

Chemical Analysis Report

SE-DIST-2017-10-17-01

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

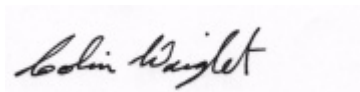
Event Description: **SMP-Broward Blue**
Request ID: **RQ-2017-10-16-31**
Customer: **SE-DIST**
Project ID: **SMP**

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

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Certified by: Colin Wright, Program Administrator

Date Certified: 09-NOV-2017 11:06

A handwritten signature in black ink, appearing to read "Colin Wright", is written on a light-colored rectangular background.

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: South New River Canal C-11 @ S Flamingo

Collection Date/Time: 10/16/2017 09:55

Field ID: 28030546

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937108	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P333569	
	EPA 300.0 Rev. 2.1	Chloride	52		mg Cl/L	P333661	
		Sulfate	11		mg SO4/L	P333663	
		Color (true)	62		PCU	P333510	
	SM 2320 B-97	Total Alkalinity	255		mg CaCO3/L	P333739	
	SM 2540 C-97	TDS	374		mg/L	P333868	
	SM 2540 D-97	TSS	3	I	mg/L	P333934	
	SM 4500 F-C-97	Fluoride	0.22		mg F/L	P333742	
1937110	EPA 350.1 Rev. 2.0	Ammonia-N	0.44		mg N/L	P333892	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P334268	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.31		mg N/L	P333994	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P333608	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P333990	
1937112	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P333505	
1937155	EPA 8321B	Sucralose**	0.081		ug/L	P333553	
	USGS O-2060-01	2,4-D	0.0057	I	ug/L	P333480	
		Diuron	0.051		ug/L	P334168	
		Fenuron	0.036		ug/L	P334168	
		Imidacloprid	0.041		ug/L	P334168	
		Bentazon	0.0087		ug/L	P333480	MS
		Linuron	0.0040	U	ug/L	P334168	
		Acetaminophen**	0.010	I	ug/L	P334168	
		MCP	0.0020	U	ug/L	P333480	
		Carbamazepine**	7.7E-04	I	ug/L	P334168	
		Triclopyr**	0.0040	U	ug/L	P333480	
		Primidone**	0.0040	U	ug/L	P334168	
		Fluridone**	0.071		ug/L	P334168	

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 imidacloprid and fluridone could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: S New River Canal East

Collection Date/Time: 10/16/2017 10:30

Field ID: G4SE0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937109	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P333569	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P333661	
		Sulfate	8.3		mg SO4/L	P333663	
		Color (true)	64		PCU	P333510	
	SM 2320 B-97	Total Alkalinity	239		mg CaCO3/L	P333739	
	SM 2540 C-97	TDS	340		mg/L	P333869	
	SM 2540 D-97	TSS	4	I	mg/L	P333935	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P333742	
1937111	EPA 350.1 Rev. 2.0	Ammonia-N	0.44		mg N/L	P333892	

Field ID: G4SE0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937111	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P334268	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.32		mg N/L	P333994	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P333608	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P333990	
1937113	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P333505	
1937156	EPA 8321B	Sucralose**	0.13		ug/L	P333553	
	USGS O-2060-01	2,4-D	0.011		ug/L	P333480	
		Diuron	0.015		ug/L	P334168	
		Fenuron	0.011	I	ug/L	P334168	
		Imidacloprid	0.054	J	ug/L	P334168	
		Bentazon	0.021	J	ug/L	P333480	MS
		Linuron	0.0040	U	ug/L	P334168	
		Acetaminophen**	0.0080	U	ug/L	P334168	
		MCP	0.0020	U	ug/L	P333480	
		Carbamazepine**	0.0023		ug/L	P334168	
		Triclopyr**	0.0040	U	ug/L	P333480	
		Primidone**	0.0040	U	ug/L	P334168	
		Fluridone**	0.042		ug/L	P334168	

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: Refer to the narrative for an explanation of QC Codes.

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

Refer to the narrative for an explanation of QC Codes.

Sample Location: Dania Cutoff Canal @ US1

Collection Date/Time: 10/16/2017 10:45

Field ID: 28030552

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937117	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P333569	
	SM 2320 B-97	Total Alkalinity	178		mg CaCO3/L	P333740	
	SM 2540 D-97	TSS	3	U	mg/L	P333939	
	SM 4500 F-C-97	Fluoride	0.62		mg F/L	P333743	
1937118	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P333964	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P333974	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P333769	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P333880	
	SM 5310 B-00	Organic Carbon	7.3		mg C/L	P333991	
1937119	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P333507	
1937157	EPA 8321B	Sucralose**	0.24		ug/L	P333619	
	USGS O-2060-01	2,4-D	0.0062	I	ug/L	P333480	
		Diuron	0.018		ug/L	P334168	
		Fenuron	0.0080	U	ug/L	P334168	
		Imidacloprid	0.025		ug/L	P334168	
		Bentazon	0.0067		ug/L	P333480	MS
		Linuron	0.0040	U	ug/L	P334168	
		Acetaminophen**	0.0080	U	ug/L	P334168	

Field ID: 28030552

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937157	USGS O-2060-01	MCP	0.0020	U	ug/L	P333480	
		Carbamazepine**	0.0049		ug/L	P334168	
		Triclopyr**	0.0040	U	ug/L	P333480	
		Primidone**	0.0040	U	ug/L	P334168	
		Fluridone**	0.016		ug/L	P334168	
1937160	EPA 200.7 Rev. 4.4	Iron	110	I	ug/L	P333970	
	EPA 200.8 Rev. 5.4	Arsenic	2.52		ug/L	P333970	
		Cadmium	0.060	U	ug/L	P333970	
		Chromium	1.2	U	ug/L	P333970	
		Copper	3.4		ug/L	P333970	
		Lead	0.27	I	ug/L	P333970	
		Nickel	0.80	U	ug/L	P333970	
		Silver	0.030	U	ug/L	P333970	
		Zinc	19		ug/L	P333970	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch relative percent difference is unavailable because of analytical difficulties.

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

Sample Location: C-10 Canal @ Stirling Rd.

Collection Date/Time: 10/16/2017 11:15

Field ID: G4SE0036

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937120	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P333569	
	SM 2320 B-97	Total Alkalinity	187		mg CaCO3/L	P333739	
	SM 2540 D-97	TSS	3	I	mg/L	P333937	
	SM 4500 F-C-97	Fluoride	0.24		mg F/L	P333742	
1937121	EPA 350.1 Rev. 2.0	Ammonia-N	0.19		mg N/L	P333892	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P334270	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P334094	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P333608	
	SM 5310 B-00	Organic Carbon	6.3		mg C/L	P333990	
1937122	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P333508	
1937158	EPA 8321B	Sucralose**	0.73		ug/L	P333553	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P333492	
		Diuron	0.018		ug/L	P333492	
		Fenuron	0.011	IJ	ug/L	P333492	RPD
		Imidacloprid	0.023	J	ug/L	P333492	MS
		Bentazon	0.0058	J	ug/L	P333492	LCS, MS
		Linuron	0.0040	U	ug/L	P333492	
		Acetaminophen**	0.0080	U	ug/L	P333492	
		MCP	0.0020	U	ug/L	P333492	
		Carbamazepine**	0.016		ug/L	P333492	
		Triclopyr**	0.0040	U	ug/L	P333492	
		Primidone**	0.0093	I	ug/L	P333492	
		Fluridone**	0.0077		ug/L	P333492	

Field ID: G4SE0036

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.							

Sample Location: C-10 Canal @ Stirling Rd.

Collection Date/Time: 10/16/2017 11:30

Field ID: G4SE0036_BLNK

Matrix: W-EQPMT-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937123	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P333892	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P334270	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P333994	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P333608	
	SM 5310 B-00	Organic Carbon	0.51	I	mg C/L	P333990	
1937124	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P333505	
1937159	EPA 8321B	Sucralose**	0.010	U	ug/L	P333553	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P333492	
		Diuron	8.0E-04	U	ug/L	P333492	
		Fenuron	0.0080	U	ug/L	P333492	RPD
		Imidacloprid	8.0E-04	U	ug/L	P333492	MS
		Bentazon	8.0E-04	UJ	ug/L	P333492	LCS, MS
		Linuron	0.0040	U	ug/L	P333492	
		Acetaminophen**	0.0080	U	ug/L	P333492	
		MCP	0.0020	U	ug/L	P333492	
		Carbamazepine**	4.0E-04	U	ug/L	P333492	
		Triclopyr**	0.0040	U	ug/L	P333492	
		Primidone**	0.0040	U	ug/L	P333492	
		Fluridone**	4.0E-04	U	ug/L	P333492	
1937161	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P333516	
		Zinc	5.0	U	ug/L	P333516	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P333516	
		Cadmium	0.020	U	ug/L	P333516	
		Chromium	0.40	U	ug/L	P333516	
		Copper	0.20	U	ug/L	P333516	
		Lead	0.050	U	ug/L	P333516	
		Nickel	0.20	U	ug/L	P333516	
		Silver	0.010	U	ug/L	P333516	

Ref. Method and Comment:
SM 5310 B-00: The result was confirmed on 10/27/2017.
USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: West Lake Middle North Sheridan

Collection Date/Time: 10/16/2017 12:00

Field ID: G4SE0037

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937114	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P333569	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P333740	
	SM 2540 D-97	TSS	5	IA	mg/L	P333939	

Field ID: G4SE0037

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1937114	SM 4500 F-C-97	Fluoride	0.96		mg F/L	P333743	
1937115	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P333616	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P333974	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.023		mg N/L	P333844	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P333880	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P333991	
1937116	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P333507	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch relative percent difference is unavailable because of analytical difficulties.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P333569

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333516

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333970

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333516

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333970

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333970

Component	Result	Code	Units
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L
Zinc	1.0	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333661

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333663

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333616

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333892

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333964

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333974

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334268

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334270

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333769

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333844

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333994

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334094

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333608

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333880

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333505

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333507

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333508

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P333553

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P333619

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P333510

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P333739

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

Reference Method: SM 2320 B-97
Batch ID: P333740

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

Reference Method: SM 2540 C-97
Batch ID: P333868

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P333869

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333934

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333935

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P333937

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333939

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P333742

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P333743

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P333990

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

Reference Method: SM 5310 B-00
Batch ID: P333991

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

Reference Method: USGS O-2060-01
Batch ID: P333480

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
MCP	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P333492

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P333492

Component	Result	Code	Units
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P334168

Component	Result	Code	Units
Acetaminophen	0.0080	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	108		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333970

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	105		P	85 - 115
Cadmium	109		P	85 - 115
Chromium	102		P	85 - 115
Copper	99.4		P	85 - 115
Lead	102		P	85 - 115
Nickel	102		P	85 - 115
Silver	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333970

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	109		P	85 - 115
Chromium	104		P	85 - 115
Copper	97.8		P	85 - 115
Lead	99.6		P	85 - 115
Nickel	101		P	85 - 115
Silver	102		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333661

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333663

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333616

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: P333892

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: P333964

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333974

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334268

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.6		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334270

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333844

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333994

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: P334094

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: P333608

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333880

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333505

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333507

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333508

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

Reference Method: EPA 8321B
Batch ID: P333553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	92.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P333619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	101		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P333739

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

Reference Method: SM 2320 B-97
Batch ID: P333740

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

Reference Method: SM 4500 F-C-97
Batch ID: P333742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.0		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P333743

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P333990

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P333991

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P333480

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	64.6		P	40 - 150
Bentazon	31.0		P	30 - 150
MCP	63.8		P	40 - 150
Triclopyr	65.2		P	40 - 150

Reference Method: USGS O-2060-01
 Batch ID: P333492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	67.9		P	40 - 150
Acetaminophen	102		P	30 - 150
Bentazon	24.4		F	30 - 150
Carbamazepine	66.4		P	40 - 150
Diuron	104		P	40 - 150
Fenuron	98.4		P	40 - 150
Fluridone	105		P	40 - 150
Imidacloprid	76.9		P	40 - 160
Linuron	113		P	40 - 150
MCP	63.7		P	40 - 150
Primidone	91.1		P	40 - 150
Triclopyr	62.0		P	40 - 150

Reference Method: USGS O-2060-01
 Batch ID: P334168

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	132		P	30 - 150
Carbamazepine	148		P	40 - 150
Diuron	73.4		P	40 - 150
Fenuron	109		P	40 - 150
Fluridone	87.9		P	40 - 150
Imidacloprid	116		P	40 - 160
Linuron	109		P	40 - 150
Primidone	91.6		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P333516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937103	Iron	109	110	P/P	80 - 120
1937103	Zinc	106	107	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P333970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937160	Iron	102	102	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937103	Arsenic	99.6	105	P/P	80 - 120
1937103	Cadmium	103	110	P/P	80 - 120
1937103	Chromium	99.7	106	P/P	80 - 120
1937103	Copper	96.2	102	P/P	80 - 120
1937103	Lead	97.2	102	P/P	80 - 120
1937103	Nickel	98.4	103	P/P	80 - 120
1937103	Silver	96.7	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937160	Arsenic	109	111	P/P	70 - 130
1937160	Cadmium	102	103	P/P	70 - 130
1937160	Chromium	85.3	86.8	P/P	70 - 130
1937160	Copper	92.6	96.9	P/P	70 - 130
1937160	Lead	104	103	P/P	70 - 130
1937160	Nickel	101	102	P/P	70 - 130
1937160	Silver	93.8	94.0	P/P	70 - 130
1937160	Zinc	94.3	96.4	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936945	Chloride	103		P	90 - 110
1937081	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936945	Sulfate	101		P	90 - 110
1937081	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936843	Ammonia-N	106	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937127	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333964

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937552	Ammonia-N	106	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937115	Kjeldahl Nitrogen	98.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937006	Kjeldahl Nitrogen	92.7	93.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334270

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937209	Kjeldahl Nitrogen	91.5	88.4	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936848	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333844

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936843	NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937110	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334094

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936850	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333608

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937128	Total-P	95.3	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937118	Total-P	102	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937112	O-Phosphate-P	91.5	93.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333507

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937116	O-Phosphate-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937122	O-Phosphate-P	96.3	99.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P333553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937062	Sucralose	47.0	48.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P333619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937475	Sucralose	97.9	106	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P333742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936807	Fluoride	98.8	99.3	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P333743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936478	Fluoride	96.5	95.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P333990

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937083	Organic Carbon	96.1	95.4	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P333991

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935843	Organic Carbon	90.0	89.8	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P333480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937156	2,4-D	73.9	76.8	P/P	40 - 150
1937156	Bentazon	25.0	26.6	F/F	30 - 150
1937156	MCP	50.8	48.6	P/P	40 - 150
1937156	Triclopyr	57.4	50.2	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P333492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937158	2,4-D	61.0	65.5	P/P	40 - 150
1937158	Acetaminophen	100	99.6	P/P	30 - 150
1937158	Bentazon	15.0	18.2	F/F	30 - 150
1937158	Carbamazepine	124	127	P/P	40 - 150
1937158	Diuron	91.0	93.4	P/P	40 - 150
1937158	Fenuron	75.8	124	P/P	40 - 150
1937158	Fluridone	78.8	90.4	P/P	40 - 150
1937158	Imidacloprid	200	197	F/F	40 - 160
1937158	Linuron	97.1	99.5	P/P	40 - 150
1937158	MCP	45.6	43.3	P/P	40 - 150
1937158	Primidone	111	102	P/P	40 - 150
1937158	Triclopyr	41.1	44.7	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P334168

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937156	Acetaminophen	94.0	89.2	P/P	30 - 150
1937156	Carbamazepine	116	110	P/P	40 - 150
1937156	Diuron	83.7	74.9	P/P	40 - 150
1937156	Fenuron	87.7	87.1	P/P	40 - 150
1937156	Linuron	99.6	93.8	P/P	40 - 150
1937156	Primidone	105	101	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P333569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936999	Turbidity	0.238	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937103	Iron	0.865	Spike	P	0 - 20
1937103	Zinc	1.51	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937160	Iron	0.511	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937103	Arsenic	4.65	Spike	P	0 - 20
1937103	Cadmium	6.45	Spike	P	0 - 20
1937103	Chromium	6.21	Spike	P	0 - 20
1937103	Copper	5.11	Spike	P	0 - 20
1937103	Lead	4.62	Spike	P	0 - 20
1937103	Nickel	4.52	Spike	P	0 - 20
1937103	Silver	4.78	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937160	Arsenic	1.98	Spike	P	0 - 20
1937160	Cadmium	0.916	Spike	P	0 - 20
1937160	Chromium	1.77	Spike	P	0 - 20
1937160	Copper	3.87	Spike	P	0 - 20
1937160	Lead	0.735	Spike	P	0 - 20
1937160	Nickel	1.21	Spike	P	0 - 20
1937160	Silver	0.226	Spike	P	0 - 20
1937160	Zinc	1.85	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936945	Chloride	0.227	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936945	Sulfate	0.323	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936843	Ammonia-N	0.808	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937127	Ammonia-N	0.471	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937552	Ammonia-N	0.173	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937006	Kjeldahl Nitrogen	0.892	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937209	Kjeldahl Nitrogen	2.88	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936848	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936843	NO2NO3-N	0.598	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937110	NO2NO3-N	0.388	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334094

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936850	NO2NO3-N	0.284	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937128	Total-P	2.15	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937118	Total-P	1.36	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937112	O-Phosphate-P	2.26	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937116	O-Phosphate-P	0.295	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333508

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937122	O-Phosphate-P	2.13	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P333553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937062	Sucralose	2.83	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P333619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937475	Sucralose	8.23	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P333510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937075	Color (true)	3.44	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P333739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936807	Total Alkalinity	1.68	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P333740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937075	Total Alkalinity	0.0436	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P333868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936898	TDS	2.51	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P333869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937126	TDS	8.57	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P333742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936807	Fluoride	0.472	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P333743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936478	Fluoride	0.464	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P333990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937083	Organic Carbon	0.382	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P333991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935843	Organic Carbon	0.148	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P333480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937156	2,4-D	2.77	Spike	P	0 - 30
1937156	Bentazon	2.17	Spike	P	0 - 30
1937156	MCP	4.43	Spike	P	0 - 30
1937156	Triclopyr	13.3	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P333492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937158	2,4-D	7.18	Spike	P	0 - 30
1937158	Acetaminophen	0.461	Spike	P	0 - 30
1937158	Bentazon	10.2	Spike	P	0 - 30
1937158	Carbamazepine	1.95	Spike	P	0 - 30
1937158	Diuron	1.78	Spike	P	0 - 30
1937158	Fenuron	37.5	Spike	F	0 - 30
1937158	Fluridone	11.1	Spike	P	0 - 30
1937158	Imidacloprid	1.41	Spike	P	0 - 30
1937158	Linuron	2.38	Spike	P	0 - 30
1937158	MCP	4.99	Spike	P	0 - 30
1937158	Primidone	7.11	Spike	P	0 - 30
1937158	Triclopyr	8.34	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P334168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937156	Acetaminophen	5.26	Spike	P	0 - 30
1937156	Carbamazepine	5.31	Spike	P	0 - 30
1937156	Diuron	7.56	Spike	P	0 - 30
1937156	Fenuron	0.554	Spike	P	0 - 30
1937156	Fluridone	15.2	Spike	P	0 - 30
1937156	Imidacloprid	1.58	Spike	P	0 - 30
1937156	Linuron	5.98	Spike	P	0 - 30
1937156	Primidone	3.43	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: 1937155
Field Sample ID: 28030546

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	144	P	30 - 160
EPA 8321B	Diuron-d6	100	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1937155
Field Sample ID: 28030546

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Primidone-d5	122	P	30 - 160
EPA 8321B	Sucralose-d6	51.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	79.5	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	106	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	144	P	30 - 160
USGS O-2060-01	Diuron-d6	100	P	30 - 160
USGS O-2060-01	Primidone-d5	122	P	30 - 160
USGS O-2060-01	Sucralose-d6	51.4	P	40 - 160

Lab Sample ID: 1937156
Field Sample ID: G4SE0047

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	140	P	30 - 160
EPA 8321B	Diuron-d6	93.1	P	30 - 160
EPA 8321B	Primidone-d5	130	P	30 - 160
EPA 8321B	Sucralose-d6	48.7	P	40 - 160
USGS O-2060-01	2,4-D-d3	79.5	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	111	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	140	P	30 - 160
USGS O-2060-01	Diuron-d6	93.1	P	30 - 160
USGS O-2060-01	Primidone-d5	130	P	30 - 160
USGS O-2060-01	Sucralose-d6	48.7	P	40 - 160

Lab Sample ID: 1937157
Field Sample ID: 28030552

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	160	P	30 - 160
EPA 8321B	Diuron-d6	105	P	30 - 160
EPA 8321B	Primidone-d5	151	P	30 - 160
EPA 8321B	Sucralose-d6	51.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	70.2	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	105	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	160	P	30 - 160
USGS O-2060-01	Diuron-d6	105	P	30 - 160
USGS O-2060-01	Primidone-d5	151	P	30 - 160
USGS O-2060-01	Sucralose-d6	51.8	P	40 - 160

Lab Sample ID: 1937158
Field Sample ID: G4SE0036

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	92.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	127	P	30 - 160
EPA 8321B	Diuron-d6	88.6	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	53.1	P	40 - 160
USGS O-2060-01	2,4-D-d3	54.7	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	92.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1937158
Field Sample ID: G4SE0036

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Carbamazepine-d10	127	P	30 - 160
USGS O-2060-01	Diuron-d6	88.6	P	30 - 160
USGS O-2060-01	Primidone-d5	106	P	30 - 160
USGS O-2060-01	Sucralose-d6	53.1	P	40 - 160

Lab Sample ID: 1937159
Field Sample ID: G4SE0036_BLNK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	121	P	30 - 160
EPA 8321B	Carbamazepine-d10	117	P	30 - 160
EPA 8321B	Diuron-d6	108	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	80.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	58.6	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	121	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	117	P	30 - 160
USGS O-2060-01	Diuron-d6	108	P	30 - 160
USGS O-2060-01	Primidone-d5	106	P	30 - 160
USGS O-2060-01	Sucralose-d6	80.4	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A79593
Included Lab Sample IDs: 1937108, 1937109

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	106	107	P/P	90 - 110
Sulfate	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A79608
Included Lab Sample IDs: 1937112, 1937113, 1937116, 1937119, 1937122, 1937124

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.7	P/P	90 - 110
O-Phosphate-P	98.8	100	P/P	90 - 110
O-Phosphate-P	99.1	98.8	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A79613
Included Lab Sample IDs: 1937108, 1937109

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.7	98.0	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A79632

Included Lab Sample IDs: 1937108, 1937109, 1937114, 1937117, 1937120

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79639

Included Lab Sample IDs: 1937115

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79650

Included Lab Sample IDs: 1937161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	107	106	P/P	90 - 110
Cadmium	106	108	P/P	90 - 110
Chromium	103	105	P/P	90 - 110
Copper	105	104	P/P	90 - 110
Lead	102	103	P/P	90 - 110
Nickel	106	104	P/P	90 - 110
Silver	101	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A79652

Included Lab Sample IDs: 1937161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	103	105	P/P	90 - 110
Zinc	96.7	99.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79673

Included Lab Sample IDs: 1937155, 1937156, 1937158, 1937159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	95.2	90.2	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A79678

Included Lab Sample IDs: 1937108, 1937109, 1937114, 1937117, 1937120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	100	P/P	90 - 110
Total Alkalinity	99.5	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79678

Included Lab Sample IDs: 1937108, 1937109, 1937114, 1937117, 1937120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A79678

Included Lab Sample IDs: 1937108, 1937109, 1937114, 1937117, 1937120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.1	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79690

Included Lab Sample IDs: 1937118

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79696

Included Lab Sample IDs: 1937121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79711

Included Lab Sample IDs: 1937110, 1937111, 1937123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79729

Included Lab Sample IDs: 1937115

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79747

Included Lab Sample IDs: 1937110, 1937111, 1937121, 1937123

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79772

Included Lab Sample IDs: 1937118

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79778

Included Lab Sample IDs: 1937115, 1937118

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A79779

Included Lab Sample IDs: 1937110, 1937111, 1937115, 1937118, 1937121, 1937123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.3	96.0	P/P	90 - 110
Organic Carbon	97.4	91.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79780

Included Lab Sample IDs: 1937110, 1937111, 1937123

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A79805

Included Lab Sample IDs: 1937160

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79823

Included Lab Sample IDs: 1937121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	106	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79846

Included Lab Sample IDs: 1937115, 1937118

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	98.5	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A79847

Included Lab Sample IDs: 1937155, 1937156, 1937157, 1937158, 1937159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	100	P/P	50 - 150
2,4-D	92.1	94.7	P/P	50 - 150
2,4-D	99.0	92.1	P/P	50 - 150
Acetaminophen	102	108	P/P	60 - 150
Acetaminophen	106	106	P/P	60 - 150
Acetaminophen	107	106	P/P	60 - 150
Bentazon	101	94.9	P/P	50 - 150
Bentazon	92.9	92.1	P/P	50 - 150
Bentazon	96.8	92.9	P/P	50 - 150
Carbamazepine	108	111	P/P	60 - 150
Carbamazepine	109	109	P/P	60 - 150
Carbamazepine	111	109	P/P	60 - 150
Diuron	104	107	P/P	60 - 150
Diuron	108	112	P/P	60 - 150
Diuron	112	107	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A79847

Included Lab Sample IDs: 1937155, 1937156, 1937157, 1937158, 1937159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	104	106	P/P	60 - 150
Fenuron	105	105	P/P	60 - 150
Fenuron	105	105	P/P	60 - 150
Fluridone	108	109	P/P	60 - 160
Fluridone	108	105	P/P	60 - 160
Fluridone	109	108	P/P	60 - 160
Imidacloprid	100	98.5	P/P	60 - 150
Imidacloprid	93.5	100	P/P	60 - 150
Imidacloprid	96.4	108	P/P	60 - 150
Linuron	105	117	P/P	60 - 150
Linuron	107	110	P/P	60 - 150
Linuron	117	105	P/P	60 - 150
MCPP	102	91.2	P/P	50 - 150
MCPP	107	102	P/P	50 - 150
MCPP	98.4	102	P/P	50 - 150
Primidone	98.1	97.7	P/P	60 - 150
Primidone	98.6	98.1	P/P	60 - 150
Primidone	99.8	97.8	P/P	60 - 150
Triclopyr	102	99.6	P/P	50 - 150
Triclopyr	109	107	P/P	50 - 150
Triclopyr	99.6	101	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A79920

Included Lab Sample IDs: 1937157

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	114	102	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79931

Included Lab Sample IDs: 1937110, 1937111

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.1	98.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79961

Included Lab Sample IDs: 1937121, 1937123

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79972

Included Lab Sample IDs: 1937160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	107	107	P/P	90 - 110
Chromium	104	99.7	P/P	90 - 110
Silver	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80041

Included Lab Sample IDs: 1937160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	101	99.4	P/P	90 - 110
Zinc	108	109	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80061

Included Lab Sample IDs: 1937160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	105	106	P/P	90 - 110
Copper	104	105	P/P	90 - 110
Nickel	105	106	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.238	
EPA 200.7 Rev. 4.4	Iron	108	109 110			0.865
	Iron	102	102 102			0.511
	Zinc	100	106 107			1.51
EPA 200.8 Rev. 5.4	Arsenic	105	99.6 105			4.65
	Arsenic	101	109 111			1.98
	Cadmium	109	103 110			6.45
	Cadmium	109	102 103			0.916
	Chromium	102	99.7 106			6.21
	Chromium	104	85.3 86.8			1.77
	Copper	99.4	96.2 102			5.11
	Copper	97.8	92.6 96.9			3.87
	Lead	102	97.2 102			4.62
	Lead	99.6	104 103			0.735
	Nickel	102	98.4 103			4.52
	Nickel	101	101 102			1.21
	Silver	102	96.7 101			4.78
	Silver	102	93.8 94.0			0.226
	Zinc	102	94.3 96.4			1.85
EPA 300.0 Rev. 2.1	Chloride	101	103 102		0.227	
	Sulfate	101	101 101		0.323	
EPA 350.1 Rev. 2.0	Ammonia-N	104	106 105			0.808
	Ammonia-N	104	103 102			0.471
	Ammonia-N	97.3	106 106			0.173
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	98.5			
	Kjeldahl Nitrogen	93.6	92.7 93.8			0.892
	Kjeldahl Nitrogen	98.0	91.5 88.4			2.88
EPA 353.2 Rev. 2.0	NO2NO3-N	103	103 103			0.0
	NO2NO3-N	103	104 102			0.598

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102			0.388
	NO2NO3-N	102	101	102		0.284
EPA 365.1 Rev. 2.0	Total-P	97.2	95.3	97.7		2.15
	Total-P	97.7	102	100		1.36
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	91.5	93.8		2.26
	O-Phosphate-P	99.2	102	102		0.295
	O-Phosphate-P	97.8	96.3	99.2		2.13
EPA 8321B	Sucralose	92.3	47.0	48.8		2.83
	Sucralose	101	97.9	106		8.23
SM 2120 B	Color (true)					3.44
SM 2320 B-97	Total Alkalinity	102				1.68
	Total Alkalinity	103				0.0436
SM 2540 C-97	TDS					2.51
	TDS					8.57
SM 4500 F-C-97	Fluoride	96.0	98.8	99.3		0.472
	Fluoride	100	96.5	95.8		0.464
SM 5310 B-00	Organic Carbon	95.2	96.1	95.4		0.382
	Organic Carbon	96.2	90.0	89.8		0.148
USGS O-2060-01	2,4-D	64.6	73.9	76.8		2.77
	2,4-D	67.9	61.0	65.5		7.18
	Acetaminophen	102	100	99.6		0.461
	Acetaminophen	132	94.0	89.2		5.26
	Bentazon	31.0	25.0	26.6		2.17
	Bentazon	24.4	15.0	18.2		10.2
	Carbamazepine	66.4	124	127		1.95
	Carbamazepine	148	116	110		5.31
	Diuron	104	91.0	93.4		1.78
	Diuron	73.4	83.7	74.9		7.56
	Fenuron	98.4	75.8	124		37.5
	Fenuron	109	87.7	87.1		0.554
	Fluridone	105	78.8	90.4		11.1
	Fluridone	87.9				15.2
	Imidacloprid	76.9	200	197		1.41
	Imidacloprid	116				1.58
	Linuron	113	97.1	99.5		2.38
	Linuron	109	99.6	93.8		5.98
	MCP	63.8	50.8	48.6		4.43
	MCP	63.7	45.6	43.3		4.99
	Primidone	91.1	111	102		7.11
	Primidone	91.6	105	101		3.43
	Triclopyr	65.2	57.4	50.2		13.3
	Triclopyr	62.0	41.1	44.7		8.34

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1937108, 1937109, 1937114, 1937117, 1937120
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1937160, 1937161
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1937160, 1937161
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1937108, 1937109

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1937108, 1937109
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1937110, 1937111, 1937115, 1937118, 1937121, 1937123
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1937110, 1937111, 1937115, 1937118, 1937121, 1937123
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1937110, 1937111, 1937115, 1937118, 1937121, 1937123
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1937110, 1937111, 1937115, 1937118, 1937121, 1937123
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1937112, 1937113, 1937116, 1937119, 1937122, 1937124
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1937155, 1937156, 1937157, 1937158, 1937159
SM 2120 B / E31780	True Color measured at 450 nm	1937108, 1937109
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1937108, 1937109, 1937114, 1937117, 1937120
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1937108, 1937109
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1937108, 1937109, 1937114, 1937117, 1937120
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1937108, 1937109, 1937114, 1937117, 1937120
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1937110, 1937111, 1937115, 1937118, 1937121, 1937123
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1937155, 1937156, 1937157, 1937158, 1937159
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1937155, 1937156, 1937157, 1937158, 1937159

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	10/17/2017			10/17/2017 15:46	DeAsia Armster	1937108, 1937109, 1937114, 1937117, 1937120
EPA 200.7 Rev. 4.4	10/17/2017	10/17/2017	Elliott D. Healy	10/18/2017	Betina Topolski	1937161
	10/17/2017	10/24/2017	Elliott D. Healy	10/25/2017	Betina Topolski	1937160
EPA 200.8 Rev. 5.4	10/17/2017	10/17/2017	Elliott D. Healy	10/18/2017	Nadine Brooks	1937161
	10/17/2017	10/24/2017	Elliott D. Healy	11/02/2017	Nadine Brooks	1937160
	10/17/2017	10/24/2017	Elliott D. Healy	11/03/2017	Nadine Brooks	1937160
	10/17/2017	10/24/2017	Elliott D. Healy	11/06/2017	Nadine Brooks	1937160
EPA 300.0 Rev. 2.1	10/17/2017			10/17/2017	Julia Storbeck	1937108, 1937109
EPA 350.1 Rev. 2.0	10/17/2017			10/18/2017	Sofia Elnemr	1937115
	10/17/2017			10/23/2017	Sofia Elnemr	1937110, 1937111, 1937121, 1937123
	10/17/2017			10/24/2017	Sofia Elnemr	1937118
EPA 351.2 Rev. 2.0	10/17/2017	10/25/2017	Adrian Shelby	10/26/2017	Tanya Welborn	1937115, 1937118
	10/17/2017	10/30/2017	Adrian Shelby	10/30/2017	Joseph Suarez	1937110, 1937111
	10/17/2017	10/30/2017	Adrian Shelby	10/31/2017	Joseph Suarez	1937121, 1937123
EPA 353.2 Rev. 2.0	10/17/2017			10/20/2017	Beverly Y. Sanders	1937118
	10/17/2017			10/23/2017	Beverly Y. Sanders	1937115
	10/17/2017			10/24/2017	Beverly Y. Sanders	1937110, 1937111, 1937123
	10/17/2017			10/26/2017	Beverly Y. Sanders	1937121
EPA 365.1 Rev. 2.0	10/17/2017	10/18/2017	Sima Feizi	10/20/2017	Lipi Saha	1937110, 1937111, 1937121, 1937123
	10/17/2017	10/23/2017	Sima Feizi	10/24/2017	Lipi Saha	1937115, 1937118
EPA 365.1 Rev. 2.0 dissolved	10/17/2017			10/17/2017 13:55	Megan Treadwell	1937112
	10/17/2017			10/17/2017 13:59	Megan Treadwell	1937116
	10/17/2017			10/17/2017 14:08	Megan Treadwell	1937122
	10/17/2017			10/17/2017 14:13	Megan Treadwell	1937124
	10/17/2017			10/17/2017 14:19	Megan Treadwell	1937113
	10/17/2017			10/17/2017 14:20	Megan Treadwell	1937119
EPA 8321B	10/17/2017	10/18/2017	Juyoung Kim	10/19/2017	Juyoung Kim	1937155, 1937156, 1937158, 1937159
	10/17/2017	10/24/2017	Juyoung Kim	10/27/2017	Juyoung Kim	1937157
SM 2120 B	10/17/2017			10/17/2017 14:48	Tanya Welborn	1937108
	10/17/2017			10/17/2017 14:49	Tanya Welborn	1937109
SM 2320 B-97	10/17/2017			10/20/2017	Dale L. Simmons	1937108, 1937109, 1937114, 1937117, 1937120
SM 2540 C-97	10/17/2017			10/18/2017	Yijie Li	1937108, 1937109
SM 2540 D-97	10/17/2017			10/18/2017	Yijie Li	1937108, 1937109, 1937114, 1937117, 1937120
SM 4500 F-C-97	10/17/2017			10/20/2017	Dale L. Simmons	1937108, 1937109, 1937114, 1937117, 1937120
SM 5310 B-00	10/17/2017			10/23/2017	Ping Hua	1937110, 1937111, 1937121, 1937123
	10/17/2017			10/24/2017	Ping Hua	1937115, 1937118
USGS O-2060-01	10/17/2017	10/18/2017	Hoor Shaik	10/24/2017	Julie Michelle Frank	1937155, 1937156, 1937157

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
USGS O-2060-01	10/17/2017	10/19/2017	Hoor Shaik	10/24/2017	Julie Michelle Frank	1937158, 1937159