

Chemical Analysis Report

SE-DIST-2017-05-09-01

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

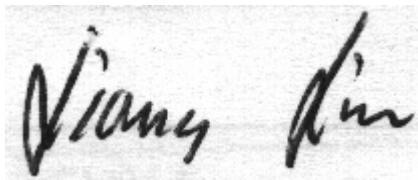
Event Description: **SMP-G5 North Run**
Request ID: **RQ-2017-05-01-30**
Customer: **SE-DIST**
Project ID: **SMP**

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: Liang Lin, Environmental Administrator

Date Certified: 02-JUN-2017 11:03

A handwritten signature in black ink, appearing to read "Liang Lin", is shown 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: 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: South Relief Canal @ US 1

Collection Date/Time: 05/08/2017 10:00

Field ID: G5SE0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897301	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	470		mg Cl/L	P325825	
		Sulfate	98		mg SO4/L	P325829	
	SM 2120 B	Color (true)	43		PCU	P324904	
	SM 2320 B-97	Total Alkalinity	195		mg CaCO3/L	P325465	
	SM 2540 C-97	TDS	1.05E+03		mg/L	P325343	
	SM 2540 D-97	TSS	6	I	mg/L	P325327	
	SM 4500 F-C-97	Fluoride	0.57		mg F/L	P325808	
1897305	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.53		mg N/L	P325088	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P324991	
	SM 5310 B-00	Organic Carbon	9.6		mg C/L	P325232	
1897309	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.046		mg P/L	P324939	
1897346	EPA 8321B	Sucralose**	0.75		ug/L	P324692	
	USGS O-2060-01	2,4-D	0.064		ug/L	P324620	
		Diuron	0.0031	I	ug/L	P324620	
		Fenuron	0.0040	U	ug/L	P324620	
		Imidacloprid	0.0063		ug/L	P324620	MS
		Bentazon	0.013		ug/L	P324620	
		Linuron	0.0040	U	ug/L	P324620	
		Acetaminophen**	0.0080	U	ug/L	P324620	
		MCP	8.0E-04	U	ug/L	P324620	
		Carbamazepine**	0.0025		ug/L	P324620	
		Triclopyr**	0.0040	U	ug/L	P324620	
		Primidone**	0.0064	I	ug/L	P324620	
		Fluridone**	0.0050		ug/L	P324620	

Ref. Method and Comment:

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

Sample Location: Main Canal @ US 1

Collection Date/Time: 05/08/2017 10:40

Field ID: G5SE0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897302	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	380		mg Cl/L	P325825	
		Sulfate	83		mg SO4/L	P325829	
	SM 2120 B	Color (true)	41	A	PCU	P324904	
	SM 2320 B-97	Total Alkalinity	187		mg CaCO3/L	P325465	
	SM 2540 C-97	TDS	915		mg/L	P325343	
	SM 2540 D-97	TSS	5	I	mg/L	P325327	
	SM 4500 F-C-97	Fluoride	0.47		mg F/L	P325808	
1897306	EPA 350.1 Rev. 2.0	Ammonia-N	0.064		mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P325088	

Field ID: G5SE0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897306	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P324991	
	SM 5310 B-00	Organic Carbon	9.8		mg C/L	P325232	
1897310	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.055		mg P/L	P324939	
1897347	EPA 8321B	Sucralose**	0.45		ug/L	P324692	
	USGS O-2060-01	2,4-D	0.096		ug/L	P324620	
		Diuron	0.021		ug/L	P324620	
		Fenuron	0.0040	U	ug/L	P324620	
		Imidacloprid	0.0054		ug/L	P324620	MS
		Bentazon	0.0086		ug/L	P324620	
		Linuron	0.0040	U	ug/L	P324620	
		Acetaminophen**	0.0080	U	ug/L	P324620	
		MCPP	8.0E-04	U	ug/L	P324620	
		Carbamazepine**	0.0014	I	ug/L	P324620	
		Triclopyr**	0.0040	U	ug/L	P324620	
		Primidone**	0.0056	I	ug/L	P324620	
		Fluridone**	0.0057		ug/L	P324620	

Ref. Method and Comment:

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

Sample Location: North Canal below weir

Collection Date/Time: 05/08/2017 11:05

Field ID: G5SE0043

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897303	EPA 180.1 Rev. 2.0	Turbidity	3.0	A	NTU	P324934	
	EPA 300.0 Rev. 2.1	Chloride	220		mg Cl/L	P325825	
		Sulfate	64		mg SO4/L	P325829	
		Color (true)	59		PCU	P324904	
	SM 2320 B-97	Total Alkalinity	158		mg CaCO3/L	P325466	
	SM 2540 C-97	TDS	609		mg/L	P325343	
	SM 2540 D-97	TSS	3	I	mg/L	P325327	
	SM 4500 F-C-97	Fluoride	0.34		mg F/L	P325468	
1897307	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P325088	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P324991	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P325232	
1897311	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.078		mg P/L	P324939	
1897348	EPA 8321B	Sucralose**	2.4		ug/L	P324692	
	USGS O-2060-01	2,4-D	0.77		ug/L	P324481	
		Diuron	0.0093		ug/L	P324620	
		Fenuron	0.0040	I	ug/L	P324620	
		Imidacloprid	0.010		ug/L	P324620	MS
		Bentazon	0.046		ug/L	P324620	
		Linuron	0.0040	U	ug/L	P324620	

Field ID: G5SE0043

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897348	USGS O-2060-01	Acetaminophen**	0.0080	U	ug/L	P324620	
		MCP	0.0038		ug/L	P324620	
		Carbamazepine**	0.0061		ug/L	P324620	
		Triclopyr**	0.0040	U	ug/L	P324620	
		Primidone**	0.023		ug/L	P324620	
		Fluridone**	0.0032		ug/L	P324620	

Ref. Method and Comment:

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

Sample Location: South Relief Canal @ US 1

Collection Date/Time: 05/08/2017 10:15

Field ID: G5SEDUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897304	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	470		mg Cl/L	P325825	
		Sulfate	98		mg SO4/L	P325829	
	SM 2120 B	Color (true)	41		PCU	P324904	
	SM 2320 B-97	Total Alkalinity	191		mg CaCO3/L	P325465	
	SM 2540 C-97	TDS	1.08E+03		mg/L	P325343	
	SM 2540 D-97	TSS	7	I	mg/L	P325327	
	SM 4500 F-C-97	Fluoride	0.59		mg F/L	P325808	
1897308	EPA 350.1 Rev. 2.0	Ammonia-N	0.079		mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P325088	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P324991	
	SM 5310 B-00	Organic Carbon	9.7		mg C/L	P325232	
1897312	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.050		mg P/L	P324939	
1897349	EPA 8321B	Sucralose**	0.85		ug/L	P324692	
	USGS O-2060-01	2,4-D	0.064		ug/L	P324620	
		Diuron	0.0033		ug/L	P324620	
		Fenuron	0.0040	U	ug/L	P324620	
		Imidacloprid	0.0062		ug/L	P324620	MS
		Bentazon	0.013		ug/L	P324620	
		Linuron	0.0040	U	ug/L	P324620	
		Acetaminophen**	0.0080	U	ug/L	P324620	
		MCP	8.0E-04	U	ug/L	P324620	
		Carbamazepine**	0.0025		ug/L	P324620	
		Triclopyr**	0.0040	U	ug/L	P324620	
		Primidone**	0.0066	I	ug/L	P324620	
		Fluridone**	0.0048		ug/L	P324620	

Ref. Method and Comment:

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

Sample Location: South Relief Canal @ US 1

Collection Date/Time: 05/08/2017 10:30

Field ID: Field Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897313	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P325825	
		Sulfate	0.20	U	mg SO4/L	P325829	
	SM 2120 B	Color (true)	2.5	U	PCU	P324904	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P325465	
	SM 2540 C-97	TDS	15	U	mg/L	P325339	
	SM 2540 D-97	TSS	2	U	mg/L	P325323	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P325808	
1897314	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P325088	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P324991	
	SM 5310 B-00	Organic Carbon	0.70	I	mg C/L	P325232	
1897315	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324939	
1897350	EPA 8321B	Sucralose**	0.010	U	ug/L	P324692	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P324620	
		Diuron	8.0E-04	U	ug/L	P324620	
		Fenuron	0.0040	U	ug/L	P324620	
		Imidacloprid	8.0E-04	U	ug/L	P324620	MS
		Bentazon	8.0E-04	U	ug/L	P324620	
		Linuron	0.0040	U	ug/L	P324620	
		Acetaminophen**	0.0080	U	ug/L	P324620	
		MCP	8.0E-04	U	ug/L	P324620	
		Carbamazepine**	4.0E-04	U	ug/L	P324620	
		Triclopyr**	0.0040	U	ug/L	P324620	
		Primidone**	0.0040	U	ug/L	P324620	
		Fluridone**	4.0E-04	U	ug/L	P324620	

Ref. Method and Comment:

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

SM 5310 B-00: The result was confirmed on 05/15/2017.

Sample Location: Kid Creek @ Old Dixie

Collection Date/Time: 05/08/2017 12:10

Field ID: G5SE0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897298	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P325825	
		Sulfate	17		mg SO4/L	P325829	
	SM 2120 B	Color (true)	32		PCU	P324903	
	SM 2320 B-97	Total Alkalinity	100		mg CaCO3/L	P325466	
	SM 2540 C-97	TDS	366	A	mg/L	P325344	
	SM 2540 D-97	TSS	2	I	mg/L	P325327	
	SM 4500 F-C-97	Fluoride	0.051	I	mg F/L	P325468	
1897299	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P325088	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P325196	

Field ID: G5SE0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897299	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P324991	
	SM 5310 B-00	Organic Carbon	6.5		mg C/L	P325232	
1897300	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P324939	

Ref. Method and Comment:

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

Sample Location: Micco Ditch Weir off Dottie Rd.

Collection Date/Time: 05/08/2017 12:50

Field ID: G5SE0063

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897289	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	84		mg Cl/L	P325825	
		Sulfate	24		mg SO4/L	P325829	
	SM 2120 B	Color (true)	52	A	PCU	P324903	
	SM 2320 B-97	Total Alkalinity	99		mg CaCO3/L	P325466	
	SM 2540 C-97	TDS	298		mg/L	P325342	
	SM 2540 D-97	TSS	8	I	mg/L	P325326	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P325468	
1897292	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P325087	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P324988	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P325232	
1897295	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.027		mg P/L	P324940	

Ref. Method and Comment:

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

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

Collection Date/Time: 05/08/2017 14:30

Field ID: G5SE0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897290	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	130		mg Cl/L	P325825	
		Sulfate	36		mg SO4/L	P325829	
	SM 2120 B	Color (true)	51		PCU	P324903	
	SM 2320 B-97	Total Alkalinity	174		mg CaCO3/L	P325466	
	SM 2540 C-97	TDS	469		mg/L	P325342	
	SM 2540 D-97	TSS	9	I	mg/L	P325326	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P325468	
1897293	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P325088	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.061		mg P/L	P324988	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P325232	
1897296	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P324939	

Field ID: G5SE0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							

Sample Location: C-54 W of I-95

Collection Date/Time: 05/08/2017 14:00

Field ID: G5SE0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897291	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P324933	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P325825	
		Sulfate	36		mg SO4/L	P325829	
	SM 2120 B	Color (true)	50		PCU	P324903	
	SM 2320 B-97	Total Alkalinity	171		mg CaCO3/L	P325466	
	SM 2540 C-97	TDS	466	A	mg/L	P325343	
	SM 2540 D-97	TSS	8	IA	mg/L	P325327	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P325468	
1897294	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P325048	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P325088	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325196	
	EPA 365.1 Rev. 2.0	Total-P	0.055		mg P/L	P324991	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P325232	
1897297	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P324939	

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P324933

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P324934

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P325825

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P325829

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325048

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325087

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325088

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325196

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324988

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324991

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324939

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324940

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

Reference Method: EPA 8321B
Batch ID: P324692

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P324903

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P324904

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P325465

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

Reference Method: SM 2320 B-97
Batch ID: P325466

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

Reference Method: SM 2540 C-97
Batch ID: P325339

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P325342

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P325343

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P325344

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P325323

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P325326

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P325327

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325468

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325808

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P325232

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

Reference Method: USGS O-2060-01
Batch ID: P324481

Component	Result	Code	Units
2,4-D	8.0E-04	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P324620

Component	Result	Code	Units
2,4-D	8.0E-04	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	0.0040	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	8.0E-04	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325825

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325829

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325048

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: P325087

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325088

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325196

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324991

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324939

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324940

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

Reference Method: EPA 8321B
Batch ID: P324692

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	83.0		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P325465

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

Reference Method: SM 2320 B-97
Batch ID: P325466

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

Reference Method: SM 4500 F-C-97
Batch ID: P325468

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.0		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P325808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P325232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P324481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	72.6		P	40 - 140

Reference Method: USGS O-2060-01
Batch ID: P324620

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	69.8		P	40 - 140
Acetaminophen	103		P	40 - 140
Bentazon	65.8		P	40 - 140
Carbamazepine	121		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P324620

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	120		P	40 - 140
Fenuron	107		P	40 - 140
Fluridone	107		P	40 - 140
Imidacloprid	117		P	40 - 160
Linuron	120		P	40 - 140
MCPP	80.9		P	40 - 140
Primidone	104		P	40 - 140
Triclopyr	69.4		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897280	Chloride	97.5		P	90 - 110
1898026	Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897280	Sulfate	93.1		P	90 - 110
1898026	Sulfate	94.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325048

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897292	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897282	Kjeldahl Nitrogen	92.4	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897299	Kjeldahl Nitrogen	99.8	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897293	NO2NO3-N	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897212	Total-P	102	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324991

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897299	Total-P	97.7	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897296	O-Phosphate-P	100	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324940

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897216	O-Phosphate-P	99.8	100	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P324692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896739	Sucralose	108	104	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P325468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897159	Fluoride	97.9	99.1	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P325808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896723	Fluoride	98.7	99.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P325232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897211	Organic Carbon	91.9	92.6	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P324481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895708	2,4-D	67.9	68.7	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P324620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896649	2,4-D	75.0	66.1	P/P	40 - 140
1896649	Acetaminophen	97.3	101	P/P	40 - 140
1896649	Bentazon	73.9	61.4	P/P	40 - 140
1896649	Carbamazepine	111	115	P/P	40 - 140
1896649	Diuron	102	107	P/P	40 - 140
1896649	Fenuron	118	109	P/P	40 - 140
1896649	Fluridone	90.6	93.1	P/P	40 - 140
1896649	Imidacloprid	213	202	F/F	40 - 160
1896649	Linuron	106	104	P/P	40 - 140
1896649	MCP	69.0	57.4	P/P	40 - 140
1896649	Primidone	108	118	P/P	40 - 140
1896649	Triclopyr	69.4	57.6	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897279	Turbidity	2.47	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897303	Turbidity	0.992	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897280	Chloride	0.385	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897280	Sulfate	1.38	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897292	Ammonia-N	0.416	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897282	Kjeldahl Nitrogen	3.07	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897299	Kjeldahl Nitrogen	1.65	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897293	NO2NO3-N	0.985	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897212	Total-P	3.31	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897299	Total-P	3.99	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897296	O-Phosphate-P	0.0944	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897216	O-Phosphate-P	0.200	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P324692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896739	Sucralose	3.67	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P324903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897289	Color (true)	2.27	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P324904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897302	Color (true)	3.67	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P325465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897738	Total Alkalinity	0.304	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P325466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897159	Total Alkalinity	0.405	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P325339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896723	TDS	2.62	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P325342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897159	TDS	4.44	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P325343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897291	TDS	2.79	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P325344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897298	TDS	1.92	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
 Batch ID: P325468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897159	Fluoride	1.02	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
 Batch ID: P325808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896723	Fluoride	0.480	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P325232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897211	Organic Carbon	0.694	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P324481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895708	2,4-D	0.954	Spike	P	0 - 30

Reference Method: USGS O-2060-01
 Batch ID: P324620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896649	2,4-D	12.1	Spike	P	0 - 30
1896649	Acetaminophen	3.79	Spike	P	0 - 30
1896649	Bentazon	18.3	Spike	P	0 - 30
1896649	Carbamazepine	3.07	Spike	P	0 - 30
1896649	Diuron	5.07	Spike	P	0 - 30
1896649	Fenuron	8.22	Spike	P	0 - 30
1896649	Fluridone	2.71	Spike	P	0 - 30
1896649	Imidacloprid	5.29	Spike	P	0 - 30
1896649	Linuron	1.67	Spike	P	0 - 30
1896649	MCPP	18.2	Spike	P	0 - 30
1896649	Primidone	8.62	Spike	P	0 - 30
1896649	Triclopyr	18.6	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: 1897346
Field Sample ID: G5SE0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	102	P	40 - 150
USGS O-2060-01	2,4-D-d3	61.4	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	101	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	85.0	P	30 - 160
USGS O-2060-01	Diuron-d6	69.1	P	30 - 150
USGS O-2060-01	Primidone-d5	88.7	P	30 - 150

Lab Sample ID: 1897347
Field Sample ID: G5SE0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	87.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	58.9	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	93.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	80.5	P	30 - 160
USGS O-2060-01	Diuron-d6	75.6	P	30 - 150
USGS O-2060-01	Primidone-d5	82.7	P	30 - 150

Lab Sample ID: 1897348
Field Sample ID: G5SE0043

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	95.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	62.1	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	98.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	84.8	P	30 - 160
USGS O-2060-01	Diuron-d6	76.3	P	30 - 150
USGS O-2060-01	Primidone-d5	88.6	P	30 - 150

Lab Sample ID: 1897349
Field Sample ID: G5SEDUPE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	108	P	40 - 150
USGS O-2060-01	2,4-D-d3	61.5	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	106	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	90.3	P	30 - 160
USGS O-2060-01	Diuron-d6	83.6	P	30 - 150
USGS O-2060-01	Primidone-d5	79.5	P	30 - 150

Lab Sample ID: 1897350
Field Sample ID: Field Blank

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	91.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	70.0	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	96.3	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	123	P	30 - 160
USGS O-2060-01	Diuron-d6	141	P	30 - 150
USGS O-2060-01	Primidone-d5	120	P	30 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A76295

Included Lab Sample IDs: 1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115
Color (true)	99.2	101	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A76301

Included Lab Sample IDs: 1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313

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 365.1 Rev. 2.0 dissolved

Run ID: A76302

Included Lab Sample IDs: 1897295, 1897296, 1897297, 1897300, 1897309, 1897310, 1897311, 1897312, 1897315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	102	P/P	90 - 110
O-Phosphate-P	99.4	99.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76336

Included Lab Sample IDs: 1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76350

Included Lab Sample IDs: 1897292, 1897293, 1897294, 1897305, 1897306, 1897307, 1897308

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76356

Included Lab Sample IDs: 1897299, 1897314

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76377

Included Lab Sample IDs: 1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A76393

Included Lab Sample IDs: 1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	92.6	98.0	P/P	90 - 110
Organic Carbon	99.6	92.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76436

Included Lab Sample IDs: 1897299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.9	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76468

Included Lab Sample IDs: 1897292, 1897293, 1897294, 1897305, 1897306, 1897307, 1897308, 1897314

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.4	98.5	P/P	90 - 110
Kjeldahl Nitrogen	98.5	96.4	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A76477

Included Lab Sample IDs: 1897346, 1897347, 1897348, 1897349, 1897350

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.2	80.0	P/P	50 - 150
Acetaminophen	122	122	P/P	60 - 150
Bentazon	104	98.8	P/P	50 - 150
Carbamazepine	122	84.8	P/P	60 - 150
Diuron	132	126	P/P	60 - 150
Fenuron	115	116	P/P	60 - 150
Fluridone	124	122	P/P	60 - 150
Imidacloprid	122	108	P/P	60 - 150
Linuron	115	119	P/P	60 - 150
MCP	88.0	89.6	P/P	50 - 150
Primidone	105	104	P/P	60 - 150
Triclopyr	92.8	88.8	P/P	50 - 150

Reference Method: SM 2320 B-97

Run ID: A76498

Included Lab Sample IDs: 1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	101	107	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76498

Included Lab Sample IDs: 1897289, 1897290, 1897291, 1897298, 1897303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.1	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A76498

Included Lab Sample IDs: 1897289, 1897290, 1897291, 1897298, 1897303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	97.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A76559

Included Lab Sample IDs: 1897346, 1897347, 1897348, 1897349, 1897350

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	81.8	87.5	P/P	60 - 150
Sucralose	88.4	98.8	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A76569

Included Lab Sample IDs: 1897348

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.4	109	P/P	50 - 150

Reference Method: SM 4500 F-C-97

Run ID: A76661

Included Lab Sample IDs: 1897301, 1897302, 1897304, 1897313

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A76672

Included Lab Sample IDs: 1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	104	P/P	90 - 110
Chloride	104	103	P/P	90 - 110
Sulfate	96.8	100	P/P	90 - 110
Sulfate	98.3	96.8	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				2.47	
	Turbidity				0.992	
EPA 300.0 Rev. 2.1	Chloride	101	97.5	98.8	0.385	
	Sulfate	96.6	93.1	94.6	1.38	
EPA 350.1 Rev. 2.0	Ammonia-N	102	102	102		0.416
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.3	92.4	97.2		3.07

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	99.8	102		1.65
EPA 353.2 Rev. 2.0	NO2NO3-N	103	101	102		0.985
EPA 365.1 Rev. 2.0	Total-P	98.4	102	98.8		3.31
	Total-P	99.6	97.7	102		3.99
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	100	99.9		0.0944
	O-Phosphate-P	101	99.8	100		0.200
EPA 8321B	Sucralose	83.0	108	104		3.67
SM 2120 B	Color (true)				2.27	
	Color (true)				3.67	
SM 2320 B-97	Total Alkalinity	102			0.304	
	Total Alkalinity	103			0.405	
SM 2540 C-97	TDS				2.62	
	TDS				4.44	
	TDS				2.79	
	TDS				1.92	
SM 4500 F-C-97	Fluoride	94.0	97.9	99.1		1.02
	Fluoride	98.9	98.7	99.4		0.480
SM 5310 B-00	Organic Carbon	96.2	91.9	92.6		0.694
USGS O-2060-01	2,4-D	72.6	67.9	68.7		0.954
	2,4-D	69.8	75.0	66.1		12.1
	Acetaminophen	103	97.3	101		3.79
	Bentazon	65.8	73.9	61.4		18.3
	Carbamazepine	121	111	115		3.07
	Diuron	120	102	107		5.07
	Fenuron	107	118	109		8.22
	Fluridone	107	93.1	90.6		2.71
	Imidacloprid	117	213	202		5.29
	Linuron	120	106	104		1.67
	MCPD	80.9	69.0	57.4		18.2
	Primidone	104	108	118		8.62
	Triclopyr	69.4	69.4	57.6		18.6

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314

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	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1897295, 1897296, 1897297, 1897300, 1897309, 1897310, 1897311, 1897312, 1897315
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1897346, 1897347, 1897348, 1897349, 1897350
SM 2120 B / E31780	True Color measured at 450 nm	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1897346, 1897347, 1897348, 1897349, 1897350
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1897346, 1897347, 1897348, 1897349, 1897350

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	05/09/2017			05/09/2017 15:52	Sima Feizi	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
EPA 300.0 Rev. 2.1	05/09/2017			05/24/2017	Ping Hua	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
EPA 350.1 Rev. 2.0	05/09/2017			05/10/2017	Julie Michelle Frank	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
EPA 351.2 Rev. 2.0	05/09/2017	05/11/2017	Adrian Shelby	05/15/2017	Joseph Suarez	1897299
	05/09/2017	05/11/2017	Adrian Shelby	05/16/2017	Joseph Suarez	1897292, 1897293, 1897294, 1897305, 1897306, 1897307, 1897308, 1897314
EPA 353.2 Rev. 2.0	05/09/2017			05/12/2017	Beverly Y. Sanders	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
EPA 365.1 Rev. 2.0	05/09/2017	05/10/2017	Vijayalakshmi Reddy	05/11/2017	Lipi Saha	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
EPA 365.1 Rev. 2.0 dissolved	05/09/2017			05/09/2017 14:34	Anthony C. Onicha	1897296
	05/09/2017			05/09/2017 15:21	Anthony C. Onicha	1897295
	05/09/2017			05/09/2017 15:22	Anthony C. Onicha	1897297
	05/09/2017			05/09/2017 15:23	Anthony C. Onicha	1897300, 1897309
	05/09/2017			05/09/2017 15:24	Anthony C. Onicha	1897310
	05/09/2017			05/09/2017 15:25	Anthony C. Onicha	1897311
	05/09/2017			05/09/2017 15:26	Anthony C. Onicha	1897312
	05/09/2017			05/09/2017 15:27	Anthony C. Onicha	1897315
EPA 8321B	05/09/2017	05/17/2017	Mohammad Ghaffari	05/18/2017	Mohammad Ghaffari	1897350
	05/09/2017	05/17/2017	Mohammad Ghaffari	05/19/2017	Mohammad Ghaffari	1897346, 1897347, 1897348, 1897349
SM 2120 B	05/09/2017			05/09/2017 14:44	Julia Storbeck	1897289
	05/09/2017			05/09/2017 14:47	Julia Storbeck	1897290
	05/09/2017			05/09/2017 14:48	Julia Storbeck	1897291, 1897298
	05/09/2017			05/09/2017 14:52	Julia Storbeck	1897302
	05/09/2017			05/09/2017 14:53	Julia Storbeck	1897301
	05/09/2017			05/09/2017 14:54	Julia Storbeck	1897303, 1897304
	05/09/2017			05/09/2017 14:55	Julia Storbeck	1897313
SM 2320 B-97	05/09/2017			05/17/2017	Dale L. Simmons	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897304, 1897313
	05/09/2017			05/18/2017	Dale L. Simmons	1897303
SM 2540 C-97	05/09/2017			05/10/2017	Yijie Li	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	05/09/2017			05/10/2017	Yijie Li	1897289, 1897290, 1897291, 1897298, 1897301, 1897302, 1897303, 1897304, 1897313
SM 4500 F-C-97	05/09/2017			05/17/2017	Dale L. Simmons	1897289, 1897290, 1897291, 1897298
	05/09/2017			05/18/2017	Dale L. Simmons	1897303
	05/09/2017			05/24/2017	Dale L. Simmons	1897301, 1897302, 1897304, 1897313
SM 5310 B-00	05/09/2017			05/12/2017	Christopher Armour	1897292, 1897293, 1897294, 1897299, 1897305, 1897306, 1897307, 1897308, 1897314
USGS O-2060-01	05/09/2017	05/10/2017	Hoor Shaik	05/17/2017	Juyoung Kim	1897346, 1897347, 1897348, 1897349, 1897350
	05/09/2017	05/10/2017	Hoor Shaik	05/22/2017	Juyoung Kim	1897348