

Chemical Analysis Report

SE-DIST-2017-03-14-01

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

Event Description: **SMP-Broward 2 Run**
Request ID: **RQ-2017-03-06-28**
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: 06-APR-2017 13:29



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: North New R. @ University Dr.

Collection Date/Time: 03/13/2017 11:30

Field ID: G4SENNR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1879735	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P321562	
	EPA 300.0 Rev. 2.1	Chloride	92		mg Cl/L	P322121	
		Sulfate	12		mg SO4/L	P321815	
	SM 2120 B	Color (true)	56		PCU	P321543	
	SM 2320 B-97	Total Alkalinity	224		mg CaCO3/L	P321765	
	SM 2540 C-97	TDS	448		mg/L	P322310	
	SM 2540 D-97	TSS	2	I	mg/L	P322173	
	SM 4500 F-C-97	Fluoride	0.39		mg F/L	P321768	
1879738	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P321554	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P321653	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P321664	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P321603	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P321638	
1879741	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P321537	
1879825	EPA 8321B	Sucralose**	0.018	I	ug/L	P321383	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P321386	
		Diuron	0.0055	I	ug/L	P321386	
		Fenuron	0.0080	U	ug/L	P321386	
		2,4,5-T	0.0040	U	ug/L	P321386	
		Acifluorfen	0.010	U	ug/L	P321386	
		Imidacloprid	0.0040	U	ug/L	P321386	
		Bentazon	0.12		ug/L	P321386	
		Linuron	0.0040	UJ	ug/L	P321386	CCV
		Acetaminophen**	0.0040	U	ug/L	P321386	
		Carbamazepine**	4.0E-04	U	ug/L	P321386	
		Silvex	0.0040	U	ug/L	P321386	MS
		Triclopyr**	0.017	I	ug/L	P321386	
		Primidone**	0.0080	U	ug/L	P321386	
		Fluridone**	4.0E-04	U	ug/L	P321386	MS, RPD

Ref. Method and Comment:

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

USGS O-2060-01: MS accuracy for 2,4-D, bentazon and triclopyr could not be assessed due to high concentration of parameter in the spiked sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Flamingo Rd. & Stirling Rd.

Collection Date/Time: 03/13/2017 12:00

Field ID: 28030548

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1879736	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P321562	
	EPA 300.0 Rev. 2.1	Chloride	82		mg Cl/L	P322121	
		Sulfate	1.8		mg SO4/L	P321815	
	SM 2120 B	Color (true)	40		PCU	P321543	
	SM 2320 B-97	Total Alkalinity	249		mg CaCO3/L	P321765	
	SM 2540 C-97	TDS	403		mg/L	P322310	
	SM 2540 D-97	TSS	2	I	mg/L	P322173	

Field ID: 28030548

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1879736	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P321768	
1879739	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P321554	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P321804	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P321664	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P321603	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P321638	
1879742	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P321537	
1879826	EPA 8321B	Sucralose**	0.057		ug/L	P321383	
	USGS O-2060-01	2,4-D	0.18		ug/L	P321386	
		Diuron	0.0040	U	ug/L	P321386	
		Fenuron	0.0080	U	ug/L	P321386	
		2,4,5-T	0.0040	U	ug/L	P321386	
		Acifluorfen	0.010	U	ug/L	P321386	
		Imidacloprid	0.011	I	ug/L	P321386	
		Bentazon	0.099		ug/L	P321386	
		Linuron	0.0040	UJ	ug/L	P321386	CCV
		Acetaminophen**	0.0040	U	ug/L	P321386	
		Carbamazepine**	4.0E-04	U	ug/L	P321386	
		Silvex	0.0040	UJ	ug/L	P321386	MS
		Triclopyr**	0.20		ug/L	P321386	
		Primidone**	0.0080	U	ug/L	P321386	
		Fluridone**	0.0040	J	ug/L	P321386	MS, RPD

Ref. Method and Comment:

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

USGS O-2060-01: MS accuracy for 2,4-D, bentazon and triclopyr could not be assessed due to high concentration of parameter in the spiked sample.

Refer to the narrative for an explanation of QC Codes.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: New R. @ Andrews Ave

Collection Date/Time: 03/13/2017 13:00

Field ID: 28030521

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1879744	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P321563	
	SM 2320 B-97	Total Alkalinity	179		mg CaCO3/L	P321700	
	SM 2540 D-97	TSS	3	I	mg/L	P322180	
	SM 4500 F-C-97	Fluoride	0.76		mg F/L	P321705	
1879746	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P321553	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P321709	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.086		mg N/L	P321736	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P321601	
	SM 5310 B-00	Organic Carbon	6.9		mg C/L	P321640	
1879748	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P321540	
1879828	EPA 8321B	Sucralose**	0.24		ug/L	P321383	
	USGS O-2060-01	2,4-D	0.021		ug/L	P321386	
		Diuron	0.023		ug/L	P321386	
		Fenuron	0.0080	U	ug/L	P321386	

Field ID: 28030521

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1879828	USGS O-2060-01	2,4,5-T	0.0040	U	ug/L	P321386	
		Acifluorfen	0.010	U	ug/L	P321386	
		Imidacloprid	0.0070	I	ug/L	P321386	
		Bentazon	0.053		ug/L	P321386	
		Linuron	0.0040	UJ	ug/L	P321386	CCV
		Acetaminophen**	0.0040	U	ug/L	P321386	
		Carbamazepine**	0.0015	I	ug/L	P321386	
		Silvex	0.0040	U	ug/L	P321386	MS
		Triclopyr**	0.018	I	ug/L	P321386	
		Primidone**	0.0080	U	ug/L	P321386	
		Fluridone**	0.0048		ug/L	P321386	MS, RPD

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for 2,4-D, bentazon and triclopyr could not be assessed due to high concentration of parameter in the spiked sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: New River North Fork @ Sunrise

Collection Date/Time: 03/13/2017 14:10

Field ID: G4SEB064

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1879745	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P321563	
	SM 2320 B-97	Total Alkalinity	205	A	mg CaCO3/L	P321701	
	SM 2540 D-97	TSS	10	A	mg/L	P322180	
	SM 4500 F-C-97	Fluoride	0.43		mg F/L	P321706	
1879747	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P321644	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P321709	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P321736	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P321601	
	SM 5310 B-00	Organic Carbon	8.4		mg C/L	P321640	
1879749	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P321537	
1879829	EPA 8321B	Sucralose**	0.18		ug/L	P321383	
	USGS O-2060-01	2,4-D	0.0090	I	ug/L	P321386	
		Diuron	0.0096	I	ug/L	P321386	
		Fenuron	0.0080	U	ug/L	P321386	
		2,4,5-T	0.0040	U	ug/L	P321386	
		Acifluorfen	0.010	U	ug/L	P321386	
		Imidacloprid	0.0040	U	ug/L	P321386	
		Bentazon	0.067		ug/L	P321386	
		Linuron	0.0040	UJ	ug/L	P321386	CCV
		Acetaminophen**	0.0040	U	ug/L	P321386	
		Carbamazepine**	0.0013	I	ug/L	P321386	
		Silvex	0.0040	U	ug/L	P321386	MS
		Triclopyr**	0.019	I	ug/L	P321386	
		Primidone**	0.0080	U	ug/L	P321386	
		Fluridone**	9.3E-04	I	ug/L	P321386	MS, RPD

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for 2,4-D, bentazon and triclopyr could not be assessed due to high concentration of parameter in the spiked sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: C-12 @ 9th Ave & Sunrise

Collection Date/Time: 03/13/2017 14:50

Field ID: G4SEB128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1879737	EPA 180.1 Rev. 2.0	Turbidity	4.2	A	NTU	P321563	
	EPA 300.0 Rev. 2.1	Chloride	74		mg Cl/L	P322121	
		Sulfate	8.9		mg SO4/L	P321815	
	SM 2120 B	Color (true)	43		PCU	P321543	
	SM 2320 B-97	Total Alkalinity	196		mg CaCO3/L	P321765	
	SM 2540 C-97	TDS	350	A	mg/L	P322310	
	SM 2540 D-97	TSS	4	I	mg/L	P322173	
1879740	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P321768	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P321554	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P321711	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P321833	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P321603	
1879743	SM 5310 B-00	Organic Carbon	15		mg C/L	P321638	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P321537	
1879827	EPA 8321B	Sucralose**	0.020	I	ug/L	P321383	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P321386	
		Diuron	2.2		ug/L	P321386	
		Fenuron	0.0083	I	ug/L	P321386	
		2,4,5-T	0.0040	U	ug/L	P321386	
		Acifluorfen	0.010	U	ug/L	P321386	
		Imidacloprid	0.011	I	ug/L	P321386	
		Bentazon	0.092		ug/L	P321386	
		Linuron	0.0040	UJ	ug/L	P321386	CCV
		Acetaminophen**	0.0040	U	ug/L	P321386	
		Carbamazepine**	4.0E-04	U	ug/L	P321386	
		Silvex	0.0040	U	ug/L	P321386	MS
		Triclopyr**	0.65		ug/L	P321386	
		Primidone**	0.0080	U	ug/L	P321386	
		Fluridone**	0.0027		ug/L	P321386	MS, RPD

Ref. Method and Comment:

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

USGS O-2060-01: MS accuracy for 2,4-D, bentazon and triclopyr could not be assessed due to high concentration of parameter in the spiked sample.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P321562

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P321563

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321563

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321815

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322121

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321553

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321554

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321644

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321653

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321709

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321711

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321804

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321664

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321736

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321833

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321601

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321603

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321537

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321540

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

Reference Method: EPA 8321B
Batch ID: P321383

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P321543

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P321700

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

Reference Method: SM 2320 B-97
Batch ID: P321701

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

Reference Method: SM 2320 B-97
Batch ID: P321765

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

Reference Method: SM 2540 C-97
Batch ID: P322310

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P322173

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P322180

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P321705

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P321706

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P321768

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P321638

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

Reference Method: SM 5310 B-00
Batch ID: P321640

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

Reference Method: USGS O-2060-01
Batch ID: P321386

Component	Result	Code	Units
2,4,5-T	0.0040	U	ug/L
2,4-D	0.0040	U	ug/L
Acetaminophen	0.0040	U	ug/L
Acifluorfen	0.010	U	ug/L
Bentazon	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
Silvex	0.0040	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321815

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322121

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321553

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321554

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321644

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321653

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321709

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321711

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321804

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321664

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321736

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321833

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321601

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321603

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321537

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.7		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P321383

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	98.9		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P321700

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

Reference Method: SM 2320 B-97
Batch ID: P321701

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

Reference Method: SM 2320 B-97
Batch ID: P321765

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P321705

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.7		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P321706

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P321768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	93.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P321638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P321640

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

Reference Method: USGS O-2060-01
Batch ID: P321386

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	79.2		P	40 - 140
2,4-D	88.4		P	40 - 140
Acetaminophen	97.2		P	40 - 140
Acifluorfen	100		P	40 - 140
Bentazon	72.4		P	40 - 140
Carbamazepine	116		P	40 - 140
Diuron	98.0		P	40 - 140
Fenuron	90.0		P	40 - 140
Fluridone	70.0		P	40 - 140
Imidacloprid	85.6		P	40 - 160
Linuron	66.4		P	40 - 140
Primidone	80.4		P	40 - 140
Silvex	88.4		P	40 - 140
Triclopyr	86.4		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321815

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879380	Sulfate	107		P	90 - 110
1879868	Sulfate	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879380	Chloride	95.6		P	90 - 110
1879868	Chloride	94.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879718	Ammonia-N	108	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879720	Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879747	Ammonia-N	98.1	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879721	Kjeldahl Nitrogen	95.1	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879849	Kjeldahl Nitrogen	96.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879740	Kjeldahl Nitrogen	91.8	93.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881002	Kjeldahl Nitrogen	101	98.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321664

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879720	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321736

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879746	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879860	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321601

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879746	Total-P	99.5	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879722	Total-P	103	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321537

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879741	O-Phosphate-P	96.1	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879748	O-Phosphate-P	102	99.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P321383

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879896	Sucralose	84.1	87.1	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P321705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1878953	Fluoride	94.3	95.8	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P321706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879745	Fluoride	97.0	97.8	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P321768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879911	Fluoride	98.6	99.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P321638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879738	Organic Carbon	92.3	93.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P321640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879687	Organic Carbon	92.8	93.5	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P321386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1879826	2,4,5-T	90.4	92.8	P/P	40 - 140
1879826	Acetaminophen	49.6	43.2	P/P	40 - 140
1879826	Acifluorfen	61.6	74.8	P/P	40 - 140
1879826	Carbamazepine	50.4	53.2	P/P	40 - 140
1879826	Diuron	53.2	55.2	P/P	40 - 140
1879826	Fenuron	42.0	42.4	P/P	40 - 140
1879826	Fluridone	5.17	10.0	F/F	40 - 140
1879826	Imidacloprid	103	111	P/P	40 - 160
1879826	Linuron	66.0	55.2	P/P	40 - 140
1879826	Primidone	54.8	48.8	P/P	40 - 140
1879826	Silvex	153	168	F/F	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879711	Turbidity	2.66	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321563

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879737	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P321815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879380	Sulfate	9.23	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879380	Chloride	0.124	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879718	Ammonia-N	1.23	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879720	Ammonia-N	0.664	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879747	Ammonia-N	0.750	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879721	Kjeldahl Nitrogen	0.0498	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879849	Kjeldahl Nitrogen	3.11	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879740	Kjeldahl Nitrogen	0.679	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881002	Kjeldahl Nitrogen	1.97	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879720	NO2NO3-N	0.617	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879746	NO2NO3-N	0.345	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879860	NO2NO3-N	1.20	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321601

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879746	Total-P	0.246	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879722	Total-P	4.07	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879741	O-Phosphate-P	2.06	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879748	O-Phosphate-P	2.49	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P321383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879896	Sucralose	3.44	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P321543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879751	Color (true)	0.493	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P321700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1878953	Total Alkalinity	2.96	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P321701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879745	Total Alkalinity	0.544	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P321765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879911	Total Alkalinity	0.468	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P322310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879737	TDS	3.14	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P322180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879745	TSS	7.69	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P321705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1878953	Fluoride	0.979	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P321706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879745	Fluoride	0.470	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P321768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879911	Fluoride	0.480	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P321638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879738	Organic Carbon	0.753	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P321640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879687	Organic Carbon	0.546	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P321386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1879826	2,4,5-T	2.62	Spike	P	0 - 30
1879826	2,4-D	1.22	Spike	P	0 - 30
1879826	Acetaminophen	13.8	Spike	P	0 - 30
1879826	Acifluorfen	19.4	Spike	P	0 - 30
1879826	Bentazon	8.83	Spike	P	0 - 30
1879826	Carbamazepine	5.41	Spike	P	0 - 30
1879826	Diuron	3.69	Spike	P	0 - 30
1879826	Fenuron	0.948	Spike	P	0 - 30
1879826	Fluridone	41.8	Spike	F	0 - 30
1879826	Imidacloprid	7.11	Spike	P	0 - 30
1879826	Linuron	17.8	Spike	P	0 - 30
1879826	Primidone	11.6	Spike	P	0 - 30
1879826	Silvex	8.98	Spike	P	0 - 30
1879826	Triclopyr	7.79	Spike	P	0 - 30

Quality Assurance Report Precision

* 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: 1879825
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	116	P	40 - 150
USGS O-2060-01	2,4-D-d3	114	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	55.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	55.2	P	40 - 160
USGS O-2060-01	Diuron-d6	52.2	P	40 - 150
USGS O-2060-01	Primidone-d5	50.4	P	40 - 150

Lab Sample ID: 1879826
Field Sample ID: 28030548

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	99.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	128	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	63.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	62.2	P	40 - 160
USGS O-2060-01	Diuron-d6	58.8	P	40 - 150
USGS O-2060-01	Primidone-d5	81.4	P	40 - 150

Lab Sample ID: 1879827
Field Sample ID: G4SEB128

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	77.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	126	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	67.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	61.2	P	40 - 160
USGS O-2060-01	Diuron-d6	58.4	P	40 - 150
USGS O-2060-01	Primidone-d5	75.6	P	40 - 150

Lab Sample ID: 1879828
Field Sample ID: 28030521

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	78.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	114	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	64.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	88.0	P	40 - 160
USGS O-2060-01	Diuron-d6	87.4	P	40 - 150
USGS O-2060-01	Primidone-d5	106	P	40 - 150

Lab Sample ID: 1879829
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	92.5	P	40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1879829
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	2,4-D-d3	115	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	68.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	64.2	P	40 - 160
USGS O-2060-01	Diuron-d6	67.4	P	40 - 150
USGS O-2060-01	Primidone-d5	93.6	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75093
Included Lab Sample IDs: 1879741, 1879742, 1879743, 1879748, 1879749

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

Reference Method: SM 2120 B
Run ID: A75094
Included Lab Sample IDs: 1879735, 1879736, 1879737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	100	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75099
Included Lab Sample IDs: 1879738, 1879739, 1879740, 1879746

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A75104
Included Lab Sample IDs: 1879735, 1879736, 1879737, 1879744, 1879745

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

Reference Method: SM 5310 B-00
Run ID: A75134
Included Lab Sample IDs: 1879738, 1879739, 1879740, 1879746, 1879747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	96.2	P/P	90 - 110
Organic Carbon	96.0	97.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A75135

Included Lab Sample IDs: 1879825, 1879826, 1879827, 1879828, 1879829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	116	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75137

Included Lab Sample IDs: 1879747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75140

Included Lab Sample IDs: 1879738, 1879739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A75152

Included Lab Sample IDs: 1879744, 1879745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	106	P/P	90 - 110
Total Alkalinity	106	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A75152

Included Lab Sample IDs: 1879744, 1879745

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

Reference Method: USGS O-2060-01

Run ID: A75159

Included Lab Sample IDs: 1879825, 1879826, 1879827, 1879828, 1879829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	103	103	P/P	60 - 150
Acetaminophen	108	103	P/P	60 - 150
Carbamazepine	129	137	P/P	60 - 150
Carbamazepine	137	141	P/P	60 - 150
Diuron	126	137	P/P	60 - 150
Diuron	138	126	P/P	60 - 150
Fenuron	114	120	P/P	60 - 150
Fenuron	120	127	P/P	60 - 150
Fluridone	107	99.2	P/P	60 - 150
Fluridone	99.2	96.0	P/P	60 - 150
Imidacloprid	121	124	P/P	60 - 150
Imidacloprid	124	134	P/P	60 - 150
Linuron	134	169*	P/F	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A75159

Included Lab Sample IDs: 1879825, 1879826, 1879827, 1879828, 1879829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	160*	134	F/P	60 - 150
Primidone	118	124	P/P	60 - 150
Primidone	86.4	118	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75166

Included Lab Sample IDs: 1879746, 1879747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75175

Included Lab Sample IDs: 1879738, 1879739, 1879740, 1879746, 1879747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.2	98.8	P/P	90 - 110
Total-P	98.0	96.5	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A75182

Included Lab Sample IDs: 1879735, 1879736, 1879737

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

Reference Method: SM 4500 F-C-97

Run ID: A75182

Included Lab Sample IDs: 1879735, 1879736, 1879737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75193

Included Lab Sample IDs: 1879735, 1879736, 1879737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	109	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75196

Included Lab Sample IDs: 1879738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.6	92.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75199

Included Lab Sample IDs: 1879740

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75212

Included Lab Sample IDs: 1879740

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75215

Included Lab Sample IDs: 1879746, 1879747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	98.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75255

Included Lab Sample IDs: 1879739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.2	91.1	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A75259

Included Lab Sample IDs: 1879825, 1879826, 1879827, 1879828, 1879829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	90.8	94.6	P/P	50 - 150
2,4,5-T	94.6	95.8	P/P	50 - 150
2,4-D	100	101	P/P	50 - 150
2,4-D	101	103	P/P	50 - 150
Acifluorfen	90.2	97.4	P/P	50 - 150
Acifluorfen	97.4	93.4	P/P	50 - 150
Bentazon	82.2	87.0	P/P	50 - 150
Bentazon	87.0	93.8	P/P	50 - 150
Silvex	113	86.6	P/P	50 - 150
Silvex	86.6	81.8	P/P	50 - 150
Triclopyr	109	86.8	P/P	50 - 150
Triclopyr	86.8	88.8	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75326

Included Lab Sample IDs: 1879735, 1879736, 1879737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	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					2.66	
	Turbidity					0.0	
EPA 300.0 Rev. 2.1	Chloride	102	95.6	94.3		0.124	
	Sulfate	106	107	104		9.23	
EPA 350.1 Rev. 2.0	Ammonia-N	104	108	107			1.23
	Ammonia-N	104	104	103			0.664
	Ammonia-N	98.5	98.1	98.9			0.750
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	95.1	95.2			0.0498
	Kjeldahl Nitrogen	103	96.8	101			3.11
	Kjeldahl Nitrogen	104	91.8	93.0			0.679
	Kjeldahl Nitrogen	105	101	98.5			1.97
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	102	102			0.617
	NO ₂ NO ₃ -N	99.5	102	102			0.345
	NO ₂ NO ₃ -N	100	102	100			1.20
EPA 365.1 Rev. 2.0	Total-P	102	99.5	99.8			0.246
	Total-P	106	103	107			4.07
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.7	96.1	98.1			2.06
	O-Phosphate-P	99.7	102	99.0			2.49
EPA 8321B	Sucralose	98.9	84.1	87.1			3.44
SM 2120 B	Color (true)					0.493	
SM 2320 B-97	Total Alkalinity	104				2.96	
	Total Alkalinity	104				0.544	
	Total Alkalinity	104				0.468	
SM 2540 C-97	TDS					3.14	
SM 2540 D-97	TSS					7.69	
SM 4500 F-C-97	Fluoride	99.7	94.3	95.8			0.979
	Fluoride	97.1	97.0	97.8			0.470
	Fluoride	93.5	98.6	99.2			0.480
SM 5310 B-00	Organic Carbon	94.4	92.3	93.8			0.753
	Organic Carbon	94.0	92.8	93.5			0.546
USGS O-2060-01	2,4,5-T	79.2	92.8	90.4			2.62
	2,4-D	88.4					1.22
	Acetaminophen	97.2	49.6	43.2			13.8
	Acifluorfen	100	74.8	61.6			19.4
	Bentazon	72.4					8.83
	Carbamazepine	116	50.4	53.2			5.41
	Diuron	98.0	53.2	55.2			3.69
	Fenuron	90.0	42.0	42.4			0.948
	Fluridone	70.0	5.17	10.0			41.8
	Imidacloprid	85.6	103	111			7.11
	Linuron	66.4	66.0	55.2			17.8
	Primidone	80.4	54.8	48.8			11.6
	Silvex	88.4	168	153			8.98
	Triclopyr	86.4					7.79

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1879735, 1879736, 1879737, 1879744, 1879745
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1879735, 1879736, 1879737

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1879735, 1879736, 1879737
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1879738, 1879739, 1879740, 1879746, 1879747
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1879738, 1879739, 1879740, 1879746, 1879747
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1879738, 1879739, 1879740, 1879746, 1879747
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1879738, 1879739, 1879740, 1879746, 1879747
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1879741, 1879742, 1879743, 1879748, 1879749
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1879825, 1879826, 1879827, 1879828, 1879829
SM 2120 B / E31780	True Color measured at 450 nm	1879735, 1879736, 1879737
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1879735, 1879736, 1879737, 1879744, 1879745
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1879735, 1879736, 1879737
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1879735, 1879736, 1879737, 1879744, 1879745
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1879735, 1879736, 1879737, 1879744, 1879745
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1879738, 1879739, 1879740, 1879746, 1879747
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1879825, 1879826, 1879827, 1879828, 1879829
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1879825, 1879826, 1879827, 1879828, 1879829

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	03/14/2017			03/14/2017 16:51	Blanca Fach	1879735, 1879736, 1879737, 1879744, 1879745
EPA 300.0 Rev. 2.1	03/14/2017			03/18/2017	Elisa J Lutz	1879735, 1879736, 1879737
	03/14/2017			03/24/2017	Ping Hua	1879735, 1879736, 1879737
EPA 350.1 Rev. 2.0	03/14/2017			03/14/2017	Sofia Elnemr	1879738, 1879739, 1879740, 1879746
	03/14/2017			03/15/2017	Sofia Elnemr	1879747
EPA 351.2 Rev. 2.0	03/14/2017	03/16/2017	Adrian Shelby	03/20/2017	Joseph Suarez	1879738
	03/14/2017	03/17/2017	Adrian Shelby	03/20/2017	Joseph Suarez	1879740
	03/14/2017	03/17/2017	Adrian Shelby	03/21/2017	Joseph Suarez	1879746, 1879747
	03/14/2017	03/20/2017	Adrian Shelby	03/22/2017	Joseph Suarez	1879739
EPA 353.2 Rev. 2.0	03/14/2017			03/16/2017	Beverly Y. Sanders	1879738, 1879739
	03/14/2017			03/17/2017	Beverly Y. Sanders	1879746, 1879747
	03/14/2017			03/20/2017	Beverly Y. Sanders	1879740
EPA 365.1 Rev. 2.0	03/14/2017	03/15/2017	Vijayalakshmi Reddy	03/17/2017	Lipi Saha	1879738, 1879739, 1879740, 1879746, 1879747
EPA 365.1 Rev. 2.0 dissolved	03/14/2017			03/14/2017 15:01	Ping Hua	1879741
	03/14/2017			03/14/2017 15:18	Ping Hua	1879748
	03/14/2017			03/14/2017 15:26	Ping Hua	1879743, 1879749
	03/14/2017			03/14/2017 16:06	Ping Hua	1879742
EPA 8321B	03/14/2017	03/15/2017	Mohammad Ghaffari	03/15/2017	Mohammad Ghaffari	1879825, 1879826, 1879827, 1879828, 1879829
SM 2120 B	03/14/2017			03/14/2017 17:41	Julie Michelle Frank	1879735
	03/14/2017			03/14/2017 17:42	Julie Michelle Frank	1879736
	03/14/2017			03/14/2017 17:43	Julie Michelle Frank	1879737
SM 2320 B-97	03/14/2017			03/16/2017	Dale L. Simmons	1879735, 1879736, 1879737, 1879744, 1879745
SM 2540 C-97	03/14/2017			03/17/2017	Yijie Li	1879735, 1879736, 1879737
SM 2540 D-97	03/14/2017			03/17/2017	Yijie Li	1879735, 1879736, 1879737, 1879744, 1879745
SM 4500 F-C-97	03/14/2017			03/15/2017	Dale L. Simmons	1879744
	03/14/2017			03/16/2017	Dale L. Simmons	1879735, 1879736, 1879737, 1879745
SM 5310 B-00	03/14/2017			03/15/2017	Julia Storbeck	1879738, 1879739, 1879740
	03/14/2017			03/16/2017	Julia Storbeck	1879746, 1879747
USGS O-2060-01	03/14/2017	03/15/2017	Hoor Shaik	03/17/2017	Juyoung Kim	1879826
	03/14/2017	03/15/2017	Hoor Shaik	03/18/2017	Juyoung Kim	1879825, 1879827, 1879828, 1879829
	03/14/2017	03/15/2017	Hoor Shaik	03/20/2017	Juyoung Kim	1879825, 1879826, 1879827, 1879828, 1879829