

Chemical Analysis Report

SE-DIST-2017-04-19-01

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

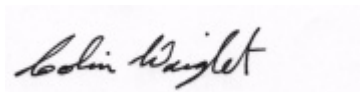
Event Description: **SMP-G5 South Run**
Request ID: **RQ-2017-04-17-36**
Customer: **SE-DIST**
Project ID: **SMP**

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

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Certified by: Colin Wright, Program Administrator

Date Certified: 17-MAY-2017 10:01

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: L-8 @ G-541

Collection Date/Time: 04/18/2017 09:55

Field ID: G3SE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890340	EPA 180.1 Rev. 2.0	Turbidity	26		NTU	P323704	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P324182	
		Sulfate	40		mg SO4/L	P324180	
	SM 2120 B	Color (true)	28	A	PCU	P323673	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P324164	
	SM 2540 C-97	TDS	358		mg/L	P324031	
	SM 2540 D-97	TSS	12		mg/L	P324270	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P325275	
1890344	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P323683	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P323795	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.33		mg N/L	P323965	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P323818	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P323790	
1890348	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P323665	

Sample Location: M-Canal

Collection Date/Time: 04/18/2017 10:15

Field ID: 28011007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890341	EPA 180.1 Rev. 2.0	Turbidity	41	A	NTU	P323705	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P324182	
		Sulfate	23		mg SO4/L	P324180	
	SM 2120 B	Color (true)	26		PCU	P323673	
	SM 2320 B-97	Total Alkalinity	109		mg CaCO3/L	P324164	
	SM 2540 C-97	TDS	268		mg/L	P324031	
	SM 2540 D-97	TSS	18		mg/L	P324270	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P325275	
1890345	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P323683	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P323795	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.48		mg N/L	P323965	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P323818	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P323790	
1890349	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.084		mg P/L	P323665	

Sample Location: Ocean Canal @ SR 700

Collection Date/Time: 04/18/2017 10:25

Field ID: G5SE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890342	EPA 180.1 Rev. 2.0	Turbidity	32		NTU	P323704	
	EPA 300.0 Rev. 2.1	Chloride	51		mg Cl/L	P324182	
		Sulfate	26		mg SO4/L	P324180	
	SM 2120 B	Color (true)	28		PCU	P323673	
	SM 2320 B-97	Total Alkalinity	112		mg CaCO3/L	P324164	

Field ID: G5SE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890342	SM 2540 C-97	TDS	267		mg/L	P324031	
	SM 2540 D-97	TSS	13		mg/L	P324270	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P325275	
1890346	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P323823	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P323795	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.47		mg N/L	P323965	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P323818	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P323790	
1890350	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.082		mg P/L	P323665	

Sample Location: WPB Canal @ Twenty Mile Bad

Collection Date/Time: 04/18/2017 10:45

Field ID: G5SE0058

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890358	EPA 180.1 Rev. 2.0	Turbidity	50	A	NTU	P323707	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P324182	
		Sulfate	23		mg SO4/L	P324180	
		Color (true)	25		PCU	P323673	
	SM 2320 B-97	Total Alkalinity	107		mg CaCO3/L	P324164	
	SM 2540 C-97	TDS	264	A	mg/L	P324032	
	SM 2540 D-97	TSS	39	A	mg/L	P324271	
1890359	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P325275	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P323683	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P323796	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.47		mg N/L	P323966	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P323834	
1890360	SM 5310 B-00	Organic Carbon	12		mg C/L	P323790	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.084		mg P/L	P323666	
1890381	EPA 8321B	Sucralose**	0.034	I	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	0.0068		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**	0.0038		ug/L	P323640	MS

Ref. Method and Comment:

EPA 353.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: WPB Canal @ Twenty Mile Bad

Collection Date/Time: 04/18/2017 10:55

Field ID: G5SE0058 Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890361	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P323705	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P324478	
		Sulfate	0.20	U	mg SO4/L	P324476	
	SM 2120 B	Color (true)	2.5	U	PCU	P323672	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P324164	
	SM 2540 C-97	TDS	15	U	mg/L	P324028	
	SM 2540 D-97	TSS	2	U	mg/L	P324267	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P325275	
1890362	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323683	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P323796	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323966	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P323834	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P323785	
1890363	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323666	

Ref. Method and Comment:

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

EPA 353.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Miami Canal @ SR 80 / Hwy 27

Collection Date/Time: 04/18/2017 11:40

Field ID: 28010980

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890343	EPA 180.1 Rev. 2.0	Turbidity	31		NTU	P323705	
	EPA 300.0 Rev. 2.1	Chloride	47		mg Cl/L	P324182	
		Sulfate	23		mg SO4/L	P324180	
	SM 2120 B	Color (true)	29		PCU	P323673	
	SM 2320 B-97	Total Alkalinity	115		mg CaCO3/L	P324164	
	SM 2540 C-97	TDS	268	A	mg/L	P324031	
	SM 2540 D-97	TSS	26	A	mg/L	P324270	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P325241	
1890347	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P323683	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P323795	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P323965	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P323818	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P323790	
1890351	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P323666	

Sample Location: 715 Farms Canal @ Morgan Rd

Collection Date/Time: 04/18/2017 12:15

Field ID: 28010984

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890352	EPA 180.1 Rev. 2.0	Turbidity	32		NTU	P323705	
	EPA 300.0 Rev. 2.1	Chloride	51		mg Cl/L	P324182	
		Sulfate	26		mg SO4/L	P324180	
	SM 2120 B	Color (true)	29		PCU	P323673	
	SM 2320 B-97	Total Alkalinity	116		mg CaCO3/L	P324164	

Field ID: 28010984

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890352	SM 2540 C-97	TDS	252		mg/L	P324031	
	SM 2540 D-97	TSS	12		mg/L	P324270	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P325241	
1890354	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P323683	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P323796	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.40		mg N/L	P323966	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P323818	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P323790	
1890356	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.084		mg P/L	P323666	
1890379	EPA 8321B	Sucralose**	0.037	I	ug/L	P323642	
	USGS O-2060-01	2,4-D	0.045		ug/L	P323640	
		Diuron	0.0020	U	ug/L	P323640	
		Fenuron	0.010	U	ug/L	P323640	
		Imidacloprid	0.0024	I	ug/L	P323640	MS
		Bentazon	0.0084		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**	0.0028		ug/L	P323640	MS

Ref. Method and Comment:

EPA 353.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: East Beach Canal near Pahokee WWTP

Collection Date/Time: 04/18/2017 12:45

Field ID: G5SE0059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890353	EPA 180.1 Rev. 2.0	Turbidity	33		NTU	P323705	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P324182	
		Sulfate	23		mg SO4/L	P324180	
	SM 2120 B	Color (true)	25		PCU	P323673	
	SM 2320 B-97	Total Alkalinity	109		mg CaCO3/L	P324164	
	SM 2540 C-97	TDS	249		mg/L	P324031	
	SM 2540 D-97	TSS	12		mg/L	P324270	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P325241	
1890355	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P323683	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P323796	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.40		mg N/L	P323966	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P323818	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P323790	
1890357	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.081		mg P/L	P323666	
1890380	EPA 8321B	Sucralose**	0.026	I	ug/L	P323688	
	USGS O-2060-01	2,4-D	0.018		ug/L	P323640	

Field ID: G5SE0059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890380	USGS O-2060-01	Diuron	0.0020	U	ug/L	P323640	
		Fenuron	0.010	U	ug/L	P323640	
		Imidacloprid	0.0020	U	ug/L	P323640	MS
		Bentazon	0.0064		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**	0.0036		ug/L	P323640	MS

Ref. Method and Comment:
 EPA 353.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323704

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323705

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323707

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324180

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324182

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324476

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324478

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323683

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323823

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323795

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323796

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323965

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323966

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323818

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323834

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: P323665

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323666

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

Reference Method: EPA 8321B
Batch ID: P323642

Component	Result	Code	Units
Sucralose	0.010	U	ug/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: P323672

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P323673

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P324164

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

Reference Method: SM 2540 C-97
Batch ID: P324028

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P324031

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P324032

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324267

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324270

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324271

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325241

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325275

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: SM 5310 B-00
Batch ID: P323790

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

Quality Assurance Report Method Blank Results

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

Component	Result	Code	Units
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: P324180

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324182

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324476

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323683

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323823

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323795

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: P323796

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323965

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323966

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323818

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: P323834

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323665

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323666

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

Reference Method: EPA 8321B
Batch ID: P323642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	123		P	40 - 140

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: P324164

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

Reference Method: SM 4500 F-C-97
Batch ID: P325241

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P325275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		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: SM 5310 B-00
Batch ID: P323790

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
MCPP	87.3		P	40 - 140
Primidone	98.2		P	40 - 140
Triclopyr	81.5		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890210	Sulfate	99.7		P	90 - 110
1890234	Sulfate	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890210	Chloride	100		P	90 - 110
1890234	Chloride	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891993	Sulfate	99.6		P	90 - 110
1892005	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891993	Chloride	98.7		P	90 - 110
1892005	Chloride	94.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323683

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890235	Ammonia-N	103	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323823

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890346	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890213	Kjeldahl Nitrogen	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890415	Kjeldahl Nitrogen	99.2	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323965

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890266	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323818

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889689	Total-P	108	110	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890415	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323665

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890176	O-Phosphate-P	99.5	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890351	O-Phosphate-P	96.5	96.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P323642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890008	Sucralose	92.3	86.1	P/P	40 - 140

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: P325241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890087	Fluoride	101	104	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P325275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895643	Fluoride	102	102	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

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: SM 5310 B-00
Batch ID: P323790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890211	Organic Carbon	99.2	101	P/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: P323704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890210	Turbidity	0.766	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890341	Turbidity	6.36	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890358	Turbidity	3.83	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890210	Sulfate	1.81	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890210	Chloride	0.0837	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891993	Sulfate	0.841	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891993	Chloride	0.138	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890235	Ammonia-N	1.79	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323823

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890346	Ammonia-N	0.942	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323795

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890213	Kjeldahl Nitrogen	1.03	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890415	Kjeldahl Nitrogen	0.119	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890266	NO2NO3-N	0.473	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890354	NO2NO3-N	0.328	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889689	Total-P	1.76	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890415	Total-P	1.78	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890176	O-Phosphate-P	0.401	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890351	O-Phosphate-P	0.130	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P323642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890008	Sucralose	6.95	Spike	P	0 - 30

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

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P323672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890265	Color (true)	0.901	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P323673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890340	Color (true)	1.84	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P324164

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890087	Total Alkalinity	0.565	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P324028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889863	TDS	4.36	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P324031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890343	TDS	7.08	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P324032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890358	TDS	3.40	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P324270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890343	TSS	7.63	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P324271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890358	TSS	5.18	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
 Batch ID: P325241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890087	Fluoride	2.62	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
 Batch ID: P325275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895643	Fluoride	0.480	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: SM 5310 B-00
 Batch ID: P323790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890211	Organic Carbon	1.78	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
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	MCPP	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

Quality Assurance Report Surrogates

Lab Sample ID: 1890379
Field Sample ID: 28010984

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	92.9	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	100	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	122	P	30 - 160
USGS O-2060-01	Diuron-d6	101	P	30 - 150
USGS O-2060-01	Primidone-d5	98.8	P	30 - 150

Lab Sample ID: 1890380
Field Sample ID: G5SE0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	77.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	90.2	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	103	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	115	P	30 - 160
USGS O-2060-01	Diuron-d6	94.8	P	30 - 150
USGS O-2060-01	Primidone-d5	91.5	P	30 - 150

Lab Sample ID: 1890381
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	76.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	89.0	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	90.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	118	P	30 - 160
USGS O-2060-01	Diuron-d6	97.4	P	30 - 150
USGS O-2060-01	Primidone-d5	97.4	P	30 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75883

Included Lab Sample IDs: 1890348, 1890349, 1890350, 1890351, 1890356, 1890357, 1890360, 1890363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.6	96.8	P/P	90 - 110
O-Phosphate-P	98.1	97.6	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A75886

Included Lab Sample IDs: 1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	100	P/P	85 - 115
Color (true)	98.8	103	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75889

Included Lab Sample IDs: 1890344, 1890345, 1890347, 1890354, 1890355, 1890359, 1890362

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A75899

Included Lab Sample IDs: 1890379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	98.2	83.1	P/P	60 - 150

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75900

Included Lab Sample IDs: 1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.0	P/P	95 - 105
Turbidity	99.0	99.5	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 5310 B-00

Run ID: A75923

Included Lab Sample IDs: 1890362

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

Reference Method: SM 5310 B-00

Run ID: A75924

Included Lab Sample IDs: 1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.8	P/P	90 - 110
Organic Carbon	98.8	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75931

Included Lab Sample IDs: 1890346

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

Reference Method: EPA 8321B

Run ID: A75944

Included Lab Sample IDs: 1890380, 1890381

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75957

Included Lab Sample IDs: 1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75961

Included Lab Sample IDs: 1890359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75964

Included Lab Sample IDs: 1890344, 1890345, 1890346, 1890347, 1890354, 1890355

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	107	P/P	90 - 110
Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75967

Included Lab Sample IDs: 1890362

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75983

Included Lab Sample IDs: 1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75999

Included Lab Sample IDs: 1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	99.7	100	P/P	90 - 110
Sulfate	94.5	98.9	P/P	90 - 110
Sulfate	99.1	94.5	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76045

Included Lab Sample IDs: 1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	104	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A76148

Included Lab Sample IDs: 1890361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	98.9	100	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A76387

Included Lab Sample IDs: 1890379, 1890380, 1890381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.6	92.7	P/P	50 - 150
Acetaminophen	112	94.5	P/P	60 - 150
Bentazon	65.6	61.6	P/P	50 - 150
Carbamazepine	94.4	82.9	P/P	60 - 150
Diuron	100	79.7	P/P	60 - 150
Fenuron	108	103	P/P	60 - 150
Fluridone	84.3	71.2	P/P	60 - 150
Imidacloprid	96.1	85.7	P/P	60 - 150
Linuron	101	85.3	P/P	60 - 150
MCP	93.3	89.4	P/P	50 - 150
Primidone	98.0	85.4	P/P	60 - 150
Triclopyr	96.1	93.2	P/P	50 - 150

Reference Method: SM 4500 F-C-97

Run ID: A76396

Included Lab Sample IDs: 1890343, 1890352, 1890353

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76418

Included Lab Sample IDs: 1890340, 1890341, 1890342, 1890358, 1890361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110
Fluoride	99.0	100	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		Precision	
						SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					0.766	
	Turbidity					6.36	
	Turbidity					3.83	
EPA 300.0 Rev. 2.1	Chloride	101	100	98.7		0.0837	
	Chloride	99.2	98.7	94.7		0.138	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 300.0 Rev. 2.1	Sulfate	103	99.7	103	1.81	
	Sulfate	100	99.6	100	0.841	
EPA 350.1 Rev. 2.0	Ammonia-N	107	103	106		1.79
	Ammonia-N	99.6	101	102		0.942
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	101	102		1.03
	Kjeldahl Nitrogen	99.0	99.2	99.1		0.119
EPA 353.2 Rev. 2.0	NO2NO3-N	102	106	106		0.473
	NO2NO3-N	105				0.328
EPA 365.1 Rev. 2.0	Total-P	109	108	110		1.76
	Total-P	102	104	102		1.78
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	99.5	99.9		0.401
	O-Phosphate-P	97.6	96.5	96.3		0.130
EPA 8321B	Sucralose	123	92.3	86.1		6.95
	Sucralose	87.0	94.7	98.7		3.67
SM 2120 B	Color (true)				0.901	
	Color (true)				1.84	
SM 2320 B-97	Total Alkalinity	104			0.565	
SM 2540 C-97	TDS				4.36	
	TDS				7.08	
	TDS				3.40	
SM 2540 D-97	TSS				7.63	
	TSS				5.18	
SM 4500 F-C-97	Fluoride	101	101	104		2.62
	Fluoride	98.5	102	102		0.480
SM 5310 B-00	Organic Carbon	100	107			0.176
	Organic Carbon	100	99.2	101		1.78
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	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1890348, 1890349, 1890350, 1890351, 1890356, 1890357, 1890360, 1890363
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1890379, 1890380, 1890381
SM 2120 B / E31780	True Color measured at 450 nm	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1890379, 1890380, 1890381
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1890379, 1890380, 1890381

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	04/19/2017			04/19/2017 16:06	Sima Feizi	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
EPA 300.0 Rev. 2.1	04/19/2017			04/27/2017	Ping Hua	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358
	04/19/2017			05/02/2017	Ping Hua	1890361
EPA 350.1 Rev. 2.0	04/19/2017			04/19/2017	Julie Michelle Frank	1890344, 1890345, 1890347, 1890354, 1890355, 1890359, 1890362
	04/19/2017			04/21/2017	Julie Michelle Frank	1890346
EPA 351.2 Rev. 2.0	04/19/2017	04/21/2017	Adrian Shelby	04/24/2017	Joseph Suarez	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
EPA 353.2 Rev. 2.0	04/19/2017			04/25/2017	Beverly Y. Sanders	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
EPA 365.1 Rev. 2.0	04/19/2017	04/21/2017	Vijayalakshmi Reddy	04/24/2017	Lipi Saha	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
EPA 365.1 Rev. 2.0 dissolved	04/19/2017			04/19/2017 14:52	Anthony C. Onicha	1890351
	04/19/2017			04/19/2017 15:00	Anthony C. Onicha	1890348
	04/19/2017			04/19/2017 15:01	Anthony C. Onicha	1890349
	04/19/2017			04/19/2017 15:02	Anthony C. Onicha	1890350
	04/19/2017			04/19/2017 15:03	Anthony C. Onicha	1890356, 1890357
	04/19/2017			04/19/2017 15:04	Anthony C. Onicha	1890360
	04/19/2017			04/19/2017 15:05	Anthony C. Onicha	1890363
EPA 8321B	04/19/2017	04/19/2017	Mohammad Ghaffari	04/19/2017	Mohammad Ghaffari	1890379
	04/19/2017	04/20/2017	Mohammad Ghaffari	04/20/2017	Mohammad Ghaffari	1890380, 1890381
SM 2120 B	04/19/2017			04/19/2017 16:22	Julia Storbeck	1890361
	04/19/2017			04/19/2017 16:29	Julia Storbeck	1890340
	04/19/2017			04/19/2017 16:30	Julia Storbeck	1890341, 1890342
	04/19/2017			04/19/2017 16:31	Julia Storbeck	1890343
	04/19/2017			04/19/2017 16:32	Julia Storbeck	1890352
	04/19/2017			04/19/2017 16:33	Julia Storbeck	1890353, 1890358
SM 2320 B-97	04/19/2017			04/27/2017	Dale L. Simmons	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 2540 C-97	04/19/2017			04/21/2017	Yijie Li	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 2540 D-97	04/19/2017			04/21/2017	Yijie Li	1890340, 1890341, 1890342, 1890343, 1890352, 1890353, 1890358, 1890361
SM 4500 F-C-97	04/19/2017			05/13/2017	Dale L. Simmons	1890343, 1890352, 1890353
	04/19/2017			05/15/2017	Dale L. Simmons	1890340, 1890341, 1890342, 1890358, 1890361
SM 5310 B-00	04/19/2017			04/20/2017	Julie Michelle Frank	1890344, 1890345, 1890346, 1890347, 1890354, 1890355, 1890359, 1890362
USGS O-2060-01	04/19/2017	04/22/2017	Fe-Val Siddell	05/08/2017	Juyoung Kim	1890379, 1890380, 1890381