

Chemical Analysis Report

SE-DIST-2018-10-03-01

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

Event Description: **SMP- Fort Pierce**
Request ID: **RQ-2018-09-24-16**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

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: Liang Lin, Environmental Administrator

Date Certified: 29-OCT-2018 14:14

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

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

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: C-25 Canal West @ Godwin

Collection Date/Time: 10/02/2018 10:45

Field ID: G2SE0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030608	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P352803	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P353036	
		Sulfate	47		mg SO4/L	P353038	
	SM 2120 B	Color (true)	91	A	PCU	P352752	
	SM 2320 B-97	Total Alkalinity	169		mg CaCO3/L	P353023	
	SM 2540 C-97	TDS	496		mg/L	P353105	
	SM 2540 D-97	TSS	5	I	mg/L	P353123	
	SM 4500 F-C-97	Fluoride	0.33		mg F/L	P353026	
2030609	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P353049	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P353119	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P352954	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P352781	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P352967	
2030610	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P352709	

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: Moores Creek @ 2nd

Collection Date/Time: 10/02/2018 11:30

Field ID: G2SE0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030617	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P352803	
	SM 2320 B-97	Total Alkalinity	89	Q	mg CaCO3/L	P353268	
	SM 2540 D-97	TSS	4	IA	mg/L	P353128	
	SM 4500 F-C-97	Fluoride	0.53		mg F/L	P353272	
2030619	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P353409	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P353120	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.088		mg N/L	P352844	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P352853	
	SM 5310 B-00	Organic Carbon	6.1		mg C/L	P353302	
2030621	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.074		mg P/L	P352712	
2030635	EPA 8321B	2,4-D	0.0041	I	ug/L	P352686	
		Bentazon	0.0014	I	ug/L	P352686	
		MCP	0.0051	I	ug/L	P352686	
		Triclopyr**	0.0040	U	ug/L	P352686	
		Imidacloprid	0.016		ug/L	P352686	MS
		Diuron	0.0086		ug/L	P352686	
		Pyraclostrobin**	0.0020	U	ug/L	P352686	
		Primidone**	0.0040	U	ug/L	P352686	
		Linuron	0.0040	U	ug/L	P352686	
		Acetaminophen**	0.017	I	ug/L	P352686	
		Fenuron	0.016	U	ug/L	P352686	MS
		Imazapyr**	0.0040	U	ug/L	P352686	
		Carbamazepine**	8.0E-04	U	ug/L	P352686	
		Fluridone**	5.1E-04	I	ug/L	P352686	
		Hydrocodone**	8.0E-04	U	ug/L	P352686	
		Naproxen**	0.0080	U	ug/L	P352686	
		Ibuprofen**	0.020	U	ug/L	P352686	
		Sucralose**	0.074		ug/L	P352677	
		Acesulfame K**	0.10	U	ug/L	P352677	
2030638	EPA 200.7 Rev. 4.4	Iron	120	U	ug/L	P353055	
		Zinc	20	U	ug/L	P353055	
	EPA 200.8 Rev. 5.4	Arsenic	1.62		ug/L	P353055	
		Cadmium	0.080	U	ug/L	P353055	
		Chromium	4.0	U	ug/L	P353055	
		Copper	1.8	I	ug/L	P353055	
		Lead	0.68	I	ug/L	P353055	
		Nickel	0.80	U	ug/L	P353055	
		Silver	0.040	U	ug/L	P353055	

Ref. Method and Comment:

SM 2320 B-97: Sample analyzed beyond hold time because of laboratory closure caused by Hurricane Michael.

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

Sample Location: Moores Creek @ 7th

Collection Date/Time: 10/02/2018 12:05

Field ID: G2SE0016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030618	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P352805	
	SM 2320 B-97	Total Alkalinity	124		mg CaCO3/L	P353023	
	SM 2540 D-97	TSS	3	I	mg/L	P353127	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P353026	
2030620	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P353049	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P353119	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P352954	
	EPA 365.1 Rev. 2.0	Total-P	0.070		mg P/L	P352781	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P352967	
2030622	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.046		mg P/L	P352709	
2030636	EPA 8321B	2,4-D	0.0020	U	ug/L	P352686	
		Bentazon	0.0012	I	ug/L	P352686	
		MCP	0.0020	U	ug/L	P352686	
		Triclopyr**	0.0040	U	ug/L	P352686	
		Imidacloprid	0.0052	I	ug/L	P352686	MS
		Diuron	0.0025	I	ug/L	P352686	
		Pyraclostrobin**	0.0020	U	ug/L	P352686	
		Primidone**	0.0040	U	ug/L	P352686	
		Linuron	0.0040	U	ug/L	P352686	
		Acetaminophen**	0.0080	U	ug/L	P352686	
		Fenuron	0.016	U	ug/L	P352686	MS
		Imazapyr**	0.013	I	ug/L	P352686	
		Carbamazepine**	8.0E-04	U	ug/L	P352686	
		Fluridone**	0.0022		ug/L	P352686	
		Hydrocodone**	8.0E-04	U	ug/L	P352686	
		Naproxen**	0.0080	U	ug/L	P352686	
		Ibuprofen**	0.020	U	ug/L	P352686	
		Sucralose**	0.30		ug/L	P352677	
		Acesulfame K**	0.10	U	ug/L	P352677	
2030639	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P352769	
		Zinc	5.0	U	ug/L	P352769	
	EPA 200.8 Rev. 5.4	Arsenic	0.74		ug/L	P352769	
		Cadmium	0.020	U	ug/L	P352769	
		Chromium	0.64	I	ug/L	P352769	
		Copper	0.82		ug/L	P352769	
		Lead	0.37		ug/L	P352769	
		Nickel	0.37	I	ug/L	P352769	
		Silver	0.010	U	ug/L	P352769	

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: Five-mile Creek @ Okeechobee

Collection Date/Time: 10/02/2018 12:40

Field ID: G2SE0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030614	EPA 180.1 Rev. 2.0	Turbidity	10	A	NTU	P352803	
	EPA 300.0 Rev. 2.1	Chloride	260		mg Cl/L	P353036	
		Sulfate	85		mg SO4/L	P353038	
	SM 2120 B	Color (true)	44		PCU	P352752	
	SM 2320 B-97	Total Alkalinity	180		mg CaCO3/L	P353023	
	SM 2540 C-97	TDS	709		mg/L	P353107	
	SM 2540 D-97	TSS	10		mg/L	P353124	
	SM 4500 F-C-97	Fluoride	0.41		mg F/L	P353026	
2030615	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P353049	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P353119	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P352954	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P352781	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P352967	
2030616	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.048		mg P/L	P352709	

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: Ten-mile Creek @ Gordy

Collection Date/Time: 10/02/2018 13:10

Field ID: G2SE0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030611	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P352803	
	EPA 300.0 Rev. 2.1	Chloride	550		mg Cl/L	P353036	
		Sulfate	110		mg SO4/L	P353038	
		Color (true)	33		PCU	P352752	
	SM 2120 B	Total Alkalinity	201		mg CaCO3/L	P353023	
	SM 2540 C-97	TDS	1.32E+03		mg/L	P353107	
	SM 2540 D-97	TSS	6	I	mg/L	P353124	
	SM 4500 F-C-97	Fluoride	0.46		mg F/L	P353026	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P353049	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P353119	
2030612	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P352954	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P352781	
	SM 5310 B-00	Organic Carbon	8.8		mg C/L	P352967	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.085		mg P/L	P352709	
	EPA 200.7 Rev. 4.4	Calcium	115		mg/L	P352769	
2030637		Iron	180		ug/L	P352769	
		Magnesium	44.1		mg/L	P352769	
		Potassium	8.7		mg/L	P352769	
		Sodium	262		mg/L	P352769	
		Zinc	5.0	U	ug/L	P352769	
		Arsenic	1.40		ug/L	P352769	
		Cadmium	0.020	U	ug/L	P352769	
		Chromium	0.40	U	ug/L	P352769	
		Copper	1.14		ug/L	P352769	
		Lead	0.084	I	ug/L	P352769	
	EPA 200.8 Rev. 5.4	Nickel	0.35	I	ug/L	P352769	
		Silver	0.010	U	ug/L	P352769	

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: P352803

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352805

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352769

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P353055

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352769

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P353055

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353036

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353038

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353049

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353409

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353119

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353120

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352844

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352954

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352781

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352853

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352709

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352712

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

Reference Method: EPA 8321B
Batch ID: P352677

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P352686

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P352752

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P353023

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

Reference Method: SM 2320 B-97
Batch ID: P353268

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

Reference Method: SM 2540 C-97
Batch ID: P353105

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P353107

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P353123

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P353124

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P353127

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P353128

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P353026

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P353272

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P352967

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

Reference Method: SM 5310 B-00
Batch ID: P353302

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	96.6		P	85 - 115
Iron	103		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	105		P	85 - 115
Sodium	97.8		P	85 - 115
Zinc	99.5		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P353055

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	101		P	85 - 115
Copper	113		P	85 - 115
Lead	98.7		P	85 - 115
Nickel	98.6		P	85 - 115
Silver	95.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P353055

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	106		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	102		P	85 - 115
Copper	103		P	85 - 115
Lead	92.7		P	85 - 115
Nickel	102		P	85 - 115
Silver	99.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353036

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353038

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353049

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: P353409

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353119

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353120

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352844

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352954

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: P352781

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352853

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352709

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352712

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

Reference Method: EPA 8321B
Batch ID: P352677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	122		P	40 - 150
Sucralose	97.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P352686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.3		P	40 - 150
Acetaminophen	102		P	30 - 150
Bentazon	91.1		P	30 - 150
Carbamazepine	86.7		P	40 - 150
Diuron	79.5		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	109		P	40 - 150
Hydrocodone	104		P	40 - 150
Ibuprofen	77.7		P	40 - 150
Imazapyr	84.5		P	40 - 150
Imidacloprid	108		P	40 - 160
Linuron	76.5		P	40 - 150
MCPP	96.8		P	40 - 150
Naproxen	83.7		P	40 - 150
Primidone	92.9		P	40 - 150
Pyraclostrobin	73.0		P	40 - 150
Triclopyr	95.6		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P352752

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P353023

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P353268

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P353026

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P353272

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.2		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352967

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P353302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P352769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030363	Calcium	99.0		P	80 - 120
2030363	Iron	99.3	101	P/P	80 - 120
2030363	Magnesium	104	105	P/P	80 - 120
2030363	Potassium	97.3	101	P/P	80 - 120
2030363	Sodium	99.8		P	80 - 120
2030363	Zinc	96.1	97.9	P/P	80 - 120
2030582	Calcium	94.5		P	80 - 120
2030582	Iron	99.1		P	80 - 120
2030582	Magnesium	99.5		P	80 - 120
2030582	Potassium	97.8		P	80 - 120
2030582	Sodium	101		P	80 - 120
2030582	Zinc	97.1		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P353055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031031	Iron	97.7	101	P/P	70 - 130
2031031	Zinc	104	106	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P352769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030363	Arsenic	103	101	P/P	80 - 120
2030363	Cadmium	105	103	P/P	80 - 120
2030363	Chromium	99.7	98.7	P/P	80 - 120
2030363	Copper	111	107	P/P	80 - 120
2030363	Lead	97.5	96.5	P/P	80 - 120
2030363	Nickel	97.1	96.3	P/P	80 - 120
2030363	Silver	95.0	93.6	P/P	80 - 120
2030582	Arsenic	102		P	80 - 120
2030582	Cadmium	107		P	80 - 120
2030582	Chromium	100		P	80 - 120
2030582	Copper	106		P	80 - 120
2030582	Lead	99.7		P	80 - 120
2030582	Nickel	98.5		P	80 - 120
2030582	Silver	96.2		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P353055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031031	Arsenic	114	113	P/P	80 - 120
2031031	Cadmium	102	101	P/P	80 - 120
2031031	Chromium	111	101	P/P	80 - 120
2031031	Copper	98.2	97.7	P/P	80 - 120
2031031	Lead	98.5	97.4	P/P	80 - 120
2031031	Nickel	104	103	P/P	80 - 120
2031031	Silver	95.0	92.9	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353036

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030645	Chloride	99.1		P	90 - 110
2030661	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030645	Sulfate	97.6		P	90 - 110
2030661	Sulfate	98.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030576	Ammonia-N	99.8	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030619	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030576	Kjeldahl Nitrogen	99.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353120

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031286	Kjeldahl Nitrogen	99.1	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352844

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030098	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030576	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030664	Total-P	99.8	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352853

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031286	Total-P	97.2	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030509	O-Phosphate-P	97.2	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030621	O-Phosphate-P	99.7	99.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P352677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030560	Acesulfame K	130	119	P/P	40 - 150
2030560	Sucralose	98.2	97.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P352686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031728	2,4-D	129	124	P/P	40 - 150
2031728	Acetaminophen	130	131	P/P	30 - 150
2031728	Bentazon	47.0	44.0	P/P	30 - 150
2031728	Carbamazepine	70.5	71.8	P/P	40 - 150
2031728	Diuron	51.6	63.1	P/P	40 - 150
2031728	Fenuron	38.4	41.6	F/P	40 - 150
2031728	Fluridone	109	115	P/P	40 - 150
2031728	Hydrocodone	113	109	P/P	40 - 150
2031728	Ibuprofen	74.7	81.3	P/P	40 - 150
2031728	Imazapyr	93.3	101	P/P	40 - 150
2031728	Imidacloprid	182	183	F/F	40 - 160
2031728	Linuron	67.0	68.1	P/P	40 - 150
2031728	MCP	140	136	P/P	40 - 150
2031728	Naproxen	90.6	78.0	P/P	40 - 150
2031728	Primidone	89.7	92.7	P/P	40 - 150
2031728	Pyraclostrobin	74.5	74.3	P/P	40 - 150
2031728	Triclopyr	122	134	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P353026

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031048	Fluoride	97.8	97.8	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P353272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031014	Fluoride	94.3	94.9	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030482	Organic Carbon	93.5	97.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P353302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030619	Organic Carbon	95.4	94.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030614	Turbidity	0.995	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352805

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030700	Turbidity	3.65	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P352769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030363	Calcium	0.923	Spike	P	0 - 20
2030363	Iron	1.31	Spike	P	0 - 20
2030363	Magnesium	0.812	Spike	P	0 - 20
2030363	Potassium	2.45	Spike	P	0 - 20
2030363	Sodium	1.80	Spike	P	0 - 20
2030363	Zinc	1.82	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P353055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031031	Iron	2.78	Spike	P	0 - 20
2031031	Zinc	1.89	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P352769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030363	Arsenic	1.63	Spike	P	0 - 20
2030363	Cadmium	1.40	Spike	P	0 - 20
2030363	Chromium	0.981	Spike	P	0 - 20
2030363	Copper	3.85	Spike	P	0 - 20
2030363	Lead	0.959	Spike	P	0 - 20
2030363	Nickel	0.786	Spike	P	0 - 20
2030363	Silver	1.43	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P353055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031031	Arsenic	0.199	Spike	P	0 - 20
2031031	Cadmium	0.829	Spike	P	0 - 20
2031031	Chromium	10.2	Spike	P	0 - 20
2031031	Copper	0.485	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P353055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031031	Lead	1.05	Spike	P	0 - 20
2031031	Nickel	1.44	Spike	P	0 - 20
2031031	Silver	2.27	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353036

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030645	Chloride	1.95	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353038

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030645	Sulfate	0.988	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030576	Ammonia-N	2.01	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030619	Ammonia-N	0.837	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030576	Kjeldahl Nitrogen	1.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031286	Kjeldahl Nitrogen	4.52	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030098	NO2NO3-N	0.674	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030576	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030664	Total-P	2.42	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031286	Total-P	0.0988	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030509	O-Phosphate-P	0.845	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030621	O-Phosphate-P	0.0577	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P352677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030560	Acesulfame K	8.26	Spike	P	0 - 30
2030560	Sucralose	0.735	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P352686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031728	2,4-D	3.36	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P352686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031728	Acetaminophen	0.832	Spike	P	0 - 30
2031728	Bentazon	6.44	Spike	P	0 - 30
2031728	Carbamazepine	1.78	Spike	P	0 - 30
2031728	Diuron	20.1	Spike	P	0 - 30
2031728	Fenuron	3.39	Spike	P	0 - 30
2031728	Fluridone	5.27	Spike	P	0 - 30
2031728	Hydrocodone	3.92	Spike	P	0 - 30
2031728	Ibuprofen	8.40	Spike	P	0 - 30
2031728	Imazapyr	8.23	Spike	P	0 - 30
2031728	Imidacloprid	0.486	Spike	P	0 - 30
2031728	Linuron	1.62	Spike	P	0 - 30
2031728	MCPP	2.89	Spike	P	0 - 30
2031728	Naproxen	14.9	Spike	P	0 - 30
2031728	Primidone	3.23	Spike	P	0 - 30
2031728	Pyraclostrobin	0.274	Spike	P	0 - 30
2031728	Triclopyr	9.32	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P352752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030608	Color (true)	2.07	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P353023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031048	Total Alkalinity	1.09	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P353268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031942	Total Alkalinity	0.538	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P353105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030459	TDS	3.43	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P353107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030661	TDS	0.0	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P353026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031048	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P353272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031014	Fluoride	0.513	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P352967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030482	Organic Carbon	2.91	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P353302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030619	Organic Carbon	0.499	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 Surrogates

Lab Sample ID: 2030635
Field Sample ID: G2SE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Carbamazepine-d10	56.9	P	30 - 160
EPA 8321B	Diuron-d6	48.2	P	30 - 160
EPA 8321B	Endothall-d6	85.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	78.5	P	30 - 160
EPA 8321B	Primidone-d5	75.9	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	40 - 160

Lab Sample ID: 2030636
Field Sample ID: G2SE0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	126	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.9	P	30 - 160
EPA 8321B	Diuron-d6	52.6	P	30 - 160
EPA 8321B	Endothall-d6	108	P	40 - 160
EPA 8321B	Ibuprofen-d3	75.1	P	30 - 160
EPA 8321B	Primidone-d5	77.0	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86891

Included Lab Sample IDs: 2030610, 2030613, 2030616, 2030621, 2030622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	101	101	P/P	90 - 110
O-Phosphate-P	101	99.6	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A86905

Included Lab Sample IDs: 2030608, 2030611, 2030614

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86923

Included Lab Sample IDs: 2030608, 2030611, 2030614, 2030617, 2030618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	103	P/P	95 - 105
Turbidity	103	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86932

Included Lab Sample IDs: 2030609, 2030612, 2030615, 2030620

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86941

Included Lab Sample IDs: 2030619

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

Reference Method: EPA 8321B

Run ID: A86953

Included Lab Sample IDs: 2030635, 2030636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	107	134	P/P	60 - 160
Acesulfame K	134	157	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86975

Included Lab Sample IDs: 2030619

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86985

Included Lab Sample IDs: 2030609, 2030612, 2030615, 2030620

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

Reference Method: SM 5310 B-00

Run ID: A86987

Included Lab Sample IDs: 2030609, 2030612, 2030615, 2030620

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.1	93.6	P/P	90 - 110
Organic Carbon	98.0	96.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A86988

Included Lab Sample IDs: 2030637, 2030639

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.2	97.9	P/P	90 - 110
Iron	97.1	95.9	P/P	90 - 110
Magnesium	97.7	96.7	P/P	90 - 110
Potassium	99.9	100	P/P	90 - 110
Sodium	99.8	101	P/P	90 - 110
Zinc	99.9	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A86996

Included Lab Sample IDs: 2030635, 2030636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	84.6	98.8	P/P	60 - 160
Sucralose	87.5	84.6	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A87013

Included Lab Sample IDs: 2030608, 2030611, 2030614, 2030618

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: A87013

Included Lab Sample IDs: 2030608, 2030611, 2030614, 2030618

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87017

Included Lab Sample IDs: 2030608, 2030611, 2030614

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	108	P/P	90 - 110
Sulfate	100	106	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87024

Included Lab Sample IDs: 2030609, 2030612, 2030615, 2030620

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87102

Included Lab Sample IDs: 2030609, 2030612, 2030615, 2030619, 2030620

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	P/P	90 - 110
Kjeldahl Nitrogen	99.0	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A87109

Included Lab Sample IDs: 2030617

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

Reference Method: SM 4500 F-C-97

Run ID: A87109

Included Lab Sample IDs: 2030617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.1	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A87117

Included Lab Sample IDs: 2030635, 2030636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	110	97.4	P/P	50 - 150
Bentazon	95.4	95.9	P/P	50 - 160
Ibuprofen	107	89.3	P/P	50 - 160
MCP	99.3	86.5	P/P	50 - 150
Naproxen	73.5	83.1	P/P	50 - 160
Triclopyr	98.9	95.0	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A87121

Included Lab Sample IDs: 2030635, 2030636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	123	126	P/P	60 - 160
Carbamazepine	83.6	106	P/P	60 - 160
Diuron	120	114	P/P	60 - 150
Fenuron	108	106	P/P	60 - 150
Fluridone	115	117	P/P	60 - 160
Hydrocodone	108	112	P/P	60 - 150
Imazapyr	85.2	101	P/P	50 - 150
Imidacloprid	104	99.5	P/P	60 - 150
Linuron	117	112	P/P	60 - 150
Primidone	102	102	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A87121

Included Lab Sample IDs: 2030635, 2030636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	99.5	103	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A87126

Included Lab Sample IDs: 2030619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.1	98.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87140

Included Lab Sample IDs: 2030637, 2030639

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.0	97.6	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	99.4	100	P/P	90 - 110
Lead	97.4	98.2	P/P	90 - 110
Nickel	97.7	96.4	P/P	90 - 110
Silver	95.4	95.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87185

Included Lab Sample IDs: 2030619

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87191

Included Lab Sample IDs: 2030637, 2030639

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87196

Included Lab Sample IDs: 2030638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	104	105	P/P	90 - 110
Cadmium	103	100	P/P	90 - 110
Copper	102	104	P/P	90 - 110
Lead	92.2	91.7	P/P	90 - 110
Nickel	103	103	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A87214

Included Lab Sample IDs: 2030638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A87214

Included Lab Sample IDs: 2030638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	99.4	P/P	95 - 105
Zinc	100	101	P/P	95 - 105

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87239

Included Lab Sample IDs: 2030638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	98.7	97.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A87274

Included Lab Sample IDs: 2030638

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	100	99.0	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			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.995	
	Turbidity						3.65	
EPA 200.7 Rev. 4.4	Calcium	96.6	99.0	94.5				0.923
	Iron	103	99.3	101	99.1			1.31
	Iron	104	97.7	101				2.78
	Magnesium	109	104	105	99.5			0.812
	Potassium	105	97.3	101	97.8			2.45
	Sodium	97.8	99.8	101				1.80
	Zinc	99.5	96.1	97.9	97.1			1.82
	Zinc	101	104	106				1.89
EPA 200.8 Rev. 5.4	Arsenic	102	103	101	102			1.63
	Arsenic	106	114	113				0.199
	Cadmium	105	105	103	107			1.40
	Cadmium	103	102	101				0.829
	Chromium	101	99.7	98.7	100			0.981
	Chromium	102	111	101				10.2
	Copper	113	111	107	106			3.85
	Copper	103	98.2	97.7				0.485
	Lead	98.7	97.5	96.5	99.7			0.959
	Lead	92.7	98.5	97.4				1.05
	Nickel	98.6	97.1	96.3	98.5			0.786
	Nickel	102	104	103				1.44
	Silver	95.8	95.0	93.6	96.2			1.43
	Silver	99.5	95.0	92.9				2.27
EPA 300.0 Rev. 2.1	Chloride	100	99.1	97.6			1.95	
	Sulfate	98.7	97.6	98.0			0.988	
EPA 350.1 Rev. 2.0	Ammonia-N	99.1	99.8	102				2.01
	Ammonia-N	98.5	103	102				0.837
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	99.2	101				1.08
	Kjeldahl Nitrogen	106	99.1	105				4.52
EPA 353.2 Rev. 2.0	NO2NO3-N	101	99.5	100				0.674
	NO2NO3-N	99.5	100	102				0.990
EPA 365.1 Rev. 2.0	Total-P	104	99.8	102				2.42
	Total-P	106	97.2	97.3				0.0988
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	97.2	98.1				0.845
	O-Phosphate-P	101	99.7	99.8				0.0577
EPA 8321B	2,4-D	90.3	129	124				3.36
	Acesulfame K	122	130	119				8.26
	Acetaminophen	102	131	130				0.832
	Bentazon	91.1	47.0	44.0				6.44
	Carbamazepine	86.7	70.5	71.8				1.78
	Diuron	79.5	51.6	63.1				20.1
	Fenuron	114	41.6	38.4				3.39
	Fluridone	109	109	115				5.27
	Hydrocodone	104	109	113				3.92
	Ibuprofen	77.7	74.7	81.3				8.40
	Imazapyr	84.5	93.3	101				8.23
	Imidacloprid	108	183	182				0.486
	Linuron	76.5	67.0	68.1				1.62
	MCPP	96.8	140	136				2.89
	Naproxen	83.7	90.6	78.0				14.9
	Primidone	92.9	92.7	89.7				3.23
	Pyraclostrobin	73.0	74.5	74.3				0.274
	Sucralose	97.2	98.2	97.4				0.735

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Triclopyr	95.6	122	134		9.32
SM 2120 B	Color (true)	102			2.07	
SM 2320 B-97	Total Alkalinity	104			1.09	
	Total Alkalinity	102			0.538	
SM 2540 C-97	TDS				3.43	
	TDS				0.0	
SM 4500 F-C-97	Fluoride	98.0	97.8	97.8		0.0
	Fluoride	94.2	94.3	94.9		0.513
SM 5310 B-00	Organic Carbon	97.8	93.5	97.8		2.91
	Organic Carbon	94.9	95.4	94.8		0.499

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2030608, 2030611, 2030614, 2030617, 2030618
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2030637, 2030638, 2030639
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2030637, 2030638, 2030639
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2030608, 2030611, 2030614
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2030608, 2030611, 2030614
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2030609, 2030612, 2030615, 2030619, 2030620
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2030609, 2030612, 2030615, 2030619, 2030620
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2030609, 2030612, 2030615, 2030619, 2030620
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2030609, 2030612, 2030615, 2030619, 2030620
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2030610, 2030613, 2030616, 2030621, 2030622
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2030635, 2030636
SM 2120 B / E31780	True Color measured at 450 nm	2030608, 2030611, 2030614
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2030608, 2030611, 2030614, 2030617, 2030618
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2030608, 2030611, 2030614
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2030608, 2030611, 2030614, 2030617, 2030618
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2030608, 2030611, 2030614, 2030617, 2030618
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2030609, 2030612, 2030615, 2030619, 2030620

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	10/03/2018			10/03/2018 16:51	Megan Treadwell	2030608, 2030611, 2030614, 2030617, 2030618
EPA 200.7 Rev. 4.4	10/03/2018	10/04/2018 15:00	Elliott D. Healy	10/08/2018 15:27	Betina Topolski	2030637
	10/03/2018	10/04/2018 15:00	Elliott D. Healy	10/08/2018 15:33	Betina Topolski	2030637
	10/03/2018	10/04/2018 15:00	Elliott D. Healy	10/08/2018 15:37	Betina Topolski	2030639
	10/03/2018	10/15/2018 16:20	Elliott D. Healy	10/23/2018 09:56	Betina Topolski	2030638
EPA 200.8 Rev. 5.4	10/03/2018	10/04/2018 15:00	Elliott D. Healy	10/19/2018 05:04	Allison Taylor	2030637
	10/03/2018	10/04/2018 15:00	Elliott D. Healy	10/19/2018 05:14	Allison Taylor	2030639
	10/03/2018	10/04/2018 15:00	Elliott D. Healy	10/20/2018 00:55	Allison Taylor	2030637
	10/03/2018	10/04/2018 15:00	Elliott D. Healy	10/20/2018 01:02	Allison Taylor	2030639
	10/03/2018	10/15/2018 16:20	Elliott D. Healy	10/20/2018 11:27	Allison Taylor	2030638
	10/03/2018	10/15/2018 16:20	Elliott D. Healy	10/22/2018 21:36	Allison Taylor	2030638
	10/03/2018	10/15/2018 16:20	Elliott D. Healy	10/24/2018 16:21	Allison Taylor	2030638
EPA 300.0 Rev. 2.1	10/03/2018			10/09/2018 05:26	Lipi Saha	2030608
	10/03/2018			10/09/2018 05:38	Lipi Saha	2030611
	10/03/2018			10/09/2018 05:50	Lipi Saha	2030614
EPA 350.1 Rev. 2.0	10/03/2018			10/05/2018 12:36	Ping Hua	2030609
	10/03/2018			10/05/2018 12:37	Ping Hua	2030612
	10/03/2018			10/05/2018 12:39	Ping Hua	2030615
	10/03/2018			10/05/2018 12:40	Ping Hua	2030620
	10/03/2018			10/18/2018 13:58	Ping Hua	2030619
EPA 351.2 Rev. 2.0	10/03/2018	10/16/2018 16:30	Adrian Shelby	10/17/2018 14:09	Joseph Suarez	2030609
	10/03/2018	10/16/2018 16:30	Adrian Shelby	10/17/2018 14:10	Joseph Suarez	2030612
	10/03/2018	10/16/2018 16:30	Adrian Shelby	10/17/2018 14:12	Joseph Suarez	2030615
	10/03/2018	10/16/2018 16:30	Adrian Shelby	10/17/2018 14:13	Joseph Suarez	2030620
	10/03/2018	10/16/2018 16:30	Adrian Shelby	10/17/2018 14:29	Joseph Suarez	2030619
EPA 353.2 Rev. 2.0	10/03/2018			10/05/2018 12:42	Lauren Bottorf	2030619
	10/03/2018			10/08/2018 11:44	Lauren Bottorf	2030609
	10/03/2018			10/08/2018 11:45	Lauren Bottorf	2030612
	10/03/2018			10/08/2018 11:47	Lauren Bottorf	2030615
	10/03/2018			10/08/2018 11:48	Lauren Bottorf	2030620
EPA 365.1 Rev. 2.0	10/03/2018	10/04/2018 12:35	Sima Feizi	10/05/2018 09:57	Beverly Y. Sanders	2030609
	10/03/2018	10/04/2018 12:35	Sima Feizi	10/05/2018 09:58	Beverly Y. Sanders	2030612
	10/03/2018	10/04/2018 12:35	Sima Feizi	10/05/2018 09:59	Beverly Y. Sanders	2030615
	10/03/2018	10/04/2018 12:35	Sima Feizi	10/05/2018 10:00	Beverly Y. Sanders	2030620
	10/03/2018	10/05/2018 13:35	Sima Feizi	10/08/2018 10:32	Beverly Y. Sanders	2030619
EPA 365.1 Rev. 2.0 dissolved	10/03/2018			10/03/2018 17:21	Julia Storbeck	2030610, 2030616
	10/03/2018			10/03/2018 17:27	Julia Storbeck	2030613, 2030622
	10/03/2018			10/03/2018 17:54	Julia Storbeck	2030621
EPA 8321B	10/03/2018	10/05/2018 08:00	Mohammad Ghaffari	10/05/2018 11:17	Mohammad Ghaffari	2030635

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	10/03/2018	10/05/2018 08:00	Mohammad Ghaffari	10/05/2018 11:47	Mohammad Ghaffari	2030636
	10/03/2018	10/05/2018 08:00	Mohammad Ghaffari	10/08/2018 17:49	Mohammad Ghaffari	2030635
	10/03/2018	10/05/2018 08:00	Mohammad Ghaffari	10/08/2018 18:18	Mohammad Ghaffari	2030636
	10/03/2018	10/05/2018 13:00	Hoor Shaik	10/06/2018 12:24	Juyoung Kim	2030635
	10/03/2018	10/05/2018 13:00	Hoor Shaik	10/06/2018 12:58	Juyoung Kim	2030636
	10/03/2018	10/05/2018 13:00	Hoor Shaik	10/07/2018 17:15	Juyoung Kim	2030635
	10/03/2018	10/05/2018 13:00	Hoor Shaik	10/07/2018 17:49	Juyoung Kim	2030636
	10/03/2018			10/03/2018 15:25	Chelsea Hernandez	2030608
SM 2120 B	10/03/2018			10/03/2018 15:26	Chelsea Hernandez	2030611
	10/03/2018			10/03/2018 15:27	Chelsea Hernandez	2030614
SM 2320 B-97	10/03/2018			10/09/2018 08:36	Dale L. Simmons	2030608
	10/03/2018			10/09/2018 08:47	Dale L. Simmons	2030614
	10/03/2018			10/09/2018 08:57	Dale L. Simmons	2030618
	10/03/2018			10/09/2018 09:08	Dale L. Simmons	2030611
	10/03/2018			10/16/2018 12:15	Dale L. Simmons	2030617
SM 2540 C-97	10/03/2018			10/05/2018 16:36	Yijie Li	2030608, 2030611, 2030614
SM 2540 D-97	10/03/2018			10/05/2018 16:36	Yijie Li	2030608, 2030611, 2030614, 2030617, 2030618
SM 4500 F-C-97	10/03/2018			10/09/2018 08:36	Dale L. Simmons	2030608
	10/03/2018			10/09/2018 08:47	Dale L. Simmons	2030614
	10/03/2018			10/09/2018 08:57	Dale L. Simmons	2030618
	10/03/2018			10/09/2018 09:08	Dale L. Simmons	2030611
	10/03/2018			10/16/2018 14:11	Dale L. Simmons	2030617
SM 5310 B-00	10/03/2018			10/05/2018 08:54	Megan Treadwell	2030609
	10/03/2018			10/05/2018 09:06	Megan Treadwell	2030612
	10/03/2018			10/05/2018 09:43	Megan Treadwell	2030615
	10/03/2018			10/05/2018 09:55	Megan Treadwell	2030620
	10/03/2018			10/18/2018 05:44	Megan Treadwell	2030619