

Chemical Analysis Report

NW-DIST-2019-05-21-02

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

Event Description: **Project Greenshores**
Request ID: **RQ-2019-05-20-03**
Customer: **NW-DIST**
Project ID: **DISTRICT**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 10-JUN-2019 17:13

A handwritten signature in black ink, reading "Colin Wright", is displayed on a light gray rectangular 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: RANGE MARKER E OF TEXAR

Collection Date/Time: 05/20/2019 11:01

Field ID: 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087806	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P364362	
	SM 2120 B	Color (true)	8.8	A	PCU	P364355	
	SM 2540 D-97	TSS	4	IA	mg/L	P364888	
2087821	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P364690	MS

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: FB

Collection Date/Time: 05/20/2019 11:05

Field ID: FB

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087807	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P364362	
	SM 2120 B	Color (true)	2.5	U	PCU	P364334	
	SM 2540 D-97	TSS	2	U	mg/L	P364886	
2087822	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P364804	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P364747	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P364523	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P364714	

Sample Location: 1/2 BRIDGE AND MUSCOGEE

Collection Date/Time: 05/20/2019 11:17

Field ID: 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087808	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P364362	
	SM 2120 B	Color (true)	8.0		PCU	P364355	
	SM 2540 D-97	TSS	7	I	mg/L	P364888	
2087823	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I	mg P/L	P364690	MS

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: EAST OF PRIMARY STORMDRAIN PGS1

Collection Date/Time: 05/20/2019 11:24

Field ID: 3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087809	EPA 180.1 Rev. 2.0	Turbidity	1.2	A	NTU	P364363	
	SM 2120 B	Color (true)	8.2		PCU	P364355	
	SM 2540 D-97	TSS	3	U	mg/L	P364888	
2087824	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P364690	MS

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: 100ft SOUTH OF STORMDRAIN

Collection Date/Time: 05/20/2019 11:30

Field ID: 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087810	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P364363	
	SM 2120 B	Color (true)	7.4		PCU	P364355	
	SM 2540 D-97	TSS	5	I	mg/L	P364888	
2087825	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P364690	MS

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: END OF CHASE ST

Collection Date/Time: 05/20/2019 11:45

Field ID: 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087811	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P364363	
	SM 2120 B	Color (true)	8.4		PCU	P364355	
	SM 2540 D-97	TSS	5	I	mg/L	P364888	
2087826	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P364548	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P364690	MS

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: 1/2 MUSCOGEE AND HAWKSHAW 400 FT
FROM SHORE**

Collection Date/Time: 05/20/2019 11:51

Field ID: 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087812	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P364363	
	SM 2120 B	Color (true)	6.8		PCU	P364355	
	SM 2540 D-97	TSS	5	I	mg/L	P364888	
2087827	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P364690	MS

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: 1/2 BRIDGE AND PORT

Collection Date/Time: 05/20/2019 11:56

Field ID: 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087813	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P364363	
	SM 2120 B	Color (true)	9.1		PCU	P364355	
	SM 2540 D-97	TSS	4	I	mg/L	P364888	
2087828	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P364690	MS

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: WEST OF STORMDRAIN, INSIDE ROCKS

Collection Date/Time: 05/20/2019 11:36

Field ID: 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087814	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P364363	
	SM 2120 B	Color (true)	8.2		PCU	P364356	
	SM 2540 D-97	TSS	4	I	mg/L	P364888	
2087829	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.037		mg N/L	P364566	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P364690	MS

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: WEST END OF HAWKSHAW 100FT SOUTH OF OUTFALL **Collection Date/Time: 05/20/2019 12:19**

Field ID: 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087815	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P364363	
	SM 2120 B	Color (true)	8.5		PCU	P364356	
	SM 2540 D-97	TSS	3	I	mg/L	P364888	
2087830	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P364748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P364567	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P364691	

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: BETWEEN MARINA AND OUTFALL

Collection Date/Time: 05/20/2019 12:14

Field ID: 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087816	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P364363	
	SM 2120 B	Color (true)	8.3		PCU	P364356	
	SM 2540 D-97	TSS	5	I	mg/L	P364889	
2087831	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25	I	mg N/L	P364749	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P364567	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P364691	

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: ENTRANCE OF MARINA

Collection Date/Time: 05/20/2019 12:08

Field ID: 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087817	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P364363	
	SM 2120 B	Color (true)	8.7		PCU	P364356	
	SM 2540 D-97	TSS	6	I	mg/L	P364889	
2087832	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	mg N/L	P364820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P364567	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P364691	

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: 1/4 BETWEEN BRIDGE AND PORT, 400 FT FROM SHORE

Collection Date/Time: 05/20/2019 12:03

Field ID: 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087818	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P364363	
	SM 2120 B	Color (true)	8.8		PCU	P364356	
	SM 2540 D-97	TSS	5	I	mg/L	P364889	
2087833	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27	I	mg N/L	P364820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P364567	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P364691	

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: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 05/20/2019 12:33

Field ID: 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087819	EPA 180.1 Rev. 2.0	Turbidity	1.9	A	NTU	P364364	
	SM 2120 B	Color (true)	14	A	PCU	P364356	
	SM 2540 D-97	TSS	6	I	mg/L	P364889	
2087834	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P364820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P364567	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P364691	

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: EAST OF STORMDRAIN INSIDE PGS SITE 2

Collection Date/Time: 05/20/2019 12:39

Field ID: 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2087820	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P364364	
	SM 2120 B	Color (true)	8.9		PCU	P364356	
	SM 2540 D-97	TSS	5	IA	mg/L	P364889	
2087835	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P364801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P364820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P364567	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P364691	

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: P364362

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P364363

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P364364

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364548

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364801

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364804

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364747

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364748

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364749

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
Batch ID: P364820

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364523

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364566

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364567

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364690

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364691

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364714

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

Reference Method: SM 2120 B
Batch ID: P364334

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P364355

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P364356

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2540 D-97
Batch ID: P364886

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P364888

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P364889

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364548

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364801

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364804

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364747

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364748

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364749

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364820

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364523

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	98.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364566

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	98.0		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364567

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364690

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364691

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364714

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.2		P	90 - 110

Reference Method: SM 2120 B
Batch ID: P364334

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.9		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P364355

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.1		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P364356

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087655	Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087827	Ammonia-N	102	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087962	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087701	Kjeldahl Nitrogen	106	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364748

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087764	Kjeldahl Nitrogen	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087831	Kjeldahl Nitrogen	106	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087832	Kjeldahl Nitrogen	103	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087911	NO2NO3-N	95.0	94.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087763	NO2NO3-N	98.9	97.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087830	NO2NO3-N	99.2	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087763	Total-P	89.3	90.1	F/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087830	Total-P	94.6	93.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087911	Total-P	95.8	101	P/P	90 - 110

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P364362

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087698	Turbidity	6.38	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P364363

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087809	Turbidity	2.43	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P364364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087819	Turbidity	4.26	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087655	Ammonia-N	0.134	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087827	Ammonia-N	1.69	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087962	Ammonia-N	0.749	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087701	Kjeldahl Nitrogen	1.30	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364748

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087764	Kjeldahl Nitrogen	1.15	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087831	Kjeldahl Nitrogen	0.757	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087832	Kjeldahl Nitrogen	3.76	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087911	NO2NO3-N	0.167	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087763	NO2NO3-N	0.995	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087830	NO2NO3-N	0.917	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087763	Total-P	0.897	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087830	Total-P	1.73	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087911	Total-P	4.16	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P364334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087699	Color (true)	0.799	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P364355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087806	Color (true)	4.29	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P364356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087819	Color (true)	0.0141	Sample	P	0 - 20

Reference Method: SM 2540 D-97
Batch ID: P364886

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2088082	TSS	6.90	Sample	P	0 - 10

* 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: A91569

Included Lab Sample IDs: 2087807

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

Reference Method: SM 2120 B

Run ID: A91587

Included Lab Sample IDs: 2087806, 2087808, 2087809, 2087810, 2087811, 2087812, 2087813, 2087814, 2087815, 2087816, 2087817, 2087818, 2087819, 2087820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115
Color (true)	99.0	100	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A91590

Included Lab Sample IDs: 2087806, 2087807, 2087808, 2087809, 2087810, 2087811, 2087812, 2087813, 2087814, 2087815, 2087816, 2087817, 2087818, 2087819, 2087820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91657

Included Lab Sample IDs: 2087822

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A91667

Included Lab Sample IDs: 2087821, 2087823, 2087824, 2087825, 2087826

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91682

Included Lab Sample IDs: 2087821, 2087823, 2087824, 2087825, 2087826, 2087827, 2087828, 2087829, 2087830, 2087831, 2087832, 2087833, 2087834, 2087835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	96.5	P/P	90 - 110
NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91760

Included Lab Sample IDs: 2087821, 2087823, 2087824, 2087825, 2087826, 2087827, 2087828, 2087829, 2087830, 2087831, 2087832, 2087833, 2087834, 2087835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	99.0	P/P	90 - 110
Total-P	99.0	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A91780

Included Lab Sample IDs: 2087822, 2087827, 2087828, 2087829, 2087830, 2087831, 2087832, 2087833, 2087834, 2087835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	103	P/P	90 - 110
Ammonia-N	103	104	P/P	90 - 110
Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91790

Included Lab Sample IDs: 2087822

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91800

Included Lab Sample IDs: 2087821, 2087822, 2087823, 2087824, 2087825, 2087826, 2087827, 2087828, 2087829, 2087830, 2087831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	97.5	P/P	90 - 110
Kjeldahl Nitrogen	103	95.6	P/P	90 - 110
Kjeldahl Nitrogen	97.5	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91810

Included Lab Sample IDs: 2087832, 2087833, 2087834, 2087835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.4	105	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				6.38	
	Turbidity				2.43	
	Turbidity				4.26	
EPA 350.1 Rev. 2.0	Ammonia-N	95.6	105	105		0.134
	Ammonia-N	101	102	104		1.69
	Ammonia-N	100	102	101		0.749
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	106	103		1.30
	Kjeldahl Nitrogen	103	104	105		1.15
	Kjeldahl Nitrogen	103	106	107		0.757
	Kjeldahl Nitrogen	100	103	99.2		3.76
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	95.0	94.8		0.167
	NO2NO3-N	98.0	98.9	97.9		0.995
	NO2NO3-N	97.0	99.2	98.2		0.917
EPA 365.1 Rev. 2.0	Total-P	99.6	89.3	90.1		0.897
	Total-P	98.2	94.6	93.0		1.73
	Total-P	97.2	95.8	101		4.16
SM 2120 B	Color (true)	97.9			0.799	
	Color (true)	98.1			4.29	
	Color (true)	99.9			0.0141	
SM 2540 D-97	TSS				6.90	

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2087806, 2087807, 2087808, 2087809, 2087810, 2087811, 2087812, 2087813, 2087814, 2087815, 2087816, 2087817, 2087818, 2087819, 2087820
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2087821, 2087822, 2087823, 2087824, 2087825, 2087826, 2087827, 2087828, 2087829, 2087830, 2087831, 2087832, 2087833, 2087834, 2087835
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2087821, 2087822, 2087823, 2087824, 2087825, 2087826, 2087827, 2087828, 2087829, 2087830, 2087831, 2087832, 2087833, 2087834, 2087835
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2087821, 2087822, 2087823, 2087824, 2087825, 2087826, 2087827, 2087828, 2087829, 2087830, 2087831, 2087832, 2087833, 2087834, 2087835
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2087821, 2087822, 2087823, 2087824, 2087825, 2087826, 2087827, 2087828, 2087829, 2087830, 2087831, 2087832, 2087833, 2087834, 2087835
SM 2120 B / E31780	True Color measured at 450 nm	2087806, 2087807, 2087808, 2087809, 2087810, 2087811, 2087812, 2087813, 2087814, 2087815, 2087816, 2087817, 2087818, 2087819, 2087820
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2087806, 2087807, 2087808, 2087809, 2087810, 2087811, 2087812, 2087813, 2087814, 2087815, 2087816, 2087817, 2087818, 2087819, 2087820

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	05/21/2019			05/21/2019 17:32	Sima Feizi	2087806, 2087807, 2087808, 2087809, 2087810, 2087811, 2087812, 2087813, 2087814, 2087815, 2087816, 2087817, 2087818, 2087819, 2087820
EPA 350.1 Rev. 2.0	05/21/2019			05/23/2019 11:33	Ping Hua	2087821
	05/21/2019			05/23/2019 11:34	Ping Hua	2087823
	05/21/2019			05/23/2019 11:36	Ping Hua	2087824
	05/21/2019			05/23/2019 11:43	Ping Hua	2087825
	05/21/2019			05/23/2019 11:45	Ping Hua	2087826
	05/21/2019			05/24/2019 11:07	Ping Hua	2087827
	05/21/2019			05/24/2019 11:11	Ping Hua	2087828
	05/21/2019			05/24/2019 11:19	Ping Hua	2087829
	05/21/2019			05/24/2019 11:20	Ping Hua	2087830
	05/21/2019			05/24/2019 11:22	Ping Hua	2087831
	05/21/2019			05/24/2019 11:23	Ping Hua	2087832
	05/21/2019			05/24/2019 11:25	Ping Hua	2087833
	05/21/2019			05/24/2019 11:26	Ping Hua	2087834
	05/21/2019			05/24/2019 11:28	Ping Hua	2087835
	05/21/2019			05/24/2019 12:49	Ping Hua	2087822
EPA 351.2 Rev. 2.0	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:00	Joseph Suarez	2087822
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:13	Joseph Suarez	2087821
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:14	Joseph Suarez	2087823
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:16	Joseph Suarez	2087824
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:17	Joseph Suarez	2087825
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:19	Joseph Suarez	2087826
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:20	Joseph Suarez	2087827
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:22	Joseph Suarez	2087828
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:24	Joseph Suarez	2087829
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:25	Joseph Suarez	2087830
	05/21/2019	05/30/2019 14:00	Adrian Shelby	05/31/2019 14:33	Joseph Suarez	2087831
	05/21/2019	05/31/2019 13:15	Adrian Shelby	06/03/2019 11:22	Joseph Suarez	2087832
	05/21/2019	05/31/2019 13:15	Adrian Shelby	06/03/2019 11:26	Joseph Suarez	2087833
	05/21/2019	05/31/2019 13:15	Adrian Shelby	06/03/2019 11:28	Joseph Suarez	2087834
	05/21/2019	05/31/2019 13:15	Adrian Shelby	06/03/2019 11:29	Joseph Suarez	2087835
EPA 353.2 Rev. 2.0	05/21/2019			05/24/2019 12:17	Beverly Y. Sanders	2087822
	05/21/2019			05/28/2019 09:55	Beverly Y. Sanders	2087821
	05/21/2019			05/28/2019 09:56	Beverly Y. Sanders	2087823
	05/21/2019			05/28/2019 09:57	Beverly Y. Sanders	2087824
	05/21/2019			05/28/2019 09:58	Beverly Y. Sanders	2087825
	05/21/2019			05/28/2019 10:00	Beverly Y. Sanders	2087826

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 353.2 Rev. 2.0	05/21/2019			05/28/2019 10:01	Beverly Y. Sanders	2087827
	05/21/2019			05/28/2019 10:02	Beverly Y. Sanders	2087828
	05/21/2019			05/28/2019 10:03	Beverly Y. Sanders	2087829
	05/21/2019			05/28/2019 10:10	Beverly Y. Sanders	2087830
	05/21/2019			05/28/2019 10:16	Beverly Y. Sanders	2087831
	05/21/2019			05/28/2019 10:17	Beverly Y. Sanders	2087832
	05/21/2019			05/28/2019 10:19	Beverly Y. Sanders	2087833
	05/21/2019			05/28/2019 10:20	Beverly Y. Sanders	2087834
	05/21/2019			05/28/2019 10:21	Beverly Y. Sanders	2087835
	05/21/2019					
EPA 365.1 Rev. 2.0	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:52	Rosalyn Ballman	2087821
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:53	Rosalyn Ballman	2087823
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:54	Rosalyn Ballman	2087824
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:55	Rosalyn Ballman	2087825
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:56	Rosalyn Ballman	2087826
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:57	Rosalyn Ballman	2087827
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 12:58	Rosalyn Ballman	2087828
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 13:06	Rosalyn Ballman	2087829
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 13:08	Rosalyn Ballman	2087830
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 13:09	Rosalyn Ballman	2087831
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 13:10	Rosalyn Ballman	2087832, 2087833
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 13:11	Rosalyn Ballman	2087834
	05/21/2019	05/29/2019 14:30	Joseph Suarez	05/30/2019 13:12	Rosalyn Ballman	2087835
	05/21/2019	05/30/2019 10:32	Joseph Suarez	05/31/2019 15:11	Rosalyn Ballman	2087822
	05/21/2019					
SM 2120 B	05/21/2019			05/21/2019 16:32	Madeline Funaro	2087807
	05/21/2019			05/22/2019 09:52	Blanca Fach	2087806
	05/21/2019			05/22/2019 09:55	Blanca Fach	2087808, 2087809
	05/21/2019			05/22/2019 09:56	Blanca Fach	2087810
	05/21/2019			05/22/2019 09:57	Blanca Fach	2087811
	05/21/2019			05/22/2019 09:58	Blanca Fach	2087812, 2087813
	05/21/2019			05/22/2019 10:14	Blanca Fach	2087819
	05/21/2019			05/22/2019 10:15	Blanca Fach	2087814
	05/21/2019			05/22/2019 10:16	Blanca Fach	2087815
	05/21/2019			05/22/2019 10:17	Blanca Fach	2087816, 2087817
	05/21/2019			05/22/2019 10:18	Blanca Fach	2087818
	05/21/2019			05/22/2019 10:19	Blanca Fach	2087820
SM 2540 D-97	05/21/2019			05/23/2019 16:02	Yijie Li	2087806, 2087807, 2087808, 2087809, 2087810, 2087811, 2087812, 2087813, 2087814, 2087815, 2087816, 2087817, 2087818, 2087819, 2087820