

Chemical Analysis Report

WAS-SECT-2018-01-18-01

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

Event Description: **Black, Freeman, Ochlockonee, Quincy, Juniper**

Request ID: **RQ-2018-01-15-28**

Customer: **WAS-SECT**

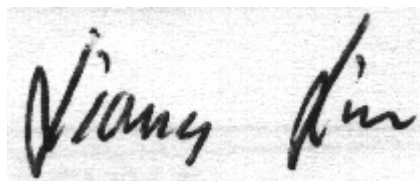
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Curtis Musson

For additional information please contact
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 12-FEB-2018 16:21

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

NON-CONFORMANCE REPORT INCLUDED

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: OCHLOCKONEE RIVER UPSTREAM OF US 90 Collection Date/Time: 01/18/2018 14:05

Field ID: G1WA0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960459	EPA 180.1 Rev. 2.0	Turbidity	9.9	A	NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P338535	
		Sulfate	8.0		mg SO4/L	P338536	
	SM 2120 B	Color (true)	81	A	PCU	P338513	
	SM 2320 B-97	Total Alkalinity	23		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	71		mg/L	P338820	
	SM 2540 D-97	TSS	6	I	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P339354	
1960463	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P338945	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P338589	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.49		mg N/L	P338573	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P338580	
	SM 5310 B-00	Organic Carbon	6.9		mg C/L	P338870	
1960467	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.064		mg P/L	P338507	

Ref. Method and Comment:

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

Sample Location: OCHLOCKONEE RIVER UPSTREAM OF US 90 Collection Date/Time: 01/18/2018 14:05

Field ID: G1WA0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960489	EPA 200.7 Rev. 4.4	Calcium	8.48		mg/L	P338614	
		Iron	1.29E+03		ug/L	P338614	
		Magnesium	3.92		mg/L	P338614	
		Potassium	3.3		mg/L	P338614	
		Sodium	8.1		mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.67		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.89	I	ug/L	P338614	
		Copper	0.55	I	ug/L	P338614	
		Lead	0.44		ug/L	P338614	
		Nickel	0.39	IV	ug/L	P339084	
		Silver	0.010	U	ug/L	P338614	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: V: Nickel was detected in the method blank at a level of 0.30 ug/L.

Sample Location: OCHLOCKONEE RIVER UPSTREAM OF TOWER RD. Collection Date/Time: 01/18/2018 13:20

Field ID: G1WA0069

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960490	EPA 200.7 Rev. 4.4	Calcium	8.74		mg/L	P338614	
		Iron	1.22E+03		ug/L	P338614	
		Magnesium	4.30		mg/L	P338614	

Field ID: G1WA0069

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960490	EPA 200.7 Rev. 4.4	Potassium	3.1		mg/L	P338614	
		Sodium	9.2		mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.65		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.84	I	ug/L	P338614	
		Copper	0.52	I	ug/L	P338614	
		Lead	0.43		ug/L	P338614	
		Nickel	0.66	IV	ug/L	P339084	
		Silver	0.010	U	ug/L	P338614	

Ref. Method and Comment:
EPA 200.8 Rev. 5.4: V: Nickel was detected in the method blank at a level of 0.30 ug/L.

Sample Location: OCHLOCKONEE RIVER UPSTREAM OF TOWER RD.

Collection Date/Time: 01/18/2018 13:20

Field ID: G1WA0069

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960472	EPA 180.1 Rev. 2.0	Turbidity	9.0		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P338535	
	SM 2120 B	Color (true)	72		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	23		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	74		mg/L	P338821	
	SM 2540 D-97	TSS	4	I	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P339354	

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

Sample Location: OCHLOCKONEE RIVER DOWNSTREAM OF TOWER RD.

Collection Date/Time: 01/18/2018 13:08

Field ID: G1WA0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960491	EPA 200.7 Rev. 4.4	Calcium	8.55		mg/L	P338614	
		Iron	1.19E+03		ug/L	P338614	
		Magnesium	4.16		mg/L	P338614	
		Potassium	3.1		mg/L	P338614	
		Sodium	8.9		mg/L	P338614	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P338614	
		Arsenic	0.66		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.85	I	ug/L	P338614	
		Copper	0.52	I	ug/L	P338614	
		Lead	0.43		ug/L	P338614	
		Nickel	0.40	IV	ug/L	P339084	
		Silver	0.010	U	ug/L	P338614	

Ref. Method and Comment:
EPA 200.8 Rev. 5.4: V: Nickel was detected in the method blank at a level of 0.30 ug/L.

Sample Location: OCHLOCKONEE RIVER DOWNSTREAM OF TOWER RD.

Collection Date/Time: 01/18/2018 13:08

Field ID: G1WA0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960473	EPA 180.1 Rev. 2.0	Turbidity	9.3		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P338535	
	SM 2120 B	Color (true)	77		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	23		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	71		mg/L	P338821	
	SM 2540 D-97	TSS	5	I	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P339354	

Ref. Method and Comment:

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

Sample Location: OCHLOCKONEE RIVER UPSTREAM OF OLD BRAINBRIDGE

Collection Date/Time: 01/18/2018 12:32

Field ID: G1WA0071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960492	EPA 200.7 Rev. 4.4	Calcium	8.96		mg/L	P338614	
		Iron	1.26E+03		ug/L	P338614	
		Magnesium	4.33		mg/L	P338614	
		Potassium	3.3		mg/L	P338614	
		Sodium	9.2		mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.67		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.93	I	ug/L	P338614	
		Copper	0.60	I	ug/L	P338614	
		Lead	0.51		ug/L	P338614	
		Nickel	0.41	IV	ug/L	P339084	
		Silver	0.010	U	ug/L	P338614	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: V: Nickel was detected in the method blank at a level of 0.30 ug/L.

Sample Location: OCHLOCKONEE RIVER UPSTREAM OF OLD BRAINBRIDGE

Collection Date/Time: 01/18/2018 12:32

Field ID: G1WA0071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960474	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P338684	
	SM 2120 B	Color (true)	78		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	76	A	mg/L	P338821	
	SM 2540 D-97	TSS	5	IA	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P339354	

Ref. Method and Comment:

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

Sample Location: QUINCY CREEK UPSTREAM OF SR 268

Collection Date/Time: 01/18/2018 10:00

Field ID: G1WA0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960460	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	6.9	A	mg Cl/L	P338535	
		Sulfate	0.84	A	mg SO4/L	P338536	
		Color (true)	28		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	18		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	32		mg/L	P338820	
	SM 2540 D-97	TSS	2	I	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.071	I	mg F/L	P339354	
1960464	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P338945	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P338589	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.41		mg N/L	P338573	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P338580	
	SM 5310 B-00	Organic Carbon	2.5		mg C/L	P338870	
1960468	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P338507	

Ref. Method and Comment:

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

Sample Location: QUINCY CREEK UPSTREAM OF SR 268

Collection Date/Time: 01/18/2018 10:00

Field ID: G1WA0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960493	EPA 200.7 Rev. 4.4	Calcium	6.77		mg/L	P338614	
		Iron	710		ug/L	P338614	
		Magnesium	2.00		mg/L	P338614	
		Potassium	0.87	I	mg/L	P338614	
		Sodium	4.0		mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.36		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.47	I	ug/L	P338614	
		Copper	0.20	U	ug/L	P338614	
		Lead	0.13	I	ug/L	P338614	
		Nickel	0.20	U	ug/L	P338614	
		Silver	0.010	U	ug/L	P338614	

Sample Location: QUINCY CREEK UPSTREAM OF SR 268

Collection Date/Time: 01/18/2018 10:00

Field ID: G1WA0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960486	EPA 8321B	Diuron	0.0020	U	ug/L	P338463	
		Fenuron	0.0080	U	ug/L	P338463	
		Imidacloprid	0.0023	I	ug/L	P338463	
		Linuron	0.0040	U	ug/L	P338463	
		Sucralose**	0.076		ug/L	P338431	
		Acetaminophen**	0.0080	U	ug/L	P338463	
		Carbamazepine**	4.0E-04	U	ug/L	P338463	

Field ID: G1WA0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960486	EPA 8321B	Primidone**	0.0040	U	ug/L	P338463	
		Fluridone**	4.0E-04	U	ug/L	P338463	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338463	
		Bentazon	8.0E-04	U	ug/L	P338463	
		MCP	0.0020	U	ug/L	P338463	
		Triclopyr**	0.0040	U	ug/L	P338463	

Sample Location: QUINCY CREEK UPSTREAM OF SR 65

Collection Date/Time: 01/18/2018 10:55

Field ID: G1WA0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960461	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	6.5		mg Cl/L	P338535	
		Sulfate	0.55		mg SO4/L	P338536	
	SM 2120 B	Color (true)	34		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	36		mg/L	P338820	
	SM 2540 D-97	TSS	2	U	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.067	I	mg F/L	P339354	
1960465	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P338851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P338589	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P338573	
	EPA 365.1 Rev. 2.0	Total-P	0.045		mg P/L	P338580	
	SM 5310 B-00	Organic Carbon	3.1		mg C/L	P338870	
1960469	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P338507	

Ref. Method and Comment:

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

Sample Location: QUINCY CREEK UPSTREAM OF SR 65

Collection Date/Time: 01/18/2018 10:55

Field ID: G1WA0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960494	EPA 200.7 Rev. 4.4	Calcium	5.68		mg/L	P338614	
		Iron	630		ug/L	P338614	
		Magnesium	2.43		mg/L	P338614	
		Potassium	0.92	I	mg/L	P338614	
		Sodium	3.7		mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.35		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.59	I	ug/L	P338614	
		Copper	0.20	U	ug/L	P338614	
		Lead	0.14	I	ug/L	P338614	
		Nickel	0.20	U	ug/L	P339084	
		Silver	0.010	U	ug/L	P338614	

Sample Location: QUINCY CREEK UPSTREAM OF SR 65

Collection Date/Time: 01/18/2018 10:55

Field ID: G1WA0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960487	EPA 8321B	Diuron	0.0020	U	ug/L	P338463	
		Fenuron	0.0080	U	ug/L	P338463	
		Imidacloprid	0.0040	I	ug/L	P338463	
		Linuron	0.0040	U	ug/L	P338463	
		Sucralose**	0.090		ug/L	P338457	
		Acetaminophen**	0.0080	U	ug/L	P338463	
		Carbamazepine**	4.0E-04	U	ug/L	P338463	
		Primidone**	0.0040	U	ug/L	P338463	
		Fluridone**	4.0E-04	U	ug/L	P338463	
		2,4-D	0.0020	U	ug/L	P338463	
USGS O-2060-01		Bentazon	8.0E-04	U	ug/L	P338463	
		MCP	0.0020	U	ug/L	P338463	
		Triclopyr**	0.0040	U	ug/L	P338463	

Sample Location: QUINCY CREEK 100 METERS UPSTREAM OF RALPH STRONG RD.

Collection Date/Time: 01/18/2018 11:20

Field ID: G1WA0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960462	EPA 180.1 Rev. 2.0	Turbidity	5.5		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	6.6		mg Cl/L	P338535	
		Sulfate	0.73		mg SO4/L	P338536	
	SM 2120 B	Color (true)	38		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	20		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	30		mg/L	P338821	
	SM 2540 D-97	TSS	5	I	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.069	I	mg F/L	P339354	
1960466	EPA 350.1 Rev. 2.0	Ammonia-N	0.041		mg N/L	P338851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P338589	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P338574	
	EPA 365.1 Rev. 2.0	Total-P	0.058		mg P/L	P338876	
	SM 5310 B-00	Organic Carbon	3.0		mg C/L	P338870	
1960470	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P338507	

Ref. Method and Comment:

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

Sample Location: QUINCY CREEK 100 METERS UPSTREAM OF RALPH STRONG RD.

Collection Date/Time: 01/18/2018 11:20

Field ID: G1WA0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960495	EPA 200.7 Rev. 4.4	Calcium	6.20		mg/L	P338614	
		Iron	960		ug/L	P338614	
		Magnesium	2.34		mg/L	P338614	
		Potassium	0.93	I	mg/L	P338614	

Field ID: G1WA0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960495	EPA 200.7 Rev. 4.4	Sodium	3.8		mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.39		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	1.9		ug/L	P338614	
		Copper	0.23	I	ug/L	P338614	
		Lead	0.26		ug/L	P338614	
		Nickel	0.26	IV	ug/L	P339084	
		Silver	0.010	U	ug/L	P338614	

Ref. Method and Comment:
 EPA 200.8 Rev. 5.4: V: Nickel was detected in the method blank at a level of 0.30 ug/L.

Sample Location: QUINCY CREEK 100 METERS UPSTREAM OF RALPH STRONG RD. **Collection Date/Time: 01/18/2018 11:20**

Field ID: G1WA0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960488	EPA 8321B	Diuron	0.0020	U	ug/L	P338463	
		Fenuron	0.0080	U	ug/L	P338463	
		Imidacloprid	0.0037	I	ug/L	P338463	
		Linuron	0.0040	U	ug/L	P338463	
		Sucralose**	0.10		ug/L	P338457	
		Acetaminophen**	0.0080	U	ug/L	P338463	
		Carbamazepine**	4.0E-04	U	ug/L	P338463	
		Primidone**	0.0040	U	ug/L	P338463	
		Fluridone**	4.0E-04	U	ug/L	P338463	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338463	
		Bentazon	8.0E-04	U	ug/L	P338463	
		MCP	0.0020	U	ug/L	P338463	
		Triclopyr**	0.0040	U	ug/L	P338463	

Sample Location: BLACK CREEK UPSTREAM OF BLOXHAM CUTOFF **Collection Date/Time: 01/18/2018 08:05**

Field ID: G1WA0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960518	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	4.0		mg Cl/L	P338684	
		Sulfate	0.28	I	mg SO4/L	P338686	
	SM 2120 B	Color (true)	370		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	1.0	I	mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	68		mg/L	P338821	
	SM 2540 D-97	TSS	2	U	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P339354	
1960521	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P338851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P338589	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P338574	

Field ID: G1WA0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960521	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P338876	
	SM 5310 B-00	Organic Carbon	33		mg C/L	P338870	
1960524	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P338507	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 01/24/2018.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The result was confirmed on 01/31/2018.

**Sample Location: FREEMAN CREEK UPSTREAM OF SR 267
(BLOXHAM CUTOFF)**

Collection Date/Time: 01/18/2018 08:40

Field ID: G1WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960519	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P338684	
		Sulfate	0.48	I	mg SO4/L	P338686	
	SM 2120 B	Color (true)	81		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	34		mg/L	P338821	
	SM 2540 D-97	TSS	2	U	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P339354	
1960522	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P338851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P338589	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P338574	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P338876	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P338870	
1960525	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P338507	

Ref. Method and Comment:

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

**Sample Location: FREEMAN CREEK UPSTREAM OF SR 267
(BLOXHAM CUTOFF)**

Collection Date/Time: 01/18/2018 08:40

Field ID: G1WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960538	EPA 200.7 Rev. 4.4	Calcium	1.60		mg/L	P338614	
		Iron	390		ug/L	P338614	
		Magnesium	0.33		mg/L	P338614	
		Potassium	0.30	U	mg/L	P338614	
		Sodium	1.7	I	mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.16	I	ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.61	I	ug/L	P338614	
		Copper	0.20	U	ug/L	P338614	
		Lead	0.14	I	ug/L	P338614	
		Nickel	0.29	IV	ug/L	P339084	

Field ID: G1WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960538	EPA 200.8 Rev. 5.4	Silver	0.010	U	ug/L	P338614	

Ref. Method and Comment:
 EPA 200.8 Rev. 5.4: V: Nickel was detected in the method blank at a level of 0.30 ug/L.

Sample Location: QUINCY CREEK UPSTREAM OF SR 267

Collection Date/Time: 01/18/2018 10:30

Field ID: G1WA0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960520	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P338510	
	EPA 300.0 Rev. 2.1	Chloride	6.1		mg Cl/L	P338684	
		Sulfate	0.50	I	mg SO4/L	P338686	
	SM 2120 B	Color (true)	35		PCU	P338513	
	SM 2320 B-97	Total Alkalinity	14		mg CaCO3/L	P339325	
	SM 2540 C-97	TDS	24	I	mg/L	P338821	
	SM 2540 D-97	TSS	2	U	mg/L	P338610	
	SM 4500 F-C-97	Fluoride	0.059	I	mg F/L	P339354	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P338851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P338589	
1960523	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P338574	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P338876	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P338870	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.021		mg P/L	P338507	
	dissolved						

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

Sample Location: QUINCY CREEK UPSTREAM OF SR 267

Collection Date/Time: 01/18/2018 10:30

Field ID: G1WA0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960539	EPA 200.7 Rev. 4.4	Calcium	5.10		mg/L	P338614	
		Iron	550		ug/L	P338614	
		Magnesium	1.79		mg/L	P338614	
		Potassium	0.93	I	mg/L	P338614	
		Sodium	3.7		mg/L	P338614	
		Zinc	5.0	U	ug/L	P338614	
	EPA 200.8 Rev. 5.4	Arsenic	0.34		ug/L	P338614	
		Cadmium	0.020	U	ug/L	P338614	
		Chromium	0.49	I	ug/L	P338614	
		Copper	0.21	I	ug/L	P338614	
		Lead	0.12	I	ug/L	P338614	
		Nickel	0.20	U	ug/L	P339084	
		Silver	0.010	U	ug/L	P338614	

Sample Location: QUINCY CREEK UPSTREAM OF SR 267

Collection Date/Time: 01/18/2018 10:30

Field ID: G1WA0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Field ID: G1WA0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1960537	EPA 8321B	Diuron	0.0020	U	ug/L	P338463	
		Fenuron	0.0080	U	ug/L	P338463	
		Imidacloprid	0.0046	I	ug/L	P338463	
		Linuron	0.0040	U	ug/L	P338463	
		Sucralose**	0.090		ug/L	P338457	
		Acetaminophen**	0.0080	U	ug/L	P338463	
		Carbamazepine**	4.0E-04	U	ug/L	P338463	
		Primidone**	0.0040	U	ug/L	P338463	
		Fluridone**	4.0E-04	U	ug/L	P338463	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338463	
		Bentazon	8.0E-04	U	ug/L	P338463	
		MCP	0.0020	U	ug/L	P338463	
		Triclopyr**	0.0040	U	ug/L	P338463	

Non-Conformance Report

NCR ID: 6877

Event(s)

WAS-SECT-2018-01-18-01

Job(s)

TLH-2018-01-18-99

Sample(s)

1960536

Test(s)

NCR Type: CUSTODY

NCR Category: Lost sample.

Observation: Sample lost in laboratory.

Analyses were not performed on sample due to it being misplaced after receipt.

Resolution: Curtis Musson was contacted, email attached to scanned files. Sample cancelled.

Authorized by/Date: Joshua Ayres 1/24/2018

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
 Please address questions to:

Chemistry Colin Wright (850) 245-8085
 Biology Cheryl Swanson (850) 245-8177

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P338510

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P338614

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338614

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	0.30	I	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339084

Component	Result	Code	Units
Nickel	0.30	I	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338535

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338536

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338684

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338686

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338851

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338945

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P338589

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338573

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338574

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338580

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338876

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P338507

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

Reference Method: EPA 8321B
Batch ID: P338431

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P338457

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P338463

Component	Result	Code	Units
Acetaminophen	0.0080	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P338463

Component	Result	Code	Units
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P338513

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P339325

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

Reference Method: SM 2540 C-97
Batch ID: P338820

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P338821

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P338610

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P339354

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P338870

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

Reference Method: USGS O-2060-01
Batch ID: P338463

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P338463

Component	Result	Code	Units
Bentazon	8.0E-04	U	ug/L
MCP	0.0020	U	ug/L
Tricopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P338614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	112		P	85 - 115
Iron	108		P	85 - 115
Magnesium	114		P	85 - 115
Potassium	110		P	85 - 115
Sodium	113		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	105		P	85 - 115
Copper	99.9		P	85 - 115
Lead	101		P	85 - 115
Nickel	102		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339084

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338535

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338536

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	94.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338684

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338686

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338851

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338945

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P338589

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338573

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338574

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	95.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338876

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P338507

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.1		P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P338431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	102		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P338457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	97.4		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P338463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	97.1		P	30 - 150
Carbamazepine	102		P	40 - 150
Diuron	89.8		P	40 - 150
Fenuron	122		P	40 - 150
Fluridone	113		P	40 - 150
Imidacloprid	112		P	40 - 160
Linuron	99.2		P	40 - 150
Primidone	115		P	40 - 150

Reference Method: SM 2320 B-97
 Batch ID: P339325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 108

Reference Method: SM 4500 F-C-97
 Batch ID: P339354

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

Reference Method: SM 5310 B-00
 Batch ID: P338870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.9		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P338463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.4		P	40 - 150
Bentazon	80.1		P	30 - 150
MCP	81.4		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P338463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Triclopyr	72.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P338614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960538	Calcium	110	109	P/P	80 - 120
1960538	Iron	108	108	P/P	80 - 120
1960538	Magnesium	114	113	P/P	80 - 120
1960538	Potassium	110	110	P/P	80 - 120
1960538	Sodium	111	112	P/P	80 - 120
1960538	Zinc	103	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P338614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960538	Arsenic	104	105	P/P	80 - 120
1960538	Cadmium	104	104	P/P	80 - 120
1960538	Chromium	105	105	P/P	80 - 120
1960538	Copper	103	103	P/P	80 - 120
1960538	Lead	102	102	P/P	80 - 120
1960538	Nickel	103	103	P/P	80 - 120
1960538	Silver	101	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P339084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1958726	Nickel	96.5		P	80 - 120
1960539	Nickel	101	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P338535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960154	Chloride	95.8		P	90 - 110
1960460	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P338536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960154	Sulfate	91.7		P	90 - 110
1960460	Sulfate	96.7		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338684

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960519	Chloride	104		P	90 - 110
1960552	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960519	Sulfate	101		P	90 - 110
1960552	Sulfate	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960465	Ammonia-N	96.0	96.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338945

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960463	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P338589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960463	Kjeldahl Nitrogen	97.4	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960158	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960466	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960420	Total-P	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960556	Total-P	100	97.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P338507

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960467	O-Phosphate-P	95.9	98.3	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P338431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1959537	Sucralose	87.4	97.6	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P338457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960487	Sucralose	97.9	93.1	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P338463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960453	Acetaminophen	99.9	96.7	P/P	30 - 150
1960453	Carbamazepine	107	106	P/P	40 - 150
1960453	Diuron	94.8	95.5	P/P	40 - 150
1960453	Fenuron	113	109	P/P	40 - 150
1960453	Fluridone	106	110	P/P	40 - 150
1960453	Imidacloprid	120	118	P/P	40 - 160
1960453	Linuron	99.9	99.1	P/P	40 - 150
1960453	Primidone	114	112	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P339354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960474	Fluoride	98.0	98.6	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P338870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960418	Organic Carbon	93.4	94.1	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P338463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960453	2,4-D	133	138	P/P	40 - 150
1960453	Bentazon	95.9	97.0	P/P	30 - 150
1960453	MCP	111	119	P/P	40 - 150
1960453	Triclopyr	118	126	P/P	40 - 150

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P338510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960459	Turbidity	0.302	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P338614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960538	Calcium	0.394	Spike	P	0 - 20
1960538	Iron	0.472	Spike	P	0 - 20
1960538	Magnesium	0.635	Spike	P	0 - 20
1960538	Potassium	0.106	Spike	P	0 - 20
1960538	Sodium	0.993	Spike	P	0 - 20
1960538	Zinc	1.73	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960538	Arsenic	0.115	Spike	P	0 - 20
1960538	Cadmium	0.787	Spike	P	0 - 20
1960538	Chromium	0.652	Spike	P	0 - 20
1960538	Copper	0.135	Spike	P	0 - 20
1960538	Lead	0.172	Spike	P	0 - 20
1960538	Nickel	0.401	Spike	P	0 - 20
1960538	Silver	0.652	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960539	Nickel	0.107	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960460	Chloride	0.149	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960460	Sulfate	0.486	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338684

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960552	Chloride	0.239	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960552	Sulfate	0.516	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960465	Ammonia-N	0.480	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P338945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960463	Ammonia-N	0.370	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P338589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960463	Kjeldahl Nitrogen	0.787	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960158	NO2NO3-N	0.939	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960466	NO2NO3-N	0.529	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960420	Total-P	1.95	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P338876

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960556	Total-P	2.37	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P338507

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960467	O-Phosphate-P	1.49	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P338431

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1959537	Sucralose	11.0	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P338457

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960487	Sucralose	4.82	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P338463

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960453	Acetaminophen	3.31	Spike	P	0 - 30
1960453	Carbamazepine	0.659	Spike	P	0 - 30
1960453	Diuron	0.799	Spike	P	0 - 30
1960453	Fenuron	3.70	Spike	P	0 - 30
1960453	Fluridone	3.90	Spike	P	0 - 30
1960453	Imidacloprid	1.68	Spike	P	0 - 30
1960453	Linuron	0.804	Spike	P	0 - 30
1960453	Primidone	2.39	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P338513

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960459	Color (true)	4.46	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P339325

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960644	Total Alkalinity	0.879	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P338820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960249	TDS	2.70	Sample	P	0 - 10

Reference Method: SM 2540 C-97
 Batch ID: P338821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960474	TDS	2.63	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P339354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960474	Fluoride	0.477	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P338870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960418	Organic Carbon	0.519	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P338463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1960453	2,4-D	3.61	Spike	P	0 - 30
1960453	Bentazon	1.19	Spike	P	0 - 30
1960453	MCPP	7.48	Spike	P	0 - 30
1960453	Triclopyr	5.98	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: 1960486
 Field Sample ID: G1WA0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	97.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	114	P	30 - 160
EPA 8321B	Carbamazepine-d10	114	P	30 - 160
EPA 8321B	Diuron-d6	97.8	P	30 - 160
EPA 8321B	Diuron-d6	97.8	P	30 - 160
EPA 8321B	Primidone-d5	127	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1960486
Field Sample ID: G1WA0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Primidone-d5	127	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	40 - 160
EPA 8321B	Sucralose-d6	101	P	40 - 160
USGS O-2060-01	2,4-D-d3	81.1	P	30 - 160

Lab Sample ID: 1960487
Field Sample ID: G1WA0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	96.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	91.1	P	30 - 160
EPA 8321B	Diuron-d6	91.1	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	92.4	P	40 - 160
EPA 8321B	Sucralose-d6	92.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	85.2	P	30 - 160

Lab Sample ID: 1960488
Field Sample ID: G1WA0018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	88.4	P	30 - 160
EPA 8321B	Diuron-d6	88.4	P	30 - 160
EPA 8321B	Primidone-d5	115	P	30 - 160
EPA 8321B	Primidone-d5	115	P	30 - 160
EPA 8321B	Sucralose-d6	94.1	P	40 - 160
EPA 8321B	Sucralose-d6	94.1	P	40 - 160
USGS O-2060-01	2,4-D-d3	77.2	P	30 - 160

Lab Sample ID: 1960537
Field Sample ID: G1WA0050

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	112	P	30 - 160
EPA 8321B	Diuron-d6	98.8	P	30 - 160
EPA 8321B	Diuron-d6	98.8	P	30 - 160
EPA 8321B	Primidone-d5	128	P	30 - 160
EPA 8321B	Primidone-d5	128	P	30 - 160
EPA 8321B	Sucralose-d6	96.2	P	40 - 160
EPA 8321B	Sucralose-d6	96.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	80.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A81524

Included Lab Sample IDs: 1960459, 1960460, 1960461, 1960462, 1960472, 1960473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	104	P/P	90 - 110
Chloride	104	106	P/P	90 - 110
Chloride	106	104	P/P	90 - 110
Sulfate	104	99.8	P/P	90 - 110
Sulfate	105	100	P/P	90 - 110
Sulfate	99.8	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A81557

Included Lab Sample IDs: 1960467, 1960468, 1960469, 1960470, 1960524, 1960525, 1960526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.7	P/P	90 - 110
O-Phosphate-P	98.7	100	P/P	90 - 110
O-Phosphate-P	99.7	99.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A81558

Included Lab Sample IDs: 1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520

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

Reference Method: SM 2120 B

Run ID: A81559

Included Lab Sample IDs: 1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115
Color (true)	98.9	102	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A81579

Included Lab Sample IDs: 1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	102	P/P	90 - 110
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81589

Included Lab Sample IDs: 1960463

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

Reference Method: EPA 8321B

Run ID: A81591

Included Lab Sample IDs: 1960486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A81591

Included Lab Sample IDs: 1960486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	101	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81601

Included Lab Sample IDs: 1960464, 1960465

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81612

Included Lab Sample IDs: 1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	97.6	P/P	90 - 110
Kjeldahl Nitrogen	97.6	94.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A81616

Included Lab Sample IDs: 1960474, 1960518, 1960519, 1960520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	102	101	P/P	90 - 110
Chloride	98.7	102	P/P	90 - 110
Sulfate	101	100	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	98.4	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A81633

Included Lab Sample IDs: 1960489, 1960490, 1960491, 1960492, 1960493, 1960494, 1960495, 1960538, 1960539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	104	P/P	90 - 110
Calcium	102	102	P/P	90 - 110
Iron	99.7	100	P/P	90 - 110
Iron	100	103	P/P	90 - 110
Magnesium	101	104	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	103	105	P/P	90 - 110
Potassium	104	103	P/P	90 - 110
Sodium	103	104	P/P	90 - 110
Sodium	104	106	P/P	90 - 110
Zinc	101	101	P/P	90 - 110
Zinc	99.7	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81665

Included Lab Sample IDs: 1960465, 1960466, 1960521, 1960522, 1960523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	100	P/P	90 - 110
Ammonia-N	99.8	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A81671

Included Lab Sample IDs: 1960486, 1960487, 1960488, 1960537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	103	101	P/P	60 - 150
Carbamazepine	103	112	P/P	60 - 150
Diuron	105	111	P/P	60 - 150
Fenuron	102	105	P/P	60 - 150
Fluridone	113	122	P/P	60 - 160
Imidacloprid	96.1	107	P/P	60 - 150
Linuron	89.2	104	P/P	60 - 150
Primidone	103	103	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A81671

Included Lab Sample IDs: 1960486, 1960487, 1960488, 1960537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.9	89.8	P/P	50 - 150
Bentazon	104	96.6	P/P	50 - 150
MCPP	95.7	94.8	P/P	50 - 150
Triclopyr	99.5	84.0	P/P	50 - 150

Reference Method: SM 5310 B-00

Run ID: A81672

Included Lab Sample IDs: 1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.4	93.8	P/P	90 - 110
Organic Carbon	93.8	91.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81683

Included Lab Sample IDs: 1960489, 1960490, 1960491, 1960492, 1960493, 1960494, 1960495, 1960538, 1960539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	103	P/P	90 - 110
Arsenic	103	102	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Chromium	104	103	P/P	90 - 110
Chromium	104	104	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Lead	100	99.9	P/P	90 - 110
Lead	101	100	P/P	90 - 110
Nickel	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81683

Included Lab Sample IDs: 1960489, 1960490, 1960491, 1960492, 1960493, 1960494, 1960495, 1960538, 1960539

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81703

Included Lab Sample IDs: 1960466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.9	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81704

Included Lab Sample IDs: 1960463, 1960464

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81706

Included Lab Sample IDs: 1960521, 1960522, 1960523

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

Reference Method: EPA 8321B

Run ID: A81725

Included Lab Sample IDs: 1960487, 1960488, 1960537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	98.8	P/P	60 - 150
Sucralose	115	101	P/P	60 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81833

Included Lab Sample IDs: 1960489, 1960490, 1960491, 1960492, 1960494, 1960495, 1960538, 1960539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	99.8	101	P/P	90 - 110
Nickel	99.9	99.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A81852

Included Lab Sample IDs: 1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A81863

Included Lab Sample IDs: 1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.5	P/P	90 - 110
Fluoride	99.5	99.1	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						0.302	
EPA 200.7 Rev. 4.4	Calcium	112		110	109			0.394
	Iron	108		108	108			0.472
	Magnesium	114		114	113			0.635
	Potassium	110		110	110			0.106
	Sodium	113		111	112			0.993
	Zinc	101		103	101			1.73
EPA 200.8 Rev. 5.4	Arsenic	102		104	105			0.115
	Cadmium	103		104	104			0.787
	Chromium	105		105	105			0.652
	Copper	99.9		103	103			0.135
	Lead	101		102	102			0.172
	Nickel	102		103	103			0.401
	Nickel	100		96.5	101	102		0.107
	Silver	101		101	100			0.652
EPA 300.0 Rev. 2.1	Chloride	99.3		99.9	95.8		0.149	
	Chloride	99.8		101	104		0.239	
	Sulfate	94.9		96.7	91.7		0.486	
	Sulfate	99.7		99.3	101		0.516	
EPA 350.1 Rev. 2.0	Ammonia-N	101		96.0	96.7			0.480
	Ammonia-N	104		101	102			0.370
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		97.4	98.5			0.787
EPA 353.2 Rev. 2.0	NO2NO3-N	105		103	102			0.939
	NO2NO3-N	106		102				0.529
EPA 365.1 Rev. 2.0	Total-P	95.2		100	102			1.95
	Total-P	99.9		100	97.8			2.37
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.1		95.9	98.3			1.49
EPA 8321B	Acetaminophen	97.1		99.9	96.7			3.31
	Carbamazepine	102		107	106			0.659
	Diuron	89.8		94.8	95.5			0.799
	Fenuron	122		113	109			3.70
	Fluridone	113		110	106			3.90
	Imidacloprid	112		120	118			1.68
	Linuron	99.2		99.9	99.1			0.804
	Primidone	115		114	112			2.39
	Sucralose	102		87.4	97.6			11.0
	Sucralose	97.4		97.9	93.1			4.82
SM 2120 B	Color (true)						4.46	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 2320 B-97	Total Alkalinity	101			0.879	
SM 2540 C-97	TDS				2.70	
	TDS				2.63	
SM 4500 F-C-97	Fluoride	96.0	98.0	98.6		0.477
SM 5310 B-00	Organic Carbon	93.9	93.4	94.1		0.519
USGS O-2060-01	2,4-D	79.4	138	133		3.61
	Bentazon	80.1	97.0	95.9		1.19
	MCP	81.4	119	111		7.48
	Triclopyr	72.2	126	118		5.98

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1960489, 1960490, 1960491, 1960492, 1960493, 1960494, 1960495, 1960538, 1960539
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1960489, 1960490, 1960491, 1960492, 1960493, 1960494, 1960495, 1960538, 1960539
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1960459, 1960460, 1960461, 1960462, 1960518, 1960519, 1960520
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1960467, 1960468, 1960469, 1960470, 1960524, 1960525, 1960526
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1960486, 1960487, 1960488, 1960537
EPA 8321B / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1960486, 1960487, 1960488, 1960537
SM 2120 B / E31780	True Color measured at 450 nm	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1960486, 1960487, 1960488, 1960537

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	01/18/2018			01/19/2018 16:30	DeAsia Armster	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
EPA 200.7 Rev. 4.4	01/18/2018	01/23/2018	Elliott D. Healy	01/24/2018	Betina Topolski	1960489, 1960490, 1960491, 1960492, 1960493, 1960494, 1960495, 1960538, 1960539
EPA 200.8 Rev. 5.4	01/18/2018	01/23/2018	Elliott D. Healy	01/26/2018	Nadine Brooks	1960489, 1960490, 1960491, 1960492, 1960493, 1960494, 1960495, 1960538, 1960539
	01/18/2018	01/31/2018	Elliott D. Healy	02/02/2018	Nadine Brooks	1960489, 1960490
	01/18/2018	01/31/2018	Elliott D. Healy	02/03/2018	Nadine Brooks	1960491, 1960492, 1960494, 1960495, 1960538, 1960539
EPA 300.0 Rev. 2.1	01/18/2018			01/19/2018	Julia Storbeck	1960459, 1960460, 1960461, 1960462, 1960472, 1960473
	01/18/2018			01/23/2018	Julia Storbeck	1960518, 1960519, 1960520
EPA 350.1 Rev. 2.0	01/18/2018			01/25/2018	Ping Hua	1960465, 1960466, 1960521, 1960522, 1960523
	01/18/2018			01/26/2018	Ping Hua	1960463, 1960464
EPA 351.2 Rev. 2.0	01/18/2018	01/22/2018	Adrian Shelby	01/23/2018	Joseph Suarez	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
EPA 353.2 Rev. 2.0	01/18/2018			01/22/2018	Lauren Bottorf	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
EPA 365.1 Rev. 2.0	01/18/2018	01/22/2018	Sima Feizi	01/23/2018	Beverly Y. Sanders	1960463, 1960464, 1960465
	01/18/2018	01/26/2018	Sima Feizi	01/29/2018	Lipi Saha	1960466, 1960521, 1960522, 1960523
EPA 365.1 Rev. 2.0 dissolved	01/18/2018			01/19/2018 15:37	Megan Treadwell	1960467
	01/18/2018			01/19/2018 15:53	Megan Treadwell	1960468
	01/18/2018			01/19/2018 15:54	Megan Treadwell	1960469, 1960470
	01/18/2018			01/19/2018 15:55	Megan Treadwell	1960524
	01/18/2018			01/19/2018 15:56	Megan Treadwell	1960525
	01/18/2018			01/19/2018 16:01	Megan Treadwell	1960526
EPA 8321B	01/18/2018	01/19/2018	Juyoung Kim	01/20/2018	Juyoung Kim	1960486
	01/18/2018	01/23/2018	Hoor Shaik	01/24/2018	Julie Michelle Frank	1960486, 1960487, 1960488, 1960537
	01/18/2018	01/25/2018	Juyoung Kim	01/25/2018	Juyoung Kim	1960487, 1960488, 1960537
SM 2120 B	01/18/2018			01/19/2018 16:13	Tanya Welborn	1960459
	01/18/2018			01/19/2018 16:14	Tanya Welborn	1960460
	01/18/2018			01/19/2018 16:15	Tanya Welborn	1960461, 1960462
	01/18/2018			01/19/2018 16:16	Tanya Welborn	1960472
	01/18/2018			01/19/2018 16:17	Tanya Welborn	1960473
	01/18/2018			01/19/2018 16:18	Tanya Welborn	1960474
	01/18/2018			01/19/2018 16:19	Tanya Welborn	1960519
	01/18/2018			01/19/2018 16:20	Tanya Welborn	1960520
	01/18/2018			01/19/2018 16:33	Tanya Welborn	1960518

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	01/18/2018			01/25/2018	Dale L. Simmons	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 2540 C-97	01/18/2018			01/19/2018	DeAsia Armster	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 2540 D-97	01/18/2018			01/19/2018	DeAsia Armster	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 4500 F-C-97	01/18/2018			02/05/2018	Dale L. Simmons	1960459, 1960460, 1960461, 1960462, 1960472, 1960473, 1960474, 1960518, 1960519, 1960520
SM 5310 B-00	01/18/2018			01/25/2018	Megan Treadwell	1960463, 1960464, 1960465, 1960466, 1960521, 1960522, 1960523
USGS O-2060-01	01/18/2018	01/23/2018	Hoor Shaik	01/24/2018	Julie Michelle Frank	1960486, 1960487, 1960488, 1960537