

Chemical Analysis Report

SW-DIST-2017-03-03-01

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

Event Description: **SMP SCIs**
Request ID: **RQ-2017-02-27-24**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Matthew Bearden

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 29-MAR-2017 10:26



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: 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: Mill Creek

Collection Date/Time: 03/02/2017 09:20

Field ID: G2SW0022

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1877509	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P320936	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P321677	
		Sulfate	8.5		mg SO4/L	P321680	
	SM 2120 B	Color (true)	11		PCU	P320935	
	SM 2320 B-97	Total Alkalinity	182		mg CaCO3/L	P321423	
	SM 2540 C-97	TDS	246	A	mg/L	P321393	
	SM 2540 D-97	TSS	5	I	mg/L	P321406	
	SM 4500 F-C-97	Fluoride	0.37		mg F/L	P321427	
1877510	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P321055	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P321033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P321354	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P321070	
	SM 5310 B-00	Organic Carbon	2.6		mg C/L	P320954	
1877511	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.089		mg P/L	P320944	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Mill Creek

Collection Date/Time: 03/02/2017 09:20

Field ID: G2SW0022

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1877524	EPA 8321B	Sucralose**	0.18		ug/L	P320822	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P320919	
		Fenuron	0.0080	U	ug/L	P320919	
		Imidacloprid	0.0040	U	ug/L	P320919	
		Linuron	0.0040	U	ug/L	P320919	
		Acetaminophen**	0.0040	U	ug/L	P320919	
		Carbamazepine**	4.0E-04	U	ug/L	P320919	
		Primidone**	0.0080	U	ug/L	P320919	
		Fluridone**	4.0E-04	U	ug/L	P320919	
							MS

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P320936

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P321677

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321680

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321055

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321033

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321354

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321070

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320944

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

Reference Method: EPA 8321B
Batch ID: P320822

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P320935

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P321423

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
 Batch ID: P321393

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
 Batch ID: P321406

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
 Batch ID: P321427

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
 Batch ID: P320954

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

Reference Method: USGS O-2060-01
 Batch ID: P320919

Component	Result	Code	Units
Acetaminophen	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0080	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P321677

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P321680

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321055

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321033

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321354

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	108		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321070

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320944

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

Reference Method: EPA 8321B
Batch ID: P320822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	92.7		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P321423

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P321427

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P320954

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P320919

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	119		P	40 - 140
Carbamazepine	122		P	40 - 140
Diuron	84.4		P	40 - 140
Fenuron	97.6		P	40 - 140
Fluridone	72.0		P	40 - 140
Imidacloprid	84.8		P	40 - 160
Linuron	132		P	40 - 140
Primidone	112		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P321677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877352	Chloride	104		P	90 - 110
1877490	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P321680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877352	Sulfate	101		P	90 - 110
1877490	Sulfate	92.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P321055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877458	Ammonia-N	101	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P321033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877510	Kjeldahl Nitrogen	94.2	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P321354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877491	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P321070

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877635	Total-P	98.6	96.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877631	O-Phosphate-P	95.9	96.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P320822

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877330	Sucralose	86.9	80.3	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P321427

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877670	Fluoride	100	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P320954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877390	Organic Carbon	99.4	99.0	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P320919

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877342	Acetaminophen	61.2	61.2	P/P	40 - 140
1877342	Carbamazepine	49.3	56.5	P/P	40 - 140
1877342	Diuron	40.2	40.6	P/P	40 - 140
1877342	Fenuron	50.8	52.0	P/P	40 - 140
1877342	Fluridone	31.7	30.9	F/F	40 - 140
1877342	Imidacloprid	77.8	83.4	P/P	40 - 160
1877342	Linuron	54.0	67.6	P/P	40 - 140
1877342	Primidone	60.4	72.4	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P320936

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877455	Turbidity	11.0	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877490	Chloride	1.24	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877458	Ammonia-N	0.519	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877510	Kjeldahl Nitrogen	7.05	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877491	NO2NO3-N	0.355	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321070

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877635	Total-P	2.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877631	O-Phosphate-P	0.737	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P320822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877330	Sucralose	7.22	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P320935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877456	Color (true)	6.04	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P321423

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877670	Total Alkalinity	0.0681	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P321393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877509	TDS	6.11	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P321427

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877670	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P320954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877390	Organic Carbon	0.388	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P320919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877342	Acetaminophen	0.0	Spike	P	0 - 30
1877342	Carbamazepine	13.3	Spike	P	0 - 30
1877342	Diuron	0.881	Spike	P	0 - 30
1877342	Fenuron	2.33	Spike	P	0 - 30
1877342	Fluridone	1.74	Spike	P	0 - 30
1877342	Imidacloprid	5.74	Spike	P	0 - 30
1877342	Linuron	22.4	Spike	P	0 - 30
1877342	Primidone	18.1	Spike	P	0 - 30

* 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: 1877524
 Field Sample ID: G2SW0022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	118	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	98.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	97.0	P	40 - 160
USGS O-2060-01	Diuron-d6	76.2	P	40 - 150
USGS O-2060-01	Primidone-d5	109	P	40 - 150

Quality Assurance Report Calibration Verification

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A74881
Included Lab Sample IDs: 1877509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.5	98.6	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A74882
Included Lab Sample IDs: 1877509

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A74887
Included Lab Sample IDs: 1877511

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	99.4	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A74891
Included Lab Sample IDs: 1877510

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

Reference Method: EPA 8321B
Run ID: A74898
Included Lab Sample IDs: 1877524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	82.7	114	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A74921
Included Lab Sample IDs: 1877510

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.3	96.8	P/P	90 - 110

Reference Method: USGS O-2060-01
Run ID: A74928
Included Lab Sample IDs: 1877524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	102	125	P/P	60 - 150
Carbamazepine	108	124	P/P	60 - 150
Diuron	114	122	P/P	60 - 150
Fenuron	107	115	P/P	60 - 150
Fluridone	104	108	P/P	60 - 150
Imidacloprid	86.8	100	P/P	60 - 150
Linuron	123	138	P/P	60 - 150
Primidone	116	116	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A74956

Included Lab Sample IDs: 1877510

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A74996

Included Lab Sample IDs: 1877510

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.4	96.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75018

Included Lab Sample IDs: 1877510

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

Reference Method: SM 2320 B-97

Run ID: A75050

Included Lab Sample IDs: 1877509

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

Reference Method: SM 4500 F-C-97

Run ID: A75050

Included Lab Sample IDs: 1877509

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75123

Included Lab Sample IDs: 1877509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	105	P/P	90 - 110
Sulfate	102	101	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				11.0	
EPA 300.0 Rev. 2.1	Chloride	104	100	104	1.24	
	Sulfate	102	92.9	101		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 350.1 Rev. 2.0	Ammonia-N	101	101	99.8			0.519
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	94.2	103			7.05
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	108	103	102			0.355
EPA 365.1 Rev. 2.0	Total-P	98.8	98.6	96.2			2.21
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	95.9	96.7			0.737
EPA 8321B	Sucralose	92.7	86.9	80.3			7.22
SM 2120 B	Color (true)					6.04	
SM 2320 B-97	Total Alkalinity	104				0.0681	
SM 2540 C-97	TDS					6.11	
SM 4500 F-C-97	Fluoride	99.0	100	100			0.0
SM 5310 B-00	Organic Carbon	100	99.4	99.0			0.388
USGS O-2060-01	Acetaminophen	119	61.2	61.2			0.0
	Carbamazepine	122	49.3	56.5			13.3
	Diuron	84.4	40.2	40.6			0.881
	Fenuron	97.6	50.8	52.0			2.33
	Fluridone	72.0	31.7	30.9			1.74
	Imidacloprid	84.8	77.8	83.4			5.74
	Linuron	132	54.0	67.6			22.4
	Primidone	112	60.4	72.4			18.1

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1877509
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1877509
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1877509
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1877510
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1877510
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1877510
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1877510
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1877511
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1877524
SM 2120 B / E31780	True Color measured at 450 nm	1877509
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1877509
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1877509
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1877509
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1877509
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1877510
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1877524

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/03/2017			03/03/2017 14:15	Sima Feizi	1877509
EPA 300.0 Rev. 2.1	03/03/2017			03/16/2017	Elisa J Lutz	1877509
EPA 350.1 Rev. 2.0	03/03/2017			03/06/2017	Sofia Elnemr	1877510
EPA 351.2 Rev. 2.0	03/03/2017	03/07/2017	Adrian Shelby	03/08/2017	Joseph Suarez	1877510
EPA 353.2 Rev. 2.0	03/03/2017			03/10/2017	Beverly Y. Sanders	1877510
EPA 365.1 Rev. 2.0	03/03/2017	03/07/2017	Adrian Shelby	03/08/2017	Lipi Saha	1877510
EPA 365.1 Rev. 2.0 dissolved	03/03/2017			03/03/2017 15:26	Julia Storbeck	1877511
EPA 8321B	03/03/2017	03/03/2017	Mohammad Ghaffari	03/03/2017	Mohammad Ghaffari	1877524
SM 2120 B	03/03/2017			03/03/2017 14:02	Julie Michelle Frank	1877509
SM 2320 B-97	03/03/2017			03/11/2017	Dale L. Simmons	1877509
SM 2540 C-97	03/03/2017			03/08/2017	Yijie Li	1877509
SM 2540 D-97	03/03/2017			03/08/2017	Yijie Li	1877509
SM 4500 F-C-97	03/03/2017			03/11/2017	Dale L. Simmons	1877509
SM 5310 B-00	03/03/2017			03/04/2017	Julie Michelle Frank	1877510
USGS O-2060-01	03/03/2017	03/06/2017	Hoor Shaik	03/07/2017	Juyoung Kim	1877524