

Chemical Analysis Report

SE-DIST-2017-02-21-01

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

Event Description: **SMP-G2 Jupiter Run**
Request ID: **RQ-2017-02-20-09**
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: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 20-MAR-2017 11:19



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: C-24 CANAL @ PSL BLVD.

Collection Date/Time: 02/20/2017 10:50

Field ID: G2SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873921	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P320211	
	EPA 300.0 Rev. 2.1	Chloride	190		mg Cl/L	P321008	
		Sulfate	53		mg SO4/L	P321011	
	SM 2120 B	Color (true)	100		PCU	P320225	
	SM 2320 B-97	Total Alkalinity	164		mg CaCO3/L	P320413	
	SM 2540 C-97	TDS	603		mg/L	P320672	
	SM 2540 D-97	TSS	3	I	mg/L	P320619	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P320422	
1873922	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P320320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P320258	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P320465	
	EPA 365.1 Rev. 2.0	Total-P	0.083		mg P/L	P320296	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P320393	
1873923	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P320204	
1873952	EPA 8321B	Sucralose**	0.055		ug/L	P320274	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P320202	
		Fenuron	0.0080	U	ug/L	P320202	
		Imidacloprid	0.0076	I	ug/L	P320202	
		Linuron	0.0040	U	ug/L	P320202	
		Acetaminophen**	0.0040	U	ug/L	P320202	
		Carbamazepine**	4.0E-04	U	ug/L	P320202	
		Primidone**	0.0080	U	ug/L	P320202	
		Fluridone**	0.021		ug/L	P320202	MS

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: SW FORK LOX @ LOXAHATCHEE RIVER RD.

Collection Date/Time: 02/20/2017 12:10

Field ID: G2SE0023

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873915	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P320211	
	EPA 300.0 Rev. 2.1	Chloride	1.6E+04		mg Cl/L	P321008	
		Sulfate	2.4E+03		mg SO4/L	P321011	
	SM 2120 B	Color (true)	7.5	U	PCU	P320225	
	SM 2320 B-97	Total Alkalinity	125		mg CaCO3/L	P320412	
	SM 2540 C-97	TDS	2.94E+04		mg/L	P320673	
	SM 2540 D-97	TSS	9	I	mg/L	P320622	
	SM 4500 F-C-97	Fluoride	1.6		mg F/L	P320421	
1873917	EPA 350.1 Rev. 2.0	Ammonia-N	0.72		mg N/L	P320317	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P320257	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.043		mg N/L	P320350	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P320271	
	SM 5310 B-00	Organic Carbon	3.7		mg C/L	P320512	

Field ID: G2SE0023

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873919	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P320207	
1873950	EPA 8321B	Sucralose**	0.16		ug/L	P320274	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P320078	
		Fenuron	0.0080	U	ug/L	P320078	
		Imidacloprid	0.0040	U	ug/L	P320078	
		Linuron	0.0040	U	ug/L	P320078	
		Acetaminophen**	0.0040	U	ug/L	P320078	
		Carbamazepine**	5.5E-04	I	ug/L	P320078	
		Primidone**	0.0080	U	ug/L	P320078	
		Fluridone**	9.0E-04	I	ug/L	P320078	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 2120 B: The MDL was elevated due to sample matrix interference.

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

Sample Location: TIDAL CREEK TO LOX

Collection Date/Time: 02/20/2017 12:30

Field ID: G2SE0027

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873909	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P320211	
	SM 2320 B-97	Total Alkalinity	141		mg CaCO3/L	P320412	
	SM 2540 D-97	TSS	6	I	mg/L	P320621	
	SM 4500 F-C-97	Fluoride	0.91		mg F/L	P320421	
1873910	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P320317	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P320257	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P320350	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P320271	
	SM 5310 B-00	Organic Carbon	6.6		mg C/L	P320512	
1873911	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P320207	
1873949	EPA 8321B	Sucralose**	0.036	I	ug/L	P320274	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P320078	
		Fenuron	0.0080	U	ug/L	P320078	
		Imidacloprid	0.0040	U	ug/L	P320078	
		Linuron	0.0040	U	ug/L	P320078	
		Acetaminophen**	0.0040	U	ug/L	P320078	
		Carbamazepine**	4.0E-04	U	ug/L	P320078	
		Primidone**	0.0080	U	ug/L	P320078	
		Fluridone**	0.0046		ug/L	P320078	

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 FORK LOX @ COUNTY LINE

Collection Date/Time: 02/20/2017 13:10

Field ID: G2SE0021

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873916	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P320211	

Field ID: G2SE0021

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873916	EPA 300.0 Rev. 2.1	Chloride	1.3E+04		mg Cl/L	P321008	
		Sulfate	1.8E+03		mg SO4/L	P321011	
	SM 2120 B	Color (true)	24		PCU	P320225	
	SM 2320 B-97	Total Alkalinity	144		mg CaCO3/L	P320412	
	SM 2540 C-97	TDS	2.26E+04		mg/L	P320673	
	SM 2540 D-97	TSS	8	I	mg/L	P320622	
	SM 4500 F-C-97	Fluoride	0.83		mg F/L	P320421	
1873918	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P320317	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P320257	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P320350	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P320271	
	SM 5310 B-00	Organic Carbon	6.4		mg C/L	P320512	
1873920	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P320207	
1873951	EPA 8321B	Sucralose**	0.072		ug/L	P320274	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P320202	
		Fenuron	0.0080	U	ug/L	P320202	
		Imidacloprid	0.0077	I	ug/L	P320202	
		Linuron	0.0040	U	ug/L	P320202	
		Acetaminophen**	0.0040	U	ug/L	P320202	
		Carbamazepine**	4.0E-04	U	ug/L	P320202	
		Primidone**	0.0080	U	ug/L	P320202	
		Fluridone**	5.6E-04	I	ug/L	P320202	MS

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

EPA 8321B: Results confirmed in re-extraction.

Sample Location: NORTH FORK UPPER LOX

Collection Date/Time: 02/20/2017 13:50

Field ID: G2SE0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873912	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P320211	
	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P321008	
		Sulfate	2.7		mg SO4/L	P321011	
	SM 2120 B	Color (true)	85	A	PCU	P320225	
	SM 2320 B-97	Total Alkalinity	116		mg CaCO3/L	P320411	
	SM 2540 C-97	TDS	214	A	mg/L	P320672	
	SM 2540 D-97	TSS	3	I	mg/L	P320619	
1873913	SM 4500 F-C-97	Fluoride	0.046	I	mg F/L	P320418	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P320320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P320258	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P320465	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P320296	
1873914	SM 5310 B-00	Organic Carbon	18		mg C/L	P320393	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P320204	

Field ID: G2SE0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment:							
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.							
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							
SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.							

Sample Location: HENDERSON POND

Collection Date/Time: 02/20/2017 15:00

Field ID: G2SE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1873976	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P320211	
	EPA 300.0 Rev. 2.1	Chloride	35	A	mg Cl/L	P321008	
		Sulfate	2.3	A	mg SO4/L	P321011	
	SM 2120 B	Color (true)	170		PCU	P320225	
	SM 2320 B-97	Total Alkalinity	5.6		mg CaCO3/L	P320413	
	SM 2540 C-97	TDS	98		mg/L	P320672	
	SM 2540 D-97	TSS	3	I	mg/L	P320619	
1873977	SM 4500 F-C-97	Fluoride	0.058	I	mg F/L	P320422	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P320320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P320258	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P320465	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P320296	
1873978	SM 5310 B-00	Organic Carbon	24		mg C/L	P320393	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P320204	
	dissolved						

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P320211

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P321008

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P321011

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P320317

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P320317

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P320320

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320257

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320258

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P320350

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P320465

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320271

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320296

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320204

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320207

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

Reference Method: EPA 8321B
Batch ID: P320274

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P320225

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P320411

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

Reference Method: SM 2320 B-97
Batch ID: P320412

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

Reference Method: SM 2320 B-97
Batch ID: P320413

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

Reference Method: SM 2540 C-97
Batch ID: P320672

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P320673

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P320619

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P320621

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P320622

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P320418

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P320421

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P320422

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P320393

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

Reference Method: SM 5310 B-00
Batch ID: P320512

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

Reference Method: USGS O-2060-01
Batch ID: P320078

Component	Result	Code	Units
Acetaminophen	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0080	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P320202

Component	Result	Code	Units
Acetaminophen	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0080	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321008

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321011

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	90.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P320317

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P320320

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320257

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320258

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P320350

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P320465

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320271

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	92.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320296

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	90.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320204

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320207

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

Reference Method: EPA 8321B
Batch ID: P320274

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	89.7		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P320411

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

Reference Method: SM 2320 B-97
Batch ID: P320412

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P320413

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

Reference Method: SM 4500 F-C-97
Batch ID: P320418

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P320421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.6		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P320422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P320393

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.0		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P320512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P320078

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	124		P	40 - 140
Carbamazepine	102		P	40 - 140
Diuron	88.8		P	40 - 140
Fenuron	108		P	40 - 140
Fluridone	105		P	40 - 140
Imidacloprid	110		P	40 - 160
Linuron	76.8		P	40 - 140
Primidone	80.0		P	40 - 140

Reference Method: USGS O-2060-01
Batch ID: P320202

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	79.2		P	40 - 140
Carbamazepine	115		P	40 - 140
Diuron	85.2		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P320202

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	105		P	40 - 140
Fluridone	86.8		P	40 - 140
Imidacloprid	102		P	40 - 160
Linuron	92.8		P	40 - 140
Primidone	86.4		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P321008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873900	Chloride	93.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P321011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873900	Sulfate	90.1		P	90 - 110
1873976	Sulfate	90.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P320317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873360	Ammonia-N	103	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P320320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873902	Ammonia-N	95.1	93.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P320257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873917	Kjeldahl Nitrogen	103	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P320258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1874001	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P320350

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873846	NO2NO3-N	98.6	94.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P320465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873905	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1874019	Total-P	90.3	91.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320296

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873904	Total-P	97.8	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873860	O-Phosphate-P	96.5	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873911	O-Phosphate-P	98.3	98.6	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P320274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1874519	Sucralose	82.6	74.3	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P320421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1874009	Fluoride	94.8	95.5	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P320422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1874059	Fluoride	104	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P320393

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873817	Organic Carbon	92.8	94.0	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P320512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873893	Organic Carbon	94.6	95.8	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P320078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1873950	Acetaminophen	78.8	85.6	P/P	40 - 140
1873950	Carbamazepine	65.8	71.0	P/P	40 - 140
1873950	Diuron	61.2	66.8	P/P	40 - 140
1873950	Fenuron	63.6	68.4	P/P	40 - 140
1873950	Fluridone	77.9	86.7	P/P	40 - 140
1873950	Imidacloprid	99.6	108	P/P	40 - 160
1873950	Linuron	71.6	66.4	P/P	40 - 140
1873950	Primidone	77.2	95.2	P/P	40 - 140

Reference Method: USGS O-2060-01
Batch ID: P320202

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1874049	Acetaminophen	72.4	72.0	P/P	40 - 140
1874049	Carbamazepine	58.0	49.6	P/P	40 - 140
1874049	Diuron	41.2	46.8	P/P	40 - 140
1874049	Fenuron	49.2	49.2	P/P	40 - 140
1874049	Fluridone	38.7	48.3	F/P	40 - 140
1874049	Imidacloprid	113	110	P/P	40 - 160
1874049	Linuron	70.0	60.8	P/P	40 - 140
1874049	Primidone	48.0	58.4	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P320211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873898	Turbidity	2.86	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873976	Chloride	0.338	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873976	Sulfate	0.233	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P320317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873360	Ammonia-N	3.01	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P320320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873902	Ammonia-N	1.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873917	Kjeldahl Nitrogen	4.13	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P320258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874001	Kjeldahl Nitrogen	0.964	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P320350

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873846	NO2NO3-N	4.67	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P320465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873905	NO2NO3-N	0.735	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874019	Total-P	1.55	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P320296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873904	Total-P	1.85	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873860	O-Phosphate-P	0.928	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P320207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873911	O-Phosphate-P	0.271	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P320274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874519	Sucralose	10.4	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P320225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873912	Color (true)	2.85	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P320411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873822	Total Alkalinity	0.289	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P320412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874009	Total Alkalinity	0.231	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P320413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874059	Total Alkalinity	0.174	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P320672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873912	TDS	5.13	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P320673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873822	TDS	2.11	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P320418

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873822	Fluoride	0.947	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P320421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874009	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P320422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874059	Fluoride	2.40	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P320393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873817	Organic Carbon	0.719	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P320512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873893	Organic Carbon	0.963	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P320078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1873950	Acetaminophen	8.27	Spike	P	0 - 30
1873950	Carbamazepine	7.54	Spike	P	0 - 30
1873950	Diuron	8.75	Spike	P	0 - 30
1873950	Fenuron	7.27	Spike	P	0 - 30
1873950	Fluridone	10.6	Spike	P	0 - 30
1873950	Imidacloprid	7.72	Spike	P	0 - 30
1873950	Linuron	7.54	Spike	P	0 - 30
1873950	Primidone	20.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P320202

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1874049	Acetaminophen	0.554	Spike	P	0 - 30
1874049	Carbamazepine	15.6	Spike	P	0 - 30
1874049	Diuron	12.7	Spike	P	0 - 30
1874049	Fenuron	0.0	Spike	P	0 - 30
1874049	Fluridone	19.8	Spike	P	0 - 30
1874049	Imidacloprid	2.15	Spike	P	0 - 30
1874049	Linuron	14.1	Spike	P	0 - 30
1874049	Primidone	19.5	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 1873949
Field Sample ID: G2SE0027

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	65.0	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	70.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	73.2	P	40 - 160
USGS O-2060-01	Diuron-d6	57.2	P	40 - 150
USGS O-2060-01	Primidone-d5	86.2	P	40 - 150

Lab Sample ID: 1873950
Field Sample ID: G2SE0023

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	83.2	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	73.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	81.6	P	40 - 160
USGS O-2060-01	Diuron-d6	66.6	P	40 - 150
USGS O-2060-01	Primidone-d5	87.4	P	40 - 150

Lab Sample ID: 1873951
Field Sample ID: G2SE0021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	71.0	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	69.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	97.8	P	40 - 160
USGS O-2060-01	Diuron-d6	71.8	P	40 - 150
USGS O-2060-01	Primidone-d5	104	P	40 - 150

Lab Sample ID: 1873952
Field Sample ID: G2SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	101	P	40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1873952
Field Sample ID: G2SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Acetaminophen-d4	66.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	67.2	P	40 - 160
USGS O-2060-01	Diuron-d6	43.2	P	40 - 150
USGS O-2060-01	Primidone-d5	74.6	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A74619
Included Lab Sample IDs: 1873911, 1873914, 1873919, 1873920, 1873923, 1873978

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A74620
Included Lab Sample IDs: 1873909, 1873912, 1873915, 1873916, 1873921, 1873976

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

Reference Method: SM 2120 B
Run ID: A74622
Included Lab Sample IDs: 1873912, 1873915, 1873916, 1873921, 1873976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	94.5	95.7	P/P	85 - 115
Color (true)	95.5	96.6	P/P	85 - 115
Color (true)	97.0	95.5	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A74655
Included Lab Sample IDs: 1873910, 1873913, 1873917, 1873918, 1873922, 1873977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	100	P/P	90 - 110
Ammonia-N	100	101	P/P	90 - 110
Ammonia-N	101	102	P/P	90 - 110

Reference Method: USGS O-2060-01
Run ID: A74666
Included Lab Sample IDs: 1873949, 1873950, 1873951, 1873952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	112	110	P/P	60 - 150
Acetaminophen	91.6	98.8	P/P	60 - 150
Acetaminophen	97.2	122	P/P	60 - 150
Acetaminophen	98.8	108	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A74666

Included Lab Sample IDs: 1873949, 1873950, 1873951, 1873952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	110	132	P/P	60 - 150
Carbamazepine	118	125	P/P	60 - 150
Carbamazepine	132	130	P/P	60 - 150
Carbamazepine	88.8	105	P/P	60 - 150
Diuron	108	119	P/P	60 - 150
Diuron	114	111	P/P	60 - 150
Diuron	119	114	P/P	60 - 150
Diuron	97.2	114	P/P	60 - 150
Fenuron	110	114	P/P	60 - 150
Fenuron	118	128	P/P	60 - 150
Fenuron	119	120	P/P	60 - 150
Fenuron	128	128	P/P	60 - 150
Fluridone	108	120	P/P	60 - 150
Fluridone	111	112	P/P	60 - 150
Fluridone	112	112	P/P	60 - 150
Fluridone	118	114	P/P	60 - 150
Imidacloprid	110	117	P/P	60 - 150
Imidacloprid	117	114	P/P	60 - 150
Imidacloprid	122	116	P/P	60 - 150
Imidacloprid	96.8	110	P/P	60 - 150
Linuron	102	92.0	P/P	60 - 150
Linuron	78.4	88.4	P/P	60 - 150
Linuron	92.0	102	P/P	60 - 150
Linuron	96.4	95.2	P/P	60 - 150
Primidone	107	102	P/P	60 - 150
Primidone	111	113	P/P	60 - 150
Primidone	93.2	97.2	P/P	60 - 150
Primidone	96.0	111	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A74669

Included Lab Sample IDs: 1873910, 1873917, 1873918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A74670

Included Lab Sample IDs: 1873949, 1873950, 1873951, 1873952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	114	109	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A74673

Included Lab Sample IDs: 1873910, 1873913, 1873917, 1873918, 1873922, 1873977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.0	95.5	P/P	90 - 110
Kjeldahl Nitrogen	97.6	97.0	P/P	90 - 110
Kjeldahl Nitrogen	99.8	97.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A74675

Included Lab Sample IDs: 1873913, 1873922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.7	97.5	P/P	90 - 110
Total-P	99.4	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A74682

Included Lab Sample IDs: 1873910, 1873917, 1873918, 1873977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	98.8	P/P	90 - 110
Total-P	98.5	98.5	P/P	90 - 110
Total-P	99.0	98.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A74683

Included Lab Sample IDs: 1873913, 1873922, 1873977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.7	95.6	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A74690

Included Lab Sample IDs: 1873909, 1873912, 1873915, 1873916, 1873921, 1873976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	103	103	P/P	90 - 110
Total Alkalinity	103	103	P/P	90 - 110
Total Alkalinity	104	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A74690

Included Lab Sample IDs: 1873909, 1873912, 1873915, 1873916, 1873921, 1873976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	98.0	P/P	90 - 110
Fluoride	97.5	104	P/P	90 - 110
Fluoride	98.0	98.6	P/P	90 - 110
Fluoride	98.6	98.0	P/P	90 - 110
Fluoride	99.0	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A74706

Included Lab Sample IDs: 1873913, 1873922, 1873977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A74725

Included Lab Sample IDs: 1873910, 1873917, 1873918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	95.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A74874

Included Lab Sample IDs: 1873912, 1873915, 1873916, 1873921, 1873976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	94.3	97.6	P/P	90 - 110
Chloride	97.0	94.6	P/P	90 - 110
Sulfate	92.0	93.4	P/P	90 - 110
Sulfate	93.7	93.2	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					2.86	
EPA 300.0 Rev. 2.1	Chloride	95.7		93.5		0.338	
	Sulfate	90.6		90.5 90.1		0.233	
EPA 350.1 Rev. 2.0	Ammonia-N	102		103 99.6			3.01
	Ammonia-N	101		95.1 93.6			1.22
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.5		103 96.4			4.13
	Kjeldahl Nitrogen	102		102 103			0.964
EPA 353.2 Rev. 2.0	NO2NO3-N	104		98.6 94.1			4.67
	NO2NO3-N	102		101 102			0.735
EPA 365.1 Rev. 2.0	Total-P	92.7		90.3 91.8			1.55
	Total-P	90.6		97.8 95.9			1.85
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1		96.5 97.4			0.928
	O-Phosphate-P	101		98.3 98.6			0.271
EPA 8321B	Sucralose	89.7		82.6 74.3			10.4
SM 2120 B	Color (true)					2.85	
SM 2320 B-97	Total Alkalinity	103				0.289	
	Total Alkalinity	103				0.231	
	Total Alkalinity	103				0.174	
SM 2540 C-97	TDS					5.13	
	TDS					2.11	
SM 4500 F-C-97	Fluoride	95.6					0.947
	Fluoride	96.6		94.8 95.5			0.473
	Fluoride	96.1		104 100			2.40
SM 5310 B-00	Organic Carbon	97.0		92.8 94.0			0.719
	Organic Carbon	96.4		94.6 95.8			0.963
USGS O-2060-01	Acetaminophen	124		78.8 85.6			8.27
	Acetaminophen	79.2		72.4 72.0			0.554
	Carbamazepine	102		65.8 71.0			7.54
	Carbamazepine	115		58.0 49.6			15.6

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
USGS O-2060-01	Diuron	88.8	61.2	66.8		8.75
	Diuron	85.2	41.2	46.8		12.7
	Fenuron	108	63.6	68.4		7.27
	Fenuron	105	49.2	49.2		0.0
	Fluridone	105	77.9	86.7		10.6
	Fluridone	86.8	38.7	48.3		19.8
	Imidacloprid	110	99.6	108		7.72
	Imidacloprid	102	113	110		2.15
	Linuron	76.8	71.6	66.4		7.54
	Linuron	92.8	70.0	60.8		14.1
	Primidone	80.0	77.2	95.2		20.9
	Primidone	86.4	48.0	58.4		19.5

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1873909, 1873912, 1873915, 1873916, 1873921, 1873976
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1873912, 1873915, 1873916, 1873921, 1873976
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1873912, 1873915, 1873916, 1873921, 1873976
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1873911, 1873914, 1873919, 1873920, 1873923, 1873978
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1873949, 1873950, 1873951, 1873952
SM 2120 B / E31780	True Color measured at 450 nm	1873912, 1873915, 1873916, 1873921, 1873976
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1873909, 1873912, 1873915, 1873916, 1873921, 1873976
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1873912, 1873915, 1873916, 1873921, 1873976
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1873909, 1873912, 1873915, 1873916, 1873921, 1873976
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1873909, 1873912, 1873915, 1873916, 1873921, 1873976
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1873949, 1873950, 1873951, 1873952

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	02/21/2017			02/21/2017 15:21	Sima Feizi	1873909, 1873912, 1873915, 1873916, 1873921, 1873976
EPA 300.0 Rev. 2.1	02/21/2017			03/03/2017	Ping Hua	1873912, 1873915, 1873916, 1873921, 1873976
EPA 350.1 Rev. 2.0	02/21/2017			02/22/2017	Sofia Elnemr	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
EPA 351.2 Rev. 2.0	02/21/2017	02/22/2017	Adrian Shelby	02/23/2017	Joseph Suarez	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
EPA 353.2 Rev. 2.0	02/21/2017			02/23/2017	Beverly Y. Sanders	1873910, 1873917, 1873918
	02/21/2017			02/24/2017	Beverly Y. Sanders	1873913, 1873922, 1873977
EPA 365.1 Rev. 2.0	02/21/2017	02/22/2017	Vijayalakshmi Reddy	02/23/2017	Lipi Saha	1873910, 1873913, 1873917, 1873918, 1873922, 1873977
EPA 365.1 Rev. 2.0 dissolved	02/21/2017			02/21/2017 14:43	Julia Storbeck	1873911
	02/21/2017			02/21/2017 15:04	Julia Storbeck	1873923
	02/21/2017			02/21/2017 15:06	Julia Storbeck	1873914
	02/21/2017			02/21/2017 15:07	Julia Storbeck	1873978
	02/21/2017			02/21/2017 15:18	Julia Storbeck	1873919
	02/21/2017			02/21/2017 15:19	Julia Storbeck	1873920
EPA 8321B	02/21/2017	02/22/2017	Mohammad Ghaffari	02/22/2017	Mohammad Ghaffari	1873949, 1873950, 1873951, 1873952
SM 2120 B	02/21/2017			02/21/2017 16:07	Julie Michelle Frank	1873912
	02/21/2017			02/21/2017 16:08	Julie Michelle Frank	1873916
	02/21/2017			02/21/2017 16:09	Julie Michelle Frank	1873921
	02/21/2017			02/21/2017 16:34	Julie Michelle Frank	1873976
	02/21/2017			02/21/2017 16:42	Julie Michelle Frank	1873915
SM 2320 B-97	02/21/2017			02/22/2017	Dale L. Simmons	1873912
	02/21/2017			02/23/2017	Dale L. Simmons	1873909, 1873915, 1873916, 1873921, 1873976
SM 2540 C-97	02/21/2017			02/23/2017	Yijie Li	1873912, 1873915, 1873916, 1873921, 1873976
SM 2540 D-97	02/21/2017			02/23/2017	Yijie Li	1873909, 1873912, 1873915, 1873916, 1873921, 1873976
SM 4500 F-C-97	02/21/2017			02/22/2017	Dale L. Simmons	1873912
	02/21/2017			02/23/2017	Dale L. Simmons	1873909, 1873915, 1873916, 1873921, 1873976
SM 5310 B-00	02/21/2017			02/22/2017	Julie Michelle Frank	1873913, 1873922, 1873977
	02/21/2017			02/25/2017	Julie Michelle Frank	1873910, 1873917, 1873918
USGS O-2060-01	02/21/2017	02/21/2017	Hoor Shaik	02/22/2017	Juyoung Kim	1873950
	02/21/2017	02/21/2017	Hoor Shaik	02/23/2017	Juyoung Kim	1873949
	02/21/2017	02/23/2017	Hoor Shaik	02/24/2017	Juyoung Kim	1873951, 1873952