

Chemical Analysis Report

SE-DIST-2017-03-02-01

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

Event Description: **SMP-G3 E-canals (1/5)**

Request ID: **RQ-2017-02-27-12**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

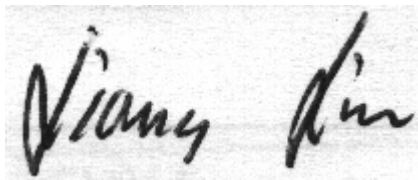
FL Dept. of Environmental Protection
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2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

For additional information please contact

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 30-MAR-2017 11:35

A handwritten signature in black ink, appearing to read "Liang Lin", 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: E-2 Canal @ Palmetto Park Rd

Collection Date/Time: 03/01/2017 11:00

Field ID: 28010589

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1877129	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P320868	
	EPA 300.0 Rev. 2.1	Chloride	63		mg Cl/L	P321781	
		Sulfate	34		mg SO4/L	P321785	MS
	SM 2120 B	Color (true)	43	A	PCU	P320875	
	SM 2320 B-97	Total Alkalinity	163		mg CaCO3/L	P321323	
	SM 2540 C-97	TDS	344	A	mg/L	P321685	
	SM 2540 D-97	TSS	3	I	mg/L	P321318	
	SM 4500 F-C-97	Fluoride	0.22		mg F/L	P321326	
1877130	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P321551	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95		mg N/L	P321438	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P321079	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P321066	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P320941	
1877131	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.066		mg P/L	P320858	
1877143	EPA 8321B	Sucralose**	0.51		ug/L	P320822	
	USGS O-2060-01	2,4-D	0.070		ug/L	P320727	
		Diuron	0.0076	I	ug/L	P320727	
		2,4-DB	0.010	U	ug/L	P320727	
		Fenuron	0.0080	U	ug/L	P320727	
		2,4,5-T	0.0040	U	ug/L	P320727	
		Acifluorfen	0.0020	U	ug/L	P320727	
		Imidacloprid	0.036		ug/L	P320727	
		Bentazon	0.24		ug/L	P320727	MS
		Linuron	0.0040	U	ug/L	P320727	
		Dicamba	0.050	U	ug/L	P320727	
		Dichlorprop	0.0040	U	ug/L	P320727	
		Dinoseb	0.020	U	ug/L	P320727	RPD
		MCPA	0.0040	U	ug/L	P320727	
		Acetaminophen**	0.0040	U	ug/L	P320727	
		MCPD	0.0040	U	ug/L	P320727	
		Picloram	0.050	U	ug/L	P320727	
		Carbamazepine**	5.2E-04	I	ug/L	P320727	
		Silvex	0.0040	U	ug/L	P320727	
		Triclopyr**	0.33		ug/L	P320727	
		Primidone**	0.0080	U	ug/L	P320727	
		Fluridone**	0.051		ug/L	P320727	

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: E-2

Collection Date/Time: 03/01/2017 11:30

Field ID: 32012012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1877123	EPA 180.1 Rev. 2.0	Turbidity	3.0	A	NTU	P320868	

Field ID: 32012012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1877123	EPA 300.0 Rev. 2.1	Chloride	69		mg Cl/L	P321781	
		Sulfate	43		mg SO4/L	P321785	MS
	SM 2120 B	Color (true)	61		PCU	P320875	
	SM 2320 B-97	Total Alkalinity	166		mg CaCO3/L	P321323	
	SM 2540 C-97	TDS	358		mg/L	P321684	
	SM 2540 D-97	TSS	6	I	mg/L	P321317	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P321326	
1877125	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P321119	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P320981	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P321079	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P321066	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P320941	
1877127	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P320858	
1877139	EPA 200.7 Rev. 4.4	Calcium	69.4		mg/L	P321249	
		Iron	84	I	ug/L	P321249	
		Magnesium	8.33		mg/L	P321249	
		Potassium	9.9		mg/L	P321249	
		Sodium	44.2		mg/L	P321249	
		Zinc	5.0	U	ug/L	P321249	
	EPA 200.8 Rev. 5.4	Arsenic	1.80		ug/L	P321249	
		Cadmium	0.020	U	ug/L	P321249	
		Chromium	0.73	I	ug/L	P321249	
		Copper	6.09		ug/L	P321249	
		Lead	0.22		ug/L	P321249	
		Nickel	0.61	I	ug/L	P321249	
		Silver	0.010	U	ug/L	P321249	

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: E-3 Canal @ Glades

Collection Date/Time: 03/01/2017 12:00

Field ID: 32013006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1877124	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P320868	
	EPA 300.0 Rev. 2.1	Chloride	58		mg Cl/L	P321781	
		Sulfate	38		mg SO4/L	P321785	MS
		Color (true)	36		PCU	P320875	
	SM 2320 B-97	Total Alkalinity	184	A	mg CaCO3/L	P321323	
	SM 2540 C-97	TDS	347		mg/L	P321684	
	SM 2540 D-97	TSS	2	U	mg/L	P321317	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P321326	
1877126	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P321119	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P321438	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P321079	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P321066	

Field ID: 32013006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1877126	SM 5310 B-00	Organic Carbon	11		mg C/L	P320941	
1877128	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P320858	
1877140	EPA 200.7 Rev. 4.4	Calcium	85.6		mg/L	P321249	
		Iron	30	U	ug/L	P321249	
		Magnesium	5.80		mg/L	P321249	
		Potassium	6.1		mg/L	P321249	
		Sodium	37.2		mg/L	P321249	
		Zinc	5.0	U	ug/L	P321249	
	EPA 200.8 Rev. 5.4	Arsenic	1.45		ug/L	P321249	
		Cadmium	0.020	U	ug/L	P321249	
		Chromium	0.40	U	ug/L	P321249	
		Copper	2.28		ug/L	P321249	
		Lead	0.050	U	ug/L	P321249	
		Nickel	0.32	I	ug/L	P321249	
		Silver	0.010	U	ug/L	P321249	

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: P320868

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P321249

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 200.8 Rev. 5.4

Batch ID: P321249

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: P321781

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321785

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321119

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321551

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320981

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321438

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321079

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321066

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320858

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P320822

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P320875

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P321323

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

Reference Method: SM 2540 C-97
Batch ID: P321684

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P321685

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P321317

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P321318

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P321326

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P320941

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

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
 Batch ID: P320727

Component	Result	Code	Units
2,4,5-T	0.0020	U	ug/L
2,4-D	0.0040	U	ug/L
2,4-DB	0.0020	U	ug/L
Acetaminophen	0.0040	U	ug/L
Acifluorfen	0.0020	U	ug/L
Bentazon	0.0020	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Dicamba	0.020	U	ug/L
Dichlorprop	0.0020	U	ug/L
Dinoseb	0.020	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
MCPA	0.0040	U	ug/L
MCPP	0.0040	U	ug/L
Picloram	0.050	U	ug/L
Primidone	0.0080	U	ug/L
Silvex	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P321249

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	105		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	101		P	85 - 115
Sodium	102		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P321249

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	101		P	85 - 115
Copper	101		P	85 - 115
Lead	92.4		P	85 - 115
Nickel	103		P	85 - 115
Silver	96.6		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321781

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321785

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	93.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321119

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321551

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320981

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321438

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321079

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321066

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.4		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

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: P321323

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

Reference Method: SM 4500 F-C-97
 Batch ID: P321326

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.4		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P320941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.7		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P320727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	89.2		P	40 - 140
2,4-D	98.0		P	40 - 140
2,4-DB	70.4		P	40 - 140
Acetaminophen	122		P	40 - 140
Acifluorfen	102		P	40 - 140
Bentazon	103		P	40 - 140
Carbamazepine	99.2		P	40 - 140
Dicamba	97.6		P	40 - 140
Dichlorprop	104		P	40 - 140
Dinoseb	96.8		P	40 - 140
Diuron	89.6		P	40 - 140
Fenuron	96.0		P	40 - 140
Fluridone	90.8		P	40 - 140
Imidacloprid	80.4		P	40 - 160
Linuron	94.4		P	40 - 140
MCPA	94.8		P	40 - 140
MCPP	98.4		P	40 - 140
Picloram	111		P	40 - 140
Primidone	77.6		P	40 - 140
Silvex	86.0		P	40 - 140
Triclopyr	98.4		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P321249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877139	Calcium	105		P	80 - 120
1877139	Iron	107		P	80 - 120
1877139	Magnesium	105		P	80 - 120
1877139	Potassium	105		P	80 - 120
1877139	Sodium	104		P	80 - 120
1877139	Zinc	101		P	80 - 120
1877187	Calcium	103		P	80 - 120
1877187	Iron	109	107	P/P	80 - 120
1877187	Magnesium	105		P	80 - 120
1877187	Potassium	102		P	80 - 120
1877187	Sodium	103		P	80 - 120
1877187	Zinc	101	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P321249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877139	Arsenic	108		P	80 - 120
1877139	Cadmium	104		P	80 - 120
1877139	Chromium	101		P	80 - 120
1877139	Copper	103		P	80 - 120
1877139	Lead	95.1		P	80 - 120
1877139	Nickel	103		P	80 - 120
1877139	Silver	94.4		P	80 - 120
1877187	Arsenic	110	107	P/P	80 - 120
1877187	Cadmium	103	106	P/P	80 - 120
1877187	Chromium	104	102	P/P	80 - 120
1877187	Copper	105	103	P/P	80 - 120
1877187	Lead	97.2	94.9	P/P	80 - 120
1877187	Nickel	104	103	P/P	80 - 120
1877187	Silver	97.1	98.1	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877690	Chloride	95.3		P	90 - 110
1877768	Chloride	96.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321785

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877690	Sulfate	98.1		P	90 - 110
1877768	Sulfate	84.2		F	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877086	Ammonia-N	98.9	98.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1876861	Ammonia-N	99.7	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877087	Kjeldahl Nitrogen	95.8	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877159	Kjeldahl Nitrogen	104	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877086	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877130	Total-P	102	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877060	O-Phosphate-P	94.8	96.1	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: P321326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877124	Fluoride	103	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P320941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1877085	Organic Carbon	98.3	96.6	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P320727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1876081	2,4,5-T	98.8	106	P/P	40 - 140
1876081	2,4-D	113	134	P/P	40 - 140
1876081	2,4-DB	66.4	78.4	P/P	40 - 140
1876081	Acetaminophen	49.6	53.6	P/P	40 - 140
1876081	Acifluorfen	99.2	123	P/P	40 - 140
1876081	Bentazon	203	222	F/F	40 - 140
1876081	Carbamazepine	44.4	54.4	P/P	40 - 140
1876081	Dicamba	70.0	87.2	P/P	40 - 140
1876081	Dichlorprop	98.8	117	P/P	40 - 140
1876081	Dinoseb	71.6	119	P/P	40 - 140
1876081	Diuron	42.4	45.2	P/P	40 - 140
1876081	Fenuron	40.4	47.6	P/P	40 - 140
1876081	Fluridone	52.1	55.3	P/P	40 - 140
1876081	Imidacloprid	75.6	82.4	P/P	40 - 160
1876081	Linuron	74.0	68.0	P/P	40 - 140
1876081	MCPA	107	116	P/P	40 - 140
1876081	MCPP	116	124	P/P	40 - 140
1876081	Picloram	64.0	63.2	P/P	40 - 140
1876081	Primidone	42.4	41.6	P/P	40 - 140
1876081	Silvex	115	138	P/P	40 - 140
1876081	Triclopyr	101	111	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P320868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877123	Turbidity	2.34	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P321249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877187	Calcium	0.229	Spike	P	0 - 20
1877187	Iron	1.96	Spike	P	0 - 20
1877187	Magnesium	1.59	Spike	P	0 - 20
1877187	Potassium	0.442	Spike	P	0 - 20
1877187	Sodium	0.0256	Spike	P	0 - 20
1877187	Zinc	0.253	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P321249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877187	Arsenic	2.31	Spike	P	0 - 20
1877187	Cadmium	3.42	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P321249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877187	Chromium	1.33	Spike	P	0 - 20
1877187	Copper	2.13	Spike	P	0 - 20
1877187	Lead	2.43	Spike	P	0 - 20
1877187	Nickel	1.11	Spike	P	0 - 20
1877187	Silver	0.988	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877690	Chloride	0.340	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877690	Sulfate	0.398	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877086	Ammonia-N	0.442	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1876861	Ammonia-N	0.118	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877087	Kjeldahl Nitrogen	1.96	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877159	Kjeldahl Nitrogen	1.61	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877086	NO2NO3-N	0.939	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877130	Total-P	1.60	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877060	O-Phosphate-P	1.36	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: P320875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877129	Color (true)	2.42	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P321323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877124	Total Alkalinity	0.194	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P321684

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877081	TDS	0.763	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P321685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877129	TDS	0.871	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P321326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877124	Fluoride	1.95	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P320941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1877085	Organic Carbon	1.01	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P320727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1876081	2,4,5-T	7.03	Spike	P	0 - 30
1876081	2,4-D	8.93	Spike	P	0 - 30
1876081	2,4-DB	16.6	Spike	P	0 - 30
1876081	Acetaminophen	7.75	Spike	P	0 - 30
1876081	Acifluorfen	21.3	Spike	P	0 - 30
1876081	Bentazon	6.44	Spike	P	0 - 30
1876081	Carbamazepine	20.2	Spike	P	0 - 30
1876081	Dicamba	21.9	Spike	P	0 - 30
1876081	Dichlorprop	16.7	Spike	P	0 - 30
1876081	Dinoseb	49.6	Spike	F	0 - 30
1876081	Diuron	6.39	Spike	P	0 - 30
1876081	Fenuron	16.4	Spike	P	0 - 30
1876081	Fluridone	5.67	Spike	P	0 - 30
1876081	Imidacloprid	8.61	Spike	P	0 - 30
1876081	Linuron	8.45	Spike	P	0 - 30
1876081	MCPA	7.91	Spike	P	0 - 30
1876081	MCP	6.32	Spike	P	0 - 30
1876081	Picloram	1.26	Spike	P	0 - 30
1876081	Primidone	1.90	Spike	P	0 - 30
1876081	Silvex	18.1	Spike	P	0 - 30
1876081	Triclopyr	9.42	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: 1877143
Field Sample ID: 28010589

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	88.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	115	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	75.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	57.2	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1877143
Field Sample ID: 28010589

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Diuron-d6	45.4	P	40 - 150
USGS O-2060-01	Primidone-d5	59.4	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A74855
Included Lab Sample IDs: 1877127, 1877128, 1877131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	99.3	P/P	90 - 110
O-Phosphate-P	99.3	98.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A74856
Included Lab Sample IDs: 1877123, 1877124, 1877129

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

Reference Method: SM 2120 B
Run ID: A74857
Included Lab Sample IDs: 1877123, 1877124, 1877129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	94.0	94.6	P/P	85 - 115

Reference Method: SM 5310 B-00
Run ID: A74885
Included Lab Sample IDs: 1877125, 1877126, 1877130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.7	98.2	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A74898
Included Lab Sample IDs: 1877143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	89.6	108	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A74933
Included Lab Sample IDs: 1877125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	95.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A74934

Included Lab Sample IDs: 1877125, 1877126, 1877130

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A74946

Included Lab Sample IDs: 1877125, 1877126

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

Reference Method: USGS O-2060-01

Run ID: A74966

Included Lab Sample IDs: 1877143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	97.0	96.0	P/P	50 - 150
2,4-D	126	128	P/P	50 - 150
2,4-DB	107	109	P/P	50 - 150
Acifluorfen	87.8	106	P/P	50 - 150
Bentazon	112	112	P/P	50 - 150
Dicamba	97.4	136	P/P	50 - 150
Dichlorprop	120	121	P/P	50 - 150
Dinoseb	128	134	P/P	50 - 150
MCPA	116	115	P/P	50 - 150
MCPP	119	122	P/P	50 - 150
Picloram	126	94.0	P/P	50 - 150
Silvex	89.2	88.8	P/P	50 - 150
Triclopyr	119	95.4	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A74987

Included Lab Sample IDs: 1877126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.0	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A74995

Included Lab Sample IDs: 1877143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	141	126	P/P	60 - 150
Carbamazepine	122	116	P/P	60 - 150
Diuron	116	136	P/P	60 - 150
Fenuron	118	118	P/P	60 - 150
Fluridone	110	115	P/P	60 - 150
Imidacloprid	98.4	98.4	P/P	60 - 150
Linuron	149	142	P/P	60 - 150
Primidone	92.4	94.0	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A74996

Included Lab Sample IDs: 1877125, 1877130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.6	98.9	P/P	90 - 110
Total-P	98.9	97.4	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A75009

Included Lab Sample IDs: 1877123, 1877124, 1877129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110
Total Alkalinity	104	106	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A75009

Included Lab Sample IDs: 1877123, 1877124, 1877129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.0	P/P	90 - 110
Fluoride	99.0	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A75069

Included Lab Sample IDs: 1877139, 1877140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	102	P/P	90 - 110
Cadmium	100	98.5	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Copper	102	103	P/P	90 - 110
Lead	91.3	90.9	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Silver	95.3	94.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A75083

Included Lab Sample IDs: 1877139, 1877140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	103	P/P	90 - 110
Calcium	103	102	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Iron	104	103	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Potassium	102	103	P/P	90 - 110
Potassium	103	103	P/P	90 - 110
Sodium	101	103	P/P	90 - 110
Sodium	103	102	P/P	90 - 110
Zinc	102	102	P/P	90 - 110
Zinc	102	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A75088
 Included Lab Sample IDs: 1877126, 1877130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A75099
 Included Lab Sample IDs: 1877130

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

Reference Method: EPA 300.0 Rev. 2.1
 Run ID: A75123
 Included Lab Sample IDs: 1877123, 1877124, 1877129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	98.9	99.6	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						2.34	
EPA 200.7 Rev. 4.4	Calcium	104	105	103				0.229
	Iron	105	107	109	107			1.96
	Magnesium	103	105	105				1.59
	Potassium	101	105	102				0.442
	Sodium	102	104	103				0.0256
	Zinc	101	101	101	100			0.253
EPA 200.8 Rev. 5.4	Arsenic	102	108	110	107			2.31
	Cadmium	101	104	103	106			3.42
	Chromium	101	101	104	102			1.33
	Copper	101	103	105	103			2.13
	Lead	92.4	95.1	97.2	94.9			2.43
	Nickel	103	103	104	103			1.11
	Silver	96.6	94.4	97.1	98.1			0.988
EPA 300.0 Rev. 2.1	Chloride	99.0	95.3	96.2			0.340	
	Sulfate	93.9	98.1	84.2			0.398	
EPA 350.1 Rev. 2.0	Ammonia-N	105	98.9	98.3				0.442
	Ammonia-N	102	99.7	99.6				0.118
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	95.8	98.8				1.96
	Kjeldahl Nitrogen	110	104	107				1.61
EPA 353.2 Rev. 2.0	NO2NO3-N	102	101	102				0.939
EPA 365.1 Rev. 2.0	Total-P	96.8	102	99.9				1.60
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.4	94.8	96.1				1.36
EPA 8321B	Sucralose	92.7	86.9	80.3				7.22

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 2120 B	Color (true)					2.42	
SM 2320 B-97	Total Alkalinity	104				0.194	
SM 2540 C-97	TDS					0.763	
	TDS					0.871	
SM 4500 F-C-97	Fluoride	96.4	103	100			1.95
SM 5310 B-00	Organic Carbon	98.7	98.3	96.6			1.01
USGS O-2060-01	2,4,5-T	89.2	98.8	106			7.03
	2,4-D	98.0	113	134			8.93
	2,4-DB	70.4	66.4	78.4			16.6
	Acetaminophen	122	49.6	53.6			7.75
	Acifluorfen	102	99.2	123			21.3
	Bentazon	103	203	222			6.44
	Carbamazepine	99.2	44.4	54.4			20.2
	Dicamba	97.6	70.0	87.2			21.9
	Dichlorprop	104	98.8	117			16.7
	Dinoseb	96.8	71.6	119			49.6
	Diuron	89.6	42.4	45.2			6.39
	Fenuron	96.0	40.4	47.6			16.4
	Fluridone	90.8	52.1	55.3			5.67
	Imidacloprid	80.4	75.6	82.4			8.61
	Linuron	94.4	74.0	68.0			8.45
	MCPA	94.8	107	116			7.91
	MCPP	98.4	116	124			6.32
	Picloram	111	64.0	63.2			1.26
	Primidone	77.6	42.4	41.6			1.90
	Silvex	86.0	115	138			18.1
	Tricopyr	98.4	101	111			9.42

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1877123, 1877124, 1877129
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1877139, 1877140
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1877139, 1877140
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1877123, 1877124, 1877129
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1877123, 1877124, 1877129
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1877125, 1877126, 1877130
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1877125, 1877126, 1877130
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1877125, 1877126, 1877130
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1877125, 1877126, 1877130
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1877127, 1877128, 1877131
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1877143
SM 2120 B / E31780	True Color measured at 450 nm	1877123, 1877124, 1877129
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1877123, 1877124, 1877129
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1877123, 1877124, 1877129

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1877123, 1877124, 1877129
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1877123, 1877124, 1877129
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1877125, 1877126, 1877130
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1877143
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1877143

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	03/02/2017			03/02/2017 15:50	Sima Feizi	1877123, 1877124, 1877129
EPA 200.7 Rev. 4.4	03/02/2017	03/09/2017	Elliott D. Healy	03/13/2017	Martin Acosta	1877139, 1877140
EPA 200.8 Rev. 5.4	03/02/2017	03/09/2017	Elliott D. Healy	03/13/2017	Betina Topolski	1877139, 1877140
EPA 300.0 Rev. 2.1	03/02/2017			03/16/2017	Elisa J Lutz	1877123, 1877124, 1877129
EPA 350.1 Rev. 2.0	03/02/2017			03/07/2017	Sofia Elnemr	1877125, 1877126
	03/02/2017			03/14/2017	Sofia Elnemr	1877130
EPA 351.2 Rev. 2.0	03/02/2017	03/06/2017	Adrian Shelby	03/07/2017	Joseph Suarez	1877125
	03/02/2017	03/13/2017	Adrian Shelby	03/14/2017	Joseph Suarez	1877126, 1877130
EPA 353.2 Rev. 2.0	03/02/2017			03/07/2017	Beverly Y. Sanders	1877125, 1877126, 1877130
EPA 365.1 Rev. 2.0	03/02/2017	03/07/2017	Adrian Shelby	03/08/2017	Lipi Saha	1877125, 1877130
	03/02/2017	03/07/2017	Adrian Shelby	03/09/2017	Lipi Saha	1877126
EPA 365.1 Rev. 2.0 dissolved	03/02/2017			03/02/2017 15:02	Julia Storbeck	1877127
	03/02/2017			03/02/2017 15:12	Julia Storbeck	1877128
	03/02/2017			03/02/2017 15:13	Julia Storbeck	1877131
EPA 8321B	03/02/2017	03/03/2017	Mohammad Ghaffari	03/03/2017	Mohammad Ghaffari	1877143
SM 2120 B	03/02/2017			03/02/2017 17:11	Julie Michelle Frank	1877123
	03/02/2017			03/02/2017 17:12	Julie Michelle Frank	1877124
	03/02/2017			03/02/2017 17:13	Julie Michelle Frank	1877129
SM 2320 B-97	03/02/2017			03/10/2017	Dale L. Simmons	1877123, 1877124, 1877129
SM 2540 C-97	03/02/2017			03/06/2017	Sima Feizi	1877123, 1877124, 1877129
SM 2540 D-97	03/02/2017			03/06/2017	Sima Feizi	1877123, 1877124, 1877129
SM 4500 F-C-97	03/02/2017			03/10/2017	Dale L. Simmons	1877123, 1877124, 1877129
SM 5310 B-00	03/02/2017			03/03/2017	Julie Michelle Frank	1877125, 1877126, 1877130
USGS O-2060-01	03/02/2017	03/03/2017	Hoor Shaik	03/04/2017	Juyoung Kim	1877143
	03/02/2017	03/03/2017	Hoor Shaik	03/05/2017	Juyoung Kim	1877143