

Chemical Analysis Report

SE-DIST-2017-03-22-02

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

Event Description: **SMP-G5 South Run**
Request ID: **RQ-2017-03-20-36**
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: 17-APR-2017 09:42

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: L-8 @ G-541

Collection Date/Time: 03/21/2017 10:40

Field ID: G3SE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882145	EPA 180.1 Rev. 2.0	Turbidity	20		NTU	P322010	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P322487	
		Sulfate	26		mg SO4/L	P322662	
	SM 2120 B	Color (true)	32		PCU	P321981	
	SM 2320 B-97	Total Alkalinity	119		mg CaCO3/L	P322416	
	SM 2540 C-97	TDS	278		mg/L	P322645	
	SM 2540 D-97	TSS	8	I	mg/L	P322624	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P322419	
1882149	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P321987	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P322019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P322119	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P322028	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P322058	
1882153	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.069		mg P/L	P322004	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: M-Canal

Collection Date/Time: 03/21/2017 11:10

Field ID: 28011007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882146	EPA 180.1 Rev. 2.0	Turbidity	24		NTU	P322010	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P322487	
		Sulfate	23		mg SO4/L	P322662	
	SM 2120 B	Color (true)	28		PCU	P321981	
	SM 2320 B-97	Total Alkalinity	106		mg CaCO3/L	P322416	
	SM 2540 C-97	TDS	251		mg/L	P322645	
	SM 2540 D-97	TSS	6	I	mg/L	P322624	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P322419	
1882150	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P321987	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P322019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.44		mg N/L	P322119	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P322028	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P322058	
1882154	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P322004	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Ocean Canal @ SR 700

Collection Date/Time: 03/21/2017 11:30

Field ID: G5SE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882147	EPA 180.1 Rev. 2.0	Turbidity	22		NTU	P322010	

Field ID: G5SE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882147	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P322487	
		Sulfate	23		mg SO4/L	P322662	
	SM 2120 B	Color (true)	28		PCU	P321981	
	SM 2320 B-97	Total Alkalinity	106		mg CaCO3/L	P322416	
	SM 2540 C-97	TDS	231		mg/L	P322645	
	SM 2540 D-97	TSS	6	I	mg/L	P322624	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P322419	
1882151	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P321987	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P322019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.45		mg N/L	P322119	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P322028	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P322058	
1882155	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.067		mg P/L	P322004	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: West Palm Beach Canal @ Twenty Mile Bend Collection Date/Time: 03/21/2017 12:00

Field ID: G5SE0058

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882157	EPA 180.1 Rev. 2.0	Turbidity	34		NTU	P322010	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P322487	
		Sulfate	23		mg SO4/L	P322662	
	SM 2120 B	Color (true)	27		PCU	P321981	
	SM 2320 B-97	Total Alkalinity	105		mg CaCO3/L	P322416	
	SM 2540 C-97	TDS	254		mg/L	P322645	
	SM 2540 D-97	TSS	14		mg/L	P322624	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P322419	
1882160	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P321987	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P322019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.43		mg N/L	P322120	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P322028	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P322058	
1882163	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.075		mg P/L	P322004	
1882207	EPA 8321B	Sucralose**	0.074		ug/L	P322018	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P321946	
		Diuron	0.0040	U	ug/L	P321946	MS
		Fenuron	0.0080	U	ug/L	P321946	MS
		Imidacloprid	0.0040	U	ug/L	P321946	
		Bentazon	0.049		ug/L	P321946	MS
		Linuron	0.0040	UJ	ug/L	P321946	CCV
		Acetaminophen**	0.010	U	ug/L	P321946	
		MCP	0.0040	U	ug/L	P321946	
		Carbamazepine**	4.0E-04	U	ug/L	P321946	

Field ID: G5SE0058

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882207	USGS O-2060-01	Triclopyr**	0.010	U	ug/L	P321946	MS
		Primidone**	0.0080	U	ug/L	P321946	
		Fluridone**	0.0010	I	ug/L	P321946	MS

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Miami Canal (C6) @ SR 80/HWY 27

Collection Date/Time: 03/21/2017 13:15

Field ID: 28010980

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882148	EPA 180.1 Rev. 2.0	Turbidity	31		NTU	P322010	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P322487	
		Sulfate	23		mg SO4/L	P322662	
	SM 2120 B	Color (true)	28		PCU	P321981	
	SM 2320 B-97	Total Alkalinity	110		mg CaCO3/L	P322416	
	SM 2540 C-97	TDS	261		mg/L	P322645	
	SM 2540 D-97	TSS	24		mg/L	P322624	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P322419	
1882152	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P321987	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P322019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P322119	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P322028	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P322058	
1882156	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P322004	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: 715 Farms @ Morgan Rd

Collection Date/Time: 03/21/2017 13:45

Field ID: 28010984

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882158	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P322010	
	EPA 300.0 Rev. 2.1	Chloride	280		mg Cl/L	P322656	
		Sulfate	160		mg SO4/L	P322660	
	SM 2120 B	Color (true)	82		PCU	P321978	
	SM 2320 B-97	Total Alkalinity	350		mg CaCO3/L	P322479	
	SM 2540 C-97	TDS	1.05E+03		mg/L	P322645	
	SM 2540 D-97	TSS	6	I	mg/L	P322624	
	SM 4500 F-C-97	Fluoride	0.67		mg F/L	P322482	
1882161	EPA 350.1 Rev. 2.0	Ammonia-N	0.41		mg N/L	P321987	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P322019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P322120	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P322130	
	SM 5310 B-00	Organic Carbon	25		mg C/L	P322058	

Field ID: 28010984

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882164	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P322004	
1882208	EPA 8321B	Sucralose**	0.015	I	ug/L	P322018	
	USGS O-2060-01	2,4-D	0.030		ug/L	P321946	
		Diuron	0.0080	U	ug/L	P321946	MS
		Fenuron	0.016	U	ug/L	P321946	MS
		Imidacloprid	0.0080	U	ug/L	P321946	
		Bentazon	0.10		ug/L	P321946	MS
		Linuron	0.0080	U	ug/L	P321946	
		Acetaminophen**	0.010	U	ug/L	P321946	
		MCP	0.0040	U	ug/L	P321946	
		Carbamazepine**	4.0E-04	U	ug/L	P321946	
		Triclopyr**	0.010	U	ug/L	P321946	MS
		Primidone**	0.0080	U	ug/L	P321946	
		Fluridone**	8.0E-04	U	ug/L	P321946	MS

Ref. Method and Comment:

SM 2120 B: The precision data is unavailable due to the low analyte concentration in the QC sample.

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: MDL's for some parameters elevated due to matrix interference.

Sample Location: East Beach Canal near Pahokee WWTP

Collection Date/Time: 03/21/2017 14:50

Field ID: G5SE0059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882159	EPA 180.1 Rev. 2.0	Turbidity	21		NTU	P322010	
	EPA 300.0 Rev. 2.1	Chloride	46		mg Cl/L	P322487	
		Sulfate	23		mg SO4/L	P322662	
	SM 2120 B	Color (true)	30	A	PCU	P321981	
	SM 2320 B-97	Total Alkalinity	119		mg CaCO3/L	P322416	
	SM 2540 C-97	TDS	268	A	mg/L	P322645	
	SM 2540 D-97	TSS	9	I	mg/L	P322624	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P322419	
1882162	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P321987	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P322019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.30		mg N/L	P322120	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P322130	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P322058	
1882165	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.059		mg P/L	P322005	
1882209	EPA 8321B	Sucralose**	0.081		ug/L	P322018	
	USGS O-2060-01	2,4-D	0.030		ug/L	P321946	
		Diuron	0.0040	U	ug/L	P321946	MS
		Fenuron	0.0080	U	ug/L	P321946	MS
		Imidacloprid	0.0040	U	ug/L	P321946	
		Bentazon	0.044		ug/L	P321946	MS
		Linuron	0.0040	UJ	ug/L	P321946	CCV
		Acetaminophen**	0.010	U	ug/L	P321946	

Field ID: G5SE0059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1882209	USGS O-2060-01	MCPP	0.0040	U	ug/L	P321946	
		Carbamazepine**	4.0E-04	U	ug/L	P321946	
		Triclopyr**	0.010	U	ug/L	P321946	MS
		Primidone**	0.0080	U	ug/L	P321946	
		Fluridone**	0.0012	I	ug/L	P321946	MS

Ref. Method and Comment:
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
 USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P322010

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322487

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322656

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322660

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322662

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P321987

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P322019

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322119

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322120

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322028

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322130

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322004

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322005

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

Reference Method: EPA 8321B
Batch ID: P322018

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P321978

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P321981

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P322416

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

Reference Method: SM 2320 B-97
Batch ID: P322479

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

Reference Method: SM 2540 C-97
Batch ID: P322645

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P322624

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P322419

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P322482

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P322058

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

Reference Method: USGS O-2060-01
Batch ID: P321946

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

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
 Batch ID: P321946

Component	Result	Code	Units
Primidone	0.0080	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322487

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322656

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322662

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P321987

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: P322019

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P322119

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322120

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322028

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322130

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322005

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

Reference Method: EPA 8321B
Batch ID: P322018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	71.4		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P322416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P322479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P322419

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.2		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P322482

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P322058

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.9		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P321946

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	80.4		P	40 - 140
Acetaminophen	52.8		P	40 - 140
Bentazon	101		P	40 - 140
Carbamazepine	122		P	40 - 140
Diuron	111		P	40 - 140
Fenuron	114		P	40 - 140
Fluridone	99.2		P	40 - 140
Imidacloprid	88.4		P	40 - 160
Linuron	102		P	40 - 140
MCPP	85.2		P	40 - 140
Primidone	86.8		P	40 - 140
Triclopyr	122		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881984	Chloride	98.1		P	90 - 110
1882053	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322656

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883144	Chloride	101		P	90 - 110
1883323	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883144	Sulfate	99.8		P	90 - 110
1883323	Sulfate	99.4		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881984	Sulfate	94.7		P	90 - 110
1882053	Sulfate	93.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882090	Ammonia-N	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882076	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322120

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882161	NO2NO3-N	98.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882090	Total-P	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882304	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322004

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882087	O-Phosphate-P	97.5	97.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882165	O-Phosphate-P	97.1	98.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P322018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882187	Sucralose	76.0	77.3	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P322419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882329	Fluoride	100	100	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P322482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882688	Fluoride	103	102	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P322058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1882060	Organic Carbon	98.0	97.1	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P321946

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881998	2,4-D	101	109	P/P	40 - 140
1881998	Acetaminophen	42.8	46.8	P/P	40 - 140
1881998	Bentazon	143	146	F/F	40 - 140
1881998	Carbamazepine	43.6	44.8	P/P	40 - 140
1881998	Diuron	36.5	35.8	F/F	40 - 140
1881998	Fenuron	28.7	31.6	F/F	40 - 140
1881998	Fluridone	28.4	34.2	F/F	40 - 140
1881998	Imidacloprid	62.0	69.6	P/P	40 - 160
1881998	Linuron	56.8	61.6	P/P	40 - 140
1881998	MCP	109	110	P/P	40 - 140
1881998	Primidone	53.6	47.2	P/P	40 - 140
1881998	Triclopyr	120	141	P/F	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P322010

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882084	Turbidity	1.94	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881984	Chloride	0.0129	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322656

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883323	Chloride	0.287	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883323	Sulfate	2.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881984	Sulfate	3.02	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882090	Ammonia-N	1.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322019

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882086	Kjeldahl Nitrogen	1.79	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882076	NO2NO3-N	1.28	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882161	NO2NO3-N	0.721	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882090	Total-P	1.96	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882304	Total-P	1.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882087	O-Phosphate-P	0.411	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882165	O-Phosphate-P	0.827	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P322018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882187	Sucralose	1.41	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P321981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882159	Color (true)	1.65	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P322416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882329	Total Alkalinity	1.50	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P322479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882688	Total Alkalinity	0.467	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P322645

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882159	TDS	1.87	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P322419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882329	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P322482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882688	Fluoride	0.509	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P322058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1882060	Organic Carbon	0.731	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P321946

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881998	2,4-D	5.73	Spike	P	0 - 30
1881998	Acetaminophen	8.93	Spike	P	0 - 30
1881998	Bentazon	1.83	Spike	P	0 - 30
1881998	Carbamazepine	2.71	Spike	P	0 - 30
1881998	Diuron	1.88	Spike	P	0 - 30
1881998	Fenuron	9.56	Spike	P	0 - 30
1881998	Fluridone	18.5	Spike	P	0 - 30
1881998	Imidacloprid	11.6	Spike	P	0 - 30
1881998	Linuron	8.11	Spike	P	0 - 30
1881998	MCP	1.10	Spike	P	0 - 30
1881998	Primidone	12.7	Spike	P	0 - 30
1881998	Triclopyr	15.9	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: 1882207
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	75.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	106	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	52.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	76.0	P	40 - 160
USGS O-2060-01	Diuron-d6	44.4	P	40 - 150
USGS O-2060-01	Primidone-d5	50.0	P	40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1882208
Field Sample ID: 28010984

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	98.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	122	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	50.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	58.8	P	40 - 160
USGS O-2060-01	Diuron-d6	56.0	P	40 - 150
USGS O-2060-01	Primidone-d5	43.2	P	40 - 150

Lab Sample ID: 1882209
Field Sample ID: G5SE0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	84.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	115	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	60.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	74.2	P	40 - 160
USGS O-2060-01	Diuron-d6	48.4	P	40 - 150
USGS O-2060-01	Primidone-d5	52.2	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A75274
Included Lab Sample IDs: 1882158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.6	99.4	P/P	85 - 115

Reference Method: SM 2120 B
Run ID: A75278
Included Lab Sample IDs: 1882145, 1882146, 1882147, 1882148, 1882157, 1882159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.0	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75279
Included Lab Sample IDs: 1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75284
Included Lab Sample IDs: 1882153, 1882154, 1882155, 1882156, 1882163, 1882164, 1882165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.3	P/P	90 - 110
O-Phosphate-P	100	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A75284

Included Lab Sample IDs: 1882153, 1882154, 1882155, 1882156, 1882163, 1882164, 1882165

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75286

Included Lab Sample IDs: 1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159

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

Reference Method: SM 5310 B-00

Run ID: A75305

Included Lab Sample IDs: 1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75316

Included Lab Sample IDs: 1882149, 1882150, 1882151, 1882152, 1882160

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

Reference Method: EPA 8321B

Run ID: A75318

Included Lab Sample IDs: 1882207, 1882208, 1882209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	75.6	146	P/P	60 - 150
Sucralose	81.2	75.6	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75325

Included Lab Sample IDs: 1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75352

Included Lab Sample IDs: 1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	96.1	P/P	90 - 110
Kjeldahl Nitrogen	108	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75372

Included Lab Sample IDs: 1882162

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75372

Included Lab Sample IDs: 1882162

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75381

Included Lab Sample IDs: 1882161

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

Reference Method: USGS O-2060-01

Run ID: A75408

Included Lab Sample IDs: 1882207, 1882208, 1882209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.6	98.8	P/P	50 - 150
Bentazon	95.8	75.2	P/P	50 - 150
MCP	102	102	P/P	50 - 150
Triclopyr	111	104	P/P	50 - 150

Reference Method: USGS O-2060-01

Run ID: A75428

Included Lab Sample IDs: 1882207, 1882208, 1882209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	127	135	P/P	60 - 150
Acetaminophen	135	132	P/P	60 - 150
Carbamazepine	130	132	P/P	60 - 150
Carbamazepine	132	130	P/P	60 - 150
Diuron	130	140	P/P	60 - 150
Diuron	133	130	P/P	60 - 150
Fenuron	126	131	P/P	60 - 150
Fenuron	130	126	P/P	60 - 150
Fluridone	120	120	P/P	60 - 150
Fluridone	128	120	P/P	60 - 150
Imidacloprid	106	97.6	P/P	60 - 150
Imidacloprid	97.6	99.6	P/P	60 - 150
Linuron	54.8*	42.0*	F/F	60 - 150
Linuron	77.6	54.8*	P/F	60 - 150
Primidone	78.0	82.8	P/P	60 - 150
Primidone	85.2	78.0	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A75433

Included Lab Sample IDs: 1882145, 1882146, 1882147, 1882148, 1882157, 1882159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A75433

Included Lab Sample IDs: 1882145, 1882146, 1882147, 1882148, 1882157, 1882159

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

Reference Method: SM 2320 B-97

Run ID: A75466

Included Lab Sample IDs: 1882158

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

Reference Method: SM 4500 F-C-97

Run ID: A75466

Included Lab Sample IDs: 1882158

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75467

Included Lab Sample IDs: 1882145, 1882146, 1882147, 1882148, 1882157, 1882159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	104	P/P	90 - 110
Chloride	104	104	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75488

Included Lab Sample IDs: 1882158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	101	P/P	90 - 110
Sulfate	100	96.7	P/P	90 - 110
Sulfate	101	96.8	P/P	90 - 110
Sulfate	96.8	100	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A75564

Included Lab Sample IDs: 1882208

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Diuron	101	111	P/P	60 - 150
Fenuron	122	124	P/P	60 - 150
Fluridone	104	103	P/P	60 - 150
Imidacloprid	107	104	P/P	60 - 150
Linuron	106	143	P/P	60 - 150

* 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	MS
EPA 180.1 Rev. 2.0	Turbidity				1.94	
EPA 300.0 Rev. 2.1	Chloride	101	98.1	97.2	0.0129	
	Chloride	102	100	101	0.287	
	Sulfate	99.7	99.4	99.8	2.15	
	Sulfate	103	94.7	93.1	3.02	
	Ammonia-N	102	104	102		1.81
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108				1.79
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102	103		1.28
	NO2NO3-N	104	98.8			0.721
EPA 365.1 Rev. 2.0	Total-P	107	104	101		1.96
	Total-P	106	104	105		1.16
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5	97.5	97.1		0.411
	O-Phosphate-P	99.3	97.1	98.4		0.827
EPA 8321B	Sucralose	71.4	76.0	77.3		1.41
SM 2120 B	Color (true)				1.65	
SM 2320 B-97	Total Alkalinity	105			1.50	
	Total Alkalinity	105			0.467	
SM 2540 C-97	TDS				1.87	
SM 4500 F-C-97	Fluoride	94.2	100	100		0.0
	Fluoride	98.2	103	102		0.509
SM 5310 B-00	Organic Carbon	98.9	98.0	97.1		0.731
USGS O-2060-01	2,4-D	80.4	101	109		5.73
	Acetaminophen	52.8	42.8	46.8		8.93
	Bentazon	101	143	146		1.83
	Carbamazepine	122	43.6	44.8		2.71
	Diuron	111	36.5	35.8		1.88
	Fenuron	114	28.7	31.6		9.56
	Fluridone	99.2	28.4	34.2		18.5
	Imidacloprid	88.4	62.0	69.6		11.6
	Linuron	102	56.8	61.6		8.11
	MCPP	85.2	109	110		1.10
	Primidone	86.8	53.6	47.2		12.7
	Triclopyr	122	120	141		15.9

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1882153, 1882154, 1882155, 1882156, 1882163, 1882164, 1882165
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1882207, 1882208, 1882209

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2120 B / E31780	True Color measured at 450 nm	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1882207, 1882208, 1882209
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1882207, 1882208, 1882209

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	03/22/2017			03/22/2017 16:01	Blanca Fach	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
EPA 300.0 Rev. 2.1	03/22/2017			03/30/2017	Ping Hua	1882145, 1882146, 1882147, 1882148, 1882157, 1882159
	03/22/2017			03/31/2017	Ping Hua	1882158
	03/22/2017			04/01/2017	Ping Hua	1882145, 1882146, 1882147, 1882148, 1882157, 1882159
EPA 350.1 Rev. 2.0	03/22/2017			03/22/2017	Julie Michelle Frank	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
EPA 351.2 Rev. 2.0	03/22/2017	03/23/2017	Adrian Shelby	03/24/2017	Joseph Suarez	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
EPA 353.2 Rev. 2.0	03/22/2017			03/24/2017	Beverly Y. Sanders	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
EPA 365.1 Rev. 2.0	03/22/2017	03/23/2017	Adrian Shelby	03/23/2017	Lipi Saha	1882149, 1882150, 1882151, 1882152, 1882160
EPA 365.1 Rev. 2.0 dissolved	03/22/2017	03/24/2017	Vijayalakshmi Reddy	03/27/2017	Lipi Saha	1882161, 1882162
	03/22/2017			03/22/2017 14:41	Anthony C. Onicha	1882165
	03/22/2017			03/22/2017 15:11	Anthony C. Onicha	1882153
	03/22/2017			03/22/2017 15:12	Anthony C. Onicha	1882154
	03/22/2017			03/22/2017 15:17	Anthony C. Onicha	1882155
	03/22/2017			03/22/2017 15:18	Anthony C. Onicha	1882156
	03/22/2017			03/22/2017 15:19	Anthony C. Onicha	1882163
	03/22/2017			03/22/2017 15:20	Anthony C. Onicha	1882164
EPA 8321B	03/22/2017	03/23/2017	Mohammad Ghaffari	03/23/2017	Mohammad Ghaffari	1882207, 1882208, 1882209
SM 2120 B	03/22/2017			03/22/2017 14:48	Julia Storbeck	1882158
	03/22/2017			03/22/2017 16:25	Julia Storbeck	1882159
	03/22/2017			03/22/2017 16:26	Julia Storbeck	1882145
	03/22/2017			03/22/2017 16:27	Julia Storbeck	1882146
	03/22/2017			03/22/2017 16:28	Julia Storbeck	1882147
	03/22/2017			03/22/2017 16:29	Julia Storbeck	1882148, 1882157
SM 2320 B-97	03/22/2017			03/29/2017	Dale L. Simmons	1882145, 1882146, 1882147, 1882148, 1882157, 1882159
	03/22/2017			03/30/2017	Dale L. Simmons	1882158
SM 2540 C-97	03/22/2017			03/24/2017	Yijie Li	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
SM 2540 D-97	03/22/2017			03/24/2017	Yijie Li	1882145, 1882146, 1882147, 1882148, 1882157, 1882158, 1882159
SM 4500 F-C-97	03/22/2017			03/29/2017	Dale L. Simmons	1882145, 1882146, 1882147, 1882148, 1882157, 1882159
	03/22/2017			03/30/2017	Dale L. Simmons	1882158
SM 5310 B-00	03/22/2017			03/23/2017	Julie Michelle Frank	1882149, 1882150, 1882151, 1882152, 1882160, 1882161, 1882162
USGS O-2060-01	03/22/2017	03/24/2017	Hoor Shaik	03/26/2017	Juyoung Kim	1882207, 1882208, 1882209

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
USGS O-2060-01	03/22/2017	03/24/2017	Hoor Shaik	03/28/2017	Juyoung Kim	1882207, 1882208, 1882209