

Chemical Analysis Report

WAS-SECT-2020-02-12-01

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

Event Description: **NWQI - Alligator Creek**
Request ID: **RQ-2020-02-10-09**
Customer: **WAS-SECT**
Project ID: **NWQI**

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Certified by: Colin Wright, Program Administrator

Date Certified: 06-MAR-2020 12:08

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

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program 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: Minnow Creek At Lovewood Rd

Collection Date/Time: 02/12/2020 09:26

Field ID: G3WA0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157150	EPA 180.1 Rev. 2.0	Turbidity	7.1	A	NTU	P378901	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P379510	
		Sulfate	1.6		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	81	A	PCU	P378906	
	SM 2320 B-2011	Total Alkalinity	6.6		mg CaCO3/L	P379405	
	SM 2540 C-2011	TDS	28		mg/L	P379594	
	SM 2540 D-2011	TSS	4	I	mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P379408	
2157152	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P379351	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P379113	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038		mg N/L	P379536	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P379847	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P378987	
2157154	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P378911	
2157190	EPA 8321B	2,4-D	0.0020	U	ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.012	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyrophen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.0053	I	ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0033	I	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCP	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157190	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	
2157198	EPA 200.7 Rev. 4.4	Barium	18.5		ug/L	P378879	
		Calcium	3.60		mg/L	P378879	
		Iron	530		ug/L	P378879	
		Magnesium	1.23		mg/L	P378879	
		Potassium	1.6		mg/L	P378879	
		Sodium	2.5		mg/L	P378879	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P378879	
		Aluminum	308		ug/L	P378879	
		Antimony	0.069	I	ug/L	P378879	
		Arsenic	0.45		ug/L	P378879	
		Boron**	15.2		ug/L	P378879	
		Cadmium	0.020	U	ug/L	P378879	
		Chromium	0.45	I	ug/L	P378879	
		Copper	0.92		ug/L	P378879	
		Lead	0.31	I	ug/L	P378879	
		Nickel	0.50	U	ug/L	P378879	
		Selenium	0.20	U	ug/L	P378879	
		Silver	0.010	U	ug/L	P378879	
		Thallium	0.10	U	ug/L	P378879	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Alligator Creek Upstream of SR 273

Collection Date/Time: 02/12/2020 10:00

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157151	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P378901	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P379510	
		Sulfate	1.3		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	140		PCU	P378906	
	SM 2320 B-2011	Total Alkalinity	6.1		mg CaCO3/L	P379405	
	SM 2540 C-2011	TDS	47		mg/L	P379594	
	SM 2540 D-2011	TSS	10		mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P379408	
2157153	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P379352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P379113	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P379536	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P379847	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P378987	
2157155	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P378911	
2157191	EPA 8321B	2,4-D	0.020		ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.012	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyropen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.022		ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0053	I	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCP	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157191	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	
2157199	EPA 200.7 Rev. 4.4	Barium	16.4		ug/L	P378879	
		Calcium	3.32		mg/L	P378879	
		Iron	860		ug/L	P378879	
		Magnesium	1.21		mg/L	P378879	
		Potassium	2.0		mg/L	P378879	
		Sodium	2.4		mg/L	P378879	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P378879	
		Aluminum	474		ug/L	P378879	
		Antimony	0.064	I	ug/L	P378879	
		Arsenic	0.58		ug/L	P378879	
		Boron**	14.4		ug/L	P378879	
		Cadmium	0.020	U	ug/L	P378879	
		Chromium	0.58	I	ug/L	P378879	
		Copper	1.02		ug/L	P378879	
		Lead	0.56		ug/L	P378879	
		Nickel	0.50	U	ug/L	P378879	
		Selenium	0.20	U	ug/L	P378879	
		Silver	0.010	U	ug/L	P378879	
		Thallium	0.10	U	ug/L	P378879	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 02/27/2020.

Sample Location: Alligator Creek upstream of Bentley Rd.

Collection Date/Time: 02/12/2020 10:37

Field ID: G3WA0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157156	EPA 180.1 Rev. 2.0	Turbidity	18		NTU	P378901	
	EPA 300.0 Rev. 2.1	Chloride	5.8		mg Cl/L	P379510	
		Sulfate	1.9		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	44	A	PCU	P378907	
	SM 2320 B-2011	Total Alkalinity	7.8		mg CaCO3/L	P379405	
	SM 2540 C-2011	TDS	50		mg/L	P379594	
	SM 2540 D-2011	TSS	6	I	mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P379408	
2157162	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P379352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P379475	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P379537	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P379501	
	SM 5310 B-2011	Organic Carbon	9.1		mg C/L	P378987	
2157168	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P378911	
2157192	EPA 8321B	2,4-D	0.0020	U	ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.031	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyropen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.0040	U	ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0023	I	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCPD	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157192	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Little Alligator Creek at SR 273

Collection Date/Time: 02/12/2020 11:11

Field ID: G3WA0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157157	EPA 180.1 Rev. 2.0	Turbidity	22		NTU	P378901	
	EPA 300.0 Rev. 2.1	Chloride	5.7		mg Cl/L	P379510	
		Sulfate	1.9		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	45		PCU	P378907	
	SM 2320 B-2011	Total Alkalinity	9.6		mg CaCO3/L	P379405	
	SM 2540 C-2011	TDS	46		mg/L	P379594	
	SM 2540 D-2011	TSS	8	I	mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.036	I	mg F/L	P379408	
2157163	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P379352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P379475	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P379537	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P379501	
	SM 5310 B-2011	Organic Carbon	9.9		mg C/L	P378987	
2157169	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P378911	
2157193	EPA 8321B	2,4-D	0.0020	U	ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.023	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyrophen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.0040	U	ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0025	I	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCP	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157193	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Scurlock Creek At Pilgrim Rd

Collection Date/Time: 02/12/2020 11:49

Field ID: G3WA0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157158	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P378901	
	EPA 300.0 Rev. 2.1	Chloride	3.6		mg Cl/L	P379510	
		Sulfate	1.1		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	78		PCU	P378906	
	SM 2320 B-2011	Total Alkalinity	4.2		mg CaCO3/L	P379406	
	SM 2540 C-2011	TDS	44		mg/L	P379594	
	SM 2540 D-2011	TSS	3	I	mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P379409	
2157164	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P379352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P379475	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P379537	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P379501	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P378987	
2157170	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P378911	
2157194	EPA 8321B	2,4-D	0.0020	U	ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.020	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyropen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.032		ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0020	U	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCPD	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157194	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Pine Barn Creek at Woodrest Rd

Collection Date/Time: 02/12/2020 12:16

Field ID: G3WA0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157159	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P378902	
	EPA 300.0 Rev. 2.1	Chloride	4.3		mg Cl/L	P379510	
		Sulfate	0.68		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	110		PCU	P378906	
	SM 2320 B-2011	Total Alkalinity	7.0		mg CaCO3/L	P379406	
	SM 2540 C-2011	TDS	31		mg/L	P379594	
	SM 2540 D-2011	TSS	2	I	mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P379409	
2157165	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P379352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P379475	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P379537	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P379501	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P378988	
2157171	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P378911	
2157195	EPA 8321B	2,4-D	0.0037	I	ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.012	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyropen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0036	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.0040	U	ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0020	U	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCP	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157195	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Unnamed Creek at Woodrest Rd

Collection Date/Time: 02/12/2020 12:53

Field ID: G3WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157160	EPA 180.1 Rev. 2.0	Turbidity	9.1		NTU	P378902	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P379510	
		Sulfate	1.4		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	140		PCU	P378906	
	SM 2320 B-2011	Total Alkalinity	2.8		mg CaCO3/L	P379406	
	SM 2540 C-2011	TDS	50		mg/L	P379594	
	SM 2540 D-2011	TSS	7	I	mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P379409	
2157166	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P379352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P379475	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.080		mg N/L	P379537	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P379501	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P378988	
2157172	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P378911	
2157196	EPA 8321B	2,4-D	0.0052	I	ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.017	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyrophen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.031		ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0034	I	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCP	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157196	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Sample Location: Unnamed Creek at Palmview Rd

Collection Date/Time: 02/12/2020 13:19

Field ID: G3WA0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157161	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P378902	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P379510	
		Sulfate	2.5		mg SO4/L	P379512	
	SM 2120 B-2011	Color (true)	100		PCU	P378906	
	SM 2320 B-2011	Total Alkalinity	3.5		mg CaCO3/L	P379406	
	SM 2540 C-2011	TDS	34		mg/L	P379594	
	SM 2540 D-2011	TSS	5	I	mg/L	P379195	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P379409	
2157167	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P379352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P379475	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P379537	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P379501	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P378988	
2157173	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P378911	
2157197	EPA 8321B	2,4-D	0.0020	U	ug/L	P378897	
		Acesulfame K**	0.10	U	ug/L	P378784	MS
		AMPA**	0.10	U	ug/L	P378784	
		Sucralose**	0.019	I	ug/L	P378784	
		Acetaminophen**	0.0080	U	ug/L	P378897	
		Acetamiprid**	0.0020	U	ug/L	P378897	
		Endothall**	0.25	U	ug/L	P378784	
		Glufosinate**	0.10	U	ug/L	P378784	
		Glyphosate**	0.10	U	ug/L	P378784	
		Afidopyropen**	0.0020	UJ	ug/L	P378897	
		Bentazon	8.0E-04	U	ug/L	P378897	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378897	
		Carbamazepine**	8.0E-04	U	ug/L	P378897	
		Clothianidin**	0.0020	U	ug/L	P378897	
		Dinotefuran**	0.0020	U	ug/L	P378897	
		Diuron	0.0020	U	ug/L	P378897	
		Fenuron	0.016	U	ug/L	P378897	
		Fluridone**	8.0E-04	U	ug/L	P378897	
		Imazapyr**	0.0040	U	ug/L	P378897	
		Hydrocodone**	0.0020	U	ug/L	P378897	
		Ibuprofen**	0.020	U	ug/L	P378897	
		Imidacloprid	0.0020	U	ug/L	P378897	
		Linuron	0.0040	U	ug/L	P378897	
		Mandestrobin**	0.0020	UJ	ug/L	P378897	
		MCP	0.0020	U	ug/L	P378897	
		Naproxen**	0.0080	U	ug/L	P378897	
		Primidone**	0.0040	U	ug/L	P378897	
		Pyraclostrobin**	0.0020	U	ug/L	P378897	
		Thiamethoxam**	0.0020	U	ug/L	P378897	

Field ID: G3WA0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2157197	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378897	
		Triclopyr**	0.0040	U	ug/L	P378897	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P378901

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P378902

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P378879

Component	Result	Code	Units
Barium	1.0	U	ug/L
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: P378879

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P379510

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P379512

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: P379351

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379352

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379113

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379475

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379536

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379537

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379501

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379847

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P378911

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P378784

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P378897

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011

Batch ID: P378906

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011

Batch ID: P378907

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P379405

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

Reference Method: SM 2320 B-2011
Batch ID: P379406

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

Reference Method: SM 2540 C-2011
Batch ID: P379594

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P379195

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P379408

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P379409

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P378987

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

Reference Method: SM 5310 B-2011
Batch ID: P378988

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: P378879

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	103		P	85 - 115
Calcium	105		P	85 - 115
Iron	107		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	104		P	85 - 115
Sodium	108		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P378879

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	106		P	85 - 115
Antimony	106		P	85 - 115
Arsenic	106		P	85 - 115
Boron	104		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	97.1		P	85 - 115
Copper	107		P	85 - 115
Lead	96.4		P	85 - 115
Nickel	104		P	85 - 115
Selenium	104		P	85 - 115
Silver	109		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P379510

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P379512

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P379351

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P379352

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379113

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379475

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379536

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379537

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379501

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379847

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: P378911

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

Reference Method: EPA 8321B
Batch ID: P378784

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	136		P	40 - 150
AMPA	121		P	40 - 150
Endothall	103		P	40 - 150
Glufosinate	128		P	40 - 150
Glyphosate	136		P	40 - 140
Sucralose	92.3		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P378897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	142		P	30 - 160
Acetaminophen	75.2		P	30 - 160
Acetamiprid	87.9		P	30 - 160
Afidopyropen	89.4		P	30 - 160
Bentazon	82.7		P	30 - 160
Benzovindiflupyr	76.7		P	30 - 160
Carbamazepine	91.3		P	30 - 160
Clothianidin	74.9		P	30 - 160
Dinotefuran	82.5		P	30 - 160
Diuron	73.8		P	30 - 160
Fenuron	104		P	30 - 160
Fluridone	86.7		P	30 - 160
Hydrocodone	76.0		P	30 - 160
Ibuprofen	93.9		P	30 - 160
Imazapyr	95.5		P	30 - 160
Imidacloprid	94.3		P	30 - 160
Linuron	69.4		P	30 - 160
Mandestrobin	88.5		P	30 - 160
MCPP	149		P	30 - 160
Naproxen	73.2		P	30 - 160
Primidone	95.1		P	30 - 160
Pyraclostrobin	79.9		P	30 - 160
Thiamethoxam	82.5		P	30 - 160
Tolfenpyrad	46.2		P	30 - 160
Triclopyr	117		P	30 - 160

Reference Method: SM 2120 B-2011

Batch ID: P378906

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2120 B-2011

Batch ID: P378907

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

Reference Method: SM 2320 B-2011

Batch ID: P379405

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 2320 B-2011

Batch ID: P379406

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P379408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P379409

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P378987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P378988

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

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P378879

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157042	Barium	103		P	80 - 120
2157042	Calcium	100		P	80 - 120
2157042	Iron	107		P	80 - 120
2157042	Magnesium	99.9		P	80 - 120
2157042	Potassium	102		P	80 - 120
2157042	Sodium	101		P	80 - 120
2157042	Zinc	98.5		P	80 - 120
2157342	Barium	106	105	P/P	80 - 120
2157342	Calcium	106	105	P/P	80 - 120
2157342	Iron	105	106	P/P	80 - 120
2157342	Magnesium	106	105	P/P	80 - 120
2157342	Potassium	101	102	P/P	80 - 120
2157342	Sodium	103	102	P/P	80 - 120
2157342	Zinc	103	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P378879

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157042	Aluminum	105		P	80 - 120
2157042	Antimony	107		P	80 - 120
2157042	Arsenic	105		P	80 - 120
2157042	Boron	105		P	80 - 120
2157042	Cadmium	105		P	80 - 120
2157042	Chromium	99.0		P	80 - 120
2157042	Copper	106		P	80 - 120
2157042	Lead	96.4		P	80 - 120
2157042	Nickel	102		P	80 - 120
2157042	Selenium	104		P	80 - 120
2157042	Silver	109		P	80 - 120
2157042	Thallium	103		P	80 - 120
2157342	Aluminum	102	104	P/P	80 - 120
2157342	Antimony	105	104	P/P	80 - 120
2157342	Arsenic	104	103	P/P	80 - 120
2157342	Boron	101	102	P/P	80 - 120
2157342	Cadmium	105	104	P/P	80 - 120
2157342	Chromium	96.7	96.1	P/P	80 - 120
2157342	Copper	109	113	P/P	80 - 120
2157342	Lead	96.1	94.8	P/P	80 - 120
2157342	Nickel	106	106	P/P	80 - 120
2157342	Selenium	103	102	P/P	80 - 120
2157342	Silver	108	107	P/P	80 - 120
2157342	Thallium	104	104	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P379510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156692	Chloride	99.8		P	90 - 110
2157030	Chloride	97.6		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156692	Sulfate	100		P	90 - 110
2157030	Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156995	Ammonia-N	98.6	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157153	Ammonia-N	98.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379113

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156995	Kjeldahl Nitrogen	98.6	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379475

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157212	Kjeldahl Nitrogen	117	113	F/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156967	NO2NO3-N	98.2	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379537

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157162	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379501

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157162	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156996	Total-P	104	106	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P378911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157154	O-Phosphate-P	94.5	95.1	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P378784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156461	Acesulfame K	28.6	28.2	F/F	40 - 150
2156461	AMPA	109	108	P/P	40 - 150
2156461	Endothall	102	103	P/P	40 - 150
2156461	Glufosinate	119	119	P/P	40 - 150
2156461	Glyphosate	129	137	P/P	40 - 140
2156461	Sucralose	48.8	62.2	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P378897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156805	2,4-D	129	139	P/P	30 - 160
2156805	Acetaminophen	91.9	99.8	P/P	30 - 160
2156805	Acetamiprid	80.4	80.3	P/P	30 - 160
2156805	Afidopyropen	91.1	96.4	P/P	30 - 160
2156805	Bentazon	54.7	56.7	P/P	30 - 160
2156805	Benzovindiflupyr	66.1	65.6	P/P	30 - 160
2156805	Carbamazepine	66.1	75.3	P/P	30 - 160
2156805	Clothianidin	86.5	88.4	P/P	30 - 160
2156805	Dinotefuran	118	128	P/P	30 - 160
2156805	Diuron	59.9	53.9	P/P	30 - 160
2156805	Fenuron	86.0	82.4	P/P	30 - 160
2156805	Fluridone	79.1	80.2	P/P	30 - 160
2156805	Hydrocodone	94.9	103	P/P	30 - 160
2156805	Ibuprofen	82.2	76.6	P/P	30 - 160
2156805	Imazapyr	80.2	88.3	P/P	30 - 160
2156805	Imidacloprid	152	129	P/P	30 - 160
2156805	Linuron	58.3	57.7	P/P	30 - 160
2156805	Mandestrobin	75.9	75.1	P/P	30 - 160
2156805	MCP	135	148	P/P	30 - 160
2156805	Naproxen	75.0	67.8	P/P	30 - 160
2156805	Primidone	90.7	86.7	P/P	30 - 160
2156805	Pyraclostrobin	57.2	66.4	P/P	30 - 160
2156805	Thiamethoxam	130	134	P/P	30 - 160
2156805	Tolfenpyrad	53.3	55.4	P/P	30 - 160
2156805	Triclopyr	115	120	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P379408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157223	Fluoride	98.1	99.9	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P379409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157235	Fluoride	97.8	98.9	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P378987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2156962	Organic Carbon	103		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P378988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2157211	Organic Carbon	99.4	99.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P378901

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157150	Turbidity	14.3	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P378902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157208	Turbidity	3.31	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157342	Barium	1.69	Spike	P	0 - 20
2157342	Calcium	0.645	Spike	P	0 - 20
2157342	Iron	1.07	Spike	P	0 - 20
2157342	Magnesium	0.279	Spike	P	0 - 20
2157342	Potassium	0.596	Spike	P	0 - 20
2157342	Sodium	0.320	Spike	P	0 - 20
2157342	Zinc	2.34	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157342	Aluminum	1.70	Spike	P	0 - 20
2157342	Antimony	1.07	Spike	P	0 - 20
2157342	Arsenic	0.589	Spike	P	0 - 20
2157342	Boron	0.730	Spike	P	0 - 20
2157342	Cadmium	1.26	Spike	P	0 - 20
2157342	Chromium	0.619	Spike	P	0 - 20
2157342	Copper	3.75	Spike	P	0 - 20
2157342	Lead	1.36	Spike	P	0 - 20
2157342	Nickel	0.445	Spike	P	0 - 20
2157342	Selenium	1.32	Spike	P	0 - 20
2157342	Silver	0.128	Spike	P	0 - 20
2157342	Thallium	0.530	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157030	Chloride	0.433	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157030	Sulfate	0.0216	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2156995	Ammonia-N	0.512	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157153	Ammonia-N	1.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2156995	Kjeldahl Nitrogen	0.195	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379475

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157212	Kjeldahl Nitrogen	2.92	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2156967	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P379537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157162	NO2NO3-N	0.310	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379501

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157162	Total-P	0.951	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P379847

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2156996	Total-P	1.82	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P378911

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157154	O-Phosphate-P	0.602	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P378784

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2156461	Acesulfame K	1.46	Spike	P	0 - 30
2156461	AMPA	1.19	Spike	P	0 - 30
2156461	Endothall	1.69	Spike	P	0 - 30
2156461	Glufosinate	0.0647	Spike	P	0 - 30
2156461	Glyphosate	6.02	Spike	P	0 - 30
2156461	Sucralose	21.8	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P378897

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2156805	2,4-D	6.90	Spike	P	0 - 30
2156805	Acetaminophen	8.28	Spike	P	0 - 30
2156805	Acetamiprid	0.213	Spike	P	0 - 30
2156805	Afidopyropen	5.69	Spike	P	0 - 30
2156805	Bentazon	2.56	Spike	P	0 - 30
2156805	Benzovindiflupyr	0.886	Spike	P	0 - 30
2156805	Carbamazepine	13.1	Spike	P	0 - 30
2156805	Clothianidin	2.14	Spike	P	0 - 30
2156805	Dinotefuran	8.05	Spike	P	0 - 30
2156805	Diuron	10.6	Spike	P	0 - 30
2156805	Fenuron	4.23	Spike	P	0 - 30
2156805	Fluridone	1.36	Spike	P	0 - 30
2156805	Hydrocodone	7.89	Spike	P	0 - 30
2156805	Ibuprofen	7.00	Spike	P	0 - 30
2156805	Imazapyr	9.66	Spike	P	0 - 30
2156805	Imidacloprid	16.8	Spike	P	0 - 30
2156805	Linuron	1.03	Spike	P	0 - 30
2156805	Mandestrobin	1.08	Spike	P	0 - 30
2156805	MCPP	8.92	Spike	P	0 - 30
2156805	Naproxen	10.1	Spike	P	0 - 30
2156805	Primidone	4.52	Spike	P	0 - 30
2156805	Pyraclostrobin	14.8	Spike	P	0 - 30
2156805	Thiamethoxam	3.30	Spike	P	0 - 30
2156805	Tolfenpyrad	3.88	Spike	P	0 - 30
2156805	Triclopyr	3.87	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P378906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157150	Color (true)	0.368	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P378907

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157156	Color (true)	7.97	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P379405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157223	Total Alkalinity	0.373	Sample	P	0 - 2.8

Reference Method: SM 2320 B-2011
Batch ID: P379406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157235	Total Alkalinity	0.763	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P379594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157030	TDS	3.74	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P379408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157223	Fluoride	1.48	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-2011
Batch ID: P379409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157235	Fluoride	1.00	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P378987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2156962	Organic Carbon	0.955	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P378988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2157211	Organic Carbon	0.481	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2157190

Field Sample ID: G3WA0008

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	107	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.7	P	30 - 160
EPA 8321B	Diuron-d6	73.9	P	30 - 160
EPA 8321B	Endothall-d6	68.6	P	30 - 160
EPA 8321B	Endothall-d6	68.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	98.1	P	30 - 160
EPA 8321B	Primidone-d5	87.5	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2157191

Field Sample ID: G3WA0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.0	P	30 - 160
EPA 8321B	Diuron-d6	69.4	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.3	P	30 - 160
EPA 8321B	Primidone-d5	93.2	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Lab Sample ID: 2157192

Field Sample ID: G3WA0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.4	P	30 - 160
EPA 8321B	Diuron-d6	62.5	P	30 - 160
EPA 8321B	Endothall-d6	93.1	P	30 - 160
EPA 8321B	Endothall-d6	93.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.7	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Lab Sample ID: 2157193

Field Sample ID: G3WA0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2157193

Field Sample ID: G3WA0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	46.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.7	P	30 - 160
EPA 8321B	Diuron-d6	84.5	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.1	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2157194

Field Sample ID: G3WA0009

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.6	P	30 - 160
EPA 8321B	Diuron-d6	69.8	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	92.1	P	30 - 160
EPA 8321B	Primidone-d5	84.1	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	30 - 160
EPA 8321B	Sucralose-d6	118	P	30 - 160

Lab Sample ID: 2157195

Field Sample ID: G3WA0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	115	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.0	P	30 - 160
EPA 8321B	Diuron-d6	67.5	P	30 - 160
EPA 8321B	Endothall-d6	126	P	30 - 160
EPA 8321B	Endothall-d6	126	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.8	P	30 - 160
EPA 8321B	Primidone-d5	72.6	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	30 - 160

Lab Sample ID: 2157196

Field Sample ID: G3WA0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	115	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2157196

Field Sample ID: G3WA0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	80.9	P	30 - 160
EPA 8321B	Diuron-d6	66.6	P	30 - 160
EPA 8321B	Endothall-d6	124	P	30 - 160
EPA 8321B	Endothall-d6	124	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	99.9	P	30 - 160
EPA 8321B	Primidone-d5	72.1	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	30 - 160

Lab Sample ID: 2157197

Field Sample ID: G3WA0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	99.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.8	P	30 - 160
EPA 8321B	Diuron-d6	56.7	P	30 - 160
EPA 8321B	Endothall-d6	97.5	P	30 - 160
EPA 8321B	Endothall-d6	97.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.7	P	30 - 160
EPA 8321B	Primidone-d5	65.1	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A97527

Included Lab Sample IDs: 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115
Color (true)	99.9	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97528

Included Lab Sample IDs: 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97529

Included Lab Sample IDs: 2157154, 2157155, 2157168, 2157169, 2157170, 2157171, 2157172, 2157173

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	97.9	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97558

Included Lab Sample IDs: 2157198, 2157199

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

Reference Method: SM 5310 B-2011

Run ID: A97559

Included Lab Sample IDs: 2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	102	P/P	90 - 110
Organic Carbon	102	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97596

Included Lab Sample IDs: 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.4	99.3	P/P	50 - 150
2,4-D	99.3	90.7	P/P	50 - 150
Acetaminophen	103	114	P/P	60 - 160
Acetaminophen	130	103	P/P	60 - 160
Acetamiprid	112	115	P/P	50 - 150
Acetamiprid	115	111	P/P	50 - 150
Afidopyropen	106	106	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97596

Included Lab Sample IDs: 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	98.3	106	P/P	50 - 150
Bentazon	83.5	74.2	P/P	50 - 160
Bentazon	84.2	83.5	P/P	50 - 160
Benzovindiflupyr	106	105	P/P	50 - 150
Benzovindiflupyr	108	106	P/P	50 - 150
Carbamazepine	105	88.5	P/P	60 - 150
Carbamazepine	88.5	90.0	P/P	60 - 150
Clothianidin	101	90.5	P/P	60 - 150
Clothianidin	90.5	102	P/P	60 - 150
Dinotefuran	111	106	P/P	50 - 150
Dinotefuran	113	111	P/P	50 - 150
Diuron	110	96.0	P/P	60 - 150
Diuron	120	110	P/P	60 - 150
Fenuron	107	113	P/P	60 - 150
Fenuron	116	107	P/P	60 - 150
Fluridone	109	105	P/P	60 - 160
Fluridone	110	109	P/P	60 - 160
Hydrocodone	108	105	P/P	60 - 150
Hydrocodone	117	108	P/P	60 - 150
Ibuprofen	102	85.4	P/P	50 - 160
Ibuprofen	85.4	98.5	P/P	50 - 160
Imazapyr	103	109	P/P	50 - 150
Imazapyr	90.3	103	P/P	50 - 150
Imidacloprid	107	110	P/P	60 - 150
Imidacloprid	110	101	P/P	60 - 150
Linuron	106	112	P/P	60 - 150
Linuron	111	106	P/P	60 - 150
Mandestrobin	104	104	P/P	50 - 150
Mandestrobin	106	104	P/P	50 - 150
MCPP	88.4	91.4	P/P	50 - 150
MCPP	92.1	88.4	P/P	50 - 150
Naproxen	136	94.5	P/P	50 - 160
Naproxen	85.2	136	P/P	50 - 160
Primidone	96.9	99.2	P/P	60 - 150
Primidone	99.2	110	P/P	60 - 150
Pyraclostrobin	100	106	P/P	60 - 150
Pyraclostrobin	110	100	P/P	60 - 150
Thiamethoxam	111	96.3	P/P	50 - 150
Thiamethoxam	120	111	P/P	50 - 150
Tolfenpyrad	92.9	102	P/P	60 - 150
Tolfenpyrad	95.4	92.9	P/P	60 - 150
Triclopyr	78.8	85.1	P/P	50 - 150
Triclopyr	96.8	78.8	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A97610

Included Lab Sample IDs: 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	108	115	P/P	60 - 160
AMPA	126	108	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97610

Included Lab Sample IDs: 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glufosinate	134	135	P/P	60 - 160
Glufosinate	135	135	P/P	60 - 160
Glyphosate	131	159	P/P	60 - 160
Glyphosate	145	131	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A97613

Included Lab Sample IDs: 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	140	130	P/P	60 - 160
Acesulfame K	145	140	P/P	60 - 160
Endothall	104	110	P/P	60 - 160
Endothall	110	118	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97690

Included Lab Sample IDs: 2157152, 2157153

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	109	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97694

Included Lab Sample IDs: 2157198, 2157199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.4	101	P/P	90 - 110
Antimony	99.5	101	P/P	90 - 110
Arsenic	99.8	98.6	P/P	90 - 110
Boron	108	107	P/P	90 - 110
Cadmium	98.1	98.9	P/P	90 - 110
Copper	100	98.2	P/P	90 - 110
Nickel	97.7	96.6	P/P	90 - 110
Selenium	97.8	97.7	P/P	90 - 110
Silver	103	103	P/P	90 - 110
Thallium	98.5	97.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97714

Included Lab Sample IDs: 2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	99.2	99.5	P/P	90 - 110
Ammonia-N	99.6	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A97738

Included Lab Sample IDs: 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	103	P/P	90 - 110
Total Alkalinity	103	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A97738

Included Lab Sample IDs: 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97743

Included Lab Sample IDs: 2157198, 2157199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	93.4	92.9	P/P	90 - 110
Lead	93.8	93.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97764

Included Lab Sample IDs: 2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A97771

Included Lab Sample IDs: 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	99.4	P/P	90 - 110
Chloride	99.4	99.3	P/P	90 - 110
Sulfate	98.7	99.2	P/P	90 - 110
Sulfate	99.2	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97798

Included Lab Sample IDs: 2157162, 2157163, 2157164, 2157165, 2157166, 2157167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97859

Included Lab Sample IDs: 2157162, 2157163

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97860

Included Lab Sample IDs: 2157164, 2157165, 2157166, 2157167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97906

Included Lab Sample IDs: 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	111	106	P/P	60 - 160
Sucralose	147	119	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97913

Included Lab Sample IDs: 2157153

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97933

Included Lab Sample IDs: 2157152

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.2	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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					14.3	
	Turbidity					3.31	
EPA 200.7 Rev. 4.4	Barium	103	103	106	105		1.69
	Calcium	105	100	106	105		0.645
	Iron	107	107	105	106		1.07
	Magnesium	107	99.9	106	105		0.279
	Potassium	104	102	101	102		0.596
	Sodium	108	101	103	102		0.320
	Zinc	100	98.5	103	101		2.34
EPA 200.8 Rev. 5.4	Aluminum	106	102	104	105		1.70
	Antimony	106	105	104	107		1.07
	Arsenic	106	104	103	105		0.589
	Boron	104	101	102	105		0.730
	Cadmium	104	105	104	105		1.26
	Chromium	97.1	96.7	96.1	99.0		0.619
	Copper	107	109	113	106		3.75
	Lead	96.4	96.1	94.8	96.4		1.36
	Nickel	104	106	106	102		0.445
	Selenium	104	103	102	104		1.32
	Silver	109	109	108	107		0.128
	Thallium	104	104	104	103		0.530
EPA 300.0 Rev. 2.1	Chloride	99.9	97.6	99.8		0.433	
	Sulfate	100	97.2	100		0.0216	
EPA 350.1 Rev. 2.0	Ammonia-N	96.0	98.6	99.2			0.512
	Ammonia-N	98.3	98.2	101			1.46
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	98.6	98.4			0.195
	Kjeldahl Nitrogen	103	117	113			2.92
EPA 353.2 Rev. 2.0	NO2NO3-N	100	98.2	97.2			0.990
	NO2NO3-N	100	99.5	99.0			0.310
EPA 365.1 Rev. 2.0	Total-P	103	106	105			0.951
	Total-P	103	104	106			1.82
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	94.5	95.1			0.602
EPA 8321B	2,4-D	142	129	139			6.90
	Acesulfame K	136	28.6	28.2			1.46
	Acetaminophen	75.2	91.9	99.8			8.28
	Acetamiprid	87.9	80.4	80.3			0.213
	Afidopyropen	89.4	91.1	96.4			5.69
	AMPA	121	109	108			1.19
	Bentazon	82.7	54.7	56.7			2.56
	Benzovindiflupyr	76.7	66.1	65.6			0.886
	Carbamazepine	91.3	66.1	75.3			13.1
	Clothianidin	74.9	86.5	88.4			2.14
	Dinotefuran	82.5	118	128			8.05
	Diuron	73.8	59.9	53.9			10.6
	Endothall	103	102	103			1.69
	Fenuron	104	86.0	82.4			4.23
	Fluridone	86.7	79.1	80.2			1.36
	Glufosinate	128	119	119			0.0647
	Glyphosate	136	129	137			6.02
	Hydrocodone	76.0	94.9	103			7.89
	Ibuprofen	93.9	82.2	76.6			7.00
	Imazapyr	95.5	80.2	88.3			9.66
	Imidacloprid	94.3	152	129			16.8
	Linuron	69.4	58.3	57.7			1.03

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Mandestrobin	88.5	75.9	75.1		1.08
	MCCP	149	135	148		8.92
	Naproxen	73.2	75.0	67.8		10.1
	Primidone	95.1	90.7	86.7		4.52
	Pyraclostrobin	79.9	57.2	66.4		14.8
	Sucralose	92.3	48.8	62.2		21.8
	Thiamethoxam	82.5	130	134		3.30
	Tolfenpyrad	46.2	53.3	55.4		3.88
	Triclopyr	117	115	120		3.87
SM 2120 B-2011	Color (true)	101			0.368	
	Color (true)	100			7.97	
SM 2320 B-2011	Total Alkalinity	104			0.373	
	Total Alkalinity	104			0.763	
SM 2540 C-2011	TDS				3.74	
SM 4500 F-C-2011	Fluoride	97.9	98.1	99.9		1.48
	Fluoride	99.3	97.8	98.9		1.00
SM 5310 B-2011	Organic Carbon	98.1	103			0.955
	Organic Carbon	101	99.4	99.9		0.481

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161 2157198, 2157199
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2157198, 2157199
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2157198, 2157199
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161 2157158, 2157159, 2157160, 2157161
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161 2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167 2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167 2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167 2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167 2157154, 2157155, 2157168, 2157169, 2157170, 2157171, 2157172, 2157173
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2157154, 2157155, 2157168, 2157169, 2157170, 2157171, 2157172, 2157173 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197 2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2157190, 2157191, 2157192, 2157193, 2157194, 2157195, 2157196, 2157197 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161 2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2157152, 2157153, 2157162, 2157163, 2157164, 2157165, 2157166, 2157167

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	02/12/2020			02/13/2020 16:14	Yen Ta	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
EPA 200.7 Rev. 4.4	02/12/2020	02/13/2020 14:45	Elliott D. Healy	02/14/2020 23:19	Betina Topolski	2157198
	02/12/2020	02/13/2020 14:45	Elliott D. Healy	02/14/2020 23:25	Betina Topolski	2157199
EPA 200.8 Rev. 5.4	02/12/2020	02/13/2020 14:45	Elliott D. Healy	02/20/2020 16:08	Alexander Thompson	2157198
	02/12/2020	02/13/2020 14:45	Elliott D. Healy	02/20/2020 16:17	Alexander Thompson	2157199
	02/12/2020	02/13/2020 14:45	Elliott D. Healy	02/21/2020 15:14	Alexander Thompson	2157198
	02/12/2020	02/13/2020 14:45	Elliott D. Healy	02/21/2020 15:19	Alexander Thompson	2157199
EPA 300.0 Rev. 2.1	02/12/2020			02/24/2020 22:37	Lipi Saha	2157150
	02/12/2020			02/24/2020 22:49	Lipi Saha	2157151
	02/12/2020			02/24/2020 23:01	Lipi Saha	2157156
	02/12/2020			02/24/2020 23:13	Lipi Saha	2157157
	02/12/2020			02/24/2020 23:49	Lipi Saha	2157158
	02/12/2020			02/25/2020 00:01	Lipi Saha	2157159
	02/12/2020			02/25/2020 00:14	Lipi Saha	2157160
	02/12/2020			02/25/2020 00:26	Lipi Saha	2157161
EPA 350.1 Rev. 2.0	02/12/2020			02/19/2020 11:41	Ping Hua	2157153
	02/12/2020			02/19/2020 11:45	Ping Hua	2157162
	02/12/2020			02/19/2020 11:47	Ping Hua	2157163
	02/12/2020			02/19/2020 11:48	Ping Hua	2157164
	02/12/2020			02/19/2020 11:50	Ping Hua	2157165
	02/12/2020			02/19/2020 11:51	Ping Hua	2157166
	02/12/2020			02/19/2020 12:03	Ping Hua	2157167
	02/12/2020			02/19/2020 13:44	Ping Hua	2157152
EPA 351.2 Rev. 2.0	02/12/2020	02/18/2020 11:25	Sima Feizi	02/20/2020 17:04	Jhamieka S. Greenwood	2157152
	02/12/2020	02/18/2020 11:25	Sima Feizi	02/20/2020 17:05	Jhamieka S. Greenwood	2157153
	02/12/2020	02/24/2020 14:25	Elliott Rodriguez	02/25/2020 11:53	Jhamieka S. Greenwood	2157162
	02/12/2020	02/24/2020 14:25	Elliott Rodriguez	02/25/2020 11:55	Jhamieka S. Greenwood	2157163
	02/12/2020	02/24/2020 14:25	Elliott Rodriguez	02/25/2020 11:56	Jhamieka S. Greenwood	2157164
	02/12/2020	02/24/2020 14:25	Elliott Rodriguez	02/25/2020 11:58	Jhamieka S. Greenwood	2157165
	02/12/2020	02/24/2020 14:25	Elliott Rodriguez	02/25/2020 12:00	Jhamieka S. Greenwood	2157166
	02/12/2020	02/24/2020 14:25	Elliott Rodriguez	02/25/2020 12:01	Jhamieka S. Greenwood	2157167
EPA 353.2 Rev. 2.0	02/12/2020			02/21/2020 10:34	Beverly Y. Sanders	2157152
	02/12/2020			02/21/2020 10:35	Beverly Y. Sanders	2157153
	02/12/2020			02/21/2020 10:42	Beverly Y. Sanders	2157162
	02/12/2020			02/21/2020 10:48	Beverly Y. Sanders	2157163
	02/12/2020			02/21/2020 10:49	Beverly Y. Sanders	2157164
	02/12/2020			02/21/2020 10:50	Beverly Y. Sanders	2157165
	02/12/2020			02/21/2020 10:52	Beverly Y. Sanders	2157166
	02/12/2020			02/21/2020 10:53	Beverly Y. Sanders	2157167

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	02/12/2020	02/24/2020 16:08	Yen Ta	02/26/2020 17:22	Benjamin T. Nordmann	2157162
	02/12/2020	02/24/2020 16:08	Yen Ta	02/26/2020 17:26	Benjamin T. Nordmann	2157163
	02/12/2020	02/24/2020 16:08	Yen Ta	02/27/2020 12:48	Benjamin T. Nordmann	2157164
	02/12/2020	02/24/2020 16:08	Yen Ta	02/27/2020 12:49	Benjamin T. Nordmann	2157165
	02/12/2020	02/24/2020 16:08	Yen Ta	02/27/2020 12:50	Benjamin T. Nordmann	2157166
	02/12/2020	02/24/2020 16:08	Yen Ta	02/27/2020 12:51	Benjamin T. Nordmann	2157167
	02/12/2020	02/28/2020 14:20	Yen Ta	03/02/2020 12:37	Lipi Saha	2157153
	02/12/2020	02/28/2020 14:20	Yen Ta	03/02/2020 14:32	Lipi Saha	2157152
EPA 365.1 Rev. 2.0 dissolved	02/12/2020			02/13/2020 16:01	Carlos Miranda	2157154
	02/12/2020			02/13/2020 16:04	Carlos Miranda	2157155, 2157168
	02/12/2020			02/13/2020 16:05	Carlos Miranda	2157169
	02/12/2020			02/13/2020 16:06	Carlos Miranda	2157170
	02/12/2020			02/13/2020 16:07	Carlos Miranda	2157171
	02/12/2020			02/13/2020 16:08	Carlos Miranda	2157172
EPA 8321B	02/12/2020			02/13/2020 16:09	Carlos Miranda	2157173
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 14:49	Rebecca Ware	2157190
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 15:00	Rebecca Ware	2157191
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 15:11	Rebecca Ware	2157192
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 15:22	Rebecca Ware	2157193
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 15:46	Rebecca Ware	2157194
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 15:56	Rebecca Ware	2157195
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 16:07	Rebecca Ware	2157196
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/13/2020 16:18	Rebecca Ware	2157197
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 13:03	Rebecca Ware	2157190
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 13:17	Rebecca Ware	2157191
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 13:31	Rebecca Ware	2157192
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 13:45	Rebecca Ware	2157193
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 14:15	Rebecca Ware	2157194
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 14:28	Rebecca Ware	2157195
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 14:42	Rebecca Ware	2157196
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/14/2020 14:56	Rebecca Ware	2157197
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/25/2020 15:18	Rebecca Ware	2157190
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/25/2020 15:30	Rebecca Ware	2157191
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/25/2020 15:42	Rebecca Ware	2157192
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/25/2020 15:54	Rebecca Ware	2157193
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/26/2020 09:50	Rebecca Ware	2157194
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/26/2020 10:01	Rebecca Ware	2157195
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/26/2020 10:13	Rebecca Ware	2157196
	02/12/2020	02/13/2020 10:45	Rebecca Ware	02/26/2020 10:25	Rebecca Ware	2157197
	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/18/2020 22:05	Juyoung Kim	2157190

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/18/2020 22:40	Juyoung Kim	2157191
	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/18/2020 23:15	Juyoung Kim	2157192
	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/18/2020 23:49	Juyoung Kim	2157193
	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/19/2020 00:24	Juyoung Kim	2157194
	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/19/2020 01:33	Juyoung Kim	2157195
	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/19/2020 02:08	Juyoung Kim	2157196
	02/12/2020	02/18/2020 09:00	Hoor Shaik	02/19/2020 02:42	Juyoung Kim	2157197
	02/12/2020			02/13/2020 16:20	Samantha Davila	2157150
SM 2120 B-2011	02/12/2020			02/13/2020 16:21	Samantha Davila	2157151
	02/12/2020			02/13/2020 16:24	Samantha Davila	2157159
	02/12/2020			02/13/2020 16:25	Samantha Davila	2157160, 2157161
	02/12/2020			02/13/2020 16:35	Samantha Davila	2157156, 2157157
	02/12/2020			02/13/2020 16:36	Samantha Davila	2157158
SM 2320 B-2011	02/12/2020			02/21/2020 03:03	Dale L. Simmons	2157150
	02/12/2020			02/21/2020 03:15	Dale L. Simmons	2157151
	02/12/2020			02/21/2020 03:27	Dale L. Simmons	2157156
	02/12/2020			02/21/2020 03:39	Dale L. Simmons	2157157
	02/12/2020			02/21/2020 06:36	Dale L. Simmons	2157158
	02/12/2020			02/21/2020 06:47	Dale L. Simmons	2157159
	02/12/2020			02/21/2020 06:58	Dale L. Simmons	2157160
	02/12/2020			02/21/2020 07:09	Dale L. Simmons	2157161
SM 2540 C-2011	02/12/2020			02/14/2020 13:00	Sima Feizi	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
SM 2540 D-2011	02/12/2020			02/14/2020 13:00	Sima Feizi	2157150, 2157151, 2157156, 2157157, 2157158, 2157159, 2157160, 2157161
SM 4500 F-C-2011	02/12/2020			02/21/2020 03:03	Dale L. Simmons	2157150
	02/12/2020			02/21/2020 03:15	Dale L. Simmons	2157151
	02/12/2020			02/21/2020 03:27	Dale L. Simmons	2157156
	02/12/2020			02/21/2020 03:39	Dale L. Simmons	2157157
	02/12/2020			02/21/2020 06:36	Dale L. Simmons	2157158
	02/12/2020			02/21/2020 06:47	Dale L. Simmons	2157159
	02/12/2020			02/21/2020 06:58	Dale L. Simmons	2157160
	02/12/2020			02/21/2020 07:09	Dale L. Simmons	2157161
SM 5310 B-2011	02/12/2020			02/14/2020 23:06	Lauren Lees	2157152
	02/12/2020			02/14/2020 23:18	Lauren Lees	2157153
	02/12/2020			02/14/2020 23:31	Lauren Lees	2157162
	02/12/2020			02/14/2020 23:43	Lauren Lees	2157163
	02/12/2020			02/14/2020 23:55	Lauren Lees	2157164
	02/12/2020			02/15/2020 01:50	Lauren Lees	2157165
	02/12/2020			02/15/2020 02:02	Lauren Lees	2157166

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Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	02/12/2020			02/15/2020 02:19	Lauren Lees	2157167