

Chemical Analysis Report

NE-DIST-2022-01-14-01

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

Event Description: **ICW Boat and Arlington 2022**

Request ID: **RQ-2022-01-10-40**

Customer: **NE-DIST**

Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
Suite 100
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 07-FEB-2022 14:31

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

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: Open creek 200 meters above mouth

Collection Date/Time: 01/13/2022 09:35

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299890	EPA 8321B	2,4-D	0.0068	I	ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	10	U	ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	10	U	ug/L	P408582	
		Glyphosate	10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	0.013		ug/L	P408581	
		Sucralose	0.40		ug/L	P408582	MS
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.0E-04	U	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.011		ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	0.0065		ug/L	P408581	
		Imazapyr	0.082		ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.017		ug/L	P408581	MS
		Linuron	0.0040	U	ug/L	P408581	
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0041	I	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	

Ref. Method and Comment:

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

EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

Sample Location: Open creek 0.5mile upstream of Mouth

Collection Date/Time: 01/13/2022 09:55

Field ID: G2NE1186

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299891	EPA 8321B	2,4-D	0.0022	I	ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	10	U	ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	10	U	ug/L	P408582	
		Glyphosate	10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	0.015		ug/L	P408581	
		Sucralose	0.37		ug/L	P408582	MS
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.0E-04	U	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0036	I	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	0.0082		ug/L	P408581	
		Imazapyr	0.061		ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.013		ug/L	P408581	MS
		Linuron	0.0040	U	ug/L	P408581	
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0044	I	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	

Ref. Method and Comment:

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

EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

Sample Location: Little Pottsburg Creek at Atlantic BLVD

Collection Date/Time: 01/13/2022 11:30

Field ID: 20030679

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299867	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P408562	
	SM 2320 B-2011	Total Alkalinity	99	A	mg CaCO3/L	P408795	
	SM 2540 D-2011	TSS	9	I	mg/L	P408954	
	SM 4500 F-C-2011	Fluoride	0.40		mg F/L	P408798	
2299869	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P409023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P408888	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.094		mg N/L	P408784	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P408649	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P408839	
2299871	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P408551	
2299892	EPA 200.7 Rev. 4.4	Calcium	141		mg/L	P408834	
		Iron	220	I	ug/L	P408834	
		Magnesium	352		mg/L	P408834	
		Strontium	2.56E+03		ug/L	P408834	
		Tin	9.0	U	ug/L	P408834	
		Vanadium	6.0	U	ug/L	P408834	
		Zinc	15	U	ug/L	P408834	
	EPA 200.8 Rev. 5.4	Aluminum	110	I	ug/L	P408834	
		Antimony	0.20	U	ug/L	P408834	
		Arsenic	1.57		ug/L	P408834	
		Beryllium	0.040	U	ug/L	P408834	
		Cadmium	0.080	U	ug/L	P408834	
		Chromium	1.6	U	ug/L	P408834	
		Cobalt	0.11	I	ug/L	P408834	
		Copper	1.6	U	ug/L	P408834	
		Lead	0.80	U	ug/L	P408834	
		Manganese	28.8		ug/L	P408834	
		Molybdenum	4.0		ug/L	P408834	
		Nickel	2.0	U	ug/L	P408834	
		Selenium	0.80	U	ug/L	P408834	
		Silver	0.040	U	ug/L	P408834	

Ref. Method and Comment:

SM 2540 D-2011: 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, magnesium and strontium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Arlington River at Carlton oaks

Collection Date/Time: 01/13/2022 12:00

Field ID: G2NE1152

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299868	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P408562	
	SM 2320 B-2011	Total Alkalinity	88		mg CaCO3/L	P408795	
	SM 2540 D-2011	TSS	7	IA	mg/L	P408954	
	SM 4500 F-C-2011	Fluoride	0.46		mg F/L	P408798	
2299870	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P409023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P408851	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P408784	
	EPA 365.1 Rev. 2.0	Total-P	0.076		mg P/L	P408649	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P408839	
2299872	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.055		mg P/L	P408551	
2299893	EPA 200.7 Rev. 4.4	Calcium	151		mg/L	P408834	
		Iron	120	I	ug/L	P408834	
		Magnesium	417		mg/L	P408834	
		Strontium	2.82E+03		ug/L	P408834	
		Tin	9.0	U	ug/L	P408834	
		Vanadium	6.0	U	ug/L	P408834	
		Zinc	15	U	ug/L	P408834	
	EPA 200.8 Rev. 5.4	Aluminum	50	U	ug/L	P408834	
		Antimony	0.20	U	ug/L	P408834	
		Arsenic	1.56		ug/L	P408834	
		Beryllium	0.040	U	ug/L	P408834	
		Cadmium	0.080	U	ug/L	P408834	
		Chromium	1.6	U	ug/L	P408834	
		Cobalt	0.080	U	ug/L	P408834	
		Copper	1.6	U	ug/L	P408834	
		Lead	0.80	U	ug/L	P408834	
		Manganese	10.5		ug/L	P408834	
		Molybdenum	4.4		ug/L	P408834	
		Nickel	2.0	U	ug/L	P408834	
		Selenium	0.80	U	ug/L	P408834	
		Silver	0.040	U	ug/L	P408834	

Ref. Method and Comment:

SM 2540 D-2011: 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, magnesium and strontium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Field Blank

Collection Date/Time: 01/13/2022 12:05

Field ID: FB_01132022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299873	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P408562	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P408794	
	SM 2540 D-2011	TSS	2	U	mg/L	P408952	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P408797	
2299874	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P409024	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P408965	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P408733	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P408653	MS
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P408958	
2299875	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P408550	
2299894	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P408711	
		Iron	30	U	ug/L	P408711	
		Magnesium	0.040	U	mg/L	P408711	
		Strontium	2.0	U	ug/L	P408711	
		Tin	3.0	U	ug/L	P408711	
		Vanadium	2.0	U	ug/L	P408711	
		Zinc	5.0	U	ug/L	P408711	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P408711	
		Antimony	0.050	U	ug/L	P408711	
		Arsenic	0.050	U	ug/L	P408711	
		Beryllium	0.010	U	ug/L	P408711	
		Cadmium	0.020	U	ug/L	P408711	
		Chromium	0.40	U	ug/L	P408711	
		Cobalt	0.020	U	ug/L	P408711	
		Copper	0.40	U	ug/L	P408711	
		Lead	0.20	U	ug/L	P408711	
		Manganese	0.10	U	ug/L	P408711	
		Molybdenum	0.15	U	ug/L	P408711	
		Nickel	0.50	U	ug/L	P408711	
		Selenium	0.20	U	ug/L	P408711	
		Silver	0.010	U	ug/L	P408711	

Ref. Method and Comment:

SM 2540 D-2011: 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: P408562

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408711

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408834

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408711

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408834

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408834

Component	Result	Code	Units
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409023

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409024

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408851

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408888

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408965

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408733

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408784

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408784

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408649

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408653

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408550

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408551

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

Reference Method: EPA 8321B
Batch ID: P408581

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	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	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P408581

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	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: P408582

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: SM 2320 B-2011
Batch ID: P408794

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

Reference Method: SM 2320 B-2011
Batch ID: P408795

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

Reference Method: SM 2540 D-2011
Batch ID: P408952

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P408954

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P408798

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P408839

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

Reference Method: SM 5310 B-2011
Batch ID: P408958

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: P408711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	106		P	85 - 115
Strontium	105		P	85 - 115
Tin	107		P	85 - 115
Vanadium	105		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408834

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	109		P	85 - 115
Magnesium	102		P	85 - 115
Strontium	106		P	85 - 115
Tin	107		P	85 - 115
Vanadium	106		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.4		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	99.7		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	100		P	85 - 115
Cobalt	98.1		P	85 - 115
Copper	100		P	85 - 115
Lead	94.1		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	101		P	85 - 115
Selenium	98.8		P	85 - 115
Silver	99.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408834

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	97.1		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	103		P	85 - 115
Copper	101		P	85 - 115
Lead	100		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408834

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Manganese	100		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	102		P	85 - 115
Selenium	98.8		P	85 - 115
Silver	105		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409023

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409024

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: P408851

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408888

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408965

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408733

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408784

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: P408649

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

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408649

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: P408653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	107		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408550

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408551

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

Reference Method: EPA 8321B
Batch ID: P408581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	114		P	40 - 150
2,4,5-T	106		P	40 - 150
Acetaminophen	85.5		P	30 - 150
Acetamiprid	96.7		P	40 - 150
Afidopyropen	80.4		P	40 - 150
Bentazon	81.0		P	30 - 150
Benzovindiflupyr	117		P	40 - 150
Carbamazepine	112		P	40 - 150
Clothianidin	92.7		P	40 - 150
Dinotefuran	105		P	40 - 150
Diuron	82.3		P	40 - 150
Fenuron	100		P	40 - 150
Fluridone	73.4		P	40 - 150
Hydrocodone	86.4		P	40 - 150
Ibuprofen	145		P	40 - 150
Imazapyr	104		P	40 - 150
Imidacloprid	79.9		P	40 - 150
Linuron	91.7		P	40 - 150
Mandestrobin	114		P	40 - 150
MCPP	102		P	40 - 150
Naproxen	98.8		P	40 - 150
Primidone	91.6		P	40 - 150
Pyraclostrobin	89.6		P	40 - 150
Silvex	75.6		P	40 - 150
Thiamethoxam	99.5		P	40 - 150
Tolfenpyrad	51.7		P	30 - 150
Triclopyr	126		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P408582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	101		P	40 - 150
AMPA	137		P	40 - 150
Endothall	106		P	40 - 150
Glufosinate	139		P	40 - 150
Glyphosate	130		P	40 - 150
Sucralose	108		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P408794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.6		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P408795

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P408798

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P408839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P408958

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299928	Calcium	101		P	80 - 120
2299928	Iron	110		P	80 - 120
2299928	Magnesium	104		P	80 - 120
2299928	Strontium	108		P	80 - 120
2299928	Tin	110		P	80 - 120
2299928	Vanadium	110		P	80 - 120
2299928	Zinc	107		P	80 - 120
2299995	Calcium	108	105	P/P	80 - 120
2299995	Iron	108	107	P/P	80 - 120
2299995	Magnesium	108	106	P/P	80 - 120
2299995	Strontium	107	106	P/P	80 - 120
2299995	Tin	109	109	P/P	80 - 120
2299995	Vanadium	106	106	P/P	80 - 120
2299995	Zinc	105	104	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299892	Iron	104	107	P/P	70 - 130
2299892	Tin	89.2	84.4	P/P	70 - 130
2299892	Vanadium	112	109	P/P	70 - 130
2299892	Zinc	103	102	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299928	Aluminum	98.0		P	80 - 120
2299928	Antimony	103		P	80 - 120
2299928	Arsenic	103		P	80 - 120
2299928	Beryllium	101		P	80 - 120
2299928	Cadmium	101		P	80 - 120
2299928	Chromium	103		P	80 - 120
2299928	Cobalt	98.0		P	80 - 120
2299928	Copper	97.9		P	80 - 120
2299928	Lead	95.4		P	80 - 120
2299928	Manganese	101		P	80 - 120
2299928	Molybdenum	103		P	80 - 120
2299928	Nickel	99.1		P	80 - 120
2299928	Selenium	99.5		P	80 - 120
2299928	Silver	98.6		P	80 - 120
2299995	Aluminum	101	101	P/P	80 - 120
2299995	Antimony	101	98.7	P/P	80 - 120
2299995	Arsenic	101	99.2	P/P	80 - 120
2299995	Beryllium	100	95.0	P/P	80 - 120
2299995	Cadmium	101	97.9	P/P	80 - 120
2299995	Chromium	102	100	P/P	80 - 120
2299995	Cobalt	99.0	96.3	P/P	80 - 120
2299995	Copper	102	99.6	P/P	80 - 120
2299995	Lead	95.9	95.2	P/P	80 - 120
2299995	Manganese	104	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299995	Molybdenum	101	99.0	P/P	80 - 120
2299995	Nickel	102	99.9	P/P	80 - 120
2299995	Selenium	98.9	97.2	P/P	80 - 120
2299995	Silver	101	97.6	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299892	Aluminum	96.0	108	P/P	70 - 130
2299892	Antimony	96.8	89.4	P/P	70 - 130
2299892	Arsenic	104	95.7	P/P	70 - 130
2299892	Beryllium	102	94.1	P/P	70 - 130
2299892	Cadmium	91.1	84.2	P/P	70 - 130
2299892	Chromium	95.6	88.3	P/P	70 - 130
2299892	Cobalt	107	97.5	P/P	70 - 130
2299892	Copper	98.4	91.4	P/P	70 - 130
2299892	Lead	98.9	89.6	P/P	70 - 130
2299892	Manganese	90.0	80.0	P/P	70 - 130
2299892	Molybdenum	104	94.5	P/P	70 - 130
2299892	Nickel	104	96.5	P/P	70 - 130
2299892	Selenium	97.5	88.4	P/P	70 - 130
2299892	Silver	88.7	81.3	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299533	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299859	Ammonia-N	98.6	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299870	Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299910	Kjeldahl Nitrogen	94.5	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408965

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300062	Kjeldahl Nitrogen	103	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299720	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299602	NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299870	Total-P	105	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299880	Total-P	104	110	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299860	O-Phosphate-P	99.8	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299871	O-Phosphate-P	97.6	99.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P408581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	2,4-D	132	98.7	P/P	40 - 150
2299564	2,4,5-T	80.5	88.5	P/P	40 - 150
2299564	Acetaminophen	111	115	P/P	30 - 150
2299564	Acetamiprid	114	102	P/P	40 - 150
2299564	Afidopyrophen	75.5	65.6	P/P	40 - 150
2299564	Benzovindiflupyr	96.5	117	P/P	40 - 150
2299564	Carbamazepine	102	109	P/P	40 - 150
2299564	Clothianidin	166	183	F/F	40 - 150
2299564	Dinotefuran	128	141	P/P	40 - 150
2299564	Diuron	86.2	68.9	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P408581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	Fenuron	86.1	99.7	P/P	40 - 150
2299564	Fluridone	74.0	95.1	P/P	40 - 150
2299564	Hydrocodone	97.3	106	P/P	40 - 150
2299564	Ibuprofen	59.7	80.1	P/P	40 - 150
2299564	Imazapyr	66.2	95.9	P/P	40 - 150
2299564	Imidacloprid	188	203	F/F	40 - 150
2299564	Linuron	93.8	77.9	P/P	40 - 150
2299564	Mandestrobin	100	98.9	P/P	40 - 150
2299564	MCPD	111	98.9	P/P	40 - 150
2299564	Naproxen	57.6	47.3	P/P	40 - 150
2299564	Primidone	108	72.8	P/P	40 - 150
2299564	Pyraclostrobin	80.0	83.3	P/P	40 - 150
2299564	Silvex	64.6	81.9	P/P	40 - 150
2299564	Thiamethoxam	184	186	F/F	40 - 150
2299564	Tolfenpyrad	50.5	42.9	P/P	30 - 150
2299564	Triclopyr	106	98.8	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P408582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	Acesulfame K	145	139	P/P	40 - 150
2299564	AMPA	148	154	P/F	40 - 150
2299564	Endothall	162	163	F/F	40 - 150
2299564	Glufosinate	140	146	P/P	40 - 150
2299564	Glyphosate	143	141	P/P	40 - 150
2299564	Sucralose	127	153	P/F	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P408797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300414	Fluoride	97.5	96.9	P/P	92 - 107

Reference Method: SM 4500 F-C-2011

Batch ID: P408798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299867	Fluoride	98.4	97.7	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P408839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299602	Organic Carbon	95.2	96.1	P/P	85 - 115

Reference Method: SM 5310 B-2011

Batch ID: P408958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298793	Organic Carbon	92.9	92.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P408562

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299828	Turbidity	3.24	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408711

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299995	Calcium	1.52	Spike	P	0 - 20
2299995	Iron	1.25	Spike	P	0 - 20
2299995	Magnesium	1.40	Spike	P	0 - 20
2299995	Strontium	0.761	Spike	P	0 - 20
2299995	Tin	0.152	Spike	P	0 - 20
2299995	Vanadium	0.0282	Spike	P	0 - 20
2299995	Zinc	0.728	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408834

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299892	Calcium	4.16	Spike	P	0 - 20
2299892	Iron	2.74	Spike	P	0 - 20
2299892	Magnesium	1.49	Spike	P	0 - 20
2299892	Strontium	3.81	Spike	P	0 - 20
2299892	Tin	5.56	Spike	P	0 - 20
2299892	Vanadium	3.00	Spike	P	0 - 20
2299892	Zinc	0.885	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299995	Aluminum	0.00639	Spike	P	0 - 20
2299995	Antimony	2.74	Spike	P	0 - 20
2299995	Arsenic	1.84	Spike	P	0 - 20
2299995	Beryllium	5.02	Spike	P	0 - 20
2299995	Cadmium	3.05	Spike	P	0 - 20
2299995	Chromium	1.93	Spike	P	0 - 20
2299995	Cobalt	2.77	Spike	P	0 - 20
2299995	Copper	2.53	Spike	P	0 - 20
2299995	Lead	0.764	Spike	P	0 - 20
2299995	Manganese	2.06	Spike	P	0 - 20
2299995	Molybdenum	2.12	Spike	P	0 - 20
2299995	Nickel	2.27	Spike	P	0 - 20
2299995	Selenium	1.75	Spike	P	0 - 20
2299995	Silver	3.30	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299892	Aluminum	11.0	Spike	P	0 - 20
2299892	Antimony	7.93	Spike	P	0 - 20
2299892	Arsenic	8.22	Spike	P	0 - 20
2299892	Beryllium	7.99	Spike	P	0 - 20
2299892	Cadmium	7.98	Spike	P	0 - 20
2299892	Chromium	7.95	Spike	P	0 - 20
2299892	Cobalt	9.10	Spike	P	0 - 20
2299892	Copper	7.44	Spike	P	0 - 20
2299892	Lead	9.78	Spike	P	0 - 20
2299892	Manganese	8.24	Spike	P	0 - 20
2299892	Molybdenum	8.15	Spike	P	0 - 20
2299892	Nickel	7.53	Spike	P	0 - 20
2299892	Selenium	9.69	Spike	P	0 - 20
2299892	Silver	8.75	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299533	Ammonia-N	0.175	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299859	Ammonia-N	0.151	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299870	Kjeldahl Nitrogen	3.00	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299910	Kjeldahl Nitrogen	2.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300062	Kjeldahl Nitrogen	1.75	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299720	NO2NO3-N	0.976	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299602	NO2NO3-N	0.503	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299870	Total-P	2.09	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299880	Total-P	4.34	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299860	O-Phosphate-P	0.997	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299871	O-Phosphate-P	1.33	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P408581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	2,4-D	28.9	Spike	P	0 - 30
2299564	2,4,5-T	9.39	Spike	P	0 - 30
2299564	Acetaminophen	3.65	Spike	P	0 - 30
2299564	Acetamiprid	11.1	Spike	P	0 - 30
2299564	Afidopyropen	14.1	Spike	P	0 - 30
2299564	Bentazon	6.76	Spike	P	0 - 30
2299564	Benzovindiflupyr	19.4	Spike	P	0 - 30
2299564	Carbamazepine	6.72	Spike	P	0 - 30
2299564	Clothianidin	9.47	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P408581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	Dinotefuran	9.41	Spike	P	0 - 30
2299564	Diuron	22.3	Spike	P	0 - 30
2299564	Fenuron	14.6	Spike	P	0 - 30
2299564	Fluridone	15.1	Spike	P	0 - 30
2299564	Hydrocodone	8.23	Spike	P	0 - 30
2299564	Ibuprofen	29.1	Spike	P	0 - 30
2299564	Imazapyr	18.3	Spike	P	0 - 30
2299564	Imidacloprid	7.77	Spike	P	0 - 30
2299564	Linuron	18.6	Spike	P	0 - 30
2299564	Mandestrobin	1.28	Spike	P	0 - 30
2299564	MCPPP	11.6	Spike	P	0 - 30
2299564	Naproxen	19.6	Spike	P	0 - 30
2299564	Primidone	36.5	Spike	F	0 - 30
2299564	Pyraclostrobin	4.10	Spike	P	0 - 30
2299564	Silvex	23.7	Spike	P	0 - 30
2299564	Thiamethoxam	1.01	Spike	P	0 - 30
2299564	Tolfenpyrad	16.3	Spike	P	0 - 30
2299564	Triclopyr	7.17	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P408582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	Acesulfame K	4.14	Spike	P	0 - 30
2299564	AMPA	4.30	Spike	P	0 - 30
2299564	Endothall	0.858	Spike	P	0 - 30
2299564	Glufosinate	4.15	Spike	P	0 - 30
2299564	Glyphosate	1.31	Spike	P	0 - 30
2299564	Sucralose	16.1	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P408794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300414	Total Alkalinity	4.54	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P408795

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299867	Total Alkalinity	3.55	Sample	P	0 - 5.2

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300414	Fluoride	0.490	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P408798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299867	Fluoride	0.487	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P408839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299602	Organic Carbon	0.768	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P408958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298793	Organic Carbon	0.461	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2299890
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	125	P	30 - 160
EPA 8321B	Diuron-d6	114	P	30 - 160
EPA 8321B	Endothall-d6	136	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.0	P	30 - 160
EPA 8321B	Primidone-d5	68.6	P	30 - 160
EPA 8321B	Sucralose-d6	128	P	30 - 160

Lab Sample ID: 2299891
Field Sample ID: G2NE1186

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	78.3	P	30 - 160
EPA 8321B	Endothall-d6	136	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	127	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.3	P	30 - 160
EPA 8321B	Primidone-d5	99.0	P	30 - 160
EPA 8321B	Sucralose-d6	145	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A109883

Included Lab Sample IDs: 2299871, 2299872, 2299875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109889

Included Lab Sample IDs: 2299867, 2299868, 2299873

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.0	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A109919

Included Lab Sample IDs: 2299890, 2299891

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	123	119	P/P	60 - 160
Endothall	89.8	80.8	P/P	60 - 160
Sucralose	104	93.1	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109920

Included Lab Sample IDs: 2299890, 2299891

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	138	117	P/P	50 - 150
2,4,5-T	95.0	98.2	P/P	50 - 150
Acetaminophen	76.1	79.9	P/P	60 - 160
Acetamiprid	92.5	99.3	P/P	50 - 150
Afidopyropen	75.7	98.7	P/P	50 - 150
Bentazon	80.7	94.9	P/P	50 - 160
Benzovindiflupyr	95.2	116	P/P	50 - 150
Carbamazepine	95.8	92.8	P/P	60 - 150
Clothianidin	119	100	P/P	60 - 150
Dinotefuran	106	96.8	P/P	50 - 150
Diuron	90.3	89.7	P/P	60 - 160
Fenuron	103	101	P/P	60 - 150
Fluridone	84.3	111	P/P	60 - 160
Hydrocodone	94.5	94.9	P/P	60 - 150
Ibuprofen	69.4	69.2	P/P	50 - 160
Imazapyr	114	107	P/P	50 - 150
Imidacloprid	92.9	82.2	P/P	60 - 150
Linuron	120	105	P/P	60 - 150
Mandestrobin	114	109	P/P	50 - 150
MCPP	102	95.3	P/P	50 - 150
Naproxen	74.7	64.8	P/P	50 - 160
Primidone	83.4	66.0	P/P	60 - 150
Pyraclostrobin	107	98.7	P/P	60 - 150
Silvex	104	114	P/P	50 - 150
Thiamethoxam	106	111	P/P	50 - 150
Tolfenpyrad	80.2	74.8	P/P	60 - 150
Triclopyr	132	121	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A109941

Included Lab Sample IDs: 2299890, 2299891

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.8	99.0	P/P	60 - 160
Glufosinate	97.8	100	P/P	60 - 160
Glyphosate	94.0	84.2	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109944

Included Lab Sample IDs: 2299874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109953

Included Lab Sample IDs: 2299894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	99.0	P/P	90 - 110
Antimony	99.2	101	P/P	90 - 110
Arsenic	101	99.5	P/P	90 - 110
Beryllium	99.2	101	P/P	90 - 110
Cadmium	98.6	100	P/P	90 - 110
Chromium	98.8	100	P/P	90 - 110
Cobalt	95.2	94.5	P/P	90 - 110
Copper	98.6	96.3	P/P	90 - 110
Lead	91.3	92.0	P/P	90 - 110
Manganese	98.1	100	P/P	90 - 110
Molybdenum	99.1	98.6	P/P	90 - 110
Nickel	98.8	97.0	P/P	90 - 110
Selenium	101	100	P/P	90 - 110
Silver	98.3	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109970

Included Lab Sample IDs: 2299869, 2299870

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

Reference Method: SM 2320 B-2011

Run ID: A109978

Included Lab Sample IDs: 2299867, 2299868, 2299873

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.8	97.0	P/P	90 - 110
Total Alkalinity	98.3	97.5	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109978

Included Lab Sample IDs: 2299867, 2299868, 2299873

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

Reference Method: SM 4500 F-C-2011

Run ID: A109978

Included Lab Sample IDs: 2299867, 2299868, 2299873

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

Reference Method: SM 5310 B-2011

Run ID: A109998

Included Lab Sample IDs: 2299869, 2299870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	97.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110001

Included Lab Sample IDs: 2299894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Strontium	105	104	P/P	90 - 110
Tin	102	103	P/P	90 - 110
Vanadium	102	102	P/P	90 - 110
Zinc	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110010

Included Lab Sample IDs: 2299874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110013

Included Lab Sample IDs: 2299869, 2299870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110029

Included Lab Sample IDs: 2299870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.7	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110039

Included Lab Sample IDs: 2299892, 2299893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	99.4	102	P/P	90 - 110
Antimony	99.8	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110039

Included Lab Sample IDs: 2299892, 2299893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	102	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Beryllium	103	104	P/P	90 - 110
Beryllium	104	109	P/P	90 - 110
Cadmium	97.6	98.5	P/P	90 - 110
Cadmium	98.6	97.6	P/P	90 - 110
Chromium	98.3	101	P/P	90 - 110
Chromium	98.8	98.3	P/P	90 - 110
Cobalt	103	105	P/P	90 - 110
Cobalt	104	103	P/P	90 - 110
Copper	102	104	P/P	90 - 110
Copper	103	102	P/P	90 - 110
Lead	93.5	93.7	P/P	90 - 110
Lead	94.7	93.5	P/P	90 - 110
Manganese	99.3	102	P/P	90 - 110
Manganese	99.6	99.3	P/P	90 - 110
Molybdenum	97.8	98.1	P/P	90 - 110
Molybdenum	98.5	97.8	P/P	90 - 110
Nickel	104	106	P/P	90 - 110
Nickel	104	104	P/P	90 - 110
Selenium	100	99.0	P/P	90 - 110
Selenium	99.0	101	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Silver	102	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110041

Included Lab Sample IDs: 2299874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	95.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110045

Included Lab Sample IDs: 2299892, 2299893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	98.4	P/P	90 - 110
Calcium	100	100	P/P	90 - 110
Iron	102	99.9	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	101	99.2	P/P	90 - 110
Strontium	104	104	P/P	90 - 110
Strontium	104	104	P/P	90 - 110
Tin	103	102	P/P	90 - 110
Tin	103	103	P/P	90 - 110
Vanadium	102	102	P/P	90 - 110
Vanadium	102	102	P/P	90 - 110
Zinc	103	104	P/P	90 - 110
Zinc	104	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110064

Included Lab Sample IDs: 2299869, 2299870, 2299874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	107	P/P	90 - 110
Ammonia-N	107	106	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110089

Included Lab Sample IDs: 2299893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.0	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110092

Included Lab Sample IDs: 2299869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	94.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110097

Included Lab Sample IDs: 2299874

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110115

Included Lab Sample IDs: 2299892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	105	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						3.24	
EPA 200.7 Rev. 4.4	Calcium	106	101	108	105			1.52
	Calcium	102						4.16
	Iron	107	110	108	107			1.25
	Iron	109	104	107				2.74
	Magnesium	106	104	108	106			1.40
	Magnesium	102						1.49
	Strontium	105	108	107	106			0.761
	Strontium	106						3.81
	Tin	107	110	109	109			0.152
	Tin	107	89.2	84.4				5.56
	Vanadium	105	110	106	106			0.0282
	Vanadium	106	112	109				3.00
	Zinc	104	107	105	104			0.728
	Zinc	106	103	102				0.885
EPA 200.8 Rev. 5.4	Aluminum	99.4	98.0	101	101			0.0063
	Aluminum	102	96.0	108				11.0
	Antimony	100	103	101	98.7			2.74
	Antimony	101	96.8	89.4				7.93
	Arsenic	101	103	101	99.2			1.84
	Arsenic	101	104	95.7				8.22
	Beryllium	99.7	101	100	95.0			5.02
	Beryllium	97.1	102	94.1				7.99
	Cadmium	98.6	101	101	97.9			3.05
	Cadmium	102	91.1	84.2				7.98
	Chromium	100	103	102	100			1.93
	Chromium	102	95.6	88.3				7.95
	Cobalt	98.1	98.0	99.0	96.3			2.77
	Cobalt	103	107	97.5				9.10
	Copper	100	97.9	102	99.6			2.53
	Copper	101	98.4	91.4				7.44
	Lead	94.1	95.4	95.9	95.2			0.764
	Lead	100	98.9	89.6				9.78
	Manganese	99.2	101	104	101			2.06
	Manganese	100	90.0	80.0				8.24
	Molybdenum	101	103	101	99.0			2.12
	Molybdenum	102	104	94.5				8.15
	Nickel	101	99.1	102	99.9			2.27
	Nickel	102	104	96.5				7.53
	Selenium	98.8	99.5	98.9	97.2			1.75
	Selenium	98.8	97.5	88.4				9.69
	Silver	99.9	98.6	101	97.6			3.30
	Silver	105	88.7	81.3				8.75
EPA 350.1 Rev. 2.0	Ammonia-N	100	103	103				0.175
	Ammonia-N	100	98.6	98.8				0.151
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	101	105				3.00
	Kjeldahl Nitrogen	95.3	94.5	97.6				2.35
	Kjeldahl Nitrogen	104	103	106				1.75
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102	103				0.976
	NO2NO3-N	102	100	99.0				0.503
EPA 365.1 Rev. 2.0	Total-P	106	105	108				2.09
	Total-P	107	104	110				4.34
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	99.8	101				0.997
	O-Phosphate-P	99.0	97.6	99.4				1.33

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
			LCS	SMP	MS	
EPA 8321B	2,4-D	114	132	98.7		28.9
	2,4,5-T	106	80.5	88.5		9.39
	Acesulfame K	101	145	139		4.14
	Acetaminophen	85.5	115	111		3.65
	Acetamiprid	96.7	102	114		11.1
	Afidopyropen	80.4	65.6	75.5		14.1
	AMPA	137	148	154		4.30
	Bentazon	81.0				6.76
	Benzovindiflupyr	117	96.5	117		19.4
	Carbamazepine	112	109	102		6.72
	Clothianidin	92.7	183	166		9.47
	Dinotefuran	105	141	128		9.41
	Diuron	82.3	68.9	86.2		22.3
	Endothall	106	162	163		0.858
	Fenuron	100	99.7	86.1		14.6
	Fluridone	73.4	74.0	95.1		15.1
	Glufosinate	139	140	146		4.15
	Glyphosate	130	143	141		1.31
	Hydrocodone	86.4	106	97.3		8.23
	Ibuprofen	145	59.7	80.1		29.1
	Imazapyr	104	66.2	95.9		18.3
	Imidacloprid	79.9	203	188		7.77
	Linuron	91.7	93.8	77.9		18.6
	Mandestrobin	114	100	98.9		1.28
	MCPP	102	111	98.9		11.6
	Naproxen	98.8	57.6	47.3		19.6
	Primidone	91.6	72.8	108		36.5
	Pyraclostrobin	89.6	80.0	83.3		4.10
	Silvex	75.6	64.6	81.9		23.7
	Sucralose	108	127	153		16.1
	Thiamethoxam	99.5	186	184		1.01
	Tolfenpyrad	51.7	50.5	42.9		16.3
	Triclopyr	126	106	98.8		7.17
SM 2320 B-2011	Total Alkalinity	98.6			4.54	
	Total Alkalinity	99.5			3.55	
SM 4500 F-C-2011	Fluoride	97.5	97.5	96.9		0.490
	Fluoride	98.9	98.4	97.7		0.487
SM 5310 B-2011	Organic Carbon	95.8	95.2	96.1		0.768
	Organic Carbon	96.1	92.9	92.4		0.461

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2299867, 2299868, 2299873
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2299892, 2299893, 2299894
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2299892, 2299893, 2299894
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2299869, 2299870, 2299874
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2299869, 2299870, 2299874
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2299869, 2299870, 2299874
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2299869, 2299870, 2299874

Reference Method Descriptions

Method	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2299871, 2299872, 2299875
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2299890, 2299891
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2299867, 2299868, 2299873
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2299867, 2299868, 2299873
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2299867, 2299868, 2299873
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2299869, 2299870, 2299874

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	01/14/2022			01/14/2022 15:39	Khloe J Berg	2299867, 2299868, 2299873
EPA 200.7 Rev. 4.4	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 20:47	Josef B Mick	2299894
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/25/2022 19:15	Josef B Mick	2299892
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/25/2022 20:18	Josef B Mick	2299892
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/25/2022 20:50	Josef B Mick	2299893
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/25/2022 20:58	Josef B Mick	2299893
EPA 200.8 Rev. 5.4	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 00:15	McKinley C Carter	2299894
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/25/2022 20:46	McKinley C Carter	2299893
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/25/2022 21:24	McKinley C Carter	2299892
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/27/2022 14:17	Emily M Philpot	2299893
	01/14/2022	01/24/2022 09:56	Emily M Philpot	01/28/2022 11:06	Alexander Thompson	2299892
EPA 350.1 Rev. 2.0	01/14/2022			01/26/2022 14:48	Ping Hua	2299869
	01/14/2022			01/26/2022 14:49	Ping Hua	2299870
	01/14/2022			01/26/2022 15:17	Ping Hua	2299874
EPA 351.2 Rev. 2.0	01/14/2022	01/24/2022 11:37	Samantha L Bates	01/25/2022 12:35	Alexandra J Mattheus	2299870
	01/14/2022	01/26/2022 10:32	Samantha L Bates	01/27/2022 12:54	Alexandra J Mattheus	2299869
	01/14/2022	01/27/2022 10:17	Samantha L Bates	01/28/2022 09:51	Alexandra J Mattheus	2299874
EPA 353.2 Rev. 2.0	01/14/2022			01/20/2022 12:08	Beverly Y. Sanders	2299874
	01/14/2022			01/21/2022 10:43	Beverly Y. Sanders	2299869
	01/14/2022			01/21/2022 10:44	Beverly Y. Sanders	2299870
EPA 365.1 Rev. 2.0	01/14/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 15:04	Shengyu Ding	2299874
	01/14/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 16:16	Shengyu Ding	2299870
	01/14/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 16:21	Shengyu Ding	2299869
EPA 365.1 Rev. 2.0 dissolved	01/14/2022			01/14/2022 14:25	Ping Hua	2299875
	01/14/2022			01/14/2022 14:29	Ping Hua	2299871
	01/14/2022			01/14/2022 14:31	Ping Hua	2299872
EPA 8321B	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 18:25	Juyoung Kim	2299890
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 18:36	Juyoung Kim	2299891
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 20:45	Manjita Shrestha	2299890
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 21:00	Manjita Shrestha	2299891
	01/14/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 12:06	Juyoung Kim	2299890
	01/14/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 12:41	Juyoung Kim	2299891
SM 2320 B-2011	01/14/2022			01/21/2022 00:31	Dale L. Simmons	2299873
	01/14/2022			01/21/2022 06:29	Dale L. Simmons	2299867
	01/14/2022			01/21/2022 06:42	Dale L. Simmons	2299868
SM 2540 D-2011	01/14/2022			01/18/2022 15:32	Yijie Li	2299867, 2299868, 2299873
SM 4500 F-C-2011	01/14/2022			01/21/2022 00:31	Dale L. Simmons	2299873
	01/14/2022			01/21/2022 04:46	Dale L. Simmons	2299867
	01/14/2022			01/21/2022 05:00	Dale L. Simmons	2299868
SM 5310 B-2011	01/14/2022			01/21/2022 17:18	Nathaniel J Jones	2299869

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	01/14/2022			01/21/2022 17:49	Nathaniel J Jones	2299870
	01/14/2022			01/25/2022 03:28	Nathaniel J Jones	2299874