

Chemical Analysis Report

NE-DIST-2020-03-17-01

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

Event Description: **Nassau North 2 2020**
Request ID: **RQ-2020-03-16-12**
Customer: **NE-DIST**
Project ID: **SMP**

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8800 Baymeadows Way West
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 03-APR-2020 11:14

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Little St. Mary's River at White Oak Rd.

Collection Date/Time: 03/16/2020 11:50

Field ID: G4NE0289

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2165404	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P380811	
	EPA 300.0 Rev. 2.1	Chloride	55		mg Cl/L	P381006	
		Sulfate	9.0		mg SO4/L	P381010	
		Color (true)	320		PCU	P380791	
	SM 2320 B-2011	Total Alkalinity	13		mg CaCO3/L	P381069	
	SM 2540 C-2011	TDS	200		mg/L	P381190	
	SM 2540 D-2011	TSS	3	I	mg/L	P381222	
	SM 4500 F-C-2011	Fluoride	0.051	I	mg F/L	P381265	
2165405	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P381049	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P381135	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P381358	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P381213	
	SM 5310 B-2011	Organic Carbon	33		mg C/L	P380911	
2165406	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P380819	
2165462	EPA 200.7 Rev. 4.4	Barium	17.9		ug/L	P380894	
		Calcium	7.42		mg/L	P380894	
		Iron	620		ug/L	P380894	
		Magnesium	5.22		mg/L	P380894	
		Potassium	1.7		mg/L	P380894	
		Sodium	35.7		mg/L	P380894	
		Zinc	5.0	U	ug/L	P380894	
	EPA 200.8 Rev. 5.4	Aluminum	545		ug/L	P380894	
		Antimony	0.052	I	ug/L	P380894	
		Arsenic	1.03		ug/L	P380894	
		Boron**	40.2		ug/L	P380894	
		Cadmium	0.020	U	ug/L	P380894	
		Chromium	1.6		ug/L	P380894	
		Copper	1.26		ug/L	P380894	
		Lead	0.55		ug/L	P380894	
		Nickel	0.60	I	ug/L	P380894	
		Selenium	0.20	U	ug/L	P380894	
		Silver	0.010	U	ug/L	P380894	
		Thallium	0.10	U	ug/L	P380894	
		Hardness	40.1		mg/L	P380894	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Lofton CR @ A1A

Collection Date/Time: 03/16/2020 11:00

Field ID: 19020003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2165416	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P380811	
	EPA 300.0 Rev. 2.1	Chloride	46		mg Cl/L	P381006	
		Sulfate	9.0		mg SO4/L	P381010	
	SM 2120 B-2011	Color (true)	420		PCU	P380791	
	SM 2320 B-2011	Total Alkalinity	24		mg CaCO3/L	P381069	
	SM 2540 C-2011	TDS	194		mg/L	P381190	
	SM 2540 D-2011	TSS	4	I	mg/L	P381222	
	SM 4500 F-C-2011	Fluoride	0.055	I	mg F/L	P381265	
2165417	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P381049	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P381135	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.023		mg N/L	P381358	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P381213	
	SM 5310 B-2011	Organic Carbon	39		mg C/L	P380911	
2165418	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P380819	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Egans Creek at N. 14th

Collection Date/Time: 03/16/2020 09:50

Field ID: G4NE0290

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2165407	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P380811	
	EPA 300.0 Rev. 2.1	Bromide	54		mg Br/L	P381200	
	SM 2320 B-2011	Total Alkalinity	110	A	mg CaCO3/L	P381065	
	SM 2540 D-2011	TSS	11		mg/L	P381224	
	SM 4500 F-C-2011	Fluoride	0.99		mg F/L	P381452	
2165410	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P381050	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P381103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P381207	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P381414	
	SM 5310 B-2011	Organic Carbon	6.4		mg C/L	P380913	
2165413	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.045		mg P/L	P380821	

Ref. Method and Comment:

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

Sample Location: Egans creek at Atlantic

Collection Date/Time: 03/16/2020 10:05

Field ID: G4NE0285

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2165408	EPA 180.1 Rev. 2.0	Turbidity	8.6		NTU	P380811	
	EPA 300.0 Rev. 2.1	Bromide	36		mg Br/L	P381200	
	SM 2320 B-2011	Total Alkalinity	135		mg CaCO3/L	P381065	
	SM 2540 D-2011	TSS	11		mg/L	P381224	
	SM 4500 F-C-2011	Fluoride	0.82		mg F/L	P381351	MS
2165411	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P381050	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P381103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P381207	
	EPA 365.1 Rev. 2.0	Total-P	0.35		mg P/L	P381414	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P380913	
2165414	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.22		mg P/L	P380821	

Ref. Method and Comment:

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

Sample Location: Egans creek at Sadler

Collection Date/Time: 03/16/2020 10:30

Field ID: G4NE0286

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2165409	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P380811	
	EPA 300.0 Rev. 2.1	Bromide	0.40		mg Br/L	P381200	
	SM 2320 B-2011	Total Alkalinity	246		mg CaCO3/L	P381069	
	SM 2540 D-2011	TSS	4	I	mg/L	P381223	
	SM 4500 F-C-2011	Fluoride	0.78		mg F/L	P381265	
2165412	EPA 350.1 Rev. 2.0	Ammonia-N	0.24		mg N/L	P381049	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P381135	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028		mg N/L	P381358	
	EPA 365.1 Rev. 2.0	Total-P	1.1		mg P/L	P381213	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P380911	
2165415	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.93		mg P/L	P380819	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Escambia Slough at Escambia St.

Collection Date/Time: 03/16/2020 09:30

Field ID: G4NE0287

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2165419	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P380811	
	EPA 300.0 Rev. 2.1	Bromide	31		mg Br/L	P381200	
	SM 2320 B-2011	Total Alkalinity	130		mg CaCO3/L	P381065	
	SM 2540 D-2011	TSS	10		mg/L	P381224	
	SM 4500 F-C-2011	Fluoride	0.63		mg F/L	P381351	MS
2165420	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P381050	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P381103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.023		mg N/L	P381216	
	EPA 365.1 Rev. 2.0	Total-P	0.23		mg P/L	P381414	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P380913	
2165421	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.18		mg P/L	P380821	
2165461	EPA 8321B	2,4-D	0.0020	U	ug/L	P380839	
		Acesulfame K**	0.10	U	ug/L	P380764	MS
		AMPA**	1.0	U	ug/L	P380764	
		Sucralose**	0.017	I	ug/L	P380764	
		Acetaminophen**	0.0080	U	ug/L	P380839	
		Endothall**	0.25	U	ug/L	P380764	
		Acetamiprid**	0.0020	U	ug/L	P380839	
		Glufosinate**	1.0	U	ug/L	P380764	
		Glyphosate**	1.0	U	ug/L	P380764	
		Afidopyropen**	0.0020	UJ	ug/L	P380839	
		Bentazon	0.034		ug/L	P380839	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P380839	
		Carbamazepine**	8.0E-04	U	ug/L	P380839	
		Clothianidin**	0.0020	U	ug/L	P380839	
		Dinotefuran**	0.0020	U	ug/L	P380839	
		Diuron	0.0020	U	ug/L	P380839	
		Fenuron	0.016	U	ug/L	P380839	
		Fluridone**	8.0E-04	U	ug/L	P380839	
		Imazapyr**	0.015	I	ug/L	P380839	
		Hydrocodone**	0.0020	U	ug/L	P380839	
		Ibuprofen**	0.020	U	ug/L	P380839	
		Imidacloprid	0.0020	U	ug/L	P380839	MS
		Linuron	0.0040	U	ug/L	P380839	
		Mandestrobin**	0.0020	UJ	ug/L	P380839	
		MCP	0.0020	U	ug/L	P380839	MS
		Naproxen**	0.0080	U	ug/L	P380839	
		Primidone**	0.0040	U	ug/L	P380839	
		Pyraclostrobin**	0.0020	U	ug/L	P380839	
		Thiamethoxam**	0.0020	U	ug/L	P380839	
		Tolfenpyrad**	0.0020	U	ug/L	P380839	
		Triclopyr**	0.0040	U	ug/L	P380839	

Field ID: G4NE0287

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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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: MS accuracy for some analytes could not be assessed due to a high concentration of parameters in the spiked sample. J - second source check standards for some analytes were not available for analysis.
EPA 8321B: MDL elevated due to matrix interference.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380811

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380894

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: P380894

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: P381006

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381010

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381200

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381049

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381050

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381103

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381135

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381207

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381216

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381358

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381213

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381414

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380819

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380821

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

Reference Method: EPA 8321B
Batch ID: P380764

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: P380839

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P380791

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P381065

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

Reference Method: SM 2320 B-2011
Batch ID: P381069

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

Reference Method: SM 2540 C-2011
Batch ID: P381190

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P381222

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P381223

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P381224

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P381265

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P381351

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P381452

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P380911

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

Reference Method: SM 5310 B-2011
Batch ID: P380913

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: P380894

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	104		P	85 - 115
Iron	98.4		P	85 - 115
Magnesium	101		P	85 - 115
Potassium	95.8		P	85 - 115
Sodium	99.9		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380894

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	80 - 120
Antimony	100		P	85 - 115
Arsenic	101		P	80 - 120
Boron	105		P	80 - 120
Cadmium	99.2		P	85 - 115
Chromium	102		P	80 - 120
Copper	100		P	80 - 120
Lead	101		P	80 - 120
Nickel	99.8		P	80 - 120
Selenium	94.3		P	80 - 120
Silver	102		P	85 - 115
Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381006

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381010

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381200

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.1		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381050

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381103

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381135

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381207

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381216

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381213

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381414

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380819

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380821

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

Reference Method: EPA 8321B
Batch ID: P380764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	88.1		P	40 - 150
AMPA	103		P	40 - 150
Endothall	104		P	40 - 150
Glufosinate	115		P	40 - 150
Glyphosate	112		P	40 - 140
Sucralose	89.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P380839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	132		P	30 - 160
Acetaminophen	87.9		P	30 - 160
Acetamiprid	81.5		P	30 - 160
Afidopyropen	101		P	30 - 160
Bentazon	112		P	30 - 160
Benzovindiflupyr	87.8		P	30 - 160
Carbamazepine	115		P	30 - 160
Clothianidin	91.5		P	30 - 160
Dinotefuran	74.8		P	30 - 160
Diuron	94.0		P	30 - 160
Fenuron	91.0		P	30 - 160
Fluridone	103		P	30 - 160
Hydrocodone	95.9		P	30 - 160
Ibuprofen	88.6		P	30 - 160
Imazapyr	92.3		P	30 - 160
Imidacloprid	115		P	30 - 160
Linuron	72.8		P	30 - 160
Mandestrobin	95.7		P	30 - 160
MCPP	151		P	30 - 160
Naproxen	77.7		P	30 - 160
Primidone	91.1		P	30 - 160
Pyraclostrobin	86.6		P	30 - 160
Thiamethoxam	95.6		P	30 - 160
Tolfenpyrad	61.7		P	30 - 160
Triclopyr	106		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P380791

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P381065

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

Reference Method: SM 2320 B-2011
Batch ID: P381069

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P381265

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.3		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P381351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	92 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P381452

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	92 - 104

Reference Method: SM 5310 B-2011
Batch ID: P380911

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

Reference Method: SM 5310 B-2011
Batch ID: P380913

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165291	Barium	101		P	80 - 120
2165291	Calcium	101		P	80 - 120
2165291	Iron	99.6		P	80 - 120
2165291	Magnesium	101		P	80 - 120
2165291	Potassium	97.4		P	80 - 120
2165291	Sodium	100		P	80 - 120
2165291	Zinc	103		P	80 - 120
2165532	Barium	101	102	P/P	80 - 120
2165532	Calcium	103		P	80 - 120
2165532	Iron	101	101	P/P	80 - 120
2165532	Magnesium	100	101	P/P	80 - 120
2165532	Potassium	94.8	97.6	P/P	80 - 120
2165532	Sodium	100		P	80 - 120
2165532	Zinc	102	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165291	Aluminum	96.6		P	80 - 120
2165291	Antimony	99.5		P	80 - 120
2165291	Arsenic	98.9		P	80 - 120
2165291	Boron	106		P	80 - 120
2165291	Cadmium	99.5		P	80 - 120
2165291	Chromium	98.9		P	80 - 120
2165291	Copper	100		P	80 - 120
2165291	Lead	100		P	80 - 120
2165291	Nickel	96.3		P	80 - 120
2165291	Selenium	90.2		P	80 - 120
2165291	Silver	100		P	80 - 120
2165291	Thallium	104		P	80 - 120
2165532	Aluminum	98.1	97.7	P/P	80 - 120
2165532	Antimony	101	99.1	P/P	80 - 120
2165532	Arsenic	99.6	100	P/P	80 - 120
2165532	Boron	106	107	P/P	80 - 120
2165532	Cadmium	98.6	97.2	P/P	80 - 120
2165532	Chromium	99.9	101	P/P	80 - 120
2165532	Copper	90.7	90.7	P/P	80 - 120
2165532	Lead	99.7	99.9	P/P	80 - 120
2165532	Nickel	97.4	96.9	P/P	80 - 120
2165532	Selenium	89.1	88.6	P/P	80 - 120
2165532	Silver	101	99.8	P/P	80 - 120
2165532	Thallium	104	105	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381006

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165314	Chloride	96.5		P	90 - 110
2165489	Chloride	98.6		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381010

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165314	Sulfate	97.0		P	90 - 110
2165489	Sulfate	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381200

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166022	Bromide	100	101	P/P	90 - 110
2166911	Bromide	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165417	Ammonia-N	99.7	98.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166365	Ammonia-N	98.7	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165363	Kjeldahl Nitrogen	98.1	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381135

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165487	Kjeldahl Nitrogen	108	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165138	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165420	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381358

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165312	NO2NO3-N	102	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P381213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165312	Total-P	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P381414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165364	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165368	O-Phosphate-P	99.2	99.0	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P380764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165906	Acesulfame K	138	152	P/F	40 - 150
2165906	AMPA	103	112	P/P	40 - 150
2165906	Endothall	116	119	P/P	40 - 150
2165906	Glufosinate	110	106	P/P	40 - 150
2165906	Glyphosate	107	108	P/P	40 - 140
2165906	Sucralose	127	105	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P380839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165334	2,4-D	141	131	P/P	30 - 160
2165334	Acetaminophen	109	94.8	P/P	30 - 160
2165334	Acetamiprid	106	105	P/P	30 - 160
2165334	Afidopyropen	111	98.5	P/P	30 - 160
2165334	Benzovindiflupyr	79.8	74.5	P/P	30 - 160
2165334	Carbamazepine	107	103	P/P	30 - 160
2165334	Clothianidin	102	94.3	P/P	30 - 160
2165334	Dinotefuran	119	119	P/P	30 - 160
2165334	Diuron	68.8	77.6	P/P	30 - 160
2165334	Fenuron	85.4	81.7	P/P	30 - 160
2165334	Hydrocodone	113	108	P/P	30 - 160
2165334	Ibuprofen	75.0	76.9	P/P	30 - 160
2165334	Imazapyr	112	112	P/P	30 - 160
2165334	Imidacloprid	182	165	F/F	30 - 160
2165334	Linuron	76.7	72.5	P/P	30 - 160
2165334	Mandestrobin	90.1	87.6	P/P	30 - 160
2165334	MCPP	164	153	F/P	30 - 160
2165334	Naproxen	138	124	P/P	30 - 160
2165334	Primidone	103	96.9	P/P	30 - 160
2165334	Pyraclostrobin	88.2	83.6	P/P	30 - 160
2165334	Thiamethoxam	155	141	P/P	30 - 160
2165334	Tolfenpyrad	61.8	59.4	P/P	30 - 160
2165334	Triclopyr	126	108	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P381351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2166025	Fluoride	102	105	P/F	91 - 105

Reference Method: SM 4500 F-C-2011
Batch ID: P381452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165407	Fluoride	98.4	101	P/P	91 - 105

Reference Method: SM 5310 B-2011
Batch ID: P380911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165487	Organic Carbon	97.2	102	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P380913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2165363	Organic Carbon	99.8	98.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P380811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165359	Turbidity	6.91	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P380894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165532	Barium	0.847	Spike	P	0 - 20
2165532	Calcium	0.474	Spike	P	0 - 20
2165532	Iron	0.523	Spike	P	0 - 20
2165532	Magnesium	0.479	Spike	P	0 - 20
2165532	Potassium	2.13	Spike	P	0 - 20
2165532	Sodium	2.30	Spike	P	0 - 20
2165532	Zinc	0.814	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P380894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165532	Aluminum	0.387	Spike	P	0 - 20
2165532	Antimony	1.58	Spike	P	0 - 20
2165532	Arsenic	0.515	Spike	P	0 - 20
2165532	Boron	0.867	Spike	P	0 - 20
2165532	Cadmium	1.46	Spike	P	0 - 20
2165532	Chromium	0.742	Spike	P	0 - 20
2165532	Copper	0.00493	Spike	P	0 - 20
2165532	Lead	0.141	Spike	P	0 - 20
2165532	Nickel	0.520	Spike	P	0 - 20
2165532	Selenium	0.545	Spike	P	0 - 20
2165532	Silver	1.58	Spike	P	0 - 20
2165532	Thallium	1.00	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P381006

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165314	Chloride	0.799	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P381010

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165314	Sulfate	0.566	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P381200

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166022	Bromide	0.551	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165417	Ammonia-N	0.936	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166365	Ammonia-N	0.0435	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165363	Kjeldahl Nitrogen	1.21	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P381135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165487	Kjeldahl Nitrogen	6.73	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165138	NO2NO3-N	0.496	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165420	NO2NO3-N	0.893	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165312	NO2NO3-N	0.976	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165312	Total-P	0.277	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P381414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165364	Total-P	1.68	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165313	O-Phosphate-P	1.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165368	O-Phosphate-P	0.172	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P380764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165906	Acesulfame K	9.76	Spike	P	0 - 30
2165906	AMPA	9.13	Spike	P	0 - 30
2165906	Endothall	2.04	Spike	P	0 - 30
2165906	Glufosinate	4.41	Spike	P	0 - 30
2165906	Glyphosate	0.961	Spike	P	0 - 30
2165906	Sucralose	18.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165334	2,4-D	7.55	Spike	P	0 - 30
2165334	Acetaminophen	14.1	Spike	P	0 - 30
2165334	Acetamiprid	0.588	Spike	P	0 - 30
2165334	Afidopyropen	11.7	Spike	P	0 - 30
2165334	Bentazon	4.85	Spike	P	0 - 30
2165334	Benzovindiflupyr	6.87	Spike	P	0 - 30
2165334	Carbamazepine	3.90	Spike	P	0 - 30
2165334	Clothianidin	7.02	Spike	P	0 - 30
2165334	Dinotefuran	0.554	Spike	P	0 - 30
2165334	Diuron	6.25	Spike	P	0 - 30
2165334	Fenuron	2.31	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P380839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165334	Fluridone	4.29	Spike	P	0 - 30
2165334	Hydrocodone	4.53	Spike	P	0 - 30
2165334	Ibuprofen	2.33	Spike	P	0 - 30
2165334	Imazapyr	0.00892	Spike	P	0 - 30
2165334	Imidacloprid	7.11	Spike	P	0 - 30
2165334	Linuron	5.62	Spike	P	0 - 30
2165334	Mandestrobin	2.80	Spike	P	0 - 30
2165334	MCP	6.95	Spike	P	0 - 30
2165334	Naproxen	11.1	Spike	P	0 - 30
2165334	Primidone	5.70	Spike	P	0 - 30
2165334	Pyraclostrobin	5.36	Spike	P	0 - 30
2165334	Thiamethoxam	9.01	Spike	P	0 - 30
2165334	Tolfenpyrad	4.03	Spike	P	0 - 30
2165334	Triclopyr	15.3	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P380791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165314	Color (true)	4.53	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P381065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165407	Total Alkalinity	0.325	Sample	P	0 - 2.8

Reference Method: SM 2320 B-2011
Batch ID: P381069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165344	Total Alkalinity	0.0890	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P381190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165028	TDS	0.957	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P381265

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165344	Fluoride	1.41	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P381351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2166025	Fluoride	1.92	Spike	P	0 - 2.0

Reference Method: SM 4500 F-C-2011
Batch ID: P381452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165407	Fluoride	1.47	Spike	P	0 - 2.0

Reference Method: SM 5310 B-2011
Batch ID: P380911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165487	Organic Carbon	4.40	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P380913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2165363	Organic Carbon	1.14	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2165461
Field Sample ID: G4NE0287

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.3	P	30 - 160
EPA 8321B	Diuron-d6	93.4	P	30 - 160
EPA 8321B	Endothall-d6	65.4	P	30 - 160
EPA 8321B	Endothall-d6	65.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	46.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	46.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.4	P	30 - 160
EPA 8321B	Primidone-d5	92.9	P	30 - 160
EPA 8321B	Sucralose-d6	78.9	P	30 - 160
EPA 8321B	Sucralose-d6	78.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A98243

Included Lab Sample IDs: 2165404, 2165416

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A98248

Included Lab Sample IDs: 2165404, 2165407, 2165408, 2165409, 2165416, 2165419

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A98251

Included Lab Sample IDs: 2165406, 2165413, 2165414, 2165415, 2165418, 2165421

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.3	P/P	90 - 110
O-Phosphate-P	97.3	96.4	P/P	90 - 110
O-Phosphate-P	98.6	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98259

Included Lab Sample IDs: 2165404, 2165416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.1	99.5	P/P	90 - 110
Chloride	99.5	98.9	P/P	90 - 110
Sulfate	99.6	99.3	P/P	90 - 110
Sulfate	99.8	99.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A98285

Included Lab Sample IDs: 2165405, 2165410, 2165411, 2165412, 2165417, 2165420

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	102	P/P	90 - 110
Organic Carbon	97.8	97.2	P/P	90 - 110
Organic Carbon	100	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A98286

Included Lab Sample IDs: 2165461

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	105	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A98320

Included Lab Sample IDs: 2165462

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	106	106	P/P	90 - 110
Calcium	103	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A98320

Included Lab Sample IDs: 2165462

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	103	102	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Potassium	98.0	98.3	P/P	90 - 110
Sodium	101	102	P/P	90 - 110
Zinc	106	106	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98324

Included Lab Sample IDs: 2165462

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	100	P/P	90 - 110
Arsenic	100	101	P/P	90 - 110
Boron	102	102	P/P	90 - 110
Chromium	100	101	P/P	90 - 110
Copper	97.0	95.1	P/P	90 - 110
Lead	101	102	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Selenium	98.1	98.7	P/P	90 - 110
Thallium	98.5	98.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A98342

Included Lab Sample IDs: 2165405, 2165410, 2165411, 2165412, 2165417, 2165420

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	101	98.9	P/P	90 - 110
Ammonia-N	101	100	P/P	90 - 110
Ammonia-N	98.9	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A98350

Included Lab Sample IDs: 2165404, 2165407, 2165408, 2165409, 2165416, 2165419

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

Reference Method: EPA 8321B

Run ID: A98352

Included Lab Sample IDs: 2165461

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	109	78.3	P/P	60 - 160
Endothall	102	98.4	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A98362

Included Lab Sample IDs: 2165461

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	105	115	P/P	40 - 200
Glufosinate	120	126	P/P	40 - 200
Glyphosate	135	122	P/P	40 - 200

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98382

Included Lab Sample IDs: 2165410, 2165411, 2165420

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A98393

Included Lab Sample IDs: 2165405, 2165410, 2165411, 2165412, 2165417, 2165420

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.9	99.4	P/P	90 - 110
Kjeldahl Nitrogen	97.6	97.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A98394

Included Lab Sample IDs: 2165461

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	107	111	P/P	50 - 150
Acetaminophen	114	112	P/P	60 - 160
Acetamiprid	110	110	P/P	50 - 150
Afidopyropen	86.7	102	P/P	50 - 150
Bentazon	123	107	P/P	50 - 160
Benzovindiflupyr	101	104	P/P	50 - 150
Carbamazepine	102	132	P/P	60 - 150
Clothianidin	91.8	101	P/P	60 - 150
Dinotefuran	98.8	98.7	P/P	50 - 150
Diuron	109	117	P/P	60 - 150
Fenuron	103	91.9	P/P	60 - 150
Fluridone	106	109	P/P	60 - 160
Hydrocodone	110	113	P/P	60 - 150
Ibuprofen	112	88.8	P/P	50 - 160
Imazapyr	103	94.8	P/P	50 - 150
Imidacloprid	108	106	P/P	60 - 150
Linuron	102	100	P/P	60 - 150
Mandestrobin	108	104	P/P	50 - 150
MCPP	102	101	P/P	50 - 150
Naproxen	103	103	P/P	50 - 160
Primidone	92.4	91.4	P/P	60 - 150
Pyraclostrobin	107	111	P/P	60 - 150
Thiamethoxam	87.6	106	P/P	50 - 150
Tolfenpyrad	107	108	P/P	60 - 150
Triclopyr	108	92.6	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98406

Included Lab Sample IDs: 2165407, 2165408, 2165409, 2165419

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98423

Included Lab Sample IDs: 2165412, 2165417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	103	P/P	90 - 110
Total-P	104	105	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A98428

Included Lab Sample IDs: 2165404, 2165409, 2165416

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.0	96.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98429

Included Lab Sample IDs: 2165405

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98446

Included Lab Sample IDs: 2165462

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	96.9	97.1	P/P	90 - 110
Cadmium	98.2	98.1	P/P	90 - 110
Silver	101	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A98463

Included Lab Sample IDs: 2165408, 2165419

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98466

Included Lab Sample IDs: 2165405, 2165412, 2165417

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A98495

Included Lab Sample IDs: 2165407

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98558

Included Lab Sample IDs: 2165411, 2165420

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98560

Included Lab Sample IDs: 2165410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.5	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						6.91	
EPA 200.7 Rev. 4.4	Barium	101	101	101	102			0.847
	Calcium	104	101	103				0.474
	Iron	98.4	99.6	101	101			0.523
	Magnesium	101	101	100	101			0.479
	Potassium	95.8	97.4	94.8	97.6			2.13
	Sodium	99.9	100	100				2.30
	Zinc	102	103	102	103			0.814
EPA 200.8 Rev. 5.4	Aluminum	100	96.6	98.1	97.7			0.387
	Antimony	100	99.5	101	99.1			1.58
	Arsenic	101	98.9	99.6	100			0.515
	Boron	105	106	106	107			0.867
	Cadmium	99.2	99.5	98.6	97.2			1.46
	Chromium	102	98.9	99.9	101			0.742
	Copper	100	100	90.7	90.7			0.0049
	Lead	101	100	99.7	99.9			0.141
	Nickel	99.8	96.3	97.4	96.9			0.520
	Selenium	94.3	90.2	89.1	88.6			0.545
	Silver	102	100	101	99.8			1.58
	Thallium	104	104	104	105			1.00
EPA 300.0 Rev. 2.1	Bromide	104	100	101	100			0.551
	Chloride	99.4	96.5	98.6			0.799	
	Sulfate	99.2	97.0	98.1			0.566	
EPA 350.1 Rev. 2.0	Ammonia-N	98.1	99.7	98.2				0.936
	Ammonia-N	100	98.7	98.6				0.0435
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.8	98.1	99.5				1.21
	Kjeldahl Nitrogen	99.3	108	100				6.73
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101	101	100				0.496
	NO ₂ NO ₃ -N	102	101	100				0.893
	NO ₂ NO ₃ -N	97.5	102	103				0.976
EPA 365.1 Rev. 2.0	Total-P	106	108	108				0.277
	Total-P	105	104	106				1.68
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.2						1.44
	O-Phosphate-P	101	99.2	99.0				0.172
EPA 8321B	2,4-D	132	141	131				7.55
	Acesulfame K	88.1	138	152				9.76
	Acetaminophen	87.9	109	94.8				14.1
	Acetamiprid	81.5	106	105				0.588
	Afidopyrophen	101	111	98.5				11.7
	AMPA	103	103	112				9.13
	Bentazon	112						4.85
	Benzovindiflupyr	87.8	79.8	74.5				6.87
	Carbamazepine	115	107	103				3.90
	Clothianidin	91.5	102	94.3				7.02
	Dinotefuran	74.8	119	119				0.554
	Diuron	94.0	68.8	77.6				6.25
	Endothall	104	116	119				2.04
	Fenuron	91.0	85.4	81.7				2.31
	Fluridone	103						4.29
	Glufosinate	115	110	106				4.41
	Glyphosate	112	107	108				0.961
	Hydrocodone	95.9	113	108				4.53
	Ibuprofen	88.6	75.0	76.9				2.33
	Imazapyr	92.3	112	112				0.0089

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imidacloprid	115	182	165		7.11
	Linuron	72.8	76.7	72.5		5.62
	Mandestrobin	95.7	90.1	87.6		2.80
	MCP	151	164	153		6.95
	Naproxen	77.7	138	124		11.1
	Primidone	91.1	103	96.9		5.70
	Pyraclostrobin	86.6	88.2	83.6		5.36
	Sucralose	89.6	127	105		18.9
	Thiamethoxam	95.6	155	141		9.01
	Tolfenpyrad	61.7	61.8	59.4		4.03
	Triclopyr	106	126	108		15.3
SM 2120 B-2011	Color (true)	101			4.53	
SM 2320 B-2011	Total Alkalinity	104			0.325	
	Total Alkalinity	105			0.0890	
SM 2540 C-2011	TDS				0.957	
SM 4500 F-C-2011	Fluoride	94.3				1.41
	Fluoride	96.7	102	105		1.92
	Fluoride	98.3	98.4	101		1.47
SM 5310 B-2011	Organic Carbon	102	97.2	102		4.40
	Organic Carbon	104	99.8	98.5		1.14

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2165404, 2165407, 2165408, 2165409, 2165416, 2165419
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2165462
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2165462
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2165407, 2165408, 2165409, 2165419
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2165404, 2165416
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2165404, 2165416
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2165405, 2165410, 2165411, 2165412, 2165417, 2165420
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2165405, 2165410, 2165411, 2165412, 2165417, 2165420
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2165405, 2165410, 2165411, 2165412, 2165417, 2165420
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2165405, 2165410, 2165411, 2165412, 2165417, 2165420
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2165406, 2165413, 2165414, 2165415, 2165418, 2165421
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2165461
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2165461
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2165404, 2165416
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2165404, 2165407, 2165408, 2165409, 2165416, 2165419
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2165462
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2165404, 2165416
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2165404, 2165407, 2165408, 2165409, 2165416, 2165419
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2165404, 2165407, 2165408, 2165409, 2165416, 2165419

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2165405, 2165410, 2165411, 2165412, 2165417, 2165420

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	03/17/2020			03/17/2020 16:07	Yen Ta	2165404, 2165407, 2165408, 2165409, 2165416, 2165419
EPA 200.7 Rev. 4.4	03/17/2020	03/18/2020 17:30	Elliott D. Healy	03/19/2020 19:20	Betina Topolski	2165462
EPA 200.8 Rev. 5.4	03/17/2020	03/18/2020 17:30	Elliott D. Healy	03/19/2020 16:29	Alexander Thompson	2165462
	03/17/2020	03/18/2020 17:30	Elliott D. Healy	03/24/2020 13:53	Justin Cutchin	2165462
EPA 300.0 Rev. 2.1	03/17/2020			03/19/2020 17:11	Lipi Saha	2165404
	03/17/2020			03/19/2020 17:47	Lipi Saha	2165416
	03/17/2020			03/24/2020 00:19	Elliott Rodriguez	2165407
	03/17/2020			03/24/2020 00:36	Elliott Rodriguez	2165408
	03/17/2020			03/24/2020 00:53	Elliott Rodriguez	2165409
	03/17/2020			03/24/2020 01:10	Elliott Rodriguez	2165419
EPA 350.1 Rev. 2.0	03/17/2020			03/21/2020 12:10	Ping Hua	2165417
	03/17/2020			03/21/2020 12:31	Ping Hua	2165405
	03/17/2020			03/21/2020 12:50	Ping Hua	2165410
	03/17/2020			03/21/2020 12:52	Ping Hua	2165411
	03/17/2020			03/21/2020 12:53	Ping Hua	2165420
	03/17/2020			03/21/2020 15:06	Ping Hua	2165412
EPA 351.2 Rev. 2.0	03/17/2020	03/23/2020 11:25	Sima Feizi	03/24/2020 08:49	Jhamieka S. Greenwood	2165405
	03/17/2020	03/23/2020 11:25	Sima Feizi	03/24/2020 08:51	Jhamieka S. Greenwood	2165412
	03/17/2020	03/23/2020 11:25	Sima Feizi	03/24/2020 08:52	Jhamieka S. Greenwood	2165417
	03/17/2020	03/23/2020 12:20	Sima Feizi	03/24/2020 09:52	Jhamieka S. Greenwood	2165410
	03/17/2020	03/23/2020 12:20	Sima Feizi	03/24/2020 09:53	Jhamieka S. Greenwood	2165411
	03/17/2020	03/23/2020 12:20	Sima Feizi	03/24/2020 09:55	Jhamieka S. Greenwood	2165420
EPA 353.2 Rev. 2.0	03/17/2020			03/23/2020 11:02	Beverly Y. Sanders	2165410
	03/17/2020			03/23/2020 11:03	Beverly Y. Sanders	2165411
	03/17/2020			03/23/2020 11:10	Beverly Y. Sanders	2165420
	03/17/2020			03/26/2020 15:49	Lauren Lees	2165405
	03/17/2020			03/26/2020 15:51	Lauren Lees	2165412
	03/17/2020			03/26/2020 15:52	Lauren Lees	2165417
EPA 365.1 Rev. 2.0	03/17/2020	03/24/2020 14:46	Lipi Saha	03/25/2020 08:40	Benjamin T. Nordmann	2165417
	03/17/2020	03/24/2020 14:46	Lipi Saha	03/25/2020 09:46	Benjamin T. Nordmann	2165412
	03/17/2020	03/24/2020 14:46	Lipi Saha	03/25/2020 11:31	Benjamin T. Nordmann	2165405
	03/17/2020	03/27/2020 16:50	Yen Ta	03/31/2020 15:57	Benjamin T. Nordmann	2165411
	03/17/2020	03/27/2020 16:50	Yen Ta	03/31/2020 15:58	Benjamin T. Nordmann	2165420
	03/17/2020	03/27/2020 16:50	Yen Ta	03/31/2020 18:14	Benjamin T. Nordmann	2165410
EPA 365.1 Rev. 2.0 dissolved	03/17/2020			03/17/2020 15:10	Carlos Miranda	2165406
	03/17/2020			03/17/2020 15:44	Carlos Miranda	2165413
	03/17/2020			03/17/2020 15:45	Carlos Miranda	2165414
	03/17/2020			03/17/2020 15:46	Carlos Miranda	2165421
	03/17/2020			03/17/2020 16:53	Carlos Miranda	2165415

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	03/17/2020			03/17/2020 16:54	Carlos Miranda	2165418
EPA 8321B	03/17/2020	03/18/2020 11:00	Mohammad Ghaffari	03/18/2020 13:19	Mohammad Ghaffari	2165461
	03/17/2020	03/18/2020 11:00	Mohammad Ghaffari	03/20/2020 22:32	Mohammad Ghaffari	2165461
	03/17/2020	03/18/2020 11:00	Mohammad Ghaffari	03/22/2020 23:51	Mohammad Ghaffari	2165461
	03/17/2020	03/18/2020 14:00	Hoor Shaik	03/20/2020 18:46	Juyoung Kim	2165461
SM 2120 B-2011	03/17/2020			03/17/2020 15:28	Madeline Gruver	2165404
	03/17/2020			03/17/2020 15:29	Madeline Gruver	2165416
SM 2320 B-2011	03/17/2020			03/20/2020 18:47	Dale L. Simmons	2165407
	03/17/2020			03/20/2020 18:57	Dale L. Simmons	2165408
	03/17/2020			03/20/2020 19:40	Dale L. Simmons	2165419
	03/17/2020			03/21/2020 12:34	Dale L. Simmons	2165404
	03/17/2020			03/21/2020 12:46	Dale L. Simmons	2165409
	03/17/2020			03/21/2020 12:55	Dale L. Simmons	2165416
SM 2340B	03/17/2020			03/19/2020 19:20	Betina Topolski	2165462
SM 2540 C-2011	03/17/2020			03/18/2020 15:15	Yijie Li	2165404, 2165416
SM 2540 D-2011	03/17/2020			03/18/2020 15:32	Yijie Li	2165404, 2165407, 2165408, 2165409, 2165416, 2165419
SM 4500 F-C-2011	03/17/2020			03/25/2020 01:59	Dale L. Simmons	2165404
	03/17/2020			03/25/2020 02:04	Dale L. Simmons	2165409
	03/17/2020			03/25/2020 02:09	Dale L. Simmons	2165416
	03/17/2020			03/25/2020 16:07	Dale L. Simmons	2165408
	03/17/2020			03/25/2020 16:13	Dale L. Simmons	2165419
	03/17/2020			03/27/2020 15:32	Dale L. Simmons	2165407
SM 5310 B-2011	03/17/2020			03/18/2020 17:41	Lauren Lees	2165405
	03/17/2020			03/18/2020 17:53	Lauren Lees	2165412
	03/17/2020			03/18/2020 18:31	Lauren Lees	2165417
	03/17/2020			03/19/2020 00:17	Lauren Lees	2165410
	03/17/2020			03/19/2020 00:31	Lauren Lees	2165411
	03/17/2020			03/19/2020 01:00	Lauren Lees	2165420