Chemical Analysis Report

CEN-DIST-2017-04-14-02

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

Event Description: **Spruce (F)/Groover + D&B**
Request ID: **RQ-2017-04-03-67**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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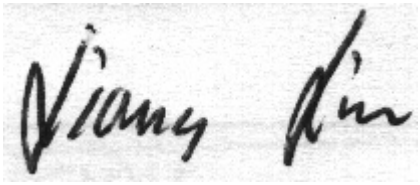
Certified by: Liang Lin, Environmental Administrator

Date Certified: 11-MAY-2017 14:09



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: Groover Branch @ Tymber Road Bridge **Collection Date/Time: 04/13/2017 11:30**

Field ID: G5CE0041 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889103	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P323514	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P324108	
		Sulfate	18		mg SO4/L	P323863	
	SM 2120 B	Color (true)	65		PCU	P323440	
	SM 2320 B-97	Total Alkalinity	139		mg CaCO3/L	P324011	
	SM 2540 C-97	TDS	311		mg/L	P323871	
	SM 2540 D-97	TSS	3	I	mg/L	P324582	
	SM 4500 F-C-97	Fluoride	0.075	I	mg F/L	P324404	
1889104	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P323431	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P323599	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P323723	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P323565	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P323467	
1889105	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.088		mg P/L	P323443	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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: Groover Branch @ Tymber Road Bridge (Duplicate) **Collection Date/Time: 04/13/2017 11:35**

Field ID: G5CE0041_D Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889106	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P323514	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P324108	
		Sulfate	18		mg SO4/L	P323863	
	SM 2120 B	Color (true)	62		PCU	P323440	
	SM 2320 B-97	Total Alkalinity	138		mg CaCO3/L	P324011	
	SM 2540 C-97	TDS	302		mg/L	P323871	
	SM 2540 D-97	TSS	4	I	mg/L	P324582	
	SM 4500 F-C-97	Fluoride	0.075	I	mg F/L	P324404	
1889107	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P323431	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P323599	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P323723	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P323565	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P323467	
1889108	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.085		mg P/L	P323443	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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: Spruce Creek @ Spruce Creek Blvd **Collection Date/Time: 04/13/2017 12:25**

Field ID: G5CE0083 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889097	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P323514	
	EPA 300.0 Rev. 2.1	Chloride	57		mg Cl/L	P324108	
		Sulfate	6.4		mg SO4/L	P323863	
	SM 2120 B	Color (true)	36	A	PCU	P323440	
	SM 2320 B-97	Total Alkalinity	282		mg CaCO3/L	P324011	
	SM 2540 C-97	TDS	406		mg/L	P323871	
	SM 2540 D-97	TSS	3	I	mg/L	P324582	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P324404	
1889098	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P323431	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P323599	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P323723	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P323562	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P323467	
1889099	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P323443	
1889159	EPA 8321B	Sucralose**	0.15		ug/L	P323416	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323392	
		Diuron	0.0040	U	ug/L	P323392	MS
		Fenuron	0.0080	U	ug/L	P323392	
		Imidacloprid	0.0040	U	ug/L	P323392	
		Bentazon	0.31		ug/L	P323392	
		Linuron	0.0040	U	ug/L	P323392	MS, RPD
		Acetaminophen**	0.010	U	ug/L	P323392	
		MCPP	0.0040	U	ug/L	P323392	
		Carbamazepine**	4.0E-04	U	ug/L	P323392	
		Triclopyr**	0.010	U	ug/L	P323392	
		Primidone**	0.0080	U	ug/L	P323392	
		Fluridone**	0.0093		ug/L	P323392	
1889160	EPA 200.7 Rev. 4.4	Calcium	110		mg/L	P323764	
		Iron	440		ug/L	P323764	
		Magnesium	6.45		mg/L	P323764	
		Potassium	1.5		mg/L	P323764	
		Sodium	33.5		mg/L	P323764	
		Zinc	5.0	U	ug/L	P323764	
	EPA 200.8 Rev. 5.4	Arsenic	0.36		ug/L	P323764	
		Cadmium	0.020	U	ug/L	P323764	
		Chromium	0.40	U	ug/L	P323764	
		Copper	0.20	U	ug/L	P323764	
		Lead	0.050	U	ug/L	P323764	
		Nickel	0.20	U	ug/L	P323764	
		Silver	0.010	U	ug/L	P323764	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.
USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.
USGS O-2060-01: MS accuracy and precision for fluridone could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Field Blank **Collection Date/Time: 04/13/2017 12:35**

Field ID: Field Blank Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889100	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P323514	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P324108	
		Sulfate	0.20	U	mg SO4/L	P323863	
	SM 2120 B	Color (true)	2.5	U	PCU	P323440	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P324011	
	SM 2540 C-97	TDS	15	U	mg/L	P323870	
	SM 2540 D-97	TSS	2	U	mg/L	P324581	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P324404	
1889101	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323431	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P323599	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323723	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P323562	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P323467	
1889102	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323443	
1889161	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P323764	
		Iron	30	U	ug/L	P323764	
		Magnesium	0.040	U	mg/L	P323764	
		Potassium	0.30	U	mg/L	P323764	
		Sodium	0.50	U	mg/L	P323764	
		Zinc	5.0	U	ug/L	P323764	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P323764	
		Cadmium	0.020	U	ug/L	P323764	
		Chromium	0.40	U	ug/L	P323764	
		Copper	0.28	I	ug/L	P323764	
		Lead	0.050	U	ug/L	P323764	
		Nickel	0.20	U	ug/L	P323764	
		Silver	0.010	U	ug/L	P323764	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.
EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 04/21/2017.
EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 04/24/2017.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323514

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P323764

Component	Result	Code	Units
Calcium	0.075	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P323764

Component	Result	Code	Units
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 200.8 Rev. 5.4
Batch ID: P323764

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 300.0 Rev. 2.1
Batch ID: P323863

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324108

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323431

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323599

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323723

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323562

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323562

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323565

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323443

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

Reference Method: EPA 8321B
Batch ID: P323416

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P323440

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P324011

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

Reference Method: SM 2540 C-97
Batch ID: P323870

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P323871

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324581

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P324582

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P324404

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P323467

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

Reference Method: USGS O-2060-01
Batch ID: P323392

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.010	U	ug/L
Bentazon	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
MCPP	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P323764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	107		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	103		P	85 - 115
Sodium	103		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P323764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	96.3		P	85 - 115
Cadmium	97.4		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P323764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	95.8		P	85 - 115
Copper	90.2		P	85 - 115
Lead	93.5		P	85 - 115
Nickel	90.6		P	85 - 115
Silver	95.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323863

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324108

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323431

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: P323599

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: P323723

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323562

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323565

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323443

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323443

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.2		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P323416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	115		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P324011

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P324404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P323467

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

Reference Method: USGS O-2060-01
Batch ID: P323392

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	83.2		P	40 - 140
Acetaminophen	76.8		P	40 - 140
Bentazon	134		P	40 - 140
Carbamazepine	97.2		P	40 - 140
Diuron	81.2		P	40 - 140
Fenuron	87.6		P	40 - 140
Fluridone	103		P	40 - 140
Imidacloprid	67.6		P	40 - 160
Linuron	52.8		P	40 - 140
MCPP	98.0		P	40 - 140
Primidone	61.2		P	40 - 140
Triclopyr	100		P	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P323764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888524	Calcium	107		P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P323764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888524	Iron	110		P	80 - 120
1888524	Magnesium	107		P	80 - 120
1888524	Potassium	104		P	80 - 120
1888524	Sodium	104		P	80 - 120
1888524	Zinc	105		P	80 - 120
1888996	Calcium	105	108	P/P	80 - 120
1888996	Iron	104	107	P/P	80 - 120
1888996	Magnesium	105	108	P/P	80 - 120
1888996	Potassium	105	106	P/P	80 - 120
1888996	Sodium	101	102	P/P	80 - 120
1888996	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P323764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888524	Arsenic	97.4		P	80 - 120
1888524	Cadmium	97.7		P	80 - 120
1888524	Chromium	95.2		P	80 - 120
1888524	Copper	90.1		P	80 - 120
1888524	Lead	94.5		P	80 - 120
1888524	Nickel	90.8		P	80 - 120
1888524	Silver	95.1		P	80 - 120
1888996	Arsenic	97.5	95.5	P/P	80 - 120
1888996	Cadmium	101	98.3	P/P	80 - 120
1888996	Chromium	99.4	99.1	P/P	80 - 120
1888996	Copper	100	101	P/P	80 - 120
1888996	Lead	96.4	95.6	P/P	80 - 120
1888996	Nickel	101	101	P/P	80 - 120
1888996	Silver	97.5	96.3	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323863

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888893	Sulfate	107		P	90 - 110
1889031	Sulfate	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324108

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888893	Chloride	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889098	Ammonia-N	98.3	101	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323599

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889168	Kjeldahl Nitrogen	98.3	97.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888759	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889098	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889258	Total-P	99.5	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889086	O-Phosphate-P	96.0	96.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P323416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888994	Sucralose	103	101	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P324404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889030	Fluoride	101	102	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P323467

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888966	Organic Carbon	97.8	98.6	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P323392

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888781	2,4-D	131	127	P/P	40 - 140
1888781	Acetaminophen	79.6	66.8	P/P	40 - 140
1888781	Carbamazepine	47.2	52.8	P/P	40 - 140
1888781	Diuron	40.8	37.2	P/F	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P323392

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888781	Fenuron	42.0	41.2	P/P	40 - 140
1888781	Imidacloprid	67.3	72.9	P/P	40 - 160
1888781	Linuron	24.8	33.6	F/F	40 - 140
1888781	MCPP	137	123	P/P	40 - 140
1888781	Primidone	53.6	58.0	P/P	40 - 140
1888781	Triclopyr	106	74.8	P/P	40 - 140

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323514

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889031	Turbidity	2.83	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P323764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888996	Calcium	1.90	Spike	P	0 - 20
1888996	Iron	2.43	Spike	P	0 - 20
1888996	Magnesium	2.31	Spike	P	0 - 20
1888996	Potassium	1.45	Spike	P	0 - 20
1888996	Sodium	0.704	Spike	P	0 - 20
1888996	Zinc	0.391	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P323764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888996	Arsenic	2.06	Spike	P	0 - 20
1888996	Cadmium	2.85	Spike	P	0 - 20
1888996	Chromium	0.278	Spike	P	0 - 20
1888996	Copper	0.620	Spike	P	0 - 20
1888996	Lead	0.918	Spike	P	0 - 20
1888996	Nickel	0.664	Spike	P	0 - 20
1888996	Silver	1.20	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323863

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889031	Sulfate	0.451	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889031	Chloride	0.258	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889098	Ammonia-N	1.90	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889168	Kjeldahl Nitrogen	0.995	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888759	NO2NO3-N	1.47	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889098	Total-P	0.442	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889258	Total-P	2.48	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889086	O-Phosphate-P	0.184	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P323416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888994	Sucralose	1.96	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2120 B
Batch ID: P323440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889097	Color (true)	7.27	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P324011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889036	Total Alkalinity	0.750	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P323870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889031	TDS	7.63	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P323871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889036	TDS	4.95	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P324404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889030	Fluoride	1.03	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P323467

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888966	Organic Carbon	0.687	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P323392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888781	2,4-D	2.50	Spike	P	0 - 30
1888781	Acetaminophen	17.5	Spike	P	0 - 30
1888781	Bentazon	3.17	Spike	P	0 - 30
1888781	Carbamazepine	10.9	Spike	P	0 - 30
1888781	Diuron	9.23	Spike	P	0 - 30
1888781	Fenuron	1.92	Spike	P	0 - 30
1888781	Imidacloprid	6.90	Spike	P	0 - 30
1888781	Linuron	30.0	Spike	F	0 - 30
1888781	MCPP	10.8	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: USGS O-2060-01
Batch ID: P323392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888781	Primidone	7.89	Spike	P	0 - 30
1888781	Triclopyr	14.0	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: 1889159
Field Sample ID: G5CE0083

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	121	P	40 - 150
USGS O-2060-01	2,4-D-d3	118	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	67.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	59.6	P	40 - 160
USGS O-2060-01	Diuron-d6	33.0	P	30 - 150
USGS O-2060-01	Primidone-d5	40.2	P	40 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75792
Included Lab Sample IDs: 1889098, 1889101, 1889104, 1889107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	103	P/P	90 - 110
Ammonia-N	102	101	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A75794
Included Lab Sample IDs: 1889097, 1889100, 1889103, 1889106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	98.8	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75795
Included Lab Sample IDs: 1889099, 1889102, 1889105, 1889108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	97.0	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A75801
Included Lab Sample IDs: 1889098, 1889101, 1889104, 1889107

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-00
Run ID: A75801
Included Lab Sample IDs: 1889098, 1889101, 1889104, 1889107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.6	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A75811
Included Lab Sample IDs: 1889159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	123	122	P/P	60 - 150

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A75823
Included Lab Sample IDs: 1889097, 1889100, 1889103, 1889106

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A75870
Included Lab Sample IDs: 1889098, 1889104, 1889107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	101	P/P	90 - 110
Total-P	101	98.4	P/P	90 - 110
Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A75884
Included Lab Sample IDs: 1889101

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A75896
Included Lab Sample IDs: 1889098, 1889101, 1889104, 1889107

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A75902
Included Lab Sample IDs: 1889098, 1889101, 1889104, 1889107

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A75903
Included Lab Sample IDs: 1889097, 1889100, 1889103, 1889106

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A75903
Included Lab Sample IDs: 1889097, 1889100, 1889103, 1889106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	108	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A75972
Included Lab Sample IDs: 1889160, 1889161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	93.6	90.9	P/P	90 - 110
Arsenic	93.8	93.4	P/P	90 - 110
Cadmium	95.1	96.7	P/P	90 - 110
Cadmium	95.7	95.1	P/P	90 - 110
Chromium	95.3	96.0	P/P	90 - 110
Chromium	97.1	96.2	P/P	90 - 110
Copper	91.0	90.9	P/P	90 - 110
Lead	94.4	94.6	P/P	90 - 110
Lead	94.9	92.9	P/P	90 - 110
Nickel	90.8	90.3	P/P	90 - 110
Silver	93.8	93.2	P/P	90 - 110
Silver	94.0	93.8	P/P	90 - 110

Reference Method: USGS O-2060-01
Run ID: A75985
Included Lab Sample IDs: 1889159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.6	90.6	P/P	50 - 150
Bentazon	85.4	79.0	P/P	50 - 150
MCPP	104	103	P/P	50 - 150
Triclopyr	79.8	80.6	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A75988
Included Lab Sample IDs: 1889160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	98.5	99.2	P/P	90 - 110
Nickel	98.3	98.9	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A75995
Included Lab Sample IDs: 1889097, 1889100, 1889103, 1889106

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A75999
Included Lab Sample IDs: 1889097, 1889100, 1889103, 1889106

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

Quality Assurance Report
Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A76024
Included Lab Sample IDs: 1889159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	149	132	P/P	60 - 150
Carbamazepine	136	128	P/P	60 - 150
Diuron	102	113	P/P	60 - 150
Fenuron	125	121	P/P	60 - 150
Fluridone	131	141	P/P	60 - 150
Imidacloprid	100	108	P/P	60 - 150
Linuron	66.8	62.8	P/P	60 - 150
Primidone	98.0	96.8	P/P	60 - 150

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A76050
Included Lab Sample IDs: 1889160, 1889161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	99.4	P/P	90 - 110
Calcium	102	104	P/P	90 - 110
Iron	102	106	P/P	90 - 110
Iron	103	99.6	P/P	90 - 110
Magnesium	102	99.7	P/P	90 - 110
Magnesium	102	106	P/P	90 - 110
Potassium	100	104	P/P	90 - 110
Potassium	98.7	98.5	P/P	90 - 110
Sodium	101	102	P/P	90 - 110
Sodium	99.2	98.0	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A76126
Included Lab Sample IDs: 1889097, 1889100, 1889103, 1889106

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A76307
Included Lab Sample IDs: 1889160, 1889161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	101	102	P/P	90 - 110
Zinc	101	102	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	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				2.83	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision		
						LCS	SMP	MS
EPA 200.7 Rev. 4.4	Calcium	108	107	105	108			1.90
	Iron	107	110	104	107			2.43
	Magnesium	108	107	105	108			2.31
	Potassium	103	104	105	106			1.45
	Sodium	103	104	101	102			0.704
	Zinc	102	105	101	102			0.391
EPA 200.8 Rev. 5.4	Arsenic	96.3	97.4	97.5	95.5			2.06
	Cadmium	97.4	97.7	101	98.3			2.85
	Chromium	95.8	95.2	99.4	99.1			0.278
	Copper	90.2	100	101	90.1			0.620
	Lead	93.5	94.5	96.4	95.6			0.918
	Nickel	90.6	101	101	90.8			0.664
	Silver	95.6	95.1	97.5	96.3			1.20
EPA 300.0 Rev. 2.1	Chloride	102	102				0.258	
	Sulfate	103	107	107			0.451	
EPA 350.1 Rev. 2.0	Ammonia-N	101	98.3	101				1.90
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	98.3	97.3				0.995
EPA 353.2 Rev. 2.0	NO2NO3-N	101	103	102				1.47
EPA 365.1 Rev. 2.0	Total-P	100	103	102				0.442
	Total-P	97.2	99.5	96.9				2.48
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.2	96.0	96.2				0.184
EPA 8321B	Sucralose	115	103	101				1.96
SM 2120 B	Color (true)						7.27	
SM 2320 B-97	Total Alkalinity	102					0.750	
SM 2540 C-97	TDS						7.63	
	TDS						4.95	
SM 4500 F-C-97	Fluoride	96.2	101	102				1.03
SM 5310 B-00	Organic Carbon	100	97.8	98.6				0.687
USGS O-2060-01	2,4-D	83.2	131	127				2.50
	Acetaminophen	76.8	79.6	66.8				17.5
	Bentazon	134						3.17
	Carbamazepine	97.2	47.2	52.8				10.9
	Diuron	81.2	40.8	37.2				9.23
	Fenuron	87.6	42.0	41.2				1.92
	Fluridone	103						
	Imidacloprid	67.6	67.3	72.9				6.90
	Linuron	52.8	24.8	33.6				30.0
	MCPP	98.0	137	123				10.8
	Primidone	61.2	53.6	58.0				7.89
	Triclopyr	100	106	74.8				14.0

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1889097, 1889100, 1889103, 1889106
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1889160, 1889161
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1889160, 1889161
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1889097, 1889100, 1889103, 1889106
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1889097, 1889100, 1889103, 1889106

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1889098, 1889101, 1889104, 1889107
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1889098, 1889101, 1889104, 1889107
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1889098, 1889101, 1889104, 1889107
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1889098, 1889101, 1889104, 1889107
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1889099, 1889102, 1889105, 1889108
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1889159
SM 2120 B / E31780	True Color measured at 450 nm	1889097, 1889100, 1889103, 1889106
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1889097, 1889100, 1889103, 1889106
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1889097, 1889100, 1889103, 1889106
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1889097, 1889100, 1889103, 1889106
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1889097, 1889100, 1889103, 1889106
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1889098, 1889101, 1889104, 1889107
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1889159
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1889159

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	04/14/2017			04/14/2017 16:52	Blanca Fach	1889097, 1889100, 1889103, 1889106
EPA 200.7 Rev. 4.4	04/14/2017	04/20/2017	Elliott D. Healy	04/27/2017	Martin Acosta	1889160, 1889161
	04/14/2017	04/20/2017	Elliott D. Healy	05/09/2017	Martin Acosta	1889161
	04/14/2017	04/20/2017	Elliott D. Healy	05/10/2017	Martin Acosta	1889160
EPA 200.8 Rev. 5.4	04/14/2017	04/20/2017	Elliott D. Healy	04/24/2017	Betina Topolski	1889161
	04/14/2017	04/20/2017	Elliott D. Healy	04/25/2017	Betina Topolski	1889160
EPA 300.0 Rev. 2.1	04/14/2017			04/21/2017	Ping Hua	1889097, 1889100, 1889103, 1889106
	04/14/2017			04/27/2017	Ping Hua	1889097, 1889100, 1889103, 1889106
EPA 350.1 Rev. 2.0	04/14/2017			04/14/2017	Julie Michelle Frank	1889098, 1889101, 1889104, 1889107
EPA 351.2 Rev. 2.0	04/14/2017	04/19/2017	Adrian Shelby	04/20/2017	Joseph Suarez	1889098, 1889101, 1889104, 1889107
EPA 353.2 Rev. 2.0	04/14/2017			04/20/2017	Beverly Y. Sanders	1889098, 1889101, 1889104, 1889107
EPA 365.1 Rev. 2.0	04/14/2017	04/18/2017	Adrian Shelby	04/19/2017	Lipi Saha	1889098, 1889101, 1889104, 1889107
EPA 365.1 Rev. 2.0 dissolved	04/14/2017			04/14/2017 15:41	Anthony C. Onicha	1889099, 1889102
	04/14/2017			04/14/2017 15:42	Anthony C. Onicha	1889105
	04/14/2017			04/14/2017 15:43	Anthony C. Onicha	1889108
EPA 8321B	04/14/2017	04/16/2017	Mohammad Ghaffari	04/16/2017	Mohammad Ghaffari	1889159
SM 2120 B	04/14/2017			04/14/2017 15:56	Julia Storbeck	1889097
	04/14/2017			04/14/2017 15:57	Julia Storbeck	1889100
	04/14/2017			04/14/2017 15:58	Julia Storbeck	1889103
	04/14/2017			04/14/2017 15:59	Julia Storbeck	1889106
SM 2320 B-97	04/14/2017			04/26/2017	Dale L. Simmons	1889097, 1889100, 1889103, 1889106
SM 2540 C-97	04/14/2017			04/19/2017	Yijie Li	1889097, 1889100, 1889103, 1889106
SM 2540 D-97	04/14/2017			04/19/2017	Yijie Li	1889097, 1889100, 1889103, 1889106
SM 4500 F-C-97	04/14/2017			05/02/2017	Dale L. Simmons	1889097, 1889100, 1889103, 1889106
SM 5310 B-00	04/14/2017			04/15/2017	Julie Michelle Frank	1889098, 1889101, 1889104, 1889107
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	04/14/2017	04/16/2017	Hoor Shaik	04/26/2017	Juyoung Kim	1889159