09/16/2019 11:01	Beverly Y. Sanders	2117710
	09/11/2019			09/16/2019 11:03	Beverly Y. Sanders	2117711
	09/11/2019			09/16/2019 11:04	Beverly Y. Sanders	2117712
	09/11/2019			09/16/2019 11:05	Beverly Y. Sanders	2117713
	09/11/2019	09/12/2019 13:45	Lipi Saha	09/13/2019 14:43	Rosalyn Ballman	2117714
	09/11/2019	09/12/2019 13:45	Lipi Saha	09/13/2019 18:11	Rosalyn Ballman	2117708
	09/11/2019	09/12/2019 13:45	Lipi Saha	09/13/2019 18:12	Rosalyn Ballman	2117709

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	09/11/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 12:04	Rosalyn Ballman	2117713
	09/11/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 15:00	Rosalyn Ballman	2117710
	09/11/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 15:01	Rosalyn Ballman	2117711
	09/11/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 15:02	Rosalyn Ballman	2117712
SM 2320 B-97	09/11/2019			09/13/2019 22:22	Dale L. Simmons	2117706
	09/11/2019			09/14/2019 00:01	Dale L. Simmons	2117707
	09/11/2019			09/19/2019 11:55	Dale L. Simmons	2117701
	09/11/2019			09/19/2019 12:07	Dale L. Simmons	2117702
	09/11/2019			09/19/2019 12:19	Dale L. Simmons	2117703
	09/11/2019			09/19/2019 12:31	Dale L. Simmons	2117704
	09/11/2019			09/19/2019 12:44	Dale L. Simmons	2117705
	09/11/2019			09/13/2019 15:21	Yijie Li	2117701, 2117702, 2117703, 2117704, 2117705, 2117706, 2117707
SM 2540 D-97	09/11/2019					
	09/11/2019					
	09/11/2019					
	09/11/2019					
	09/11/2019					
	09/11/2019					
	09/11/2019					
	09/11/2019					
SM 4500 F-C-97	09/11/2019			09/13/2019 22:22	Dale L. Simmons	2117706
	09/11/2019			09/14/2019 00:01	Dale L. Simmons	2117707
	09/11/2019			09/19/2019 08:44	Dale L. Simmons	2117701
	09/11/2019			09/19/2019 09:31	Dale L. Simmons	2117702
	09/11/2019			09/19/2019 09:35	Dale L. Simmons	2117703
	09/11/2019			09/19/2019 09:39	Dale L. Simmons	2117704
	09/11/2019			09/19/2019 09:44	Dale L. Simmons	2117705
	09/11/2019			09/14/2019 02:02	Madeline Funaro	2117713
SM 5310 B-00	09/11/2019			09/14/2019 02:14	Madeline Funaro	2117714
	09/11/2019			09/14/2019 09:11	Madeline Funaro	2117708
	09/11/2019			09/14/2019 09:23	Madeline Funaro	2117709
	09/11/2019			09/14/2019 09:36	Madeline Funaro	2117710
	09/11/2019			09/14/2019 09:48	Madeline Funaro	2117711
	09/11/2019			09/14/2019 10:37	Madeline Funaro	2117712