

Chemical Analysis Report

SE-DIST-2017-08-31-01

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

Event Description: **SMP-Dade Green Run**

Request ID: **RQ-2017-08-28-31**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

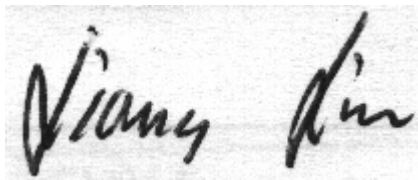
FL Dept. of Environmental Protection
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2199 South Rock Road
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Attn: Matthew Sewell

For additional information please contact

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 28-SEP-2017 11:02

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: C-100/Cutler Drain

Collection Date/Time: 08/30/2017 10:15

Field ID: G4SECD09

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926584	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P331152	
	EPA 300.0 Rev. 2.1	Chloride	34		mg Cl/L	P331243	
		Sulfate	12		mg SO4/L	P331237	
	SM 2120 B	Color (true)	6.8		PCU	P331144	
	SM 2320 B-97	Total Alkalinity	194		mg CaCO3/L	P331523	
	SM 2540 C-97	TDS	275		mg/L	P331661	
	SM 2540 D-97	TSS	2	U	mg/L	P331309	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P331741	
1926589	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P331457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35		mg N/L	P331160	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P331249	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P331192	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P331339	
1926594	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331137	
1926671	EPA 8321B	Sucralose**	0.019	I	ug/L	P331112	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P331089	
		Diuron	8.0E-04	U	ug/L	P331089	
		Fenuron	0.0080	U	ug/L	P331089	
		Imidacloprid	0.0035		ug/L	P331089	
		Bentazon	8.0E-04	U	ug/L	P331089	MS
		Linuron	0.0040	U	ug/L	P331089	
		Acetaminophen**	0.0080	U	ug/L	P331089	MS
		MCP	0.0020	U	ug/L	P331089	
		Carbamazepine**	4.0E-04	U	ug/L	P331089	
		Triclopyr**	0.0040	U	ug/L	P331089	
		Primidone**	0.0040	U	ug/L	P331089	
		Fluridone**	0.0014	I	ug/L	P331089	

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: The result was confirmed on 09/26/2017.

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 09/14/2017.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked 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: C-2/Snapper Creek

Collection Date/Time: 08/30/2017 11:00

Field ID: G4SE0097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926585	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P331152	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P331243	
		Sulfate	1.6		mg SO4/L	P331237	
	SM 2120 B	Color (true)	52	A	PCU	P331144	
	SM 2320 B-97	Total Alkalinity	203		mg CaCO3/L	P331523	
	SM 2540 C-97	TDS	301		mg/L	P331661	
	SM 2540 D-97	TSS	2	U	mg/L	P331309	

Field ID: G4SE0097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926585	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P331741	
1926590	EPA 350.1 Rev. 2.0	Ammonia-N	0.03		mg N/L	P331457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P331576	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P331249	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P331192	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P331339	
1926595	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331137	
1926672	EPA 8321B	Sucralose**	0.035	I	ug/L	P331112	
	USGS O-2060-01	2,4-D	0.0047	I	ug/L	P331089	
		Diuron	0.0021	I	ug/L	P331089	
		Fenuron	0.0080	U	ug/L	P331089	
		Imidacloprid	0.0030	I	ug/L	P331089	
		Bentazon	0.0023	I	ug/L	P331089	MS
		Linuron	0.0040	U	ug/L	P331089	
		Acetaminophen**	0.0080	U	ug/L	P331089	MS
		MCP	0.0020	U	ug/L	P331089	
		Carbamazepine**	0.0011	I	ug/L	P331089	
		Triclopyr**	0.0040	U	ug/L	P331089	
		Primidone**	0.0040	U	ug/L	P331089	
		Fluridone**	0.0031		ug/L	P331089	

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.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked 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: C-100/Cutler Drain

Collection Date/Time: 08/30/2017 10:25

Field ID: G4SECD09_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926586	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P331152	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P331487	
		Sulfate	12		mg SO4/L	P331493	
	SM 2120 B	Color (true)	6.2		PCU	P331144	
	SM 2320 B-97	Total Alkalinity	193		mg CaCO3/L	P331523	
	SM 2540 C-97	TDS	275		mg/L	P331661	
	SM 2540 D-97	TSS	2	U	mg/L	P331309	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P331741	
1926591	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P331634	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P331797	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P331249	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P331192	
	SM 5310 B-00	Organic Carbon	4.1		mg C/L	P331339	
1926596	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331137	
1926673	EPA 8321B	Sucralose**	0.016	I	ug/L	P331112	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P331089	

Field ID: G4SECD09_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926673	USGS O-2060-01	Diuron	8.0E-04	U	ug/L	P331089	
		Fenuron	0.0080	U	ug/L	P331089	
		Imidacloprid	0.0037		ug/L	P331089	
		Bentazon	8.0E-04	U	ug/L	P331089	MS
		Linuron	0.0040	U	ug/L	P331089	
		Acetaminophen**	0.0080	U	ug/L	P331089	MS
		MCP	0.0020	U	ug/L	P331089	
		Carbamazepine**	4.0E-04	U	ug/L	P331089	
		Triclopyr**	0.0040	U	ug/L	P331089	
		Primidone**	0.0040	U	ug/L	P331089	
		Fluridone**	0.0017		ug/L	P331089	

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: The result was confirmed on 09/06/2017.

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 09/19/2017.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked 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: Coral Gables Canal

Collection Date/Time: 08/30/2017 11:20

Field ID: G4SE0096

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926587	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P331152	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P331487	
		Sulfate	14		mg SO4/L	P331493	
	SM 2120 B	Color (true)	9.4		PCU	P331144	
	SM 2320 B-97	Total Alkalinity	218		mg CaCO3/L	P331523	
	SM 2540 C-97	TDS	293		mg/L	P331661	
	SM 2540 D-97	TSS	2	U	mg/L	P331309	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P331741	
1926592	EPA 350.1 Rev. 2.0	Ammonia-N	0.58		mg N/L	P331457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P331576	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P331249	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P331192	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P331339	
1926597	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P331137	
1926674	EPA 8321B	Sucralose**	1.2		ug/L	P331112	
	USGS O-2060-01	2,4-D	0.0029	I	ug/L	P331089	
		Diuron	0.0047		ug/L	P331089	
		Fenuron	0.0080	U	ug/L	P331089	
		Imidacloprid	0.0076		ug/L	P331089	
		Bentazon	9.6E-04	I	ug/L	P331089	MS
		Linuron	0.0040	U	ug/L	P331089	
		Acetaminophen**	0.090		ug/L	P331089	MS
		MCP	0.0020	U	ug/L	P331089	
		Carbamazepine**	0.058		ug/L	P331089	
		Triclopyr**	0.0040	U	ug/L	P331089	

Field ID: G4SE0096

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926674	USGS O-2060-01	Primidone**	0.014	I	ug/L	P331089	
		Fluridone**	0.0020		ug/L	P331089	

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.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked 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: C-6/Miami Canal (West)

Collection Date/Time: 08/30/2017 12:10

Field ID: G4SE0094

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926599	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P331153	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P331487	
		Sulfate	6.6		mg SO4/L	P331493	
	SM 2120 B	Color (true)	57		PCU	P331145	
	SM 2320 B-97	Total Alkalinity	193	Q	mg CaCO3/L	P331631	
	SM 2540 C-97	TDS	338		mg/L	P331661	
	SM 2540 D-97	TSS	4	I	mg/L	P331309	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P331632	
1926601	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P331457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P331576	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P331249	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P331193	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P331406	
1926603	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331138	
1926676	EPA 8321B	Sucralose**	0.010	U	ug/L	P331112	
	USGS O-2060-01	2,4-D	0.0091		ug/L	P331089	
		Diuron	9.6E-04	I	ug/L	P331089	
		Fenuron	0.0080	U	ug/L	P331089	
		Imidacloprid	0.0081		ug/L	P331089	
		Bentazon	0.021		ug/L	P331089	MS
		Linuron	0.0040	U	ug/L	P331089	
		Acetaminophen**	0.0080	U	ug/L	P331089	MS
		MCP	0.0020	U	ug/L	P331089	
		Carbamazepine**	4.0E-04	U	ug/L	P331089	
		Triclopyr**	0.0040	U	ug/L	P331089	
		Primidone**	0.0040	U	ug/L	P331089	
		Fluridone**	0.0022		ug/L	P331089	
1926686	EPA 200.7 Rev. 4.4	Calcium	65.2		mg/L	P331282	
		Iron	140		ug/L	P331282	
		Magnesium	11.9		mg/L	P331282	
		Potassium	3.8		mg/L	P331282	
		Sodium	40.7		mg/L	P331282	
		Zinc	5.0	U	ug/L	P331282	
	EPA 200.8 Rev. 5.4	Arsenic	1.08		ug/L	P331282	

Field ID: G4SE0094

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926686	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P331282	
		Chromium	0.40	U	ug/L	P331282	
		Copper	0.24	I	ug/L	P331282	
		Lead	0.12	I	ug/L	P331282	
		Nickel	0.23	I	ug/L	P331282	
		Selenium	0.20	U	ug/L	P331282	
		Silver	0.010	U	ug/L	P331282	

Ref. Method and Comment:

SM 2320 B-97: Sample analyzed after expiration date because of laboratory closure for Hurricane Irma.

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.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: C6 @ NW 118th Ave

Collection Date/Time: 08/30/2017 12:30

Field ID: G4SE0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926600	EPA 180.1 Rev. 2.0	Turbidity	2.0	A	NTU	P331153	
	EPA 300.0 Rev. 2.1	Chloride	60		mg Cl/L	P331487	
		Sulfate	6.7		mg SO4/L	P331493	
	SM 2120 B	Color (true)	56	A	PCU	P331145	
	SM 2320 B-97	Total Alkalinity	193	Q	mg CaCO3/L	P331631	
	SM 2540 C-97	TDS	336	A	mg/L	P331661	
	SM 2540 D-97	TSS	2	UA	mg/L	P331309	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P331632	
1926602	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P331457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P331576	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P331249	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P331193	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P331406	
1926604	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331138	
1926677	EPA 8321B	Sucralose**	0.010	U	ug/L	P331112	
	USGS O-2060-01	2,4-D	0.010		ug/L	P331089	
		Diuron	9.4E-04	I	ug/L	P331089	
		Fenuron	0.0080	U	ug/L	P331089	
		Imidacloprid	0.0078		ug/L	P331089	
		Bentazon	0.022		ug/L	P331089	MS
		Linuron	0.0040	U	ug/L	P331089	
		Acetaminophen**	0.0080	U	ug/L	P331089	MS
		MCP	0.0020	U	ug/L	P331089	
		Carbamazepine**	4.0E-04	U	ug/L	P331089	
		Triclopyr**	0.0040	U	ug/L	P331089	
		Primidone**	0.0040	U	ug/L	P331089	
		Fluridone**	0.0022		ug/L	P331089	

Field ID: G4SE0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926687	EPA 200.7 Rev. 4.4	Calcium	64.0		mg/L	P331282	
		Iron	120		ug/L	P331282	
		Magnesium	11.7		mg/L	P331282	
		Potassium	3.7		mg/L	P331282	
		Sodium	40.6		mg/L	P331282	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P331282	
		Arsenic	1.07		ug/L	P331282	
		Cadmium	0.020	U	ug/L	P331282	
		Chromium	0.40	U	ug/L	P331282	
		Copper	0.24	I	ug/L	P331282	
		Lead	0.10	I	ug/L	P331282	
		Nickel	0.22	I	ug/L	P331282	
		Selenium	0.20	U	ug/L	P331282	
		Silver	0.010	U	ug/L	P331282	

Ref. Method and Comment:

SM 2320 B-97: Sample analyzed after expiration date because of laboratory closure for Hurricane Irma.

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.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Snake Creek Canal (East)

Collection Date/Time: 08/30/2017 13:15

Field ID: 28040381

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926588	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P331152	
	EPA 300.0 Rev. 2.1	Chloride	29		mg Cl/L	P331487	
		Sulfate	3.7		mg SO4/L	P331493	
		Color (true)	24		PCU	P331144	
	SM 2320 B-97	Total Alkalinity	143	Q	mg CaCO3/L	P331631	
	SM 2540 C-97	TDS	219		mg/L	P331661	
	SM 2540 D-97	TSS	2	U	mg/L	P331309	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P331632	
1926593	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P331457	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P331576	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.080		mg N/L	P331249	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P331192	
	SM 5310 B-00	Organic Carbon	9.4		mg C/L	P331339	
1926598	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331137	
1926675	EPA 8321B	Sucralose**	0.22		ug/L	P331112	
	USGS O-2060-01	2,4-D	0.031		ug/L	P331089	
		Diuron	0.0048		ug/L	P331089	
		Fenuron	0.0080	U	ug/L	P331089	
		Imidacloprid	0.055		ug/L	P331089	
		Bentazon	0.0062		ug/L	P331089	MS

Field ID: 28040381

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1926675	USGS O-2060-01	Linuron	0.0040	U	ug/L	P331089	
		Acetaminophen**	0.0080	U	ug/L	P331089	MS
		MCP	0.0020	U	ug/L	P331089	
		Carbamazepine**	0.0012	I	ug/L	P331089	
		Triclopyr**	0.0040	U	ug/L	P331089	
		Primidone**	0.0040	U	ug/L	P331089	
		Fluridone**	0.018		ug/L	P331089	

Ref. Method and Comment:

SM 2320 B-97: Sample analyzed after expiration date because of laboratory closure for Hurricane Irma.

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.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P331152

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P331153

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P331282

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P331282

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331237

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331243

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331487

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331493

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331457

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331634

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331160

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331576

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331797

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: P331249

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331192

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331193

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331137

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331138

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

Reference Method: EPA 8321B
Batch ID: P331112

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P331144

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P331145

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P331523

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P331631

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

Reference Method: SM 2540 C-97
Batch ID: P331661

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P331309

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P331632

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P331741

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P331339

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

Reference Method: SM 5310 B-00
Batch ID: P331406

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

Reference Method: USGS O-2060-01
Batch ID: P331089

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
MCP	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P331089

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 200.7 Rev. 4.4
Batch ID: P331282

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	107		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	99.6		P	85 - 115
Sodium	104		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331282

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	98.9		P	85 - 115
Copper	95.8		P	85 - 115
Lead	99.9		P	85 - 115
Nickel	98.3		P	85 - 115
Selenium	99.6		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331237

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331243

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331487

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331493

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331634

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: P331160

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: P331576

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331797

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331249

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: P331192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331193

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	90.7		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331137

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331138

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

Reference Method: EPA 8321B
Batch ID: P331112

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	115		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P331523

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

Reference Method: SM 2320 B-97
Batch ID: P331631

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.6		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P331632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P331741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P331339

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	102		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P331406

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.3		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P331089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	63.3		P	40 - 150
Acetaminophen	128		P	30 - 150
Bentazon	40.6		P	40 - 150
Carbamazepine	126		P	40 - 150
Diuron	103		P	40 - 150
Fenuron	110		P	40 - 150
Fluridone	109		P	40 - 150
Imidacloprid	88.6		P	40 - 160
Linuron	108		P	40 - 150
MCPP	64.5		P	40 - 150
Primidone	102		P	40 - 150
Triclopyr	64.1		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P331282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926531	Calcium	88.5		P	80 - 120
1926531	Iron	103		P	80 - 120
1926531	Magnesium	101		P	80 - 120
1926531	Potassium	100		P	80 - 120
1926531	Sodium	101		P	80 - 120
1926531	Zinc	98.5		P	80 - 120
1926941	Calcium	101	102	P/P	80 - 120
1926941	Iron	103	102	P/P	80 - 120
1926941	Magnesium	102	102	P/P	80 - 120
1926941	Potassium	99.9		P	80 - 120
1926941	Zinc	105	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926531	Arsenic	105		P	80 - 120
1926531	Cadmium	104		P	80 - 120
1926531	Chromium	97.4		P	80 - 120
1926531	Copper	95.4		P	80 - 120
1926531	Lead	100		P	80 - 120
1926531	Nickel	97.3		P	80 - 120
1926531	Selenium	103		P	80 - 120
1926531	Silver	102		P	80 - 120
1926941	Arsenic	109	108	P/P	80 - 120
1926941	Cadmium	104	103	P/P	80 - 120
1926941	Chromium	94.8	94.6	P/P	80 - 120
1926941	Copper	97.9	97.2	P/P	80 - 120
1926941	Lead	103	102	P/P	80 - 120
1926941	Nickel	98.6	98.5	P/P	80 - 120
1926941	Selenium	103	102	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926941	Silver	101	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331237

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926418	Sulfate	101		P	90 - 110
1926574	Sulfate	93.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926418	Chloride	105		P	90 - 110
1926574	Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926536	Chloride	96.2		P	90 - 110
1926552	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331493

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926536	Sulfate	95.2		P	90 - 110
1926552	Sulfate	95.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926567	Ammonia-N	93.6	91.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1928555	Ammonia-N	103	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331160

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926554	Kjeldahl Nitrogen	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1928654	Kjeldahl Nitrogen	97.9	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926590	NO2NO3-N	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926592	Total-P	93.5	94.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926726	Total-P	94.1	92.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331137

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926594	O-Phosphate-P	94.3	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331138

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926810	O-Phosphate-P	96.6	97.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P331632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926832	Fluoride	97.9	98.5	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P331741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1928615	Fluoride	96.9	96.9	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P331339

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926422	Organic Carbon	103	102	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P331089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1926400	2,4-D	63.5	63.5	P/P	40 - 150
1926400	Acetaminophen	22.5	22.0	F/F	30 - 150
1926400	Bentazon	26.3	24.4	F/F	40 - 150
1926400	Carbamazepine	94.8	91.4	P/P	40 - 150
1926400	Diuron	81.0	78.9	P/P	40 - 150
1926400	Fenuron	101	98.9	P/P	40 - 150
1926400	Fluridone	110	104	P/P	40 - 150
1926400	Linuron	116	105	P/P	40 - 150
1926400	MCP	64.7	58.2	P/P	40 - 150
1926400	Primidone	148	129	P/P	40 - 150
1926400	Triclopyr	62.1	57.4	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P331152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926564	Turbidity	3.09	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P331153

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926600	Turbidity	0.512	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P331282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926941	Calcium	0.704	Spike	P	0 - 20
1926941	Iron	0.508	Spike	P	0 - 20
1926941	Magnesium	0.343	Spike	P	0 - 20
1926941	Potassium	0.464	Spike	P	0 - 20
1926941	Sodium	1.36	Spike	P	0 - 20
1926941	Zinc	0.0361	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926941	Arsenic	0.698	Spike	P	0 - 20
1926941	Cadmium	0.359	Spike	P	0 - 20
1926941	Chromium	0.230	Spike	P	0 - 20
1926941	Copper	0.720	Spike	P	0 - 20
1926941	Lead	0.249	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926941	Nickel	0.0562	Spike	P	0 - 20
1926941	Selenium	0.0783	Spike	P	0 - 20
1926941	Silver	0.0155	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331237

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926418	Sulfate	0.446	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926418	Chloride	0.401	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926552	Chloride	2.08	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331493

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926552	Sulfate	1.68	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926567	Ammonia-N	1.41	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928555	Ammonia-N	1.28	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331160

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926554	Kjeldahl Nitrogen	1.56	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926590	Kjeldahl Nitrogen	1.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928654	Kjeldahl Nitrogen	3.30	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926590	NO2NO3-N	1.37	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926592	Total-P	1.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926726	Total-P	2.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926594	O-Phosphate-P	3.85	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926810	O-Phosphate-P	0.944	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P331112

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926399	Sucralose	2.37	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P331144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926585	Color (true)	0.898	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P331145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926600	Color (true)	1.62	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P331523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926802	Total Alkalinity	0.386	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P331631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926832	Total Alkalinity	0.696	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P331661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926600	TDS	1.49	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P331632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926832	Fluoride	0.500	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P331741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928615	Fluoride	0.0	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
 Batch ID: P331339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926422	Organic Carbon	0.914	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P331406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926725	Organic Carbon	0.119	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P331089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926400	2,4-D	0.0257	Spike	P	0 - 30
1926400	Acetaminophen	2.07	Spike	P	0 - 30
1926400	Bentazon	5.58	Spike	P	0 - 30
1926400	Carbamazepine	0.789	Spike	P	0 - 30
1926400	Diuron	2.19	Spike	P	0 - 30
1926400	Fenuron	2.28	Spike	P	0 - 30
1926400	Fluridone	5.76	Spike	P	0 - 30
1926400	Imidacloprid	0.890	Spike	P	0 - 30
1926400	Linuron	9.29	Spike	P	0 - 30
1926400	MCPP	10.4	Spike	P	0 - 30
1926400	Primidone	5.94	Spike	P	0 - 30
1926400	Triclopyr	7.90	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: 1926671
 Field Sample ID: G4SECD09

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	122	P	30 - 160
EPA 8321B	Diuron-d6	90.9	P	30 - 160
EPA 8321B	Primidone-d5	122	P	30 - 160
EPA 8321B	Sucralose-d6	84.1	P	40 - 160
USGS O-2060-01	2,4-D-d3	58.0	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	103	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	122	P	30 - 160
USGS O-2060-01	Diuron-d6	90.9	P	30 - 160
USGS O-2060-01	Primidone-d5	122	P	30 - 160
USGS O-2060-01	Sucralose-d6	84.1	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1926672
Field Sample ID: G4SE0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	83.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.0	P	30 - 160
EPA 8321B	Diuron-d6	71.3	P	30 - 160
EPA 8321B	Primidone-d5	115	P	30 - 160
EPA 8321B	Sucralose-d6	52.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	62.7	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	83.6	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	89.0	P	30 - 160
USGS O-2060-01	Diuron-d6	71.3	P	30 - 160
USGS O-2060-01	Primidone-d5	115	P	30 - 160
USGS O-2060-01	Sucralose-d6	52.6	P	40 - 160

Lab Sample ID: 1926673
Field Sample ID: G4SECD09_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	114	P	30 - 160
EPA 8321B	Carbamazepine-d10	127	P	30 - 160
EPA 8321B	Diuron-d6	99.2	P	30 - 160
EPA 8321B	Primidone-d5	128	P	30 - 160
EPA 8321B	Sucralose-d6	74.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	62.3	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	114	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	127	P	30 - 160
USGS O-2060-01	Diuron-d6	99.2	P	30 - 160
USGS O-2060-01	Primidone-d5	128	P	30 - 160
USGS O-2060-01	Sucralose-d6	74.6	P	40 - 160

Lab Sample ID: 1926674
Field Sample ID: G4SE0096

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	94.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	110	P	30 - 160
EPA 8321B	Diuron-d6	82.6	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	76.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	52.8	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	94.5	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	110	P	30 - 160
USGS O-2060-01	Diuron-d6	82.6	P	30 - 160
USGS O-2060-01	Primidone-d5	108	P	30 - 160
USGS O-2060-01	Sucralose-d6	76.4	P	40 - 160

Lab Sample ID: 1926675
Field Sample ID: 28040381

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	97.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	78.8	P	30 - 160
EPA 8321B	Primidone-d5	123	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1926675
Field Sample ID: 28040381

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	69.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	60.2	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	97.2	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	104	P	30 - 160
USGS O-2060-01	Diuron-d6	78.8	P	30 - 160
USGS O-2060-01	Primidone-d5	123	P	30 - 160
USGS O-2060-01	Sucralose-d6	69.8	P	40 - 160

Lab Sample ID: 1926676
Field Sample ID: G4SE0094

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	89.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.4	P	30 - 160
EPA 8321B	Diuron-d6	75.1	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	47.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	65.3	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	89.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	88.4	P	30 - 160
USGS O-2060-01	Diuron-d6	75.1	P	30 - 160
USGS O-2060-01	Primidone-d5	110	P	30 - 160
USGS O-2060-01	Sucralose-d6	47.6	P	40 - 160

Lab Sample ID: 1926677
Field Sample ID: G4SE0101

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	95.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.0	P	30 - 160
EPA 8321B	Diuron-d6	74.7	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	56.7	P	40 - 160
USGS O-2060-01	2,4-D-d3	72.1	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	95.6	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	93.0	P	30 - 160
USGS O-2060-01	Diuron-d6	74.7	P	30 - 160
USGS O-2060-01	Primidone-d5	108	P	30 - 160
USGS O-2060-01	Sucralose-d6	56.7	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A78735
Included Lab Sample IDs: 1926594, 1926595, 1926596, 1926597, 1926598, 1926603, 1926604

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	102	P/P	90 - 110
O-Phosphate-P	105	102	P/P	90 - 110
O-Phosphate-P	99.3	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A78736

Included Lab Sample IDs: 1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A78737

Included Lab Sample IDs: 1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78767

Included Lab Sample IDs: 1926584, 1926585

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	107	101	P/P	90 - 110
Sulfate	106	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78773

Included Lab Sample IDs: 1926592

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78774

Included Lab Sample IDs: 1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	127	137	P/P	60 - 150
Sucralose	130	127	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78775

Included Lab Sample IDs: 1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78778

Included Lab Sample IDs: 1926589

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78782

Included Lab Sample IDs: 1926589, 1926590, 1926591, 1926593, 1926601, 1926602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.0	97.5	P/P	90 - 110
Total-P	98.5	97.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A78811

Included Lab Sample IDs: 1926589, 1926590, 1926591, 1926592, 1926593

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78818

Included Lab Sample IDs: 1926686, 1926687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	102	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	102	99.9	P/P	90 - 110
Chromium	99.5	102	P/P	90 - 110
Copper	101	99.6	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	100	99.3	P/P	90 - 110
Nickel	100	100	P/P	90 - 110
Selenium	102	98.4	P/P	90 - 110
Selenium	98.4	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A78834

Included Lab Sample IDs: 1926601, 1926602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	98.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78858

Included Lab Sample IDs: 1926589, 1926590, 1926592, 1926593, 1926601, 1926602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	97.9	P/P	90 - 110
Ammonia-N	98.7	99.3	P/P	90 - 110
Ammonia-N	99.3	99.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78862

Included Lab Sample IDs: 1926586, 1926587, 1926588, 1926599, 1926600

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78862

Included Lab Sample IDs: 1926586, 1926587, 1926588, 1926599, 1926600

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	101	P/P	90 - 110
Sulfate	101	99.5	P/P	90 - 110
Sulfate	99.5	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78866

Included Lab Sample IDs: 1926686, 1926687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	101	P/P	90 - 110
Iron	102	100	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	99.2	100	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78870

Included Lab Sample IDs: 1926584, 1926585, 1926586, 1926587

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

Reference Method: USGS O-2060-01

Run ID: A78880

Included Lab Sample IDs: 1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	90.8	97.0	P/P	50 - 150
2,4-D	94.7	90.8	P/P	50 - 150
Bentazon	105	104	P/P	50 - 150
Bentazon	106	105	P/P	50 - 150
MCP	103	105	P/P	50 - 150
MCP	105	102	P/P	50 - 150
Triclopyr	104	99.6	P/P	50 - 150
Triclopyr	99.6	115	P/P	50 - 150

Reference Method: USGS O-2060-01

Run ID: A78884

Included Lab Sample IDs: 1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	114	115	P/P	60 - 150
Acetaminophen	114	114	P/P	60 - 150
Carbamazepine	117	119	P/P	60 - 150
Carbamazepine	119	118	P/P	60 - 150
Diuron	109	110	P/P	60 - 150
Diuron	110	110	P/P	60 - 150
Fenuron	114	116	P/P	60 - 150
Fenuron	116	116	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A78884

Included Lab Sample IDs: 1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	113	114	P/P	60 - 160
Fluridone	114	111	P/P	60 - 160
Imidacloprid	103	97.0	P/P	60 - 150
Imidacloprid	91.1	103	P/P	60 - 150
Linuron	120	124	P/P	60 - 150
Linuron	124	121	P/P	60 - 150
Primidone	111	122	P/P	60 - 150
Primidone	120	111	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A78909

Included Lab Sample IDs: 1926588, 1926599, 1926600

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	97.0	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78909

Included Lab Sample IDs: 1926588, 1926599, 1926600

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78911

Included Lab Sample IDs: 1926591

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78913

Included Lab Sample IDs: 1926686, 1926687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	94.2	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78938

Included Lab Sample IDs: 1926590, 1926592, 1926593, 1926601, 1926602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	103	P/P	90 - 110
Kjeldahl Nitrogen	97.4	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78959

Included Lab Sample IDs: 1926584, 1926585, 1926586, 1926587

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79057

Included Lab Sample IDs: 1926591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	101	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						3.09	
	Turbidity						0.512	
EPA 200.7 Rev. 4.4	Calcium	108	88.5	101	102			0.704
	Iron	107	103	103	102			0.508
	Magnesium	107	101	102	102			0.343
	Potassium	99.6	100	99.9				0.464
	Sodium	104	101					1.36
	Zinc	101	98.5	105	105			0.0361
EPA 200.8 Rev. 5.4	Arsenic	102	105	109	108			0.698
	Cadmium	101	104	104	103			0.359
	Chromium	98.9	97.4	94.8	94.6			0.230
	Copper	95.8	95.4	97.9	97.2			0.720
	Lead	99.9	100	103	102			0.249
	Nickel	98.3	97.3	98.6	98.5			0.0562
	Selenium	99.6	103	103	102			0.0783
	Silver	101	102	101	101			0.0155
EPA 300.0 Rev. 2.1	Chloride	101	105	95.5			0.401	
	Chloride	97.2	97.2	96.2			2.08	
	Sulfate	97.7	101	93.4			0.446	
	Sulfate	95.2	95.0	95.2			1.68	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	93.6	91.1				1.41
	Ammonia-N	102	103	99.4				1.28
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	101	103				1.56
	Kjeldahl Nitrogen	105						1.63
	Kjeldahl Nitrogen	106	97.9	102				3.30
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104	106	105				1.37
EPA 365.1 Rev. 2.0	Total-P	94.2	93.5	94.8				1.21
	Total-P	90.7	94.1	92.0				2.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0	94.3	98.0				3.85
	O-Phosphate-P	105	96.6	97.8				0.944
EPA 8321B	Sucralose	115						2.37
SM 2120 B	Color (true)						0.898	
	Color (true)						1.62	
SM 2320 B-97	Total Alkalinity	103					0.386	
	Total Alkalinity	99.6					0.696	
SM 2540 C-97	TDS						1.49	
SM 4500 F-C-97	Fluoride	95.4	97.9	98.5				0.500
	Fluoride	95.4	96.9	96.9				0.0
SM 5310 B-00	Organic Carbon	102	103	102				0.914

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 5310 B-00	Organic Carbon	97.3				0.119
USGS O-2060-01	2,4-D	63.3	63.5	63.5		0.0257
	Acetaminophen	128	22.5	22.0		2.07
	Bentazon	40.6	26.3	24.4		5.58
	Carbamazepine	126	94.8	91.4		0.789
	Diuron	103	81.0	78.9		2.19
	Fenuron	110	101	98.9		2.28
	Fluridone	109	110	104		5.76
	Imidacloprid	88.6				0.890
	Linuron	108	116	105		9.29
	MCP	64.5	64.7	58.2		10.4
	Primidone	102	148	129		5.94
	Triclopyr	64.1	62.1	57.4		7.90

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1926686, 1926687
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1926686, 1926687
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1926594, 1926595, 1926596, 1926597, 1926598, 1926603, 1926604
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677
SM 2120 B / E31780	True Color measured at 450 nm	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677

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	08/31/2017			08/31/2017 15:53	DeAsia Armster	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
EPA 200.7 Rev. 4.4	08/31/2017	09/05/2017	Elliott D. Healy	09/07/2017	Betina Topolski	1926686, 1926687
EPA 200.8 Rev. 5.4	08/31/2017	09/05/2017	Elliott D. Healy	09/06/2017	Nadine Brooks	1926686, 1926687
	08/31/2017	09/05/2017	Elliott D. Healy	09/13/2017	Nadine Brooks	1926686, 1926687
EPA 300.0 Rev. 2.1	08/31/2017			09/02/2017	Julia Storbeck	1926584, 1926585
	08/31/2017			09/06/2017	Julia Storbeck	1926586, 1926587, 1926588, 1926599, 1926600
EPA 350.1 Rev. 2.0	08/31/2017			09/06/2017	Sofia Elnemr	1926589, 1926590, 1926592, 1926593, 1926601, 1926602
	08/31/2017			09/14/2017	Sofia Elnemr	1926591
EPA 351.2 Rev. 2.0	08/31/2017	09/01/2017	Adrian Shelby	09/05/2017	Joseph Suarez	1926589
	08/31/2017	09/13/2017	Adrian Shelby	09/15/2017	Joseph Suarez	1926590, 1926592, 1926593, 1926601, 1926602
	08/31/2017	09/19/2017	Adrian Shelby	09/20/2017	Tanya Welborn	1926591
EPA 353.2 Rev. 2.0	08/31/2017			09/05/2017	Beverly Y. Sanders	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
EPA 365.1 Rev. 2.0	08/31/2017	09/01/2017	Sima Feizi	09/05/2017	Lipi Saha	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
EPA 365.1 Rev. 2.0 dissolved	08/31/2017			08/31/2017 13:43	Megan Treadwell	1926594
	08/31/2017			08/31/2017 14:11	Megan Treadwell	1926595
	08/31/2017			08/31/2017 14:12	Megan Treadwell	1926596
	08/31/2017			08/31/2017 14:13	Megan Treadwell	1926597
	08/31/2017			08/31/2017 14:14	Megan Treadwell	1926598
	08/31/2017			08/31/2017 14:15	Megan Treadwell	1926603
	08/31/2017			08/31/2017 14:20	Megan Treadwell	1926604
EPA 8321B	08/31/2017	09/01/2017	Julie Michelle Frank	09/02/2017	Julie Michelle Frank	1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677
SM 2120 B	08/31/2017			08/31/2017 15:16	Tanya Welborn	1926584
	08/31/2017			08/31/2017 15:17	Tanya Welborn	1926585
	08/31/2017			08/31/2017 15:18	Tanya Welborn	1926586
	08/31/2017			08/31/2017 15:19	Tanya Welborn	1926587
	08/31/2017			08/31/2017 15:20	Tanya Welborn	1926588
	08/31/2017			08/31/2017 15:23	Tanya Welborn	1926599
	08/31/2017			08/31/2017 15:24	Tanya Welborn	1926600
SM 2320 B-97	08/31/2017			09/07/2017	Dale L. Simmons	1926584, 1926585, 1926586, 1926587
	08/31/2017			09/13/2017	Dale L. Simmons	1926588, 1926599, 1926600
SM 2540 C-97	08/31/2017			09/01/2017	DeAsia Armster	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
SM 2540 D-97	08/31/2017			09/01/2017	DeAsia Armster	1926584, 1926585, 1926586, 1926587, 1926588, 1926599, 1926600
SM 4500 F-C-97	08/31/2017			09/13/2017	Dale L. Simmons	1926588, 1926599, 1926600

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	08/31/2017			09/15/2017	Dale L. Simmons	1926584, 1926585, 1926586, 1926587
SM 5310 B-00	08/31/2017			09/06/2017	Ping Hua	1926589, 1926590, 1926591, 1926592, 1926593, 1926601, 1926602
USGS O-2060-01	08/31/2017	09/01/2017	Hoor Shaik	09/03/2017	Julie Michelle Frank	1926671, 1926672, 1926673, 1926674, 1926675, 1926676, 1926677