

Chemical Analysis Report

SE-DIST-2017-11-22-01

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

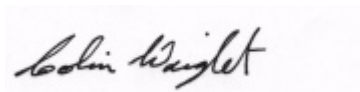
Event Description: **SMP-FoPo Run**
Request ID: **RQ-2017-11-13-31**
Customer: **SE-DIST**
Project ID: **SMP**

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

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Certified by: Colin Wright, Program Administrator

Date Certified: 11-DEC-2017 11:40

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored rectangular background.

Case Narrative

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

Results for the following analytical 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: Moore's Creek @ 7th St.

Collection Date/Time: 11/21/2017 12:00

Field ID: 28042339

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948268	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P335822	
	SM 2320 B-97	Total Alkalinity	135		mg CaCO3/L	P336242	
	SM 2540 D-97	TSS	4	I	mg/L	P336299	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P336246	
1948269	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P336340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P336182	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P336060	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P336203	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P336196	
1948270	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.089		mg P/L	P335819	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: 5 Mile Creek @ Okeechobee Rd.

Collection Date/Time: 11/21/2017 12:15

Field ID: 28010001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948271	EPA 180.1 Rev. 2.0	Turbidity	28		NTU	P335822	
	EPA 300.0 Rev. 2.1	Chloride	200		mg Cl/L	P336265	
		Sulfate	75		mg SO4/L	P336269	
	SM 2120 B	Color (true)	57	A	PCU	P335818	
	SM 2320 B-97	Total Alkalinity	201		mg CaCO3/L	P336242	
	SM 2540 C-97	TDS	665		mg/L	P336347	
	SM 2540 D-97	TSS	34		mg/L	P336297	
	SM 4500 F-C-97	Fluoride	0.36		mg F/L	P336246	
1948273	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P336340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P336182	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P336060	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P336203	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P336196	
1948275	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.069		mg P/L	P335819	
1948302	EPA 8321B	Sucralose**	0.14		ug/L	P335915	
	USGS O-2060-01	2,4-D	0.011		ug/L	P335916	
		Diuron	0.0076		ug/L	P335916	
		Fenuron	0.0080	U	ug/L	P335916	
		Imidacloprid	0.086		ug/L	P335916	
		Bentazon	0.0017	I	ug/L	P335916	
		Linuron	0.0040	U	ug/L	P335916	
		Acetaminophen**	0.0080	U	ug/L	P335916	
		MCP	0.0020	U	ug/L	P335916	
		Carbamazepine**	0.0015	I	ug/L	P335916	
		Triclopyr**	0.0040	U	ug/L	P335916	
		Primidone**	0.0040	U	ug/L	P335916	

Field ID: 28010001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948302	USGS O-2060-01	Fluridone**	0.0012	I	ug/L	P335916	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Results confirmed in re-extraction. MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: C-25 Canal West @ Godwin Rd.

Collection Date/Time: 11/21/2017 13:00

Field ID: G2SE0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948262	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P335822	
	EPA 300.0 Rev. 2.1	Chloride	93		mg Cl/L	P336264	
		Sulfate	42		mg SO4/L	P336268	
	SM 2120 B	Color (true)	170		PCU	P335816	
	SM 2320 B-97	Total Alkalinity	140		mg CaCO3/L	P336242	
	SM 2540 C-97	TDS	424		mg/L	P336347	
	SM 2540 D-97	TSS	3	I	mg/L	P336297	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P336246	
1948264	EPA 350.1 Rev. 2.0	Ammonia-N	0.090		mg N/L	P336340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P336182	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P336060	
	EPA 365.1 Rev. 2.0	Total-P	0.34		mg P/L	P336203	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P336196	
1948266	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.29		mg P/L	P335819	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Fort Pierce Farm Canal

Collection Date/Time: 11/21/2017 13:20

Field ID: G2SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948263	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P335822	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P336264	
		Sulfate	51		mg SO4/L	P336268	
	SM 2120 B	Color (true)	82		PCU	P335816	
	SM 2320 B-97	Total Alkalinity	139		mg CaCO3/L	P336242	
	SM 2540 C-97	TDS	499		mg/L	P336347	
	SM 2540 D-97	TSS	3	I	mg/L	P336297	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P336246	
1948265	EPA 350.1 Rev. 2.0	Ammonia-N	0.095		mg N/L	P336340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P336182	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P336060	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P336203	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P336196	
1948267	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.062		mg P/L	P335819	

Field ID: G2SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.							

Sample Location: 10 Mile Creek @ Gordy Rd.

Collection Date/Time: 11/21/2017 15:00

Field ID: 28010045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948272	EPA 180.1 Rev. 2.0	Turbidity	5.2		NTU	P335822	
	EPA 300.0 Rev. 2.1	Chloride	270		mg Cl/L	P336265	
		Sulfate	79		mg SO4/L	P336269	
	SM 2120 B	Color (true)	75	A	PCU	P335817	
	SM 2320 B-97	Total Alkalinity	187		mg CaCO3/L	P336243	
	SM 2540 C-97	TDS	805		mg/L	P336348	
	SM 2540 D-97	TSS	5	I	mg/L	P336298	
1948274	SM 4500 F-C-97	Fluoride	0.36		mg F/L	P336247	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P336340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P336182	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P336060	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P336203	
1948276	SM 5310 B-00	Organic Carbon	12		mg C/L	P336196	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P335819	
1948303	EPA 8321B	Sucralose**	0.012	I	ug/L	P336107	
	USGS O-2060-01	2,4-D	0.026		ug/L	P335916	
		Diuron	0.0095		ug/L	P335916	
		Fenuron	0.0080	U	ug/L	P335916	
		Imidacloprid	0.12		ug/L	P335916	
		Bentazon	0.0023	I	ug/L	P335916	
		Linuron	0.0040	U	ug/L	P335916	
		Acetaminophen**	0.0080	U	ug/L	P335916	
		MCP	0.0020	U	ug/L	P335916	
		Carbamazepine**	4.0E-04	U	ug/L	P335916	
		Triclopyr**	0.0040	U	ug/L	P335916	
		Primidone**	0.0040	U	ug/L	P335916	
		Fluridone**	5.2E-04	I	ug/L	P335916	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: IRL South @ Melody Ln Pier

Collection Date/Time: 11/21/2017 14:20

Field ID: Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948277	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P335822	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P336265	
		Sulfate	0.20	U	mg SO4/L	P336269	

Field ID: Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948277	SM 2120 B	Color (true)	2.5	U	PCU	P335817	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P336243	
	SM 2540 C-97	TDS	15	U	mg/L	P336345	
	SM 2540 D-97	TSS	2	U	mg/L	P336295	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P336247	
1948278	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P336340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P336182	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P336060	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P336203	
	SM 5310 B-00	Organic Carbon	0.57	I	mg C/L	P336196	
1948279	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P335819	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 5310 B-00: The result was confirmed on 11/30/2017.

Sample Location: IRL South @ Melody Ln Pier

Collection Date/Time: 11/21/2017 14:30

Field ID: G2SE0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1948280	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P335822	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P335851	
	SM 2540 D-97	TSS	7	I	mg/L	P336300	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P335854	
1948281	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P336409	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P336286	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.036		mg N/L	P336119	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P336156	MS
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P336262	
1948282	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P335821	

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: P335822

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P336264

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: P336265

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336268

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336269

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336340

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336409

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336182

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336286

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336060

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336119

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336156

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336203

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335819

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335821

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

Reference Method: EPA 8321B
Batch ID: P335915

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P336107

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P335816

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P335817

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P335818

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P335851

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

Reference Method: SM 2320 B-97
Batch ID: P336242

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

Reference Method: SM 2320 B-97
Batch ID: P336243

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

Reference Method: SM 2540 C-97
Batch ID: P336345

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P336347

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P336348

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P336295

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P336297

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P336298

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P336299

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P336300

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P335854

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P336246

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P336247

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P336196

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

Reference Method: SM 5310 B-00
Batch ID: P336262

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

Reference Method: USGS O-2060-01
Batch ID: P335916

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P335916

Component	Result	Code	Units
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336264

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	94.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336265

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336268

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336340

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336409

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336182

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.4		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336286

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336119

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336156

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336203

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335819

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335821

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

Reference Method: EPA 8321B
Batch ID: P335915

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	123		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P336107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	67.4		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P335851

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P336242

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

Reference Method: SM 2320 B-97
Batch ID: P336243

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P335854

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P336246

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P336247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P336196

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P336262

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

Reference Method: USGS O-2060-01
Batch ID: P335916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	94.5		P	40 - 150
Acetaminophen	107		P	30 - 150
Bentazon	66.5		P	30 - 150
Carbamazepine	114		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P335916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	105		P	40 - 150
Fenuron	112		P	40 - 150
Fluridone	106		P	40 - 150
Imidacloprid	98.6		P	40 - 160
Linuron	108		P	40 - 150
MCPP	95.3		P	40 - 150
Primidone	99.3		P	40 - 150
Triclopyr	93.5		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336264

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948210	Chloride	95.0		P	90 - 110
1948248	Chloride	94.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336265

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948312	Chloride	93.7		P	90 - 110
1948318	Chloride	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948210	Sulfate	95.6		P	90 - 110
1948248	Sulfate	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948312	Sulfate	94.8		P	90 - 110
1948318	Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948281	Ammonia-N	104	109	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948265	Kjeldahl Nitrogen	94.3	94.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948116	Kjeldahl Nitrogen	99.8	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948264	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1947643	NO2NO3-N	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336156

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948542	Total-P	93.5	84.2	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948313	Total-P	99.1	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948267	O-Phosphate-P	97.2	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948282	O-Phosphate-P	95.2	103	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P335915

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948302	Sucralose	120	133	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P336107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949632	Sucralose	76.2	82.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P335854

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1946323	Fluoride	97.0	97.0	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P336246

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948163	Fluoride	98.3	101	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P336247

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948312	Fluoride	96.8	97.9	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P336196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948250	Organic Carbon	99.8	99.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P336262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948541	Organic Carbon	98.5	98.1	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P335916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1948303	Acetaminophen	95.4	97.8	P/P	30 - 150
1948303	Carbamazepine	106	111	P/P	40 - 150
1948303	Diuron	103	100	P/P	40 - 150
1948303	Fenuron	106	104	P/P	40 - 150
1948303	Fluridone	87.0	98.9	P/P	40 - 150
1948303	Linuron	106	108	P/P	40 - 150
1948303	Primidone	84.9	108	P/P	40 - 150
1948576	2,4-D	62.5	70.2	P/P	40 - 150
1948576	Bentazon	46.2	48.0	P/P	30 - 150
1948576	MCP	86.5	92.5	P/P	40 - 150
1948576	Triclopyr	81.4	91.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P335822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948248	Turbidity	3.97	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948248	Chloride	0.378	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336265

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948318	Chloride	0.844	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948248	Sulfate	0.490	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948318	Sulfate	0.820	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336340

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948264	Ammonia-N	0.293	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948281	Ammonia-N	3.99	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948265	Kjeldahl Nitrogen	0.157	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948116	Kjeldahl Nitrogen	0.679	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948264	NO2NO3-N	0.554	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1947643	NO2NO3-N	0.468	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336156

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948542	Total-P	10.5	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948313	Total-P	1.04	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948267	O-Phosphate-P	1.31	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948282	O-Phosphate-P	6.54	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P335915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948302	Sucralose	10.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P336107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949632	Sucralose	2.51	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P335816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948210	Color (true)	2.65	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P335817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948272	Color (true)	2.79	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P335818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948271	Color (true)	0.746	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P335851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946323	Total Alkalinity	1.02	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P336242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948163	Total Alkalinity	0.0237	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P336243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948312	Total Alkalinity	0.323	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P336345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1947831	TDS	3.96	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P336347

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948173	TDS	1.87	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P336348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948312	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P335854

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946323	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P336246

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948163	Fluoride	1.42	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P336247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948312	Fluoride	0.953	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P336196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948250	Organic Carbon	0.0467	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P336262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948541	Organic Carbon	0.379	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P335916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948303	Acetaminophen	2.39	Spike	P	0 - 30
1948303	Carbamazepine	5.17	Spike	P	0 - 30
1948303	Diuron	1.85	Spike	P	0 - 30
1948303	Fenuron	2.31	Spike	P	0 - 30
1948303	Fluridone	12.6	Spike	P	0 - 30
1948303	Imidacloprid	4.75	Spike	P	0 - 30
1948303	Linuron	2.44	Spike	P	0 - 30
1948303	Primidone	23.8	Spike	P	0 - 30
1948576	2,4-D	8.67	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P335916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1948576	Bentazon	2.91	Spike	P	0 - 30
1948576	MCP	6.64	Spike	P	0 - 30
1948576	Triclopyr	11.7	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: 1948302
Field Sample ID: 28010001

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	101	P	30 - 160
EPA 8321B	Primidone-d5	96.9	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	40 - 160
USGS O-2060-01	2,4-D-d3	86.2	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	104	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	106	P	30 - 160
USGS O-2060-01	Diuron-d6	101	P	30 - 160
USGS O-2060-01	Primidone-d5	96.9	P	30 - 160
USGS O-2060-01	Sucralose-d6	126	P	40 - 160

Lab Sample ID: 1948303
Field Sample ID: 28010045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	100	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	40 - 160
USGS O-2060-01	2,4-D-d3	76.6	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	102	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	111	P	30 - 160
USGS O-2060-01	Diuron-d6	100	P	30 - 160
USGS O-2060-01	Primidone-d5	102	P	30 - 160
USGS O-2060-01	Sucralose-d6	118	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A80477
Included Lab Sample IDs: 1948262, 1948263, 1948271, 1948272, 1948277

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A80477

Included Lab Sample IDs: 1948262, 1948263, 1948271, 1948272, 1948277

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	101	P/P	85 - 115
Color (true)	98.8	99.9	P/P	85 - 115
Color (true)	99.9	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A80478

Included Lab Sample IDs: 1948266, 1948267, 1948270, 1948275, 1948276, 1948279, 1948282

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	102	P/P	90 - 110
O-Phosphate-P	95.9	98.6	P/P	90 - 110
O-Phosphate-P	96.5	102	P/P	90 - 110
O-Phosphate-P	98.6	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A80479

Included Lab Sample IDs: 1948262, 1948263, 1948268, 1948271, 1948272, 1948277, 1948280

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

Reference Method: SM 2320 B-97

Run ID: A80493

Included Lab Sample IDs: 1948280

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A80493

Included Lab Sample IDs: 1948280

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

Reference Method: EPA 8321B

Run ID: A80568

Included Lab Sample IDs: 1948302, 1948303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	107	72.7	P/P	60 - 150
Sucralose	66.3	80.6	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A80582

Included Lab Sample IDs: 1948264, 1948265, 1948269, 1948273, 1948274, 1948278

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A80607

Included Lab Sample IDs: 1948281

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A80632

Included Lab Sample IDs: 1948262, 1948263, 1948271, 1948272, 1948277

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	99.8	P/P	90 - 110
Chloride	99.8	100	P/P	90 - 110
Sulfate	99.6	98.7	P/P	90 - 110
Sulfate	99.6	99.6	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A80633

Included Lab Sample IDs: 1948264, 1948265, 1948269, 1948273, 1948274, 1948278

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

Reference Method: SM 2320 B-97

Run ID: A80654

Included Lab Sample IDs: 1948262, 1948263, 1948268, 1948271, 1948272, 1948277

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110
Total Alkalinity	99.6	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A80654

Included Lab Sample IDs: 1948262, 1948263, 1948268, 1948271, 1948272, 1948277

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

Reference Method: USGS O-2060-01

Run ID: A80657

Included Lab Sample IDs: 1948302, 1948303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.9	89.9	P/P	50 - 150
Acetaminophen	101	111	P/P	60 - 150
Bentazon	93.0	97.9	P/P	50 - 150
Carbamazepine	111	118	P/P	60 - 150
Diuron	103	111	P/P	60 - 150
Fenuron	107	108	P/P	60 - 150
Fluridone	107	118	P/P	60 - 160
Imidacloprid	98.3	100	P/P	60 - 150
Linuron	111	115	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A80657

Included Lab Sample IDs: 1948302, 1948303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCP	97.2	94.6	P/P	50 - 150
Primidone	105	103	P/P	60 - 150
Triclopyr	93.7	89.5	P/P	50 - 150

Reference Method: SM 5310 B-00

Run ID: A80659

Included Lab Sample IDs: 1948281

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A80667

Included Lab Sample IDs: 1948264, 1948265, 1948269, 1948273, 1948274

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A80677

Included Lab Sample IDs: 1948278, 1948281

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	101	P/P	90 - 110
Total-P	100	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A80695

Included Lab Sample IDs: 1948264, 1948265, 1948269, 1948273, 1948274, 1948278

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	97.7	P/P	90 - 110
Ammonia-N	101	98.5	P/P	90 - 110
Ammonia-N	98.1	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80705

Included Lab Sample IDs: 1948264, 1948265, 1948269, 1948273, 1948274, 1948278

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.4	93.5	P/P	90 - 110
Kjeldahl Nitrogen	94.5	94.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A80711

Included Lab Sample IDs: 1948281

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80724

Included Lab Sample IDs: 1948281

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	97.8	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				3.97	
EPA 300.0 Rev. 2.1	Chloride	94.9	94.6 95.0		0.378	
	Chloride	95.0	94.8 93.7		0.844	
	Sulfate	95.1	94.8 95.6		0.490	
	Sulfate	95.4	95.7 94.8		0.820	
EPA 350.1 Rev. 2.0	Ammonia-N	99.9				0.293
	Ammonia-N	98.6	104 109			3.99
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.4	94.3 94.0			0.157
	Kjeldahl Nitrogen	99.4	99.8 99.0			0.679
EPA 353.2 Rev. 2.0	NO2NO3-N	104	103 102			0.554
	NO2NO3-N	106	107 106			0.468
EPA 365.1 Rev. 2.0	Total-P	104	93.5 84.2			10.5
	Total-P	101	99.1 100			1.04
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.7	97.2 99.3			1.31
	O-Phosphate-P	99.9	95.2 103			6.54
EPA 8321B	Sucralose	123	120 133			10.0
	Sucralose	67.4	76.2 82.2			2.51
SM 2120 B	Color (true)				2.65	
	Color (true)				2.79	
	Color (true)				0.746	
SM 2320 B-97	Total Alkalinity	103			1.02	
	Total Alkalinity	102			0.0237	
	Total Alkalinity	103			0.323	
SM 2540 C-97	TDS				3.96	
	TDS				1.87	
	TDS				0.0	
SM 4500 F-C-97	Fluoride	98.0	97.0 97.0			0.0
	Fluoride	99.5	98.3 101			1.42
	Fluoride	97.1	96.8 97.9			0.953
SM 5310 B-00	Organic Carbon	99.8	99.8 99.8			0.0467
	Organic Carbon	98.7	98.5 98.1			0.379
USGS O-2060-01	2,4-D	94.5	62.5 70.2			8.67
	Acetaminophen	107	95.4 97.8			2.39
	Bentazon	66.5	46.2 48.0			2.91
	Carbamazepine	114	106 111			5.17
	Diuron	105	103 100			1.85
	Fenuron	112	106 104			2.31
	Fluridone	106	87.0 98.9			12.6
	Imidacloprid	98.6				4.75

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
USGS O-2060-01	Linuron	108	106	108		2.44
	MCP	95.3	86.5	92.5		6.64
	Primidone	99.3	84.9	108		23.8
	Triclopyr	93.5	81.4	91.6		11.7

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1948262, 1948263, 1948268, 1948271, 1948272, 1948277, 1948280
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1948262, 1948263, 1948271, 1948272, 1948277
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1948262, 1948263, 1948271, 1948272, 1948277
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1948264, 1948265, 1948269, 1948273, 1948274, 1948278, 1948281
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1948264, 1948265, 1948269, 1948273, 1948274, 1948278, 1948281
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1948264, 1948265, 1948269, 1948273, 1948274, 1948278, 1948281
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1948264, 1948265, 1948269, 1948273, 1948274, 1948278, 1948281
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1948266, 1948267, 1948270, 1948275, 1948276, 1948279, 1948282
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1948302, 1948303
SM 2120 B / E31780	True Color measured at 450 nm	1948262, 1948263, 1948271, 1948272, 1948277
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1948262, 1948263, 1948268, 1948271, 1948272, 1948277, 1948280
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1948262, 1948263, 1948271, 1948272, 1948277
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1948262, 1948263, 1948268, 1948271, 1948272, 1948277, 1948280
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1948262, 1948263, 1948268, 1948271, 1948272, 1948277, 1948280
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1948264, 1948265, 1948269, 1948273, 1948274, 1948278, 1948281
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1948302, 1948303
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1948302, 1948303

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	11/22/2017			11/22/2017 15:02	DeAsia Armster	1948262, 1948263, 1948268, 1948271, 1948272, 1948277, 1948280
EPA 300.0 Rev. 2.1	11/22/2017			12/01/2017	Julia Storbeck	1948262, 1948263
	11/22/2017			12/02/2017	Julia Storbeck	1948271, 1948272, 1948277
EPA 350.1 Rev. 2.0	11/22/2017			12/04/2017	Sofia Elnemr	1948264, 1948265, 1948269, 1948273, 1948274, 1948278
	11/22/2017			12/05/2017	Sofia Elnemr	1948281
EPA 351.2 Rev. 2.0	11/22/2017	12/01/2017	Adrian Shelby	12/05/2017	Joseph Suarez	1948264, 1948265, 1948269, 1948273, 1948274, 1948278
	11/22/2017	12/04/2017	Adrian Shelby	12/06/2017	Joseph Suarez	1948281
EPA 353.2 Rev. 2.0	11/22/2017			11/29/2017	Lauren Bottorf	1948264, 1948265, 1948269, 1948273, 1948274, 1948278
	11/22/2017			11/30/2017	Beverly Y. Sanders	1948281
EPA 365.1 Rev. 2.0	11/22/2017	12/01/2017	Sima Feizi	12/04/2017	Lipi Saha	1948264, 1948265, 1948269, 1948273, 1948274, 1948278, 1948281
EPA 365.1 Rev. 2.0 dissolved	11/22/2017			11/22/2017 13:34	Megan Treadwell	1948267
	11/22/2017			11/22/2017 13:47	Megan Treadwell	1948282
	11/22/2017			11/22/2017 14:29	Megan Treadwell	1948266
	11/22/2017			11/22/2017 14:36	Megan Treadwell	1948270
	11/22/2017			11/22/2017 14:37	Megan Treadwell	1948275
	11/22/2017			11/22/2017 14:38	Megan Treadwell	1948276
	11/22/2017			11/22/2017 14:40	Megan Treadwell	1948279
EPA 8321B	11/22/2017	11/29/2017	Juyoung Kim	11/30/2017	Juyoung Kim	1948302
	11/22/2017	11/30/2017	Juyoung Kim	11/30/2017	Juyoung Kim	1948303
SM 2120 B	11/22/2017			11/22/2017 15:47	Tanya Welborn	1948263
	11/22/2017			11/22/2017 15:51	Tanya Welborn	1948272
	11/22/2017			11/22/2017 15:52	Tanya Welborn	1948277
	11/22/2017			11/22/2017 15:59	Tanya Welborn	1948271
	11/22/2017			11/22/2017 16:01	Tanya Welborn	1948262
SM 2320 B-97	11/22/2017			11/23/2017	Dale L. Simmons	1948280
	11/22/2017			12/02/2017	Dale L. Simmons	1948262, 1948263, 1948268, 1948271, 1948272, 1948277
SM 2540 C-97	11/22/2017			11/25/2017	Yijie Li	1948262, 1948263, 1948271, 1948272, 1948277
SM 2540 D-97	11/22/2017			11/25/2017	Yijie Li	1948262, 1948263, 1948268, 1948271, 1948272, 1948277, 1948280
SM 4500 F-C-97	11/22/2017			11/23/2017	Dale L. Simmons	1948280
	11/22/2017			12/02/2017	Dale L. Simmons	1948262, 1948263, 1948268, 1948271, 1948272, 1948277
SM 5310 B-00	11/22/2017			11/30/2017	Ping Hua	1948264, 1948265, 1948269, 1948273, 1948274, 1948278
	11/22/2017			12/01/2017	Ping Hua	1948281

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
USGS O-2060-01	11/22/2017	11/28/2017	Hoor Shaik	12/01/2017	Julie Michelle Frank	1948302
	11/22/2017	11/28/2017	Hoor Shaik	12/02/2017	Julie Michelle Frank	1948303