

Chemical Analysis Report

WAS-SECT-2018-06-13-02

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

Event Description: **Freeman, Unnamed, Whittle Run, Qunicy, Juniper, Big, Little**
Request ID: **RQ-2018-06-11-30**
Customer: **WAS-SECT**
Project ID: **SMP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 13-JUL-2018 14:36

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Unnamed Run Upstream of Henrietta Dr

Collection Date/Time: 06/13/2018 10:45

Field ID: G1WA0078

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000481	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P346871	
	EPA 300.0 Rev. 2.1	Chloride	2.0		mg Cl/L	P347316	
		Sulfate	0.70		mg SO4/L	P347318	
	SM 2120 B	Color (true)	140		PCU	P346850	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P347157	RPD
	SM 2540 C-97	TDS	41		mg/L	P347171	
	SM 2540 D-97	TSS	6	I	mg/L	P347175	
	SM 4500 F-C-97	Fluoride	0.048	I	mg F/L	P347159	
2000487	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P347340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P347596	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.48		mg N/L	P347302	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P347190	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P347185	
2000493	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P346878	
2000543	EPA 200.7 Rev. 4.4	Calcium	0.73		mg/L	P346923	
		Iron	150		ug/L	P346923	
		Magnesium	0.56		mg/L	P346923	
		Potassium	0.41	I	mg/L	P346923	
		Sodium	1.8	I	mg/L	P346923	
		Zinc	5.0	U	ug/L	P346923	
	EPA 200.8 Rev. 5.4	Arsenic	0.27		ug/L	P346923	
		Cadmium	0.020	U	ug/L	P346923	
		Chromium	0.70	I	ug/L	P346923	
		Copper	0.20	U	ug/L	P346923	
		Lead	0.30		ug/L	P346923	
		Nickel	0.27	I	ug/L	P346923	
		Silver	0.010	U	ug/L	P346923	

Ref. Method and Comment:

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

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

Sample Location: Big Branch 50 m Upstream of CR 67

Collection Date/Time: 06/13/2018 09:45

Field ID: G1WA0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000542	EPA 8321B	2,4-D	0.0020	U	ug/L	P346884	
		Bentazon	8.0E-04	U	ug/L	P346884	
		MCP	0.0020	U	ug/L	P346884	
		Triclopyr**	0.0040	U	ug/L	P346884	
		Imidacloprid	0.0020	U	ug/L	P346885	
		Diuron	0.0020	U	ug/L	P346885	
		Pyraclostrobin**	0.0020	U	ug/L	P346885	
		Primidone**	0.0040	U	ug/L	P346885	
		Linuron	0.0040	U	ug/L	P346885	
		Acetaminophen**	0.0080	U	ug/L	P346885	
		Fenuron	0.016	U	ug/L	P346885	
		Imazapyr**	0.0040	U	ug/L	P346885	
		Carbamazepine**	4.0E-04	U	ug/L	P346885	
		Fluridone**	4.0E-04	U	ug/L	P346885	
		Hydrocodone**	8.0E-04	U	ug/L	P346885	
		Sucralose**	0.010	U	ug/L	P346886	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Freeman Creek Upstream of SR 267 (Bloxham Cutoff) **Collection Date/Time: 06/13/2018 09:00**

Field ID: G1WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000482	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P346871	
	EPA 300.0 Rev. 2.1	Chloride	3.6		mg Cl/L	P347316	
		Sulfate	0.24	I	mg SO4/L	P347318	
	SM 2120 B	Color (true)	290		PCU	P346850	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P347157	RPD
	SM 2540 C-97	TDS	78		mg/L	P347171	
	SM 2540 D-97	TSS	2	U	mg/L	P347175	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P347159	
2000488	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P347340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P347596	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P347302	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P347190	
	SM 5310 B-00	Organic Carbon	33		mg C/L	P347185	
2000494	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P346878	
2000544	EPA 200.7 Rev. 4.4	Calcium	0.67		mg/L	P346923	
		Iron	1.65E+03		ug/L	P346923	
		Magnesium	0.27		mg/L	P346923	
		Potassium	0.30	U	mg/L	P346923	
		Sodium	2.0	I	mg/L	P346923	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P346923	
		Arsenic	0.38		ug/L	P346923	
		Cadmium	0.020	U	ug/L	P346923	
		Chromium	0.67	I	ug/L	P346923	
		Copper	0.20	U	ug/L	P346923	
		Lead	0.51		ug/L	P346923	
		Nickel	0.58	I	ug/L	P346923	
		Silver	0.010	U	ug/L	P346923	

Ref. Method and Comment:

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

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

Sample Location: Little River 100m Upstream of US 90

Collection Date/Time: 06/13/2018 12:30

Field ID: G1WA0073

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000483	EPA 180.1 Rev. 2.0	Turbidity	33		NTU	P346871	
	EPA 300.0 Rev. 2.1	Chloride	6.0		mg Cl/L	P347316	
		Sulfate	1.6		mg SO4/L	P347318	
	SM 2120 B	Color (true)	62	A	PCU	P346853	
	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P347157	RPD
	SM 2540 C-97	TDS	71		mg/L	P347172	
	SM 2540 D-97	TSS	20		mg/L	P347175	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P347159	
2000489	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P347340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P347596	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.67		mg N/L	P347302	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P347190	
	SM 5310 B-00	Organic Carbon	9.0		mg C/L	P347185	
2000495	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.053		mg P/L	P346878	
2000545	EPA 200.7 Rev. 4.4	Calcium	6.67		mg/L	P346923	
		Iron	2.54E+03		ug/L	P346923	
		Magnesium	2.57		mg/L	P346923	
		Potassium	1.0	I	mg/L	P346923	
		Sodium	4.6		mg/L	P346923	
		Zinc	5.0	U	ug/L	P346923	
	EPA 200.8 Rev. 5.4	Arsenic	1.14		ug/L	P346923	
		Cadmium	0.020	U	ug/L	P346923	
		Chromium	1.6		ug/L	P346923	
		Copper	0.78	I	ug/L	P346923	
		Lead	1.03		ug/L	P347467	
		Nickel	0.56	I	ug/L	P346923	
		Silver	0.010	U	ug/L	P346923	

Ref. Method and Comment:

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

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

EPA 200.8 Rev. 5.4: The lead result was confirmed on 06/21/2018.

Sample Location: Quincy Creek 100m Upstream of Ralph Strong Rd **Collection Date/Time: 06/13/2018 11:58**

Field ID: G1WA0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000484	EPA 180.1 Rev. 2.0	Turbidity	19		NTU	P346871	
	EPA 300.0 Rev. 2.1	Chloride	5.3		mg Cl/L	P347316	
		Sulfate	0.48	I	mg SO4/L	P347318	
		Color (true)	34		PCU	P346853	
	SM 2320 B-97	Total Alkalinity	18		mg CaCO3/L	P347157	RPD
	SM 2540 C-97	TDS	48		mg/L	P347172	
	SM 2540 D-97	TSS	22		mg/L	P347175	
	SM 4500 F-C-97	Fluoride	0.095	I	mg F/L	P347159	
2000490	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P347340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P347861	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P347302	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P347190	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P347185	
2000496	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.061		mg P/L	P346878	
2000546	EPA 200.7 Rev. 4.4	Calcium	6.46		mg/L	P346923	
		Iron	3.03E+03		ug/L	P346923	
		Magnesium	2.17		mg/L	P346923	
		Potassium	0.42	I	mg/L	P346923	
		Sodium	3.4		mg/L	P346923	
		Zinc	5.0	U	ug/L	P346923	
	EPA 200.8 Rev. 5.4	Arsenic	1.11		ug/L	P346923	
		Cadmium	0.020	U	ug/L	P346923	
		Chromium	1.3	I	ug/L	P346923	
		Copper	0.39	I	ug/L	P346923	
		Lead	0.80		ug/L	P347467	
		Nickel	0.35	I	ug/L	P346923	
		Silver	0.010	U	ug/L	P346923	

Ref. Method and Comment:

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

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

EPA 200.8 Rev. 5.4: The lead result was confirmed on 06/21/2018.

Sample Location: Quincy Creek 100m Upstream of Ralph Strong Rd **Collection Date/Time: 06/13/2018 11:58**

Field ID: G1WA0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000540	EPA 8321B	2,4-D	0.0020	U	ug/L	P346884	
		Bentazon	8.0E-04	U	ug/L	P346884	
		MCP	0.0020	U	ug/L	P346884	
		Triclopyr**	0.0040	U	ug/L	P346884	
		Imidacloprid	0.0086		ug/L	P346885	
		Diuron	0.0020	U	ug/L	P346885	
		Pyraclostrobin**	0.0020	U	ug/L	P346885	
		Primidone**	0.0040	U	ug/L	P346885	
		Linuron	0.0040	U	ug/L	P346885	
		Acetaminophen**	0.0080	U	ug/L	P346885	
		Fenuron	0.016	U	ug/L	P346885	
		Imazapyr**	0.0040	U	ug/L	P346885	
		Carbamazepine**	6.4E-04	I	ug/L	P346885	
		Fluridone**	4.0E-04	U	ug/L	P346885	
		Hydrocodone**	8.0E-04	U	ug/L	P346885	
		Sucralose**	0.090		ug/L	P346886	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr 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: 06/13/2018 11:30

Field ID: G1WA0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000485	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P346871	
	EPA 300.0 Rev. 2.1	Chloride	5.1		mg Cl/L	P347316	
		Sulfate	0.45	I	mg SO4/L	P347318	
		Color (true)	83		PCU	P346850	
	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P347157	RPD
	SM 2540 C-97	TDS	48		mg/L	P347172	
	SM 2540 D-97	TSS	11		mg/L	P347175	
	SM 4500 F-C-97	Fluoride	0.087	I	mg F/L	P347159	
2000491	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P347340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35		mg N/L	P347861	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P347302	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P347190	
	SM 5310 B-00	Organic Carbon	4.6		mg C/L	P347185	
2000497	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.050		mg P/L	P346878	
2000547	EPA 200.7 Rev. 4.4	Calcium	6.05		mg/L	P346923	
		Iron	2.35E+03		ug/L	P346923	
		Magnesium	2.00		mg/L	P346923	
		Potassium	0.37	I	mg/L	P346923	
		Sodium	3.2		mg/L	P346923	
		Zinc	5.0	U	ug/L	P346923	
	EPA 200.8 Rev. 5.4	Arsenic	1.0		ug/L	P346923	
		Cadmium	0.020	U	ug/L	P346923	
		Chromium	0.74	I	ug/L	P346923	
		Copper	0.32	I	ug/L	P346923	
		Lead	0.41		ug/L	P346923	
		Nickel	0.26	I	ug/L	P346923	
		Silver	0.010	U	ug/L	P346923	

Ref. Method and Comment:

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

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

Sample Location: Quincy Creek Upstream of SR 65

Collection Date/Time: 06/13/2018 11:30

Field ID: G1WA0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000541	EPA 8321B	2,4-D	0.0020	U	ug/L	P346884	
		Bentazon	8.0E-04	U	ug/L	P346884	
		MCP	0.0020	U	ug/L	P346884	
		Triclopyr**	0.0040	U	ug/L	P346884	
		Imidacloprid	0.0050	I	ug/L	P346885	
		Diuron	0.0020	U	ug/L	P346885	
		Pyraclostrobin**	0.0020	U	ug/L	P346885	
		Primidone**	0.0040	U	ug/L	P346885	
		Linuron	0.0040	U	ug/L	P346885	
		Acetaminophen**	0.0080	U	ug/L	P346885	
		Fenuron	0.016	U	ug/L	P346885	
		Imazapyr**	0.0040	U	ug/L	P346885	
		Carbamazepine**	4.0E-04	U	ug/L	P346885	
		Fluridone**	4.0E-04	U	ug/L	P346885	
		Hydrocodone**	8.0E-04	U	ug/L	P346885	
		Sucralose**	0.010	U	ug/L	P346886	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr 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: 06/13/2018 10:28

Field ID: G1WA0059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2000486	EPA 180.1 Rev. 2.0	Turbidity	3.2	A	NTU	P346872	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P347316	
		Sulfate	5.5		mg SO4/L	P347318	
	SM 2120 B	Color (true)	120	A	PCU	P346851	
	SM 2320 B-97	Total Alkalinity	6.1		mg CaCO3/L	P347157	RPD
	SM 2540 C-97	TDS	66		mg/L	P347172	
	SM 2540 D-97	TSS	3	I	mg/L	P347176	
	SM 4500 F-C-97	Fluoride	0.070	I	mg F/L	P347159	
2000492	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P347340	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P347861	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.37		mg N/L	P347302	
	EPA 365.1 Rev. 2.0	Total-P	0.091		mg P/L	P347190	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P347186	
2000498	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.066		mg P/L	P346927	
2000548	EPA 200.7 Rev. 4.4	Calcium	3.67		mg/L	P346923	
		Iron	630		ug/L	P346923	
		Magnesium	2.24		mg/L	P346923	
		Potassium	3.0		mg/L	P346923	
		Sodium	7.2		mg/L	P346923	
		Zinc	21		ug/L	P346923	
	EPA 200.8 Rev. 5.4	Arsenic	0.44		ug/L	P346923	
		Cadmium	0.020	U	ug/L	P346923	
		Chromium	0.41	I	ug/L	P346923	
		Copper	0.96		ug/L	P347467	
		Lead	0.22		ug/L	P347467	
		Nickel	0.27	I	ug/L	P347467	
		Silver	0.010	U	ug/L	P346923	

Ref. Method and Comment:

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

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346871

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346872

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346923

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346923

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P347467

Component	Result	Code	Units
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347316

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347318

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347340

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347596

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347861

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347302

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347190

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346878

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346927

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

Reference Method: EPA 8321B
Batch ID: P346868

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P346885

Component	Result	Code	Units
Acetaminophen	0.0080	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P346885

Component	Result	Code	Units
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P346850

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P346851

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P346853

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P347157

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

Reference Method: SM 2540 C-97
Batch ID: P347171

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P347172

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P347175

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P347176

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P347159

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P347185

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

Reference Method: SM 5310 B-00
Batch ID: P347186

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P346923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	104		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	100		P	85 - 115
Sodium	101		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P346923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	97.9		P	85 - 115
Cadmium	99.2		P	85 - 115
Chromium	95.8		P	85 - 115
Copper	96.2		P	85 - 115
Lead	97.2		P	85 - 115
Nickel	97.6		P	85 - 115
Silver	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P347467

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	97.0		P	85 - 115
Lead	100		P	85 - 115
Nickel	99.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P347316

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: P347318

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P347340

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P347596

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347861

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347302

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346878

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346927

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

Reference Method: EPA 8321B
Batch ID: P346868

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	77.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P346885

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	90.6		P	30 - 150
Carbamazepine	91.0		P	40 - 150
Diuron	82.8		P	40 - 150
Fenuron	95.8		P	40 - 150
Fluridone	83.9		P	40 - 150
Hydrocodone	95.2		P	40 - 150
Imazapyr	86.3		P	40 - 150
Imidacloprid	97.5		P	40 - 160
Linuron	68.8		P	40 - 150
Primidone	88.4		P	40 - 150
Pyraclostrobin	81.1		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P347157

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

Reference Method: SM 2320 B-97
Batch ID: P347157

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P347159

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

Reference Method: SM 5310 B-00
Batch ID: P347185

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P347186

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P346923

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1999775	Calcium	104	105	P/P	80 - 120
1999775	Iron	105	107	P/P	80 - 120
1999775	Magnesium	107	109	P/P	80 - 120
1999775	Potassium	102	103	P/P	80 - 120
1999775	Sodium	101	105	P/P	80 - 120
1999775	Zinc	101	103	P/P	80 - 120
2000416	Calcium	104		P	80 - 120
2000416	Iron	108		P	80 - 120
2000416	Magnesium	105		P	80 - 120
2000416	Potassium	103		P	80 - 120
2000416	Sodium	102		P	80 - 120
2000416	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P346923

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1999775	Arsenic	96.7	96.1	P/P	80 - 120
1999775	Cadmium	104	103	P/P	80 - 120
1999775	Chromium	98.3	97.2	P/P	80 - 120
1999775	Copper	94.7	95.3	P/P	80 - 120
1999775	Lead	99.1	99.2	P/P	80 - 120
1999775	Nickel	96.7	96.2	P/P	80 - 120
1999775	Silver	107	105	P/P	80 - 120
2000416	Arsenic	96.8		P	80 - 120
2000416	Cadmium	101		P	80 - 120
2000416	Chromium	94.0		P	80 - 120
2000416	Copper	90.9		P	80 - 120
2000416	Lead	98.3		P	80 - 120
2000416	Nickel	93.5		P	80 - 120
2000416	Silver	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P347467

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002025	Copper	95.5	93.9	P/P	80 - 120
2002025	Lead	102	100	P/P	80 - 120
2002025	Nickel	98.6	97.8	P/P	80 - 120
2002445	Copper	95.0		P	80 - 120
2002445	Lead	101		P	80 - 120
2002445	Nickel	98.7		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P347316

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000485	Chloride	97.9		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000391	Sulfate	100		P	90 - 110
2000485	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347340

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000408	Ammonia-N	99.2	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000394	Kjeldahl Nitrogen	99.4	111	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000665	Kjeldahl Nitrogen	106	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000408	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000436	Total-P	96.4	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1999990	O-Phosphate-P	97.5	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000498	O-Phosphate-P	98.1	99.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P346868

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000693	Sucralose	72.9	86.4	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P346885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000875	Acetaminophen	70.8	68.6	P/P	30 - 150
2000875	Carbamazepine	66.7	60.7	P/P	40 - 150
2000875	Diuron	58.9	51.8	P/P	40 - 150
2000875	Fenuron	66.9	60.8	P/P	40 - 150
2000875	Fluridone	82.1	72.0	P/P	40 - 150
2000875	Hydrocodone	74.9	69.0	P/P	40 - 150
2000875	Imidacloprid	142	126	P/P	40 - 160
2000875	Linuron	65.2	51.7	P/P	40 - 150
2000875	Primidone	74.3	67.4	P/P	40 - 150
2000875	Pyraclostrobin	77.1	76.0	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P347159

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000937	Fluoride	94.7	95.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P347185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000126	Organic Carbon	102	101	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P347186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2000492	Organic Carbon	112	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000407	Turbidity	9.72	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000486	Turbidity	2.82	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1999775	Calcium	1.09	Spike	P	0 - 20
1999775	Iron	1.35	Spike	P	0 - 20
1999775	Magnesium	1.42	Spike	P	0 - 20
1999775	Potassium	1.61	Spike	P	0 - 20
1999775	Sodium	2.63	Spike	P	0 - 20
1999775	Zinc	2.24	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1999775	Arsenic	0.668	Spike	P	0 - 20
1999775	Cadmium	0.658	Spike	P	0 - 20
1999775	Chromium	1.14	Spike	P	0 - 20
1999775	Copper	0.701	Spike	P	0 - 20
1999775	Lead	0.118	Spike	P	0 - 20
1999775	Nickel	0.533	Spike	P	0 - 20
1999775	Silver	1.07	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P347467

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002025	Copper	1.64	Spike	P	0 - 20
2002025	Lead	1.36	Spike	P	0 - 20
2002025	Nickel	0.806	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347316

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000391	Chloride	1.69	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000391	Sulfate	1.66	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347340

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000408	Ammonia-N	0.128	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000394	Kjeldahl Nitrogen	6.52	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000665	Kjeldahl Nitrogen	3.42	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000408	NO2NO3-N	1.49	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000436	Total-P	2.67	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1999990	O-Phosphate-P	2.23	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000498	O-Phosphate-P	0.731	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P346868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000693	Sucralose	17.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P346885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000875	Acetaminophen	3.21	Spike	P	0 - 30
2000875	Carbamazepine	9.38	Spike	P	0 - 30
2000875	Diuron	11.3	Spike	P	0 - 30
2000875	Fenuron	9.52	Spike	P	0 - 30
2000875	Fluridone	12.9	Spike	P	0 - 30
2000875	Hydrocodone	8.22	Spike	P	0 - 30
2000875	Imazapyr	7.04	Spike	P	0 - 30
2000875	Imidacloprid	12.5	Spike	P	0 - 30
2000875	Linuron	23.1	Spike	P	0 - 30
2000875	Primidone	9.81	Spike	P	0 - 30
2000875	Pyraclostrobin	1.35	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P346850

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000407	Color (true)	1.86	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P346851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000486	Color (true)	0.746	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P346853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000483	Color (true)	19.2	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P347157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000937	Total Alkalinity	4.35	Sample	F	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P347171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000975	TDS	9.84	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P347172

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000526	TDS	0.755	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P347159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000937	Fluoride	0.943	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P347185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000126	Organic Carbon	0.932	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P347186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2000492	Organic Carbon	6.60	Spike	P	0 - 20

* 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: 2000540
Field Sample ID: G1WA0018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.0	P	30 - 160
EPA 8321B	Diuron-d6	70.9	P	30 - 160
EPA 8321B	Primidone-d5	90.1	P	30 - 160
EPA 8321B	Sucralose-d6	74.0	P	40 - 160

Lab Sample ID: 2000541
Field Sample ID: G1WA0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	83.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.7	P	30 - 160
EPA 8321B	Diuron-d6	67.7	P	30 - 160
EPA 8321B	Primidone-d5	96.5	P	30 - 160
EPA 8321B	Sucralose-d6	94.8	P	40 - 160

Lab Sample ID: 2000542
Field Sample ID: G1WA0001

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.3	P	30 - 160
EPA 8321B	Diuron-d6	64.2	P	30 - 160
EPA 8321B	Primidone-d5	80.5	P	30 - 160
EPA 8321B	Sucralose-d6	83.7	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A84549

Included Lab Sample IDs: 2000481, 2000482, 2000483, 2000484, 2000485, 2000486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	90 - 115
Color (true)	100	101	P/P	90 - 115
Color (true)	101	100	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A84568

Included Lab Sample IDs: 2000481, 2000482, 2000483, 2000484, 2000485, 2000486

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84574

Included Lab Sample IDs: 2000493, 2000494, 2000495, 2000497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.4	98.2	P/P	90 - 110
O-Phosphate-P	98.2	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84591

Included Lab Sample IDs: 2000496, 2000498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	98.4	P/P	90 - 110
O-Phosphate-P	99.9	99.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84639

Included Lab Sample IDs: 2000543, 2000544, 2000545, 2000546, 2000547, 2000548

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

Reference Method: EPA 8321B

Run ID: A84665

Included Lab Sample IDs: 2000540, 2000541, 2000542

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

Reference Method: EPA 8321B

Run ID: A84665

Included Lab Sample IDs: 2000540, 2000541, 2000542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	76.0	77.8	P/P	60 - 160
Sucralose	77.8	69.6	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84669

Included Lab Sample IDs: 2000543, 2000544, 2000545, 2000546, 2000547, 2000548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	95.9	96.5	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	97.5	96.9	P/P	90 - 110
Copper	94.2	95.0	P/P	90 - 110
Lead	99.5	99.1	P/P	90 - 110
Silver	98.4	98.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A84691

Included Lab Sample IDs: 2000481, 2000482, 2000483, 2000484, 2000485, 2000486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84691

Included Lab Sample IDs: 2000481, 2000482, 2000483, 2000484, 2000485, 2000486

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

Reference Method: SM 5310 B-00

Run ID: A84709

Included Lab Sample IDs: 2000487, 2000488, 2000489, 2000490, 2000491, 2000492

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84739

Included Lab Sample IDs: 2000487, 2000488, 2000489, 2000490, 2000491, 2000492

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84742

Included Lab Sample IDs: 2000481, 2000482, 2000483, 2000484, 2000485, 2000486

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84742

Included Lab Sample IDs: 2000481, 2000482, 2000483, 2000484, 2000485, 2000486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	104	P/P	90 - 110
Sulfate	101	103	P/P	90 - 110
Sulfate	103	106	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84751

Included Lab Sample IDs: 2000540, 2000541, 2000542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	87.4	105	P/P	50 - 150
Bentazon	116	127	P/P	50 - 150
MCP	105	112	P/P	50 - 150
Triclopyr	104	134	P/P	50 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84761

Included Lab Sample IDs: 2000487, 2000489, 2000490, 2000491, 2000492

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84767

Included Lab Sample IDs: 2000543, 2000544, 2000545, 2000546, 2000547

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84774

Included Lab Sample IDs: 2000488

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84776

Included Lab Sample IDs: 2000487, 2000488, 2000489, 2000490, 2000491, 2000492

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84851

Included Lab Sample IDs: 2000545, 2000546, 2000548

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84851

Included Lab Sample IDs: 2000545, 2000546, 2000548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	102	102	P/P	90 - 110
Lead	102	103	P/P	90 - 110
Lead	103	102	P/P	90 - 110
Nickel	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84958

Included Lab Sample IDs: 2000487, 2000488, 2000489

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	109	108	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84988

Included Lab Sample IDs: 2000540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	121	120	P/P	60 - 160
Carbamazepine	112	104	P/P	60 - 160
Diuron	112	110	P/P	60 - 150
Fenuron	104	102	P/P	60 - 150
Fluridone	105	102	P/P	60 - 160
Hydrocodone	108	112	P/P	60 - 150
Imazapyr	93.4	98.7	P/P	50 - 150
Imidacloprid	99.4	96.4	P/P	60 - 150
Linuron	100	106	P/P	60 - 150
Primidone	95.3	96.2	P/P	60 - 150
Pyraclostrobin	105	109	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85016

Included Lab Sample IDs: 2000490, 2000491, 2000492

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	96.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85164

Included Lab Sample IDs: 2000541, 2000542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	122	128	P/P	60 - 150
Carbamazepine	134	128	P/P	60 - 150
Diuron	131	123	P/P	60 - 150
Fenuron	122	122	P/P	60 - 150
Fluridone	113	116	P/P	60 - 160
Hydrocodone	103	104	P/P	60 - 150
Imazapyr	113	122	P/P	50 - 150
Imidacloprid	89.3	90.8	P/P	60 - 150
Linuron	129	124	P/P	60 - 150
Primidone	105	109	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A85164

Included Lab Sample IDs: 2000541, 2000542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	128	125	P/P	60 - 150

* 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						9.72	
	Turbidity						2.82	
EPA 200.7 Rev. 4.4	Calcium	105	104	105	104			1.09
	Iron	104	105	107	108			1.35
	Magnesium	107	107	109	105			1.42
	Potassium	100	102	103	103			1.61
	Sodium	101	101	105	102			2.63
	Zinc	100	101	103	105			2.24
EPA 200.8 Rev. 5.4	Arsenic	97.9	96.7	96.1	96.8			0.668
	Cadmium	99.2	104	103	101			0.658
	Chromium	95.8	98.3	97.2	94.0			1.14
	Copper	96.2	94.7	95.3	90.9			0.701
	Copper	97.0	95.5	93.9	95.0			1.64
	Lead	97.2	99.1	99.2	98.3			0.118
	Lead	100	102	100	101			1.36
	Nickel	97.6	96.7	96.2	93.5			0.533
	Nickel	99.6	98.6	97.8	98.7			0.806
	Silver	104	107	105	105			1.07
EPA 300.0 Rev. 2.1	Chloride	99.3	97.9				1.69	
	Sulfate	101	100	100			1.66	
EPA 350.1 Rev. 2.0	Ammonia-N	103	99.2	99.0				0.128
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.4	99.4	111				6.52
	Kjeldahl Nitrogen	100	106	102				3.42
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	100				1.49
EPA 365.1 Rev. 2.0	Total-P	99.6	96.4	100				2.67
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7	97.5	99.7				2.23
	O-Phosphate-P	98.3	98.1	99.3				0.731
EPA 8321B	Acetaminophen	90.6	70.8	68.6				3.21
	Carbamazepine	91.0	66.7	60.7				9.38
	Diuron	82.8	58.9	51.8				11.3
	Fenuron	95.8	66.9	60.8				9.52
	Fluridone	83.9	82.1	72.0				12.9
	Hydrocodone	95.2	74.9	69.0				8.22
	Imazapyr	86.3						7.04
	Imidacloprid	97.5	142	126				12.5
	Linuron	68.8	65.2	51.7				23.1
	Primidone	88.4	74.3	67.4				9.81
	Pyraclostrobin	81.1	77.1	76.0				1.35
	Sucralose	77.2	72.9	86.4				17.0
SM 2120 B	Color (true)						1.86	
	Color (true)						0.746	
	Color (true)						19.2	
SM 2320 B-97	Total Alkalinity	100					4.35	
SM 2540 C-97	TDS						9.84	
	TDS						0.755	
SM 4500 F-C-97	Fluoride	96.5	94.7	95.8				0.943
SM 5310 B-00	Organic Carbon	94.8	102	101				0.932
	Organic Carbon	97.2	112	102				6.60

Reference Method Descriptions

Method / DoH Cert #

Description

Associated Samples

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2000543, 2000544, 2000545, 2000546, 2000547, 2000548
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2000543, 2000544, 2000545, 2000546, 2000547, 2000548
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2000487, 2000488, 2000489, 2000490, 2000491, 2000492
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2000487, 2000488, 2000489, 2000490, 2000491, 2000492
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2000487, 2000488, 2000489, 2000490, 2000491, 2000492
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2000487, 2000488, 2000489, 2000490, 2000491, 2000492
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2000493, 2000494, 2000495, 2000496, 2000497, 2000498
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2000540, 2000541, 2000542
SM 2120 B / E31780	True Color measured at 450 nm	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2000487, 2000488, 2000489, 2000490, 2000491, 2000492

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	06/13/2018			06/13/2018 17:12	William L. Brown IV	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
EPA 200.7 Rev. 4.4	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/15/2018 15:10	Betina Topolski	2000543
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/15/2018 15:39	Betina Topolski	2000544
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/15/2018 15:44	Betina Topolski	2000545
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/15/2018 15:50	Betina Topolski	2000546
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/15/2018 15:56	Betina Topolski	2000547
EPA 200.8 Rev. 5.4	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/15/2018 16:02	Betina Topolski	2000548
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/18/2018 22:27	Allison Taylor	2000543
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/18/2018 22:37	Allison Taylor	2000544
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/18/2018 22:47	Allison Taylor	2000545
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/18/2018 22:56	Allison Taylor	2000546
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/18/2018 23:06	Allison Taylor	2000547
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/18/2018 23:15	Allison Taylor	2000548
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/21/2018 14:02	Allison Taylor	2000543
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/21/2018 14:36	Allison Taylor	2000544
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/21/2018 14:42	Allison Taylor	2000545
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/21/2018 14:49	Allison Taylor	2000546
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/21/2018 14:56	Allison Taylor	2000547
	06/13/2018	06/14/2018 16:50	Elliott D. Healy	06/26/2018 18:40	Robert K Palmer	2000548
	06/13/2018	06/25/2018 17:45	Elliott D. Healy	06/26/2018 18:02	Robert K Palmer	2000545
	06/13/2018	06/25/2018 17:45	Elliott D. Healy	06/26/2018 18:12	Robert K Palmer	2000546
	06/13/2018	06/25/2018 17:45	Elliott D. Healy	06/26/2018 18:40	Robert K Palmer	2000548
EPA 300.0 Rev. 2.1	06/13/2018			06/21/2018 21:37	Irina Carbone	2000485
	06/13/2018			06/21/2018 23:24	Irina Carbone	2000481
	06/13/2018			06/21/2018 23:36	Irina Carbone	2000482
	06/13/2018			06/21/2018 23:48	Irina Carbone	2000483
	06/13/2018			06/22/2018 00:00	Irina Carbone	2000484
	06/13/2018			06/22/2018 00:12	Irina Carbone	2000486
EPA 350.1 Rev. 2.0	06/13/2018			06/21/2018 10:42	Ping Hua	2000487
	06/13/2018			06/21/2018 10:43	Ping Hua	2000488
	06/13/2018			06/21/2018 10:45	Ping Hua	2000489
	06/13/2018			06/21/2018 10:46	Ping Hua	2000490
	06/13/2018			06/21/2018 10:54	Ping Hua	2000491
	06/13/2018			06/21/2018 10:55	Ping Hua	2000492
EPA 351.2 Rev. 2.0	06/13/2018	06/27/2018 15:30	Adrian Shelby	06/30/2018 19:25	Joseph Suarez	2000487
	06/13/2018	06/27/2018 15:30	Adrian Shelby	06/30/2018 19:26	Joseph Suarez	2000488
	06/13/2018	06/27/2018 15:30	Adrian Shelby	06/30/2018 19:28	Joseph Suarez	2000489
	06/13/2018	07/03/2018 10:40	Adrian Shelby	07/03/2018 18:49	Virginia P. Brown	2000490
	06/13/2018	07/03/2018 10:40	Adrian Shelby	07/03/2018 18:50	Virginia P. Brown	2000491

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 351.2 Rev. 2.0	06/13/2018	07/03/2018 10:40	Adrian Shelby	07/03/2018 18:52	Virginia P. Brown	2000492
EPA 353.2 Rev. 2.0	06/13/2018			06/20/2018 11:50	Beverly Y. Sanders	2000487
	06/13/2018			06/20/2018 11:51	Beverly Y. Sanders	2000488
	06/13/2018			06/20/2018 11:53	Beverly Y. Sanders	2000489
	06/13/2018			06/20/2018 11:54	Beverly Y. Sanders	2000490
	06/13/2018			06/20/2018 11:55	Beverly Y. Sanders	2000491
	06/13/2018			06/20/2018 11:56	Beverly Y. Sanders	2000492
EPA 365.1 Rev. 2.0	06/13/2018	06/20/2018 11:10	Sima Feizi	06/21/2018 10:54	Lipi Saha	2000487
	06/13/2018	06/20/2018 11:10	Sima Feizi	06/21/2018 10:56	Lipi Saha	2000489
	06/13/2018	06/20/2018 11:10	Sima Feizi	06/21/2018 10:57	Lipi Saha	2000490
	06/13/2018	06/20/2018 11:10	Sima Feizi	06/21/2018 10:58	Lipi Saha	2000491
	06/13/2018	06/20/2018 11:10	Sima Feizi	06/21/2018 10:59	Lipi Saha	2000492
	06/13/2018	06/20/2018 11:10	Sima Feizi	06/22/2018 10:38	Beverly Y. Sanders	2000488
EPA 365.1 Rev. 2.0 dissolved	06/13/2018			06/13/2018 16:18	Megan Treadwell	2000493
	06/13/2018			06/13/2018 16:19	Megan Treadwell	2000494
	06/13/2018			06/13/2018 16:20	Megan Treadwell	2000495
	06/13/2018			06/13/2018 16:26	Megan Treadwell	2000497
	06/13/2018			06/14/2018 14:54	Megan Treadwell	2000498
	06/13/2018			06/14/2018 15:48	Megan Treadwell	2000496
EPA 8321B	06/13/2018	06/18/2018 11:00	Juyoung Kim	06/18/2018 19:23	Mohammad Ghaffari	2000540
	06/13/2018	06/18/2018 11:00	Juyoung Kim	06/18/2018 20:01	Mohammad Ghaffari	2000541
	06/13/2018	06/18/2018 11:00	Juyoung Kim	06/18/2018 20:19	Mohammad Ghaffari	2000542
	06/13/2018	06/19/2018 10:00	Hoor Shaik	06/20/2018 02:51	Juyoung Kim	2000540
	06/13/2018	06/19/2018 10:00	Hoor Shaik	06/20/2018 03:26	Juyoung Kim	2000541
	06/13/2018	06/19/2018 10:00	Hoor Shaik	06/20/2018 04:00	Juyoung Kim	2000542
	06/13/2018	06/19/2018 10:00	Hoor Shaik	07/01/2018 09:02	Juyoung Kim	2000540
	06/13/2018	06/19/2018 10:00	Hoor Shaik	07/11/2018 18:59	Juyoung Kim	2000541
	06/13/2018	06/19/2018 10:00	Hoor Shaik	07/11/2018 19:34	Juyoung Kim	2000542
SM 2120 B	06/13/2018			06/13/2018 17:25	Tanya Welborn	2000481
	06/13/2018			06/13/2018 17:28	Tanya Welborn	2000485
	06/13/2018			06/13/2018 17:32	Tanya Welborn	2000486
	06/13/2018			06/13/2018 17:43	Tanya Welborn	2000482
	06/13/2018			06/13/2018 17:47	Tanya Welborn	2000483
	06/13/2018			06/13/2018 17:48	Tanya Welborn	2000484
SM 2320 B-97	06/13/2018			06/20/2018 00:36	Lauren Bottorf	2000481
	06/13/2018			06/20/2018 01:27	Lauren Bottorf	2000482
	06/13/2018			06/20/2018 01:37	Lauren Bottorf	2000483
	06/13/2018			06/20/2018 01:47	Lauren Bottorf	2000484
	06/13/2018			06/20/2018 01:57	Lauren Bottorf	2000485
	06/13/2018			06/20/2018 02:07	Lauren Bottorf	2000486

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 C-97	06/13/2018			06/15/2018 15:30	William L. Brown IV	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
SM 2540 D-97	06/13/2018			06/15/2018 15:30	William L. Brown IV	2000481, 2000482, 2000483, 2000484, 2000485, 2000486
SM 4500 F-C-97	06/13/2018			06/20/2018 00:36	Lauren Bottorf	2000481
	06/13/2018			06/20/2018 01:27	Lauren Bottorf	2000482
	06/13/2018			06/20/2018 01:37	Lauren Bottorf	2000483
	06/13/2018			06/20/2018 01:47	Lauren Bottorf	2000484
	06/13/2018			06/20/2018 01:57	Lauren Bottorf	2000485
SM 5310 B-00	06/13/2018			06/20/2018 02:07	Lauren Bottorf	2000486
	06/13/2018			06/18/2018 22:09	Megan Treadwell	2000487
	06/13/2018			06/18/2018 22:25	Megan Treadwell	2000488
	06/13/2018			06/18/2018 22:40	Megan Treadwell	2000489
	06/13/2018			06/18/2018 23:01	Megan Treadwell	2000490
	06/13/2018			06/18/2018 23:16	Megan Treadwell	2000491
	06/13/2018			06/19/2018 00:02	Megan Treadwell	2000492