

Chemical Analysis Report

WQ-ASSESS-2017-04-11-01

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

Event Description: **Black, Tanyard, Soapstone, Little, Qunicy, Juniper**

Request ID: **RQ-2017-04-10-19**

Customer: **WQ-ASSESS**

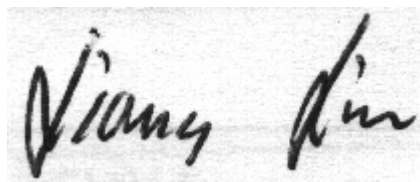
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
Division Of Water Facilities, FL DEP
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
Attn: Curtis Musson

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

Date Certified: 09-MAY-2017 12:17

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: Black Creek upstream of Bloxham Cutoff

Collection Date/Time: 04/11/2017 08:30

Field ID: G1WA0023_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887529	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	3.3		mg Cl/L	P323489	
		Sulfate	0.27	I	mg SO4/L	P323743	
	SM 2120 B	Color (true)	480		PCU	P323258	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P323886	
	SM 2540 C-97	TDS	65		mg/L	P323653	
	SM 2540 D-97	TSS	2	I	mg/L	P323884	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P324679	
1887535	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P323136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P323288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323320	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	43		mg C/L	P323329	
1887541	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P323294	

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: Soapstone Branch 100m upstream of SR 375

Collection Date/Time: 04/11/2017 09:00

Field ID: G1WA0012_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887530	EPA 180.1 Rev. 2.0	Turbidity	1.4	A	NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	4.7		mg Cl/L	P323489	
		Sulfate	0.72		mg SO4/L	P323743	
	SM 2120 B	Color (true)	290		PCU	P323258	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P323886	
	SM 2540 C-97	TDS	60		mg/L	P323653	
	SM 2540 D-97	TSS	2	I	mg/L	P323884	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P324679	
1887536	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P323288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323320	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	33		mg C/L	P323329	
1887542	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323294	

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: Black Creek upstream of SR 375

Collection Date/Time: 04/11/2017 09:30

Field ID: G1WA0047_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887573	EPA 8321B	Sucralose**	0.010	U	ug/L	P323139	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	

Field ID: G1WA0047_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887573	USGS O-2060-01	Fenuron	0.0080	U	ug/L	P323095	MS
		Imidacloprid	0.0040	U	ug/L	P323095	
		Bentazon	0.0040	U	ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.010	U	ug/L	P323095	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	5.8E-04	I	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:

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

Sample Location: Juniper Creek upstream of Juniper Creek Rd. Collection Date/Time: 04/11/2017 10:35

Field ID: G1WA0059_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887574	EPA 8321B	Sucralose**	0.026	I	ug/L	P323139	MS
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	
		Imidacloprid	0.0040	U	ug/L	P323095	
		Bentazon	0.058		ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.010	U	ug/L	P323095	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	8.3E-04	I	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:

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

Sample Location: Quincy Creek upstream of SR 65 Collection Date/Time: 04/11/2017 11:20

Field ID: G1WA0049_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887547	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	5.8		mg Cl/L	P323489	
		Sulfate	0.79		mg SO4/L	P323743	
		Color (true)	52		PCU	P323258	
	SM 2320 B-97	Total Alkalinity	27		mg CaCO3/L	P323886	
	SM 2540 C-97	TDS	60		mg/L	P323654	
	SM 2540 D-97	TSS	6	I	mg/L	P323885	
	SM 4500 F-C-97	Fluoride	0.080	I	mg F/L	P324679	
	1887549	Ammonia-N	0.36		mg N/L	P323136	
		Kjeldahl Nitrogen	0.64		mg N/L	P323282	

Field ID: G1WA0049_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887549	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P323321	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	4.3		mg C/L	P323329	
1887551	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P323294	
1887578	EPA 200.7 Rev. 4.4	Calcium	7.48		mg/L	P323578	
		Iron	1.36E+03		ug/L	P323578	
		Magnesium	2.35		mg/L	P323578	
		Potassium	0.38	I	mg/L	P323578	
		Sodium	3.6		mg/L	P323578	
		Zinc	5.0	U	ug/L	P323578	
	EPA 200.8 Rev. 5.4	Arsenic	0.63		ug/L	P323578	
		Cadmium	0.020	U	ug/L	P323578	
		Chromium	0.45	I	ug/L	P323578	
		Copper	0.27	I	ug/L	P323578	
		Lead	0.19	I	ug/L	P323578	
		Nickel	0.20	U	ug/L	P323578	
		Silver	0.010	U	ug/L	P323578	

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: 04/11/2017 11:20

Field ID: G1WA0049_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887575	EPA 8321B	Sucralose**	0.39		ug/L	P323139	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	MS
		Imidacloprid	0.0040	U	ug/L	P323095	
		Bentazon	0.059		ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.18		ug/L	P323371	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	0.0018		ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:

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

Sample Location: Quincy Creek 100m upstream of Ralph Strong Rd

Collection Date/Time: 04/11/2017 12:55

Field ID: G1WA0018_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887548	EPA 180.1 Rev. 2.0	Turbidity	8.5		NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	5.6		mg Cl/L	P323489	

Field ID: G1WA0018_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887548	EPA 300.0 Rev. 2.1	Sulfate	0.73		mg SO4/L	P323743	
	SM 2120 B	Color (true)	61		PCU	P323258	
	SM 2320 B-97	Total Alkalinity	26		mg CaCO3/L	P323886	
	SM 2540 C-97	TDS	56		mg/L	P323654	
	SM 2540 D-97	TSS	6	I	mg/L	P323885	
	SM 4500 F-C-97	Fluoride	0.085	I	mg F/L	P324679	
1887550	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P323136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P323282	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P323321	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P323329	
1887552	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P323294	
1887579	EPA 200.7 Rev. 4.4	Calcium	7.69		mg/L	P323578	
		Iron	1.55E+03		ug/L	P323578	
		Magnesium	2.41		mg/L	P323578	
		Potassium	0.36	I	mg/L	P323578	
		Sodium	3.5		mg/L	P323578	
		Zinc	5.0	U	ug/L	P323578	
	EPA 200.8 Rev. 5.4	Arsenic	0.68		ug/L	P323578	
		Cadmium	0.020	U	ug/L	P323578	
		Chromium	0.66	I	ug/L	P323578	
		Copper	0.29	I	ug/L	P323578	
		Lead	0.36		ug/L	P323578	
		Nickel	0.20	U	ug/L	P323578	
		Silver	0.010	U	ug/L	P323578	

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 100m upstream of Ralph Strong Rd Collection Date/Time: 04/11/2017 12:55

Field ID: G1WA0018_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887576	EPA 8321B	Sucralose**	0.20		ug/L	P323139	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323095	
		Diuron	0.0040	U	ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	MS
		Imidacloprid	0.0059	I	ug/L	P323095	
		Bentazon	0.060		ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.10		ug/L	P323095	
		MCP	0.0040	U	ug/L	P323095	
		Carbamazepine**	6.3E-04	I	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Field ID: G1WA0018_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.							

Sample Location: Tanyard Branch 100m upstream of Ralph Strong Rd

Collection Date/Time: 04/11/2017 12:40

Field ID: G1WA0005_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887531	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P323489	
		Sulfate	16		mg SO4/L	P323743	
	SM 2120 B	Color (true)	29		PCU	P323258	
	SM 2320 B-97	Total Alkalinity	68		mg CaCO3/L	P323886	
	SM 2540 C-97	TDS	167		mg/L	P323654	
	SM 2540 D-97	TSS	5	I	mg/L	P323885	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P324679	
1887537	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P323136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P323288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.3		mg N/L	P323320	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	4.2		mg C/L	P323329	
1887543	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.15		mg P/L	P323294	

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: Little River 100m upstream of SR 12

Collection Date/Time: 04/11/2017 14:00

Field ID: G1WA0020_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887532	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P323489	
		Sulfate	1.1	A	mg SO4/L	P323743	
	SM 2120 B	Color (true)	95	A	PCU	P323258	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P323886	
	SM 2540 C-97	TDS	73		mg/L	P323654	
	SM 2540 D-97	TSS	9	I	mg/L	P323885	
	SM 4500 F-C-97	Fluoride	0.086	I	mg F/L	P324679	
1887538	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P323136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P323282	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.4		mg N/L	P323321	
	EPA 365.1 Rev. 2.0	Total-P	0.085		mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	5.9		mg C/L	P323329	
1887544	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P323294	

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: Little River 100m upstream of SR 12

Collection Date/Time: 04/11/2017 14:00

Field ID: G1WA0020_04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887577	EPA 8321B	Sucralose**	0.010	U	ug/L	P323139	
	USGS O-2060-01	2,4-D	0.10		ug/L	P323095	
		Diuron	0.065		ug/L	P323095	
		Fenuron	0.0080	U	ug/L	P323095	MS
		Imidacloprid	0.0061	I	ug/L	P323095	
		Bentazon	0.63		ug/L	P323095	
		Linuron	0.0040	U	ug/L	P323095	
		Acetaminophen**	0.010	U	ug/L	P323095	
		MCPD	0.0040	U	ug/L	P323095	
		Carbamazepine**	4.0E-04	U	ug/L	P323095	
		Triclopyr**	0.010	U	ug/L	P323095	
		Primidone**	0.0080	U	ug/L	P323095	
		Fluridone**	4.0E-04	U	ug/L	P323095	

Ref. Method and Comment:

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

Sample Location: Little River 100m upstream of SR 12

Collection Date/Time: 04/11/2017 14:00

Field ID: G1WA0020_04112017D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887533	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	7.6		mg Cl/L	P323489	
		Sulfate	1.1		mg SO4/L	P323743	
	SM 2120 B	Color (true)	94		PCU	P323258	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P323886	
	SM 2540 C-97	TDS	70		mg/L	P323654	
	SM 2540 D-97	TSS	10		mg/L	P323885	
	SM 4500 F-C-97	Fluoride	0.085	I	mg F/L	P324679	
1887539	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P323136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P323282	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.3		mg N/L	P323321	
	EPA 365.1 Rev. 2.0	Total-P	0.086		mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P323329	
1887545	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P323294	

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: Blank DI Water

Collection Date/Time: 04/11/2017 14:10

Field ID: G1WA0020_04112017B

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887534	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P323264	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P323749	
		Sulfate	0.20	U	mg SO4/L	P323743	
	SM 2120 B	Color (true)	2.5	U	PCU	P323258	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P323886	

Field ID: G1WA0020_04112017B

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1887534	SM 2540 C-97	TDS	15	U	mg/L	P323652	
	SM 2540 D-97	TSS	2	U	mg/L	P323883	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P324679	
1887540	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P323282	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323320	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P323305	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P323329	
1887546	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323294	

Ref. Method and Comment:

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

Non-Conformance Report

NCR ID: 6403

Event(s)

WQ-ASSESS-2017-04-11-01

Job(s)

Sample(s)

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Receiving

Observation: Sample collection time for field IDs: G1WA0047_04112017 and G1WA0020_04112017B not recorded on field sheet.

Resolution: Sample collection times taken from sample containers.

Authorized by/Date: John Watts 5/5/2017

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: P323264

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P323578

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: P323578

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 300.0 Rev. 2.1
Batch ID: P323489

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323743

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323749

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323136

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323282

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323320

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323321

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323305

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323294

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

Reference Method: EPA 8321B
Batch ID: P323139

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P323258

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P323886

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

Reference Method: SM 2540 C-97
Batch ID: P323652

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P323653

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P323654

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P323883

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P323884

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P323885

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P324679

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P323329

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

Reference Method: USGS O-2060-01
Batch ID: P323095

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.010	U	ug/L
Bentazon	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Triclopyr	0.010	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P323371

Component	Result	Code	Units
Acetaminophen	0.010	U	ug/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P323578

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	103		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	103		P	85 - 115
Sodium	104		P	85 - 115
Zinc	99.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P323578

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	92.8		P	85 - 115
Cadmium	94.4		P	85 - 115
Chromium	99.8		P	85 - 115
Copper	91.0		P	85 - 115
Lead	96.1		P	85 - 115
Nickel	91.9		P	85 - 115
Silver	96.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P323489

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P323743

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P323749

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P323136

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: P323282

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323320

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323321

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323305

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323294

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

Reference Method: EPA 8321B
Batch ID: P323139

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

Reference Method: SM 2320 B-97
Batch ID: P323886

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

Reference Method: SM 4500 F-C-97
Batch ID: P324679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P323329

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01

Batch ID: P323095

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	85.6		P	40 - 140
Acetaminophen	110		P	40 - 140
Bentazon	106		P	40 - 140
Carbamazepine	99.6		P	40 - 140
Diuron	80.8		P	40 - 140
Fenuron	96.4		P	40 - 140
Fluridone	90.4		P	40 - 140
Imidacloprid	78.0		P	40 - 160
Linuron	67.2		P	40 - 140
MCPP	100		P	40 - 140
Primidone	73.2		P	40 - 140
Triclopyr	84.4		P	40 - 140

Reference Method: USGS O-2060-01

Batch ID: P323371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	70.8		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P323578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887977	Calcium	108		P	80 - 120
1887977	Iron	106		P	80 - 120
1887977	Magnesium	107		P	80 - 120
1887977	Potassium	108		P	80 - 120
1887977	Sodium	104		P	80 - 120
1887977	Zinc	104		P	80 - 120
1888375	Calcium	103		P	80 - 120
1888375	Iron	104	106	P/P	80 - 120
1888375	Magnesium	102		P	80 - 120
1888375	Potassium	103	104	P/P	80 - 120
1888375	Sodium	101	104	P/P	80 - 120
1888375	Zinc	99.3	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P323578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887977	Arsenic	95.1		P	80 - 120
1887977	Cadmium	97.4		P	80 - 120
1887977	Chromium	104		P	80 - 120
1887977	Copper	95.9		P	80 - 120
1887977	Lead	98.4		P	80 - 120
1887977	Nickel	93.8		P	80 - 120
1887977	Silver	98.3		P	80 - 120
1888375	Arsenic	95.2	94.4	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P323578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888375	Cadmium	98.1	96.9	P/P	80 - 120
1888375	Chromium	101	101	P/P	80 - 120
1888375	Copper	89.5	90.2	P/P	80 - 120
1888375	Lead	96.8	96.8	P/P	80 - 120
1888375	Nickel	92.0	92.4	P/P	80 - 120
1888375	Silver	97.7	97.8	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887181	Chloride	103		P	90 - 110
1887286	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887532	Sulfate	98.3		P	90 - 110
1887533	Sulfate	96.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887532	Chloride	99.7		P	90 - 110
1887533	Chloride	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887535	Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887718	Kjeldahl Nitrogen	102	97.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887441	Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887535	NO2NO3-N	91.5	90.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887549	NO2NO3-N	95.5	94.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323305

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887550	Total-P	98.4	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887545	O-Phosphate-P	99.2	98.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P323139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887573	Sucralose	87.3	98.0	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P324679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891234	Fluoride	98.4	99.0	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P323329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887224	Organic Carbon	103	102	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P323095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1887113	2,4-D	124	103	P/P	40 - 140
1887113	Acetaminophen	66.0	78.8	P/P	40 - 140
1887113	Carbamazepine	77.2	73.6	P/P	40 - 140
1887113	Diuron	44.8	56.4	P/P	40 - 140
1887113	Fenuron	31.5	38.7	F/F	40 - 140
1887113	Fluridone	45.8	62.6	P/P	40 - 140
1887113	Imidacloprid	96.4	101	P/P	40 - 160
1887113	Linuron	70.8	74.0	P/P	40 - 140
1887113	MCP	98.0	116	P/P	40 - 140
1887113	Primidone	63.6	59.2	P/P	40 - 140
1887113	Triclopyr	122	113	P/P	40 - 140

Reference Method: USGS O-2060-01
Batch ID: P323371

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

Reference Method: USGS O-2060-01
 Batch ID: P323371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1888144	Acetaminophen	76.8	84.4	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P323264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887530	Turbidity	2.84	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P323578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888375	Calcium	1.60	Spike	P	0 - 20
1888375	Iron	1.91	Spike	P	0 - 20
1888375	Magnesium	2.02	Spike	P	0 - 20
1888375	Potassium	0.919	Spike	P	0 - 20
1888375	Sodium	1.63	Spike	P	0 - 20
1888375	Zinc	3.18	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P323578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888375	Arsenic	0.771	Spike	P	0 - 20
1888375	Cadmium	1.24	Spike	P	0 - 20
1888375	Chromium	0.513	Spike	P	0 - 20
1888375	Copper	0.821	Spike	P	0 - 20
1888375	Lead	0.0618	Spike	P	0 - 20
1888375	Nickel	0.464	Spike	P	0 - 20
1888375	Silver	0.0724	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P323489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887286	Chloride	0.286	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P323743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887532	Sulfate	2.90	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887532	Chloride	0.0659	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887535	Ammonia-N	0.472	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887718	Kjeldahl Nitrogen	3.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887441	Kjeldahl Nitrogen	0.663	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887535	NO2NO3-N	1.65	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887549	NO2NO3-N	0.791	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323305

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887550	Total-P	4.54	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323294

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887545	O-Phosphate-P	0.665	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P323139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887573	Sucralose	11.5	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P323258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887532	Color (true)	4.13	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P323886

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887805	Total Alkalinity	1.58	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P323652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887259	TDS	6.24	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P323653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887320	TDS	3.77	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P323654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887690	TDS	1.01	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P324679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891234	Fluoride	0.487	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P323329

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887224	Organic Carbon	0.537	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
 Batch ID: P323095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1887113	2,4-D	19.0	Spike	P	0 - 30
1887113	Acetaminophen	17.7	Spike	P	0 - 30
1887113	Bentazon	0.944	Spike	P	0 - 30
1887113	Carbamazepine	4.77	Spike	P	0 - 30
1887113	Diuron	22.9	Spike	P	0 - 30
1887113	Fenuron	20.4	Spike	P	0 - 30
1887113	Fluridone	29.4	Spike	P	0 - 30
1887113	Imidacloprid	4.86	Spike	P	0 - 30
1887113	Linuron	4.42	Spike	P	0 - 30
1887113	MCP	16.5	Spike	P	0 - 30
1887113	Primidone	7.17	Spike	P	0 - 30
1887113	Triclopyr	8.16	Spike	P	0 - 30

Reference Method: USGS O-2060-01
 Batch ID: P323371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1888144	Acetaminophen	9.43	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: 1887573
 Field Sample ID: G1WA0047_04112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	98.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	114	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	64.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	61.0	P	40 - 160
USGS O-2060-01	Diuron-d6	44.8	P	40 - 150
USGS O-2060-01	Primidone-d5	85.6	P	40 - 150

Lab Sample ID: 1887574
 Field Sample ID: G1WA0059_04112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	87.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	116	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	67.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	83.0	P	40 - 160
USGS O-2060-01	Diuron-d6	69.8	P	40 - 150
USGS O-2060-01	Primidone-d5	83.2	P	40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1887575

Field Sample ID: G1WA0049_04112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	112	P	40 - 150
USGS O-2060-01	2,4-D-d3	104	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	69.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	100	P	40 - 160
USGS O-2060-01	Diuron-d6	76.8	P	40 - 150
USGS O-2060-01	Primidone-d5	123	P	40 - 150

Lab Sample ID: 1887576

Field Sample ID: G1WA0018_04112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	117	P	40 - 150
USGS O-2060-01	2,4-D-d3	108	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	77.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	88.6	P	40 - 160
USGS O-2060-01	Diuron-d6	64.0	P	40 - 150
USGS O-2060-01	Primidone-d5	103	P	40 - 150

Lab Sample ID: 1887577

Field Sample ID: G1WA0020_04112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	93.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	106	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	71.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	90.8	P	40 - 160
USGS O-2060-01	Diuron-d6	62.8	P	40 - 150
USGS O-2060-01	Primidone-d5	99.8	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75725

Included Lab Sample IDs: 1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550

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

Reference Method: SM 2120 B

Run ID: A75747

Included Lab Sample IDs: 1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115
Color (true)	102	100	P/P	85 - 115
Color (true)	99.3	102	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75748

Included Lab Sample IDs: 1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A75755

Included Lab Sample IDs: 1887541, 1887542, 1887543, 1887544, 1887545, 1887546, 1887551, 1887552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.3	97.7	P/P	90 - 110
O-Phosphate-P	97.7	97.9	P/P	90 - 110
O-Phosphate-P	97.9	97.7	P/P	90 - 110
O-Phosphate-P	97.9	97.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A75756

Included Lab Sample IDs: 1887575, 1887576

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	112	P/P	60 - 150
Sucralose	112	128	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75759

Included Lab Sample IDs: 1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	94.5	94.5	P/P	90 - 110
NO2NO3-N	94.5	95.0	P/P	90 - 110
NO2NO3-N	95.0	94.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A75769

Included Lab Sample IDs: 1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75777

Included Lab Sample IDs: 1887537, 1887538, 1887539, 1887549, 1887550

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75780

Included Lab Sample IDs: 1887529, 1887530, 1887531, 1887532, 1887533, 1887547, 1887548

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75781

Included Lab Sample IDs: 1887535, 1887536, 1887537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A75783

Included Lab Sample IDs: 1887573, 1887574, 1887577

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	97.2	P/P	60 - 150
Sucralose	94.6	108	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75787

Included Lab Sample IDs: 1887535, 1887536, 1887540

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75791

Included Lab Sample IDs: 1887538, 1887539, 1887540, 1887549, 1887550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	108	P/P	90 - 110
Kjeldahl Nitrogen	108	102	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A75820

Included Lab Sample IDs: 1887573, 1887574, 1887575, 1887576, 1887577

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	109	P/P	50 - 150
2,4-D	107	105	P/P	50 - 150
Bentazon	81.4	91.0	P/P	50 - 150
Bentazon	91.0	78.2	P/P	50 - 150
MCP	128	133	P/P	50 - 150
MCP	133	137	P/P	50 - 150
Triclopyr	109	116	P/P	50 - 150
Triclopyr	113	109	P/P	50 - 150

Reference Method: USGS O-2060-01

Run ID: A75845

Included Lab Sample IDs: 1887575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	120	111	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A75847

Included Lab Sample IDs: 1887573, 1887574, 1887575, 1887576, 1887577

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

Reference Method: USGS O-2060-01

Run ID: A75847

Included Lab Sample IDs: 1887573, 1887574, 1887575, 1887576, 1887577

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	124	121	P/P	60 - 150
Acetaminophen	124	124	P/P	60 - 150
Carbamazepine	131	146	P/P	60 - 150
Carbamazepine	145	131	P/P	60 - 150
Diuron	113	121	P/P	60 - 150
Diuron	121	122	P/P	60 - 150
Fenuron	127	124	P/P	60 - 150
Fenuron	128	127	P/P	60 - 150
Fluridone	110	115	P/P	60 - 150
Fluridone	115	104	P/P	60 - 150
Imidacloprid	100	98.8	P/P	60 - 150
Imidacloprid	98.8	95.2	P/P	60 - 150
Linuron	129	92.0	P/P	60 - 150
Linuron	138	129	P/P	60 - 150
Primidone	103	115	P/P	60 - 150
Primidone	109	103	P/P	60 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75903

Included Lab Sample IDs: 1887534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	101	P/P	90 - 110
Sulfate	96.2	98.4	P/P	90 - 110
Sulfate	97.3	97.3	P/P	90 - 110
Sulfate	97.3	96.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A75916

Included Lab Sample IDs: 1887578, 1887579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	93.5	91.9	P/P	90 - 110
Chromium	99.2	99.5	P/P	90 - 110
Copper	92.6	91.8	P/P	90 - 110
Lead	95.1	94.8	P/P	90 - 110
Nickel	93.1	91.8	P/P	90 - 110
Silver	94.2	94.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A75945

Included Lab Sample IDs: 1887578, 1887579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	96.8	98.4	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A75952

Included Lab Sample IDs: 1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548

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

Reference Method: SM 2320 B-97

Run ID: A75952

Included Lab Sample IDs: 1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	105	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A76018

Included Lab Sample IDs: 1887578, 1887579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	100	P/P	90 - 110
Iron	100	101	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	103	102	P/P	90 - 110
Sodium	100	99.4	P/P	90 - 110
Zinc	106	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76201

Included Lab Sample IDs: 1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548

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

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision	
			LCS			SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					2.84	
EPA 200.7 Rev. 4.4	Calcium	104	108	103			1.60
	Iron	103	106	104	106		1.91
	Magnesium	103	107	102			2.02
	Potassium	103	108	103	104		0.919
	Sodium	104	104	101	104		1.63
	Zinc	99.8	104	99.3	103		3.18
EPA 200.8 Rev. 5.4	Arsenic	92.8	95.1	95.2	94.4		0.771
	Cadmium	94.4	97.4	98.1	96.9		1.24
	Chromium	99.8	104	101	101		0.513
	Copper	91.0	95.9	89.5	90.2		0.821
	Lead	96.1	98.4	96.8	96.8		0.0618
	Nickel	91.9	93.8	92.0	92.4		0.464
	Silver	96.0	98.3	97.7	97.8		0.0724
EPA 300.0 Rev. 2.1	Chloride	104	102	103		0.286	
	Chloride	101	99.7	99.6		0.0659	
	Sulfate	98.0	98.3	96.9		2.90	
EPA 350.1 Rev. 2.0	Ammonia-N	104	104	104			0.472
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	102	97.1			3.81

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	102	102		0.663
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	98.5	91.5	90.0		1.65
	NO ₂ NO ₃ -N	96.0	95.5	94.0		0.791
EPA 365.1 Rev. 2.0	Total-P	103	98.4	104		4.54
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	99.2	98.3		0.665
EPA 8321B	Sucralose	104	87.3	98.0		11.5
SM 2120 B	Color (true)				4.13	
SM 2320 B-97	Total Alkalinity	104			1.58	
SM 2540 C-97	TDS				6.24	
	TDS				3.77	
	TDS				1.01	
SM 4500 F-C-97	Fluoride	98.1	98.4	99.0		0.487
SM 5310 B-00	Organic Carbon	101	103	102		0.537
USGS O-2060-01	2,4-D	85.6	124	103		19.0
	Acetaminophen	110	66.0	78.8		17.7
	Acetaminophen	70.8	76.8	84.4		9.43
	Bentazon	106				0.944
	Carbamazepine	99.6	77.2	73.6		4.77
	Diuron	80.8	44.8	56.4		22.9
	Fenuron	96.4	31.5	38.7		20.4
	Fluridone	90.4	45.8	62.6		29.4
	Imidacloprid	78.0	96.4	101		4.86
	Linuron	67.2	70.8	74.0		4.42
	MCP	100	98.0	116		16.5
	Primidone	73.2	63.6	59.2		7.17
	Triclopyr	84.4	122	113		8.16

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1887578, 1887579
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1887578, 1887579
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1887541, 1887542, 1887543, 1887544, 1887545, 1887546, 1887551, 1887552
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1887573, 1887574, 1887575, 1887576, 1887577
SM 2120 B / E31780	True Color measured at 450 nm	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1887573, 1887574, 1887575, 1887576, 1887577
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1887573, 1887574, 1887575, 1887576, 1887577

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	04/11/2017			04/12/2017 12:37	Sima Feizi	1887529
	04/11/2017			04/12/2017 12:40	Sima Feizi	1887530
	04/11/2017			04/12/2017 12:42	Sima Feizi	1887531
	04/11/2017			04/12/2017 12:44	Sima Feizi	1887532
	04/11/2017			04/12/2017 12:45	Sima Feizi	1887533
	04/11/2017			04/12/2017 12:48	Sima Feizi	1887534
	04/11/2017			04/12/2017 12:49	Sima Feizi	1887547
	04/11/2017			04/12/2017 12:51	Sima Feizi	1887548
EPA 200.7 Rev. 4.4	04/11/2017	04/18/2017	Elliott D. Healy	04/26/2017	Martin Acosta	1887578, 1887579
EPA 200.8 Rev. 5.4	04/11/2017	04/18/2017	Elliott D. Healy	04/21/2017	Betina Topolski	1887578, 1887579
EPA 300.0 Rev. 2.1	04/11/2017			04/15/2017	Ping Hua	1887529, 1887530, 1887531, 1887532, 1887533, 1887547, 1887548
	04/11/2017			04/19/2017	Ping Hua	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
EPA 350.1 Rev. 2.0	04/11/2017			04/11/2017	Julie Michelle Frank	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
EPA 351.2 Rev. 2.0	04/11/2017	04/13/2017	Adrian Shelby	04/14/2017	Joseph Suarez	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
EPA 353.2 Rev. 2.0	04/11/2017			04/13/2017	Beverly Y. Sanders	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549, 1887550
EPA 365.1 Rev. 2.0	04/11/2017	04/13/2017	Adrian Shelby	04/13/2017	Lipi Saha	1887537, 1887538, 1887539, 1887549, 1887550
EPA 365.1 Rev. 2.0 dissolved	04/11/2017	04/13/2017	Adrian Shelby	04/14/2017	Lipi Saha	1887535, 1887536, 1887540
	04/11/2017			04/12/2017 13:34	Anthony C. Onicha	1887545
	04/11/2017			04/12/2017 13:45	Anthony C. Onicha	1887541
	04/11/2017			04/12/2017 13:46	Anthony C. Onicha	1887542
	04/11/2017			04/12/2017 13:54	Anthony C. Onicha	1887544
	04/11/2017			04/12/2017 13:55	Anthony C. Onicha	1887546
EPA 8321B	04/11/2017			04/12/2017 13:56	Anthony C. Onicha	1887551, 1887552
	04/11/2017			04/12/2017 14:19	Anthony C. Onicha	1887543
	04/11/2017	04/12/2017	Mohammad Ghaffari	04/12/2017	Mohammad Ghaffari	1887575, 1887576
	04/11/2017	04/12/2017	Mohammad Ghaffari	04/13/2017	Mohammad Ghaffari	1887573, 1887574, 1887577
SM 2120 B	04/11/2017			04/12/2017 14:44	Julia Storbeck	1887532
	04/11/2017			04/12/2017 14:45	Julia Storbeck	1887533
	04/11/2017			04/12/2017 14:47	Julia Storbeck	1887531
	04/11/2017			04/12/2017 14:48	Julia Storbeck	1887534
	04/11/2017			04/12/2017 14:49	Julia Storbeck	1887547
	04/11/2017			04/12/2017 14:50	Julia Storbeck	1887548
	04/11/2017			04/12/2017 15:29	Julia Storbeck	1887530
	04/11/2017			04/12/2017 15:42	Julia Storbeck	1887529
SM 2320 B-97	04/11/2017			04/22/2017	Dale L. Simmons	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 C-97	04/11/2017			04/14/2017	Yijie Li	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
SM 2540 D-97	04/11/2017			04/14/2017	Yijie Li	1887529, 1887530, 1887531, 1887532, 1887533, 1887534, 1887547, 1887548
SM 4500 F-C-97	04/11/2017			05/02/2017	Dale L. Simmons	1887529, 1887530, 1887531, 1887532, 1887533
	04/11/2017			05/03/2017	Dale L. Simmons	1887534, 1887547, 1887548
SM 5310 B-00	04/11/2017			04/12/2017	Julie Michelle Frank	1887535, 1887536, 1887537, 1887538, 1887539, 1887540, 1887549
	04/11/2017			04/13/2017	Julie Michelle Frank	1887550
USGS O-2060-01	04/11/2017	04/12/2017	Fe-Val Siddell	04/15/2017	Juyoung Kim	1887573, 1887574, 1887575, 1887576, 1887577
	04/11/2017	04/12/2017	Fe-Val Siddell	04/16/2017	Juyoung Kim	1887573, 1887574, 1887575, 1887576, 1887577
	04/11/2017	04/12/2017	Fe-Val Siddell	04/18/2017	Juyoung Kim	1887575