

Chemical Analysis Report

NE-DIST-2019-11-13-01

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

Event Description: **Nassau North**
Request ID: **RQ-2019-11-11-12**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 03-DEC-2019 13:58



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: Egans Creek at N. 14th

Collection Date/Time: 11/12/2019 12:00

Field ID: G4NE0290

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135563	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P374360	
	EPA 300.0	Bromide	69		mg Br/L	P374769	
	SM 2320 B-97	Total Alkalinity	119		mg CaCO3/L	P374290	
	SM 2540 D-97	TSS	20		mg/L	P374821	
	SM 4500 F-C-97	Fluoride	1.2		mg F/L	P374292	
2135564	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P374439	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P374398	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P374367	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P374237	
	SM 5310 B-00	Organic Carbon	4.5		mg C/L	P374272	
2135565	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P374185	
2135579	EPA 8321B	2,4-D	0.0020	U	ug/L	P373857	
		Acesulfame K**	1.0	U	ug/L	P374205	
		AMPA**	1.0	U	ug/L	P374205	
		Sucralose**	0.024	IJ	ug/L	P374205	MS, SUR
		Acetaminophen**	0.0080	U	ug/L	P373857	
		Acetamiprid**	0.0020	U	ug/L	P373857	
		Endothall**	2.5	U	ug/L	P374205	
		Glufosinate**	1.0	U	ug/L	P374205	
		Glyphosate**	1.0	U	ug/L	P374205	
		Afidopyropen**	0.0020	UJ	ug/L	P373857	
		Bentazon	9.7E-04	I	ug/L	P373857	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373857	
		Carbamazepine**	8.0E-04	U	ug/L	P373857	
		Clothianidin**	0.0020	U	ug/L	P373857	
		Dinotefuran**	0.0020	U	ug/L	P373857	
		Diuron	0.0020	U	ug/L	P373857	
		Fenuron	0.016	U	ug/L	P373857	
		Fluridone**	8.0E-04	U	ug/L	P373857	
		Imazapyr**	0.0076	I	ug/L	P373857	
		Hydrocodone**	0.0020	U	ug/L	P373857	
		Ibuprofen**	0.020	U	ug/L	P373857	
		Imidacloprid	0.0020	U	ug/L	P373857	MS
		Linuron	0.0040	U	ug/L	P373857	
		Mandestrobin**	0.0020	UJ	ug/L	P373857	
		MCP	0.0020	U	ug/L	P373857	
		Naproxen**	0.0080	U	ug/L	P373857	
		Primidone**	0.0040	U	ug/L	P373857	
		Pyraclostrobin**	0.0020	U	ug/L	P373857	
		Thiamethoxam**	0.0020	U	ug/L	P373857	
		Tolfenpyrad**	0.0020	U	ug/L	P373857	
		Triclopyr**	0.0040	U	ug/L	P373857	

Field ID: G4NE0290

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:

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

EPA 8321B: MDL elevated due to matrix interference.

EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Lofton CR @ A1A

Collection Date/Time: 11/12/2019 11:25

Field ID: 19020003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135557	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P374360	
	EPA 300.0 Rev. 2.1	Chloride	1.4E+03		mg Cl/L	P374327	
		Sulfate	160		mg SO4/L	P374329	
	SM 2120 B	Color (true)	180		PCU	P374171	
	SM 2320 B-97	Total Alkalinity	43		mg CaCO3/L	P374494	
	SM 2540 C-97	TDS	2.26E+03		mg/L	P374828	
	SM 2540 D-97	TSS	2	U	mg/L	P374818	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P374498	
2135559	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P374437	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P374504	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P374242	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P374704	
	SM 5310 B-00	Organic Carbon	25		mg C/L	P374271	
2135561	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P374184	

Ref. Method and Comment:

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

Sample Location: Unnamed Branch above Alligator cr.

Collection Date/Time: 11/12/2019 09:20

Field ID: G4NE0288

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135551	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P374360	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P374327	
		Sulfate	22		mg SO4/L	P374329	
		Color (true)	270		PCU	P374171	
	SM 2320 B-97	Total Alkalinity	70		mg CaCO3/L	P374494	
	SM 2540 C-97	TDS	202	A	mg/L	P374828	
	SM 2540 D-97	TSS	6	IA	mg/L	P374818	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P374498	
2135553	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P374437	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P374421	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038		mg N/L	P374242	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P374704	
	SM 5310 B-00	Organic Carbon	33		mg C/L	P374271	
2135555	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P374184	
2135661	EPA 200.7 Rev. 4.4	Barium	32.7		ug/L	P374233	
		Calcium	23.4		mg/L	P374233	
		Iron	760		ug/L	P374233	
		Magnesium	8.41		mg/L	P374233	
		Potassium	5.0		mg/L	P374233	
		Sodium	13.1		mg/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	173		ug/L	P374233	
		Antimony	0.054	I	ug/L	P374233	
		Arsenic	0.88		ug/L	P374233	
		Boron**	28.1		ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	
		Chromium	0.56	I	ug/L	P374233	
		Copper	0.65	I	ug/L	P374233	
		Lead	0.22	I	ug/L	P374233	
		Nickel	0.87	I	ug/L	P374233	
		Selenium	0.22	I	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Mills Creek at US 301/US1

Collection Date/Time: 11/12/2019 09:50

Field ID: 19020048

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135552	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P374360	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P374327	
		Sulfate	4.1		mg SO4/L	P374329	
	SM 2120 B	Color (true)	280		PCU	P374171	
	SM 2320 B-97	Total Alkalinity	4.1		mg CaCO3/L	P374494	
	SM 2540 C-97	TDS	116		mg/L	P374828	
	SM 2540 D-97	TSS	3	I	mg/L	P374818	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374498	
2135554	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P374437	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P374504	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374242	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P374704	
	SM 5310 B-00	Organic Carbon	32		mg C/L	P374271	
2135556	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374184	
2135662	EPA 200.7 Rev. 4.4	Barium	23.5		ug/L	P374233	
		Calcium	5.12		mg/L	P374233	
		Iron	1.14E+03		ug/L	P374233	
		Magnesium	1.90		mg/L	P374233	
		Potassium	1.9		mg/L	P374233	
		Sodium	9.5		mg/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	380		ug/L	P374233	
		Antimony	0.050	U	ug/L	P374233	
		Arsenic	0.44		ug/L	P374233	
		Boron**	23.9		ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	
		Chromium	0.79	I	ug/L	P374233	
		Copper	0.40	U	ug/L	P374233	
		Lead	0.40	I	ug/L	P374233	
		Nickel	0.53	I	ug/L	P374233	
		Selenium	0.20	U	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Creek draining former Hampton lake 100m above rd

Collection Date/Time: 11/12/2019 10:20

Field ID: G4NE0292

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135558	EPA 180.1 Rev. 2.0	Turbidity	3.1	A	NTU	P374360	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P374327	
		Sulfate	8.8		mg SO4/L	P374329	
	SM 2120 B	Color (true)	140		PCU	P374171	
	SM 2320 B-97	Total Alkalinity	5.3		mg CaCO3/L	P374494	
	SM 2540 C-97	TDS	82		mg/L	P374828	
	SM 2540 D-97	TSS	2	I	mg/L	P374818	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374498	
2135560	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P374437	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P374504	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374242	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P374704	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P374271	
2135562	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P374184	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374360

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

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: P374233

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
Batch ID: P374769

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374327

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374329

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: P374437

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374439

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374398

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374421

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374242

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374367

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374237

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374704

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: P374184

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374185

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

Reference Method: EPA 8321B
 Batch ID: P373857

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: EPA 8321B
 Batch ID: P374205

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P374171

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P374290

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

Reference Method: SM 2320 B-97
Batch ID: P374494

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

Reference Method: SM 2540 C-97
Batch ID: P374828

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P374818

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P374821

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P374498

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374271

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P374272

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374360

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	91.8		P	85 - 115
Iron	94.3		P	85 - 115
Magnesium	93.1		P	85 - 115
Potassium	97.8		P	85 - 115
Sodium	90.4		P	85 - 115
Zinc	98.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.7		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	98.8		P	85 - 115
Boron	96.0		P	85 - 115
Cadmium	97.1		P	85 - 115
Chromium	99.0		P	85 - 115
Copper	99.6		P	85 - 115
Lead	93.3		P	85 - 115
Nickel	99.2		P	85 - 115
Selenium	95.5		P	85 - 115
Silver	97.9		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P374769

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374327

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374329

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374437

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374439

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374398

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374421

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374242

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374367

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374237

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: P374704

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374184

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374185

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.1		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P373857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	40 - 160
Acetaminophen	100		P	30 - 160
Acetamiprid	81.3		P	40 - 160
Afidopyropen	81.8		P	40 - 160
Bentazon	83.5		P	30 - 160
Benzovindiflupyr	92.3		P	40 - 160
Carbamazepine	110		P	40 - 160
Clothianidin	95.4		P	40 - 160
Dinotefuran	84.5		P	40 - 160
Diuron	87.1		P	40 - 160
Fenuron	98.6		P	40 - 160
Fluridone	92.5		P	40 - 160
Hydrocodone	103		P	40 - 160
Ibuprofen	84.0		P	30 - 160
Imazapyr	80.7		P	40 - 160
Imidacloprid	93.4		P	40 - 160
Linuron	88.8		P	40 - 160
Mandestrobin	92.2		P	40 - 160
MCPP	135		P	40 - 160
Naproxen	69.0		P	40 - 160
Primidone	91.3		P	40 - 160
Pyraclostrobin	79.4		P	30 - 160
Thiamethoxam	101		P	40 - 160
Tolfenpyrad	51.2		P	40 - 160
Triclopyr	99.9		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P374205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	95.5		P	40 - 150
AMPA	141		P	40 - 150
Endothall	68.0		P	40 - 150
Glufosinate	111		P	40 - 150
Glyphosate	129		P	40 - 140
Sucralose	82.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P374171

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

Reference Method: SM 2320 B-97
Batch ID: P374290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.7		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P374494

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P374498

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.6		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P374271

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

Reference Method: SM 5310 B-00
Batch ID: P374272

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: P374233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135411	Barium	100		P	80 - 120
2135411	Iron	93.8		P	80 - 120
2135411	Magnesium	95.0		P	80 - 120
2135411	Potassium	107		P	80 - 120
2135411	Sodium	96.4		P	80 - 120
2135411	Zinc	98.9		P	80 - 120
2135719	Barium	99.1	97.4	P/P	80 - 120
2135719	Calcium	91.5		P	80 - 120
2135719	Iron	93.9	96.1	P/P	80 - 120
2135719	Magnesium	93.9		P	80 - 120
2135719	Potassium	93.6	94.2	P/P	80 - 120
2135719	Sodium	91.2		P	80 - 120
2135719	Zinc	97.6	95.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135411	Aluminum	92.8		P	80 - 120
2135411	Antimony	102		P	80 - 120
2135411	Arsenic	98.1		P	80 - 120
2135411	Boron	94.7		P	80 - 120
2135411	Cadmium	97.9		P	80 - 120
2135411	Chromium	95.9		P	80 - 120
2135411	Copper	95.6		P	80 - 120
2135411	Lead	92.9		P	80 - 120
2135411	Nickel	94.6		P	80 - 120
2135411	Selenium	93.3		P	80 - 120
2135411	Silver	97.2		P	80 - 120
2135411	Thallium	101		P	80 - 120
2135719	Aluminum	96.1	97.6	P/P	80 - 120
2135719	Antimony	102	103	P/P	80 - 120
2135719	Arsenic	101	103	P/P	80 - 120
2135719	Boron	98.1	100	P/P	80 - 120
2135719	Cadmium	99.3	99.8	P/P	80 - 120
2135719	Chromium	98.6	100	P/P	80 - 120
2135719	Copper	95.6	98.0	P/P	80 - 120
2135719	Lead	94.1	95.6	P/P	80 - 120
2135719	Nickel	97.8	98.6	P/P	80 - 120
2135719	Selenium	92.9	97.1	P/P	80 - 120
2135719	Silver	96.1	98.6	P/P	80 - 120
2135719	Thallium	112	106	P/P	80 - 120

Reference Method: EPA 300.0
Batch ID: P374769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135473	Bromide	97.8	99.8	P/P	90 - 110
2135668	Bromide	97.3		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135408	Chloride	99.9		P	90 - 110
2135464	Chloride	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135408	Sulfate	98.7		P	90 - 110
2135464	Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374437

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135465	Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374439

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135564	Ammonia-N	105	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134948	Kjeldahl Nitrogen	98.0	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135466	Kjeldahl Nitrogen	92.0	93.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135577	Kjeldahl Nitrogen	97.2	96.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135474	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374367

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134272	NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374237

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134788	Total-P	98.1	91.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135553	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374184

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135468	O-Phosphate-P	100	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135399	O-Phosphate-P	101	99.6	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P373857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134998	2,4-D	128	133	P/P	40 - 160
2134998	Acetaminophen	104	97.0	P/P	30 - 160
2134998	Acetamiprid	89.7	88.1	P/P	40 - 160
2134998	Afidopyropen	96.6	92.1	P/P	40 - 160
2134998	Bentazon	71.9	77.1	P/P	30 - 160
2134998	Benzovindiflupyr	99.1	89.9	P/P	40 - 160
2134998	Carbamazepine	102	93.3	P/P	40 - 160
2134998	Clothianidin	95.0	87.9	P/P	40 - 160
2134998	Dinotefuran	99.5	101	P/P	40 - 160
2134998	Diuron	79.8	80.0	P/P	40 - 160
2134998	Fenuron	102	98.8	P/P	40 - 160
2134998	Fluridone	93.0	96.4	P/P	40 - 160
2134998	Hydrocodone	111	111	P/P	40 - 160
2134998	Ibuprofen	84.8	82.7	P/P	30 - 160
2134998	Imazapyr	125	100	P/P	40 - 160
2134998	Imidacloprid	164	137	F/P	40 - 160
2134998	Linuron	85.9	86.9	P/P	40 - 160
2134998	Mandestrobin	92.4	91.8	P/P	40 - 160
2134998	MCP	134	138	P/P	40 - 160
2134998	Naproxen	67.3	59.1	P/P	40 - 160
2134998	Primidone	97.4	107	P/P	40 - 160
2134998	Pyraclostrobin	79.2	75.9	P/P	30 - 160
2134998	Thiamethoxam	140	128	P/P	40 - 160
2134998	Tolfenpyrad	53.2	62.7	P/P	40 - 160
2134998	Triclopyr	106	113	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P374205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135449	Acesulfame K	111	116	P/P	40 - 150
2135449	AMPA	86.8	96.6	P/P	40 - 150
2135449	Endothall	117	122	P/P	40 - 150
2135449	Glufosinate	81.1	81.8	P/P	40 - 150
2135449	Glyphosate	63.2	64.0	P/P	40 - 140
2135449	Sucralose	27.3	28.2	F/F	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135714	Fluoride	96.5	98.1	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135668	Fluoride	99.1	99.1	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P374271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135431	Organic Carbon	102	102	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P374272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135398	Organic Carbon	104	106	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135558	Turbidity	19.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135719	Barium	1.57	Spike	P	0 - 20
2135719	Calcium	0.176	Spike	P	0 - 20
2135719	Iron	2.29	Spike	P	0 - 20
2135719	Magnesium	1.59	Spike	P	0 - 20
2135719	Potassium	0.343	Spike	P	0 - 20
2135719	Sodium	0.511	Spike	P	0 - 20
2135719	Zinc	2.39	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135719	Aluminum	1.47	Spike	P	0 - 20
2135719	Antimony	0.406	Spike	P	0 - 20
2135719	Arsenic	2.15	Spike	P	0 - 20
2135719	Boron	1.50	Spike	P	0 - 20
2135719	Cadmium	0.450	Spike	P	0 - 20
2135719	Chromium	1.41	Spike	P	0 - 20
2135719	Copper	2.32	Spike	P	0 - 20
2135719	Lead	1.60	Spike	P	0 - 20
2135719	Nickel	0.818	Spike	P	0 - 20
2135719	Selenium	4.48	Spike	P	0 - 20
2135719	Silver	2.53	Spike	P	0 - 20
2135719	Thallium	5.92	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P374769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135473	Bromide	1.96	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135408	Chloride	1.46	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374329

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135408	Sulfate	1.76	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135465	Ammonia-N	0.381	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374439

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135564	Ammonia-N	1.11	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134948	Kjeldahl Nitrogen	2.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135466	Kjeldahl Nitrogen	1.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135577	Kjeldahl Nitrogen	0.578	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135474	NO2NO3-N	0.948	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134272	NO2NO3-N	0.491	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374237

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134788	Total-P	6.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135553	Total-P	0.610	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135468	O-Phosphate-P	1.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135399	O-Phosphate-P	0.729	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P373857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134998	2,4-D	3.68	Spike	P	0 - 30
2134998	Acetaminophen	7.22	Spike	P	0 - 30
2134998	Acetamiprid	1.82	Spike	P	0 - 30
2134998	Afidopyropen	4.77	Spike	P	0 - 30
2134998	Bentazon	5.65	Spike	P	0 - 30
2134998	Benzovindiflupyr	9.78	Spike	P	0 - 30
2134998	Carbamazepine	8.53	Spike	P	0 - 30
2134998	Clothianidin	7.46	Spike	P	0 - 30
2134998	Dinotefuran	1.87	Spike	P	0 - 30
2134998	Diuron	0.273	Spike	P	0 - 30
2134998	Fenuron	3.09	Spike	P	0 - 30
2134998	Fluridone	3.52	Spike	P	0 - 30
2134998	Hydrocodone	0.456	Spike	P	0 - 30
2134998	Ibuprofen	2.51	Spike	P	0 - 30
2134998	Imazapyr	22.3	Spike	P	0 - 30
2134998	Imidacloprid	18.0	Spike	P	0 - 30
2134998	Linuron	1.17	Spike	P	0 - 30
2134998	Mandestrobin	0.630	Spike	P	0 - 30
2134998	MCP	3.28	Spike	P	0 - 30
2134998	Naproxen	13.0	Spike	P	0 - 30
2134998	Primidone	9.72	Spike	P	0 - 30
2134998	Pyraclostrobin	4.33	Spike	P	0 - 30
2134998	Thiamethoxam	9.00	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P373857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134998	Tolfenpyrad	16.3	Spike	P	0 - 30
2134998	Triclopyr	5.99	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P374205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135449	Acesulfame K	4.65	Spike	P	0 - 30
2135449	AMPA	6.06	Spike	P	0 - 30
2135449	Endothall	4.23	Spike	P	0 - 30
2135449	Glufosinate	0.872	Spike	P	0 - 30
2135449	Glyphosate	0.602	Spike	P	0 - 30
2135449	Sucralose	3.18	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P374171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135472	Color (true)	1.29	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P374290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135714	Total Alkalinity	0.195	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P374494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135668	Total Alkalinity	0.253	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P374828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135551	TDS	4.47	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P374821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135397	TSS	8.00	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135714	Fluoride	1.01	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P374498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135668	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P374271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135431	Organic Carbon	0.285	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P374272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135398	Organic Carbon	1.59	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2135579

Field Sample ID: G4NE0290

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	128	P	30 - 160
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	83.6	P	30 - 160
EPA 8321B	Endothall-d6	126	P	30 - 160
EPA 8321B	Endothall-d6	126	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	42.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	42.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	95.9	P	30 - 160
EPA 8321B	Primidone-d5	97.3	P	30 - 160
EPA 8321B	Sucralose-d6	24.2	F	30 - 160
EPA 8321B	Sucralose-d6	24.2	F	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A95713

Included Lab Sample IDs: 2135551, 2135552, 2135557, 2135558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 115
Color (true)	103	103	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95717

Included Lab Sample IDs: 2135555, 2135556, 2135561, 2135562, 2135565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95734

Included Lab Sample IDs: 2135553, 2135554, 2135559, 2135560

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

Reference Method: SM 5310 B-00

Run ID: A95750

Included Lab Sample IDs: 2135553, 2135554, 2135559, 2135560, 2135564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	106	106	P/P	90 - 110
Organic Carbon	106	107	P/P	90 - 110
Organic Carbon	107	106	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A95757

Included Lab Sample IDs: 2135563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.7	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95757

Included Lab Sample IDs: 2135563

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95765

Included Lab Sample IDs: 2135551, 2135552, 2135557, 2135558

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95773

Included Lab Sample IDs: 2135564

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

Reference Method: EPA 8321B

Run ID: A95779

Included Lab Sample IDs: 2135579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	100	P/P	50 - 150
Acetaminophen	109	110	P/P	60 - 160
Acetamiprid	106	110	P/P	50 - 150
Afidopyropen	99.7	111	P/P	50 - 150
Bentazon	109	108	P/P	50 - 160
Benzovindiflupyr	122	103	P/P	50 - 150
Carbamazepine	87.0	84.8	P/P	60 - 150
Clothianidin	99.0	92.6	P/P	60 - 150
Dinotefuran	95.5	88.8	P/P	50 - 150
Diuron	100	98.9	P/P	60 - 150
Fenuron	113	113	P/P	60 - 150
Fluridone	113	110	P/P	60 - 160
Hydrocodone	113	109	P/P	60 - 150
Ibuprofen	94.5	108	P/P	50 - 160
Imazapyr	111	107	P/P	50 - 150
Imidacloprid	101	107	P/P	60 - 150
Linuron	115	109	P/P	60 - 150
Mandestrobin	113	112	P/P	50 - 150
MCPP	100	97.8	P/P	50 - 150
Naproxen	84.9	78.2	P/P	50 - 160
Primidone	93.6	99.8	P/P	60 - 150
Pyraclostrobin	88.6	90.4	P/P	60 - 150
Thiamethoxam	99.7	96.3	P/P	50 - 150
Tolfenpyrad	87.9	115	P/P	60 - 150
Triclopyr	90.1	104	P/P	50 - 150

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95789

Included Lab Sample IDs: 2135551, 2135552, 2135557, 2135558, 2135563

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95794

Included Lab Sample IDs: 2135564

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95796

Included Lab Sample IDs: 2135661, 2135662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	99.4	P/P	90 - 110
Calcium	100	99.0	P/P	90 - 110
Iron	102	99.6	P/P	90 - 110
Magnesium	105	102	P/P	90 - 110
Potassium	97.7	95.6	P/P	90 - 110
Sodium	100	99.3	P/P	90 - 110
Zinc	99.9	98.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95814

Included Lab Sample IDs: 2135579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	100	90.9	P/P	60 - 160
Endothall	102	86.9	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95818

Included Lab Sample IDs: 2135579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	84.0	80.3	P/P	60 - 160
Glufosinate	107	110	P/P	60 - 160
Glyphosate	105	131	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95824

Included Lab Sample IDs: 2135553, 2135554, 2135559, 2135560, 2135564

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

Reference Method: SM 2320 B-97

Run ID: A95843

Included Lab Sample IDs: 2135551, 2135552, 2135557, 2135558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	98.4	P/P	90 - 110
Total Alkalinity	100	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95843

Included Lab Sample IDs: 2135551, 2135552, 2135557, 2135558

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A95849

Included Lab Sample IDs: 2135579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	108	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95851

Included Lab Sample IDs: 2135564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95873

Included Lab Sample IDs: 2135661, 2135662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	100	P/P	90 - 110
Antimony	100	101	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Boron	103	99.9	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Copper	105	104	P/P	90 - 110
Lead	96.3	96.2	P/P	90 - 110
Nickel	104	104	P/P	90 - 110
Selenium	99.0	101	P/P	90 - 110
Silver	99.6	100	P/P	90 - 110
Thallium	96.8	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95879

Included Lab Sample IDs: 2135553

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.1	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95884

Included Lab Sample IDs: 2135554, 2135559, 2135560

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	108	97.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95924

Included Lab Sample IDs: 2135661, 2135662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	96.1	95.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0

Run ID: A95940

Included Lab Sample IDs: 2135563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95968

Included Lab Sample IDs: 2135553, 2135559

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.2	P/P	90 - 110
Total-P	99.2	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95989

Included Lab Sample IDs: 2135554, 2135560

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	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	102					19.0	
EPA 200.7 Rev. 4.4	Barium	101	100	99.1	97.4			1.57
	Calcium	91.8	91.5					0.176
	Iron	94.3	93.8	93.9	96.1			2.29
	Magnesium	93.1	95.0	93.9				1.59
	Potassium	97.8	107	93.6	94.2			0.343
	Sodium	90.4	96.4	91.2				0.511
	Zinc	98.7	98.9	97.6	95.3			2.39
EPA 200.8 Rev. 5.4	Aluminum	96.7	92.8	96.1	97.6			1.47
	Antimony	101	102	102	103			0.406
	Arsenic	98.8	98.1	101	103			2.15
	Boron	96.0	94.7	98.1	100			1.50
	Cadmium	97.1	97.9	99.3	99.8			0.450
	Chromium	99.0	95.9	98.6	100			1.41
	Copper	99.6	95.6	95.6	98.0			2.32
	Lead	93.3	92.9	94.1	95.6			1.60
	Nickel	99.2	94.6	97.8	98.6			0.818
	Selenium	95.5	93.3	92.9	97.1			4.48
	Silver	97.9	97.2	96.1	98.6			2.53
	Thallium	100	101	112	106			5.92
EPA 300.0	Bromide	101	97.8	99.8	97.3			1.96
EPA 300.0 Rev. 2.1	Chloride	101	99.9	97.8			1.46	
	Sulfate	101	98.7	97.3			1.76	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	105	105				0.381
	Ammonia-N	101	105	107				1.11
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	98.0	101				2.33
	Kjeldahl Nitrogen	110	92.0	93.4				1.22
	Kjeldahl Nitrogen	105	97.2	96.1				0.578
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	101	100				0.948
	NO ₂ NO ₃ -N	102	102	102				0.491
EPA 365.1 Rev. 2.0	Total-P	106	98.1	91.8				6.61
	Total-P	106	103	102				0.610
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	100	98.9				1.21
	O-Phosphate-P	99.1	101	99.6				0.729
EPA 8321B	2,4-D	133	128	133				3.68
	Acesulfame K	95.5	111	116				4.65
	Acetaminophen	100	104	97.0				7.22
	Acetamiprid	81.3	89.7	88.1				1.82
	Afidopyropen	81.8	96.6	92.1				4.77
	AMPA	141	86.8	96.6				6.06
	Bentazon	83.5	71.9	77.1				5.65
	Benzovindiflupyr	92.3	99.1	89.9				9.78
	Carbamazepine	110	102	93.3				8.53
	Clothianidin	95.4	95.0	87.9				7.46
	Dinotefuran	84.5	99.5	101				1.87
	Diuron	87.1	79.8	80.0				0.273
	Endothall	68.0	117	122				4.23
	Fenuron	98.6	102	98.8				3.09
	Fluridone	92.5	93.0	96.4				3.52
	Glufosinate	111	81.1	81.8				0.872
	Glyphosate	129	63.2	64.0				0.602
	Hydrocodone	103	111	111				0.456
	Ibuprofen	84.0	84.8	82.7				2.51
	Imazapyr	80.7	125	100				22.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imidacloprid	93.4	164	137		18.0
	Linuron	88.8	85.9	86.9		1.17
	Mandestrobin	92.2	92.4	91.8		0.630
	MCP	135	134	138		3.28
	Naproxen	69.0	67.3	59.1		13.0
	Primidone	91.3	97.4	107		9.72
	Pyraclostrobin	79.4	79.2	75.9		4.33
	Sucralose	82.8	27.3	28.2		3.18
	Thiamethoxam	101	140	128		9.00
	Tolfenpyrad	51.2	53.2	62.7		16.3
	Triclopyr	99.9	106	113		5.99
SM 2120 B	Color (true)	102			1.29	
SM 2320 B-97	Total Alkalinity	98.7			0.195	
	Total Alkalinity	100			0.253	
SM 2540 C-97	TDS				4.47	
SM 2540 D-97	TSS				8.00	
SM 4500 F-C-97	Fluoride	96.9	96.5	98.1		1.01
	Fluoride	98.6	99.1	99.1		0.0
SM 5310 B-00	Organic Carbon	104	102	102		0.285
	Organic Carbon	104	104	106		1.59

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2135551, 2135552, 2135557, 2135558, 2135563
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2135661, 2135662
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2135661, 2135662
EPA 300.0 / E31780	Bromide in aqueous matrices	2135563
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2135551, 2135552, 2135557, 2135558
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2135551, 2135552, 2135557, 2135558
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2135553, 2135554, 2135559, 2135560, 2135564
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2135553, 2135554, 2135559, 2135560, 2135564
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2135553, 2135554, 2135559, 2135560, 2135564
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2135553, 2135554, 2135559, 2135560, 2135564
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2135555, 2135556, 2135561, 2135562, 2135565
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2135579
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2135579
SM 2120 B / E31780	True Color measured at 450 nm	2135551, 2135552, 2135557, 2135558
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2135551, 2135552, 2135557, 2135558, 2135563
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2135551, 2135552, 2135557, 2135558
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2135551, 2135552, 2135557, 2135558, 2135563
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2135551, 2135552, 2135557, 2135558, 2135563

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2135553, 2135554, 2135559, 2135560, 2135564

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	11/13/2019			11/13/2019 16:56	Samantha Davila	2135551
	11/13/2019			11/13/2019 16:57	Samantha Davila	2135552
	11/13/2019			11/13/2019 16:58	Samantha Davila	2135557
	11/13/2019			11/13/2019 17:00	Samantha Davila	2135558
	11/13/2019			11/13/2019 17:02	Samantha Davila	2135563
EPA 200.7 Rev. 4.4	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 14:01	Betina Topolski	2135661
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 14:07	Betina Topolski	2135662
EPA 200.8 Rev. 5.4	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 04:57	Justin Cutchin	2135661
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 05:07	Justin Cutchin	2135662
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 16:36	Robert K Palmer	2135661
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 16:42	Robert K Palmer	2135662
EPA 300.0	11/13/2019			11/21/2019 02:17	Lipi Saha	2135563
EPA 300.0 Rev. 2.1	11/13/2019			11/16/2019 00:45	Lipi Saha	2135551
	11/13/2019			11/16/2019 00:57	Lipi Saha	2135552
	11/13/2019			11/16/2019 01:09	Lipi Saha	2135557
	11/13/2019			11/16/2019 01:46	Lipi Saha	2135558
EPA 350.1 Rev. 2.0	11/13/2019			11/18/2019 11:58	Ping Hua	2135553
	11/13/2019			11/18/2019 12:00	Ping Hua	2135554
	11/13/2019			11/18/2019 12:01	Ping Hua	2135559
	11/13/2019			11/18/2019 12:03	Ping Hua	2135560
	11/13/2019			11/18/2019 12:40	Ping Hua	2135564
EPA 351.2 Rev. 2.0	11/13/2019	11/19/2019 11:25	Sima Feizi	11/20/2019 13:59	Jhamieka S. Greenwood	2135564
	11/13/2019	11/19/2019 11:25	Sima Feizi	11/20/2019 17:34	Jhamieka S. Greenwood	2135553
	11/13/2019	11/20/2019 12:30	Sima Feizi	11/21/2019 16:25	Jhamieka S. Greenwood	2135554
	11/13/2019	11/20/2019 12:30	Sima Feizi	11/21/2019 16:27	Jhamieka S. Greenwood	2135559
	11/13/2019	11/20/2019 12:30	Sima Feizi	11/21/2019 16:28	Jhamieka S. Greenwood	2135560
EPA 353.2 Rev. 2.0	11/13/2019			11/14/2019 11:59	Beverly Y. Sanders	2135553
	11/13/2019			11/14/2019 12:00	Beverly Y. Sanders	2135554
	11/13/2019			11/14/2019 12:01	Beverly Y. Sanders	2135559
	11/13/2019			11/14/2019 12:02	Beverly Y. Sanders	2135560
	11/13/2019			11/18/2019 11:48	Beverly Y. Sanders	2135564
EPA 365.1 Rev. 2.0	11/13/2019	11/14/2019 14:30	Yen Ta	11/15/2019 15:44	Benjamin T. Nordmann	2135564
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 12:56	Benjamin T. Nordmann	2135553
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 13:06	Benjamin T. Nordmann	2135559
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 15:46	Benjamin T. Nordmann	2135554
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 15:47	Benjamin T. Nordmann	2135560
EPA 365.1 Rev. 2.0 dissolved	11/13/2019			11/13/2019 13:57	Virginia P. Brown	2135555
	11/13/2019			11/13/2019 13:58	Virginia P. Brown	2135556
	11/13/2019			11/13/2019 13:59	Virginia P. Brown	2135561
	11/13/2019			11/13/2019 14:00	Virginia P. Brown	2135562

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	11/13/2019			11/13/2019 14:01	Virginia P. Brown	2135565
EPA 8321B	11/13/2019	11/13/2019 14:00	Hoor Shaik	11/15/2019 10:25	Juyoung Kim	2135579
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/15/2019 17:23	Rebecca Ware	2135579
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/18/2019 16:24	Rebecca Ware	2135579
	11/13/2019	11/14/2019 14:30	Rebecca Ware	11/19/2019 16:19	Rebecca Ware	2135579
SM 2120 B	11/13/2019			11/13/2019 18:08	Madeline Funaro	2135558
	11/13/2019			11/13/2019 18:25	Madeline Funaro	2135551
	11/13/2019			11/13/2019 18:26	Madeline Funaro	2135552
	11/13/2019			11/13/2019 18:27	Madeline Funaro	2135557
SM 2320 B-97	11/13/2019			11/14/2019 18:47	Dale L. Simmons	2135563
	11/13/2019			11/16/2019 03:38	Dale L. Simmons	2135551
	11/13/2019			11/16/2019 03:49	Dale L. Simmons	2135552
	11/13/2019			11/16/2019 04:00	Dale L. Simmons	2135558
	11/13/2019			11/16/2019 06:45	Dale L. Simmons	2135557
SM 2540 C-97	11/13/2019			11/15/2019 15:21	Yijie Li	2135551, 2135552, 2135557, 2135558
SM 2540 D-97	11/13/2019			11/15/2019 15:21	Yijie Li	2135551, 2135552, 2135557, 2135558, 2135563
SM 4500 F-C-97	11/13/2019			11/14/2019 15:57	Dale L. Simmons	2135563
	11/13/2019			11/16/2019 03:38	Dale L. Simmons	2135551
	11/13/2019			11/16/2019 03:49	Dale L. Simmons	2135552
	11/13/2019			11/16/2019 04:00	Dale L. Simmons	2135558
	11/13/2019			11/16/2019 06:45	Dale L. Simmons	2135557
SM 5310 B-00	11/13/2019			11/15/2019 02:15	Madeline Funaro	2135553
	11/13/2019			11/15/2019 02:27	Madeline Funaro	2135554
	11/13/2019			11/15/2019 02:40	Madeline Funaro	2135559
	11/13/2019			11/15/2019 03:16	Madeline Funaro	2135560
	11/13/2019			11/15/2019 07:22	Madeline Funaro	2135564