

Chemical Analysis Report

SE-DIST-2017-04-20-01

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

Event Description: **SMP-G5 North Run**
Request ID: **RQ-2017-04-17-35**
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: 18-MAY-2017 16:34

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray 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: Kid Creek @ Old Dixie

Collection Date/Time: 04/19/2017 10:55

Field ID: G5SE0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890593	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P323801	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P324307	
		Sulfate	16		mg SO4/L	P324302	
	SM 2120 B	Color (true)	33		PCU	P323760	
	SM 2320 B-97	Total Alkalinity	94		mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	338		mg/L	P324506	
	SM 2540 D-97	TSS	2	I	mg/L	P324213	
	SM 4500 F-C-97	Fluoride	0.057	I	mg F/L	P325403	
1890594	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P323798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.039		mg N/L	P323967	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P323835	
	SM 5310 B-00	Organic Carbon	6.8		mg C/L	P323785	
1890595	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P323755	

Ref. Method and Comment:

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

Sample Location: Mills Ditch Weir off Dixie Rd

Collection Date/Time: 04/19/2017 11:20

Field ID: G5SE0063

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890584	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P323801	
	EPA 300.0 Rev. 2.1	Chloride	72		mg Cl/L	P324307	
		Sulfate	19		mg SO4/L	P324302	
	SM 2120 B	Color (true)	45		PCU	P323759	
	SM 2320 B-97	Total Alkalinity	90	A	mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	273	A	mg/L	P324506	
	SM 2540 D-97	TSS	4	IA	mg/L	P324213	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P325403	
1890587	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P323798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P323967	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P323835	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P323785	
1890590	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.090		mg P/L	P323755	

Ref. Method and Comment:

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

Sample Location: C-54 W of I-95

Collection Date/Time: 04/19/2017 11:50

Field ID: G5SE0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890585	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P323801	
	EPA 300.0 Rev. 2.1	Chloride	110		mg Cl/L	P324307	
		Sulfate	31		mg SO4/L	P324302	

Field ID: G5SE0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890585	SM 2120 B	Color (true)	58	A	PCU	P323760	
	SM 2320 B-97	Total Alkalinity	167		mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	415		mg/L	P324506	
	SM 2540 D-97	TSS	10	I	mg/L	P324213	
	SM 4500 F-C-97	Fluoride	0.24		mg F/L	P325403	
1890588	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P323798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P323967	
	EPA 365.1 Rev. 2.0	Total-P	0.051		mg P/L	P323835	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P323785	
1890591	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323755	

Ref. Method and Comment:

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

Sample Location: C 54 1700 m West of I-95

Collection Date/Time: 04/19/2017 12:15

Field ID: G5SE0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890586	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P323801	
	EPA 300.0 Rev. 2.1	Chloride	110		mg Cl/L	P324307	
		Sulfate	32		mg SO4/L	P324302	
		Color (true)	57		PCU	P323760	
	SM 2320 B-97	Total Alkalinity	170		mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	420		mg/L	P324506	
	SM 2540 D-97	TSS	12		mg/L	P324213	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P325403	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P323798	
1890589	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323967	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P323835	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P323785	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323755	

Ref. Method and Comment:

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

Sample Location: South Relief Canal @ US1

Collection Date/Time: 04/19/2017 09:00

Field ID: G5SE0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890596	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P323801	
	EPA 300.0 Rev. 2.1	Chloride	480		mg Cl/L	P324307	
		Sulfate	110		mg SO4/L	P324302	
	SM 2120 B	Color (true)	42		PCU	P323760	
	SM 2320 B-97	Total Alkalinity	226		mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	1.10E+03		mg/L	P324506	
	SM 2540 D-97	TSS	12		mg/L	P324213	

Field ID: G5SE0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890596	SM 4500 F-C-97	Fluoride	0.74		mg F/L	P325413	
1890599	EPA 350.1 Rev. 2.0	Ammonia-N	0.084		mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P323798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P323967	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P323835	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P323785	
1890602	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P323755	
1890637	EPA 8321B	Sucralose**	0.71		ug/L	P323688	
	USGS O-2060-01	2,4-D	0.0082	I	ug/L	P323640	
		Diuron	0.0020	U	ug/L	P323640	
		Fenuron	0.010	U	ug/L	P323640	
		Imidacloprid	0.010		ug/L	P323640	MS
		Bentazon	0.017		ug/L	P323640	MS
		Linuron	0.010	U	ug/L	P323640	
		Acetaminophen**	0.020	U	ug/L	P323640	
		MCP	0.0040	U	ug/L	P323640	
		Carbamazepine**	0.0030		ug/L	P323640	
		Triclopyr**	0.010	U	ug/L	P323640	
		Primidone**	0.020	U	ug/L	P323640	
		Fluridone**	0.0082		ug/L	P323640	MS

Ref. Method and Comment:

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

Sample Location: Main Canal @ US1

Collection Date/Time: 04/19/2017 09:40

Field ID: G5SE0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890597	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P323801	
	EPA 300.0 Rev. 2.1	Chloride	360		mg Cl/L	P324307	
		Sulfate	84		mg SO4/L	P324302	
	SM 2120 B	Color (true)	41		PCU	P323760	
	SM 2320 B-97	Total Alkalinity	190		mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	852		mg/L	P324506	
	SM 2540 D-97	TSS	4	I	mg/L	P324213	
	SM 4500 F-C-97	Fluoride	0.42		mg F/L	P325403	
1890600	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P323798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038		mg N/L	P323967	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P323835	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P323785	
1890603	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.048		mg P/L	P323755	
1890638	EPA 8321B	Sucralose**	0.51		ug/L	P323688	
	USGS O-2060-01	2,4-D	0.013	I	ug/L	P323640	
		Diuron	0.0026	I	ug/L	P323640	
		Fenuron	0.010	U	ug/L	P323640	

Field ID: G5SE0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890638	USGS O-2060-01	Imidacloprid	0.020		ug/L	P323640	MS
		Bentazon	0.011		ug/L	P323640	MS
		Linuron	0.010	U	ug/L	P323640	
		Acetaminophen**	0.020	U	ug/L	P323640	
		MCP	0.0040	U	ug/L	P323640	
		Carbamazepine**	0.0022		ug/L	P323640	
		Triclopyr**	0.010	U	ug/L	P323640	
		Primidone**	0.020	U	ug/L	P323640	
		Fluridone**	0.0060		ug/L	P323640	MS

Ref. Method and Comment:

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

Sample Location: Main Canal @ US1

Collection Date/Time: 04/19/2017 09:45

Field ID: BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890605	EPA 180.1 Rev. 2.0	Turbidity	0.10		NTU	P323802	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P324307	
		Sulfate	0.20	U	mg SO4/L	P324302	
	SM 2120 B	Color (true)	2.5	U	PCU	P323760	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	15	U	mg/L	P324507	
	SM 2540 D-97	TSS	2	U	mg/L	P324214	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P325403	
1890606	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P323799	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323968	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P323836	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P323785	
1890607	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P323756	
1890640	EPA 8321B	Sucralose**	0.010	U	ug/L	P323688	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323640	
		Diuron	0.0020	U	ug/L	P323640	
		Fenuron	0.010	U	ug/L	P323640	
		Imidacloprid	0.0020	U	ug/L	P323640	MS
		Bentazon	0.0010	U	ug/L	P323640	MS
		Linuron	0.010	U	ug/L	P323640	
		Acetaminophen**	0.020	U	ug/L	P323640	
		MCP	0.0040	U	ug/L	P323640	
		Carbamazepine**	5.0E-04	U	ug/L	P323640	
		Triclopyr**	0.010	U	ug/L	P323640	
		Primidone**	0.020	U	ug/L	P323640	
		Fluridone**	5.0E-04	U	ug/L	P323640	MS

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The result was confirmed on 04/20/2017.

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

Sample Location: North Canal Below Weir

Collection Date/Time: 04/19/2017 10:10

Field ID: G5SE0043

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890598	EPA 180.1 Rev. 2.0	Turbidity	3.6	A	NTU	P323802	
	EPA 300.0 Rev. 2.1	Chloride	230		mg Cl/L	P324307	
		Sulfate	63		mg SO4/L	P324302	
	SM 2120 B	Color (true)	61		PCU	P323760	
	SM 2320 B-97	Total Alkalinity	167		mg CaCO3/L	P324293	
	SM 2540 C-97	TDS	605		mg/L	P324507	
	SM 2540 D-97	TSS	4	I	mg/L	P324214	
	SM 4500 F-C-97	Fluoride	0.33		mg F/L	P325403	
1890601	EPA 350.1 Rev. 2.0	Ammonia-N	0.063		mg N/L	P323774	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P323798	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P323968	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P323835	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P323785	
1890604	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.079		mg P/L	P323755	
1890639	EPA 8321B	Sucralose**	1.1		ug/L	P323688	
	USGS O-2060-01	2,4-D	0.0083		ug/L	P323640	
		Diuron	0.0093		ug/L	P323640	
		Fenuron	0.0040	U	ug/L	P323640	
		Imidacloprid	0.0054		ug/L	P323640	MS
		Bentazon	0.054		ug/L	P323640	MS
		Linuron	0.0040	U	ug/L	P323640	
		Acetaminophen**	0.0080	U	ug/L	P323640	
		MCP	0.0014	I	ug/L	P323640	
		Carbamazepine**	0.0036		ug/L	P323640	
		Triclopyr**	0.0040	U	ug/L	P323640	
		Primidone**	0.013	I	ug/L	P323640	
		Fluridone**	0.0020		ug/L	P323640	MS

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323801

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323802

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324302

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324302

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324307

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323774

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323798

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323799

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323967

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323968

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323835

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323836

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323755

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323756

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

Reference Method: EPA 8321B
Batch ID: P323688

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P323759

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P323760

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P324293

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

Reference Method: SM 2540 C-97
Batch ID: P324506

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P324507

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324213

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P324214

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325403

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325413

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P323785

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

Reference Method: USGS O-2060-01
Batch ID: P323640

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.020	U	ug/L
Bentazon	0.0010	U	ug/L
Carbamazepine	5.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.010	U	ug/L
Fluridone	5.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.010	U	ug/L
MCPP	0.0040	U	ug/L
Primidone	0.020	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: P324302

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324307

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323774

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323798

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323799

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323967

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323968

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: P323835

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323836

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323755

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.6		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P323688

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	87.0		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P324293

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

Reference Method: SM 4500 F-C-97
Batch ID: P325403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.3		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P325413

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P323785

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

Reference Method: USGS O-2060-01
Batch ID: P323640

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	85.7		P	40 - 140
Acetaminophen	99.2		P	40 - 140
Bentazon	89.2		P	40 - 140
Carbamazepine	110		P	40 - 140
Diuron	93.5		P	40 - 140
Fenuron	119		P	40 - 140
Fluridone	98.2		P	40 - 140
Imidacloprid	104		P	40 - 160
Linuron	96.7		P	40 - 140
MCP	87.3		P	40 - 140
Primidone	98.2		P	40 - 140
Triclopyr	81.5		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890411	Sulfate	99.1		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890443	Sulfate	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890411	Chloride	99.6		P	90 - 110
1890443	Chloride	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890444	Ammonia-N	104	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890540	Kjeldahl Nitrogen	94.2	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890587	NO2NO3-N	105	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323968

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890601	NO2NO3-N	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890540	Total-P	110	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890686	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890543	O-Phosphate-P	99.9	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P323756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890689	O-Phosphate-P	97.4	97.9	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P323688

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890552	Sucralose	94.7	98.7	P/P	40 - 140

Reference Method: SM 4500 F-C-97
 Batch ID: P325403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890410	Fluoride	100	100	P/P	91 - 105

Reference Method: SM 4500 F-C-97
 Batch ID: P325413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891951	Fluoride	98.7	100	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P323785

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890444	Organic Carbon	107		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P323640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890186	2,4-D	90.5	86.0	P/P	40 - 140
1890186	Acetaminophen	90.7	82.4	P/P	40 - 140
1890186	Bentazon	37.2	35.4	F/F	40 - 140
1890186	Carbamazepine	79.5	83.3	P/P	40 - 140
1890186	Diuron	59.9	60.1	P/P	40 - 140
1890186	Fenuron	79.6	74.3	P/P	40 - 140
1890186	Fluridone	9.20	12.0	F/F	40 - 140
1890186	Imidacloprid	195	193	F/F	40 - 160
1890186	Linuron	59.3	60.4	P/P	40 - 140
1890186	MCP	64.9	64.5	P/P	40 - 140
1890186	Primidone	95.7	92.2	P/P	40 - 140
1890186	Triclopyr	63.0	62.2	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890443	Turbidity	1.49	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323802

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890598	Turbidity	2.52	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890411	Sulfate	1.10	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890411	Chloride	0.0834	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890444	Ammonia-N	2.49	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890540	Kjeldahl Nitrogen	5.03	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890797	Kjeldahl Nitrogen	0.980	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890587	NO2NO3-N	0.277	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890601	NO2NO3-N	0.351	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890540	Total-P	3.91	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890686	Total-P	1.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890543	O-Phosphate-P	0.698	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890689	O-Phosphate-P	0.480	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P323688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890552	Sucralose	3.67	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P323759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890537	Color (true)	0.990	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P323760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890585	Color (true)	0.610	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P324293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890584	Total Alkalinity	0.465	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P324506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890584	TDS	0.733	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P324507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890794	TDS	0.396	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P324214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890794	TSS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P325403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890410	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891951	Fluoride	1.02	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P323785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890444	Organic Carbon	0.176	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P323640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890186	2,4-D	4.80	Spike	P	0 - 30
1890186	Acetaminophen	9.59	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P323640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890186	Bentazon	4.18	Spike	P	0 - 30
1890186	Carbamazepine	4.67	Spike	P	0 - 30
1890186	Diuron	0.333	Spike	P	0 - 30
1890186	Fenuron	6.89	Spike	P	0 - 30
1890186	Fluridone	26.4	Spike	P	0 - 30
1890186	Imidacloprid	1.25	Spike	P	0 - 30
1890186	Linuron	1.84	Spike	P	0 - 30
1890186	MCP	0.618	Spike	P	0 - 30
1890186	Primidone	3.73	Spike	P	0 - 30
1890186	Triclopyr	1.28	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: 1890637
Field Sample ID: G5SE0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	86.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	89.4	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	85.9	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	88.8	P	30 - 160
USGS O-2060-01	Diuron-d6	80.6	P	30 - 150
USGS O-2060-01	Primidone-d5	86.1	P	30 - 150

Lab Sample ID: 1890638
Field Sample ID: G5SE0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	88.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	90.8	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	82.5	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	94.4	P	30 - 160
USGS O-2060-01	Diuron-d6	80.8	P	30 - 150
USGS O-2060-01	Primidone-d5	80.8	P	30 - 150

Lab Sample ID: 1890639
Field Sample ID: G5SE0043

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	88.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	65.2	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	106	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	79.9	P	30 - 160
USGS O-2060-01	Diuron-d6	74.2	P	30 - 150
USGS O-2060-01	Primidone-d5	85.8	P	30 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1890640
Field Sample ID: BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	83.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	70.0	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	99.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	104	P	30 - 160
USGS O-2060-01	Diuron-d6	103	P	30 - 150
USGS O-2060-01	Primidone-d5	81.6	P	30 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A75911

Included Lab Sample IDs: 1890590, 1890591, 1890592, 1890595, 1890602, 1890603, 1890604, 1890607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	97.4	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A75914

Included Lab Sample IDs: 1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.1	98.4	P/P	85 - 115
Color (true)	98.4	99.4	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75919

Included Lab Sample IDs: 1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606

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

Reference Method: SM 5310 B-00

Run ID: A75923

Included Lab Sample IDs: 1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	100	P/P	90 - 110
Organic Carbon	99.5	98.6	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75925

Included Lab Sample IDs: 1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A75944

Included Lab Sample IDs: 1890637, 1890638, 1890639, 1890640

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	73.2	91.1	P/P	60 - 150
Sucralose	91.1	97.9	P/P	60 - 150
Sucralose	97.9	90.4	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75961

Included Lab Sample IDs: 1890587, 1890589, 1890599, 1890600, 1890601

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	103	P/P	90 - 110
Total-P	106	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75963

Included Lab Sample IDs: 1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	104	P/P	90 - 110
Kjeldahl Nitrogen	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75967

Included Lab Sample IDs: 1890588, 1890594, 1890606

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75983

Included Lab Sample IDs: 1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	104	P/P	90 - 110
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75999

Included Lab Sample IDs: 1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	104	101	P/P	90 - 110
Sulfate	94.1	98.0	P/P	90 - 110
Sulfate	98.5	94.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A76086

Included Lab Sample IDs: 1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	105	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A76387

Included Lab Sample IDs: 1890637, 1890638, 1890640

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.7	103	P/P	50 - 150
Acetaminophen	94.5	109	P/P	60 - 150
Bentazon	61.6	59.4	P/P	50 - 150
Carbamazepine	82.9	80.4	P/P	60 - 150
Diuron	79.7	85.1	P/P	60 - 150
Fenuron	103	100	P/P	60 - 150
Fluridone	71.2	70.1	P/P	60 - 150
Imidacloprid	85.7	88.3	P/P	60 - 150
Linuron	85.3	89.5	P/P	60 - 150
MCPP	89.4	95.4	P/P	50 - 150
Primidone	85.4	96.4	P/P	60 - 150
Triclopyr	93.2	99.5	P/P	50 - 150

Reference Method: SM 4500 F-C-97

Run ID: A76469

Included Lab Sample IDs: 1890584, 1890585, 1890586, 1890593, 1890597, 1890598, 1890605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.1	P/P	90 - 110
Fluoride	96.7	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76475

Included Lab Sample IDs: 1890596

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.1	95.9	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A76477

Included Lab Sample IDs: 1890639

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.0	88.0	P/P	50 - 150
Acetaminophen	103	117	P/P	60 - 150
Bentazon	90.0	86.0	P/P	50 - 150
Carbamazepine	124	91.0	P/P	60 - 150
Diuron	103	117	P/P	60 - 150
Fenuron	127	102	P/P	60 - 150
Fluridone	131	101	P/P	60 - 150
Imidacloprid	95.2	96.0	P/P	60 - 150
Linuron	84.4	92.0	P/P	60 - 150
MCPP	95.0	99.0	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A76477

Included Lab Sample IDs: 1890639

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	111	86.0	P/P	60 - 150
Triclopyr	92.0	96.0	P/P	50 - 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	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.49	
	Turbidity				2.52	
EPA 300.0 Rev. 2.1	Chloride	101	99.6 98.6		0.0834	
	Sulfate	98.0	99.1 98.7		1.10	
EPA 350.1 Rev. 2.0	Ammonia-N	101	104 101			2.49
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	94.2 101			5.03
	Kjeldahl Nitrogen	99.5				0.980
EPA 353.2 Rev. 2.0	NO2NO3-N	106	105 106			0.277
	NO2NO3-N	106	106 105			0.351
EPA 365.1 Rev. 2.0	Total-P	109	110 105			3.91
	Total-P	103	106 105			1.11
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6	99.9 101			0.698
	O-Phosphate-P	99.6	97.4 97.9			0.480
EPA 8321B	Sucralose	87.0	94.7 98.7			3.67
SM 2120 B	Color (true)				0.990	
	Color (true)				0.610	
SM 2320 B-97	Total Alkalinity	103			0.465	
SM 2540 C-97	TDS				0.733	
	TDS				0.396	
SM 2540 D-97	TSS				0.0	
SM 4500 F-C-97	Fluoride	96.3	100 100			0.0
	Fluoride	97.5	98.7 100			1.02
SM 5310 B-00	Organic Carbon	100	107			0.176
USGS O-2060-01	2,4-D	85.7	90.5 86.0			4.80
	Acetaminophen	99.2	90.7 82.4			9.59
	Bentazon	89.2	37.2 35.4			4.18
	Carbamazepine	110	79.5 83.3			4.67
	Diuron	93.5	59.9 60.1			0.333
	Fenuron	119	79.6 74.3			6.89
	Fluridone	98.2	9.20 12.0			26.4
	Imidacloprid	104	195 193			1.25
	Linuron	96.7	59.3 60.4			1.84
	MCPP	87.3	64.9 64.5			0.618
	Primidone	98.2	95.7 92.2			3.73
	Triclopyr	81.5	63.0 62.2			1.28

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1890590, 1890591, 1890592, 1890595, 1890602, 1890603, 1890604, 1890607
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1890637, 1890638, 1890639, 1890640
SM 2120 B / E31780	True Color measured at 450 nm	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1890637, 1890638, 1890639, 1890640
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1890637, 1890638, 1890639, 1890640

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	04/20/2017			04/20/2017 16:03	Blanca Fach	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
EPA 300.0 Rev. 2.1	04/20/2017			04/28/2017	Ping Hua	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
EPA 350.1 Rev. 2.0	04/20/2017			04/20/2017	Julie Michelle Frank	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 351.2 Rev. 2.0	04/20/2017	04/21/2017	Adrian Shelby	04/24/2017	Joseph Suarez	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 353.2 Rev. 2.0	04/20/2017			04/25/2017	Beverly Y. Sanders	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 365.1 Rev. 2.0	04/20/2017	04/21/2017	Vijayalakshmi Reddy	04/24/2017	Lipi Saha	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
EPA 365.1 Rev. 2.0 dissolved	04/20/2017			04/20/2017 14:54	Anthony C. Onicha	1890590, 1890591
	04/20/2017			04/20/2017 14:55	Anthony C. Onicha	1890592
	04/20/2017			04/20/2017 14:56	Anthony C. Onicha	1890595
	04/20/2017			04/20/2017 14:57	Anthony C. Onicha	1890602
	04/20/2017			04/20/2017 14:58	Anthony C. Onicha	1890603
	04/20/2017			04/20/2017 14:59	Anthony C. Onicha	1890604
	04/20/2017			04/20/2017 15:00	Anthony C. Onicha	1890607
EPA 8321B	04/20/2017	04/20/2017	Mohammad Ghaffari	04/20/2017	Mohammad Ghaffari	1890637, 1890638, 1890639, 1890640
SM 2120 B	04/20/2017			04/20/2017 16:32	Julia Storbeck	1890584
	04/20/2017			04/20/2017 16:36	Julia Storbeck	1890585
	04/20/2017			04/20/2017 16:37	Julia Storbeck	1890586
	04/20/2017			04/20/2017 16:38	Julia Storbeck	1890593, 1890596
	04/20/2017			04/20/2017 16:39	Julia Storbeck	1890597
	04/20/2017			04/20/2017 16:40	Julia Storbeck	1890598
	04/20/2017			04/20/2017 16:41	Julia Storbeck	1890605
SM 2320 B-97	04/20/2017			04/28/2017	Dale L. Simmons	1890584, 1890585, 1890586, 1890593, 1890605
	04/20/2017			04/29/2017	Dale L. Simmons	1890596, 1890597, 1890598
SM 2540 C-97	04/20/2017			04/24/2017	Sima Feizi	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
SM 2540 D-97	04/20/2017			04/24/2017	Sima Feizi	1890584, 1890585, 1890586, 1890593, 1890596, 1890597, 1890598, 1890605
SM 4500 F-C-97	04/20/2017			05/16/2017	Dale L. Simmons	1890584, 1890585, 1890586, 1890593, 1890597, 1890598, 1890605
	04/20/2017			05/17/2017	Dale L. Simmons	1890596
SM 5310 B-00	04/20/2017			04/20/2017	Julie Michelle Frank	1890587, 1890588, 1890589, 1890594, 1890599, 1890600, 1890601, 1890606
USGS O-2060-01	04/20/2017	04/22/2017	Fe-Val Siddell	05/08/2017	Juyoung Kim	1890637, 1890638, 1890640
	04/20/2017	04/22/2017	Fe-Val Siddell	05/15/2017	Juyoung Kim	1890639