

Chemical Analysis Report

SW-DIST-2021-07-29-02

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

Event Description: **SMP Run 19**
Request ID: **RQ-2021-04-19-21**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Ben Paswater

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 26-AUG-2021 10:49

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: Hudson Bayou Tidal by Marie Selby Botanical Garden **Collection Date/Time: 07/28/2021 13:00**

Field ID: G3SW0108

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265862	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P401730	
	EPA 300.0 Rev. 2.1	Chloride	1.2E+04		mg Cl/L	P402078	
	SM 2120 B-2011	Color (true)	18		PCU	P401720	
	SM 2320 B-2011	Total Alkalinity	119		mg CaCO3/L	P401792	
	SM 2540 C-2011	TDS	2.10E+04		mg/L	P402222	
	SM 2540 D-2011	TSS	3	U	mg/L	P402229	
	SM 4500 F-C-2011	Fluoride	0.95		mg F/L	P401794	
2265864	EPA 350.1 Rev. 2.0	Ammonia-N	0.086		mg N/L	P402124	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P402526	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P401870	
	SM 5310 B-2011	Organic Carbon	5.7		mg C/L	P402251	
2265866	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.093		mg P/L	P401710	
2265884	EPA 8321B	Acesulfame K	0.10	U	ug/L	P401726	
		2,4-D	0.18		ug/L	P401633	
		AMPA	1.0	U	ug/L	P401726	
		2,4,5-T	0.0040	U	ug/L	P401633	
		Acetaminophen	0.0080	U	ug/L	P401633	
		Endothall	0.25	U	ug/L	P401726	
		Acetamiprid	0.0020	U	ug/L	P401633	
		Glufosinate	1.0	U	ug/L	P401726	
		Glyphosate	1.0	U	ug/L	P401726	
		Afidopyropen	0.0020	U	ug/L	P401633	
		Sucralose	0.36		ug/L	P401726	
		Bentazon	0.010		ug/L	P401633	
		Benzovindiflupyr	0.0020	U	ug/L	P401633	
		Carbamazepine	8.0E-04	U	ug/L	P401633	
		Clothianidin	0.0028	I	ug/L	P401633	
		Dinotefuran	0.0036	I	ug/L	P401633	
		Diuron	0.029		ug/L	P401633	
		Fenuron	0.016	U	ug/L	P401633	
		Fluridone	0.0020	I	ug/L	P401633	
		Imazapyr	0.066		ug/L	P401633	
		Hydrocodone	0.0020	U	ug/L	P401633	
		Ibuprofen	0.020	U	ug/L	P401633	
		Imidacloprid	0.037		ug/L	P401633	
		Linuron	0.0040	U	ug/L	P401633	
		Mandestrobin	0.0020	U	ug/L	P401633	
		MCP	0.0029	I	ug/L	P401633	
		Naproxen	0.0080	U	ug/L	P401633	
		Primidone	0.0040	U	ug/L	P401633	
		Pyraclostrobin	0.0020	U	ug/L	P401633	
		Thiamethoxam	0.0020	U	ug/L	P401633	

Field ID: G3SW0108

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265884	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P401633	
		Triclopyr	0.0040	U	ug/L	P401633	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Indian Creek @ Fruitville Rd

Collection Date/Time: 07/28/2021 10:45

Field ID: G3SW0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265863	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P401730	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P402078	
	SM 2120 B-2011	Color (true)	170		PCU	P401720	
	SM 2320 B-2011	Total Alkalinity	49		mg CaCO3/L	P401791	
	SM 2540 C-2011	TDS	171		mg/L	P402221	
	SM 2540 D-2011	TSS	8	I	mg/L	P402224	
	SM 4500 F-C-2011	Fluoride	0.43		mg F/L	P401793	
2265865	EPA 350.1 Rev. 2.0	Ammonia-N	0.094		mg N/L	P402182	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P402635	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P401733	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P402468	
2265867	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.62		mg P/L	P401711	
2265885	EPA 200.7 Rev. 4.4	Barium	4.6		ug/L	P401881	
		Calcium	23.7		mg/L	P401881	
		Iron	2.33E+03		ug/L	P401881	
		Magnesium	9.55		mg/L	P401881	
		Potassium	3.0		mg/L	P401881	
		Sodium	10.2		mg/L	P401881	
		Zinc	5.3	I	ug/L	P402375	
		Aluminum	309		ug/L	P401881	
		Antimony	0.086	I	ug/L	P401881	
		Arsenic	2.53		ug/L	P401881	
	EPA 200.8 Rev. 5.4	Boron**	34.1		ug/L	P401881	
		Cadmium	0.020	U	ug/L	P401881	
		Chromium	1.5	I	ug/L	P401881	
		Copper	1.24		ug/L	P402243	
		Lead	0.44		ug/L	P401881	
		Nickel	0.83	I	ug/L	P401881	
		Selenium	0.20	U	ug/L	P401881	
		Silver	0.010	U	ug/L	P401881	
		Thallium	0.10	U	ug/L	P401881	
		Hardness	98.6		mg/L	P401881	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Phillippi Creek @ Bee Ridge

Collection Date/Time: 07/28/2021 12:10

Field ID: G3SW0064

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265882	EPA 8321B	2,4-D	0.12		ug/L	P401633	
		Acesulfame K	0.18	I	ug/L	P401726	
		2,4,5-T	0.0040	U	ug/L	P401633	
		AMPA	1.3		ug/L	P401726	
		Acetaminophen	0.0080	U	ug/L	P401633	
		Acetamiprid	0.0020	U	ug/L	P401633	
		Endothall	0.25	U	ug/L	P401726	
		Glufosinate	0.10	U	ug/L	P401726	
		Glyphosate	3.4		ug/L	P401726	
		Afidopyropen	0.0020	U	ug/L	P401633	
		Bentazon	0.041		ug/L	P401633	
		Sucralose	0.62		ug/L	P401726	
		Benzovindiflupyr	0.0020	U	ug/L	P401633	
		Carbamazepine	0.0025	I	ug/L	P401633	
		Clothianidin	0.29		ug/L	P401633	
		Dinotefuran	0.0051	I	ug/L	P401633	
		Diuron	0.018		ug/L	P401633	
		Fenuron	0.016	U	ug/L	P401633	
		Fluridone	0.048		ug/L	P401633	
		Imazapyr	0.67		ug/L	P401633	
		Hydrocodone	0.0020	U	ug/L	P401633	
		Ibuprofen	0.020	U	ug/L	P401633	
		Imidacloprid	0.32		ug/L	P401633	
		Linuron	0.0040	U	ug/L	P401633	
		Mandestrobin	0.0020	U	ug/L	P401633	
		MCPP	0.021		ug/L	P401633	
		Naproxen	0.0080	U	ug/L	P401633	
		Primidone	0.0040	U	ug/L	P401633	
		Pyraclostrobin	0.0020	U	ug/L	P401633	
		Thiamethoxam	0.0084		ug/L	P401633	
		Tolfenpyrad	0.0020	U	ug/L	P401633	
		Triclopyr	0.0040	U	ug/L	P401633	

Sample Location: Island Park Boat Basin off dock

Collection Date/Time: 07/28/2021 13:20

Field ID: G3SW0061

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265868	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P401730	
	SM 2320 B-2011	Total Alkalinity	120		mg CaCO3/L	P401792	
	SM 2540 D-2011	TSS	5	I	mg/L	P402229	
	SM 4500 F-C-2011	Fluoride	1.1		mg F/L	P401794	
2265869	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P402124	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P402526	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P401870	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P401763	
	SM 5310 B-2011	Organic Carbon	4.3		mg C/L	P402251	
2265870	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P401710	
2265886	EPA 200.7 Rev. 4.4	Iron	120	U	ug/L	P401704	
		Manganese	4.3	I	ug/L	P401704	
		Zinc	20	U	ug/L	P401704	
	EPA 200.8 Rev. 5.4	Aluminum	50	U	ug/L	P401704	
		Antimony	0.32	I	ug/L	P401704	
		Arsenic	2.98		ug/L	P401704	
		Cadmium	0.080	U	ug/L	P401704	
		Chromium	1.6	U	ug/L	P401704	
		Copper	8.1		ug/L	P401704	
		Lead	0.80	U	ug/L	P401704	
		Nickel	2.0	U	ug/L	P401704	
		Selenium	0.80	U	ug/L	P401704	
		Silver	0.040	U	ug/L	P401704	
		Thallium	0.40	U	ug/L	P401704	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 08/03/2021.

Sample Location: Clark Lake Drainage @ Wilkinson Rd.

Collection Date/Time: 07/28/2021 12:20

Field ID: G3SW0103

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265883	EPA 8321B	2,4-D	0.022		ug/L	P401633	
		Acesulfame K	0.23	I	ug/L	P401726	
		2,4,5-T	0.0040	U	ug/L	P401633	
		AMPA	0.88		ug/L	P401726	
		Acetaminophen	0.023	I	ug/L	P401633	
		Acetamiprid	0.0020	U	ug/L	P401633	
		Endothall	0.25	U	ug/L	P401726	
		Glufosinate	0.10	U	ug/L	P401726	
		Glyphosate	2.6		ug/L	P401726	
		Afidopyropen	0.0020	U	ug/L	P401633	
		Bentazon	0.025		ug/L	P401633	
		Sucralose	0.87		ug/L	P401726	
		Benzovindiflupyr	0.0020	U	ug/L	P401633	
		Carbamazepine	0.0045		ug/L	P401633	
		Clothianidin	0.014		ug/L	P401633	
		Dinotefuran	0.0025	I	ug/L	P401633	
		Diuron	0.018		ug/L	P401633	
		Fenuron	0.016	U	ug/L	P401633	
		Fluridone	0.092		ug/L	P401633	
		Imazapyr	0.40		ug/L	P401633	
		Hydrocodone	0.0020	U	ug/L	P401633	
		Ibuprofen	0.020	U	ug/L	P401633	
		Imidacloprid	0.17		ug/L	P401633	
		Linuron	0.0040	U	ug/L	P401633	
		Mandestrobin	0.0020	U	ug/L	P401633	
		MCPP	0.0056	I	ug/L	P401633	
		Naproxen	0.0080	U	ug/L	P401633	
		Primidone	0.0040	U	ug/L	P401633	
		Pyraclostrobin	0.0020	U	ug/L	P401633	
		Thiamethoxam	0.033		ug/L	P401633	
		Tolfenpyrad	0.0020	U	ug/L	P401633	
		Triclopyr	0.0040	U	ug/L	P401633	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P401730

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P401704

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P401881

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.21	I	mg/L
Iron	30	U	ug/L
Magnesium	0.059	I	mg/L
Potassium	0.30	U	mg/L
Sodium	0.61	I	mg/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402375

Component	Result	Code	Units
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401704

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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 200.8 Rev. 5.4
Batch ID: P401881

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401881

Component	Result	Code	Units
Chromium	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 200.8 Rev. 5.4
Batch ID: P402243

Component	Result	Code	Units
Copper	0.40	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402078

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402124

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402182

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402526

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402635

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401733

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401870

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P401763

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401710

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401711

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

Reference Method: EPA 8321B

Batch ID: P401633

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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P401726

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 2120 B-2011
Batch ID: P401720

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P401791

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

Reference Method: SM 2320 B-2011
Batch ID: P401792

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

Reference Method: SM 2540 C-2011
Batch ID: P402221

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P402222

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P402224

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P402229

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P401793

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P401794

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P402251

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

Reference Method: SM 5310 B-2011
Batch ID: P402468

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: P401704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	109		P	85 - 115
Manganese	104		P	85 - 115
Zinc	86.4		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P401881

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	104		P	85 - 115
Calcium	101		P	85 - 115
Iron	96.9		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	106		P	85 - 115
Sodium	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Zinc	108		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	100		P	85 - 115
Cadmium	98.3		P	85 - 115
Chromium	98.9		P	85 - 115
Copper	98.7		P	85 - 115
Lead	99.2		P	85 - 115
Nickel	100		P	85 - 115
Selenium	103		P	85 - 115
Silver	107		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401881

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	107		P	85 - 115
Arsenic	102		P	85 - 115
Boron	104		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	100		P	85 - 115
Lead	105		P	85 - 115
Nickel	103		P	85 - 115
Selenium	99.0		P	85 - 115
Silver	102		P	85 - 115
Thallium	107		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402243

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	96.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402078

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402124

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402182

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: P402526

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402635

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401733

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401870

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401763

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401711

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

Reference Method: EPA 8321B
Batch ID: P401633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	118		P	40 - 150
2,4,5-T	121		P	40 - 150
Acetaminophen	107		P	30 - 150
Acetamiprid	88.4		P	40 - 150
Afidopyropen	64.9		P	40 - 150
Bentazon	113		P	30 - 150
Benzovindiflupyr	86.8		P	40 - 150
Carbamazepine	101		P	40 - 150
Clothianidin	99.5		P	40 - 150
Dinotefuran	89.4		P	40 - 150
Diuron	107		P	40 - 150
Fenuron	98.9		P	40 - 150
Fluridone	95.1		P	40 - 150
Hydrocodone	95.4		P	40 - 150
Ibuprofen	88.8		P	40 - 150
Imazapyr	107		P	40 - 150
Imidacloprid	100		P	40 - 150
Linuron	84.9		P	40 - 150
Mandestrobin	86.1		P	40 - 150
MCPP	116		P	40 - 150
Naproxen	86.6		P	40 - 150
Primidone	105		P	40 - 150
Pyraclostrobin	82.4		P	40 - 150
Thiamethoxam	93.5		P	40 - 150
Tolfenpyrad	48.2		P	30 - 150
Triclopyr	114		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P401726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	79.4		P	40 - 150
AMPA	116		P	40 - 150
Endothall	83.5		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	107		P	40 - 150
Sucralose	93.2		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P401720

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

Reference Method: SM 2320 B-2011
Batch ID: P401791

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P401792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P401793

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P401794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P402251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P402468

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265737	Iron	111	109	P/P	70 - 130
2265737	Manganese	89.3	87.3	P/P	70 - 130
2265737	Zinc	84.4	85.0	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265970	Barium	111		P	80 - 120
2265970	Calcium	104		P	80 - 120
2265970	Iron	107		P	80 - 120
2265970	Magnesium	109		P	80 - 120
2265970	Potassium	110		P	80 - 120
2265970	Sodium	103		P	80 - 120
2266597	Barium	106	105	P/P	80 - 120
2266597	Calcium	104		P	80 - 120
2266597	Iron	96.1	99.8	P/P	80 - 120
2266597	Magnesium	100	103	P/P	80 - 120
2266597	Potassium	102	105	P/P	80 - 120
2266597	Sodium	103		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265002	Zinc	108		P	80 - 120
2265969	Zinc	105	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265737	Aluminum	102	100	P/P	70 - 130
2265737	Antimony	105	103	P/P	70 - 130
2265737	Arsenic	113	111	P/P	70 - 130
2265737	Cadmium	95.9	93.8	P/P	70 - 130
2265737	Chromium	104	102	P/P	70 - 130
2265737	Copper	101	98.6	P/P	70 - 130
2265737	Lead	107	105	P/P	70 - 130
2265737	Nickel	114	112	P/P	70 - 130
2265737	Selenium	101	99.8	P/P	70 - 130
2265737	Silver	102	101	P/P	70 - 130
2265737	Thallium	111	110	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265970	Aluminum	118		P	80 - 120
2265970	Antimony	103		P	80 - 120
2265970	Arsenic	97.9		P	80 - 120
2265970	Boron	107		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265970	Cadmium	103		P	80 - 120
2265970	Chromium	102		P	80 - 120
2265970	Lead	100		P	80 - 120
2265970	Nickel	101		P	80 - 120
2265970	Selenium	95.3		P	80 - 120
2265970	Silver	103		P	80 - 120
2265970	Thallium	110		P	80 - 120
2266597	Aluminum	101	102	P/P	80 - 120
2266597	Antimony	104	106	P/P	80 - 120
2266597	Arsenic	97.3	98.3	P/P	80 - 120
2266597	Boron	103	105	P/P	80 - 120
2266597	Cadmium	100	102	P/P	80 - 120
2266597	Chromium	98.0	99.8	P/P	80 - 120
2266597	Lead	102	102	P/P	80 - 120
2266597	Nickel	97.8	99.3	P/P	80 - 120
2266597	Selenium	94.5	94.7	P/P	80 - 120
2266597	Silver	101	101	P/P	80 - 120
2266597	Thallium	108	108	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264588	Copper	87.4		P	80 - 120
2265305	Copper	90.1	92.5	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265759	Chloride	98.7		P	90 - 110
2265947	Chloride	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267909	Ammonia-N	102	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265760	Ammonia-N	99.2	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265722	Kjeldahl Nitrogen	106	108	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265775	NO2NO3-N	106	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265721	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P401763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265721	Total-P	102	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265870	O-Phosphate-P	94.6	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265840	O-Phosphate-P	99.4	98.5	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P401633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264998	2,4-D	98.6	111	P/P	40 - 150
2264998	2,4,5-T	107	116	P/P	40 - 150
2264998	Acetaminophen	104	115	P/P	30 - 150
2264998	Acetamiprid	82.9	85.1	P/P	40 - 150
2264998	Afidopyropen	58.4	50.0	P/P	40 - 150
2264998	Bentazon	95.2	107	P/P	30 - 150
2264998	Benzovindiflupyr	80.7	89.7	P/P	40 - 150
2264998	Carbamazepine	94.2	105	P/P	40 - 150
2264998	Clothianidin	95.7	105	P/P	40 - 150
2264998	Dinotefuran	96.8	100	P/P	40 - 150
2264998	Diuron	94.1	105	P/P	40 - 150
2264998	Fenuron	88.1	95.5	P/P	40 - 150
2264998	Fluridone	86.9	96.2	P/P	40 - 150
2264998	Hydrocodone	90.2	98.4	P/P	40 - 150
2264998	Ibuprofen	96.8	89.8	P/P	40 - 150
2264998	Imazapyr	94.4	105	P/P	40 - 150
2264998	Imidacloprid	110	120	P/P	40 - 150
2264998	Linuron	76.0	88.3	P/P	40 - 150
2264998	Mandestrobin	82.9	91.3	P/P	40 - 150
2264998	MCPP	107	118	P/P	40 - 150
2264998	Naproxen	86.3	92.2	P/P	40 - 150
2264998	Primidone	102	107	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P401633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264998	Pyraclostrobin	78.6	87.7	P/P	40 - 150
2264998	Thiamethoxam	102	110	P/P	40 - 150
2264998	Tolfenpyrad	47.8	54.0	P/P	30 - 150
2264998	Triclopyr	103	109	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P401726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265882	Acesulfame K	136	135	P/P	40 - 150
2265882	AMPA	89.2	90.6	P/P	40 - 150
2265882	Endothall	98.2	98.8	P/P	40 - 150
2265882	Glufosinate	117	125	P/P	40 - 150
2265882	Glyphosate	99.3	103	P/P	40 - 150
2265882	Sucralose	94.1	95.3	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P401793

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265774	Fluoride	99.6	98.9	P/P	92 - 107

Reference Method: SM 4500 F-C-2011

Batch ID: P401794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265700	Fluoride	101	99.8	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P402251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265394	Organic Carbon	94.2	96.6	P/P	85 - 115

Reference Method: SM 5310 B-2011

Batch ID: P402468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266214	Organic Carbon	98.6	99.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P401730

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265836	Turbidity	2.47	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401704

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265737	Iron	1.79	Spike	P	0 - 20
2265737	Manganese	1.78	Spike	P	0 - 20
2265737	Zinc	0.713	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401881

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266597	Barium	0.563	Spike	P	0 - 20
2266597	Calcium	0.583	Spike	P	0 - 20
2266597	Iron	3.11	Spike	P	0 - 20
2266597	Magnesium	2.06	Spike	P	0 - 20
2266597	Potassium	3.04	Spike	P	0 - 20
2266597	Sodium	0.147	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402375

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265969	Zinc	2.48	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401704

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265737	Aluminum	2.22	Spike	P	0 - 20
2265737	Antimony	1.92	Spike	P	0 - 20
2265737	Arsenic	1.98	Spike	P	0 - 20
2265737	Cadmium	2.12	Spike	P	0 - 20
2265737	Chromium	1.97	Spike	P	0 - 20
2265737	Copper	2.34	Spike	P	0 - 20
2265737	Lead	2.03	Spike	P	0 - 20
2265737	Nickel	1.76	Spike	P	0 - 20
2265737	Selenium	1.43	Spike	P	0 - 20
2265737	Silver	1.53	Spike	P	0 - 20
2265737	Thallium	0.949	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266597	Aluminum	1.19	Spike	P	0 - 20
2266597	Antimony	1.21	Spike	P	0 - 20
2266597	Arsenic	1.03	Spike	P	0 - 20
2266597	Boron	0.996	Spike	P	0 - 20
2266597	Cadmium	1.63	Spike	P	0 - 20
2266597	Chromium	1.78	Spike	P	0 - 20
2266597	Lead	0.0791	Spike	P	0 - 20
2266597	Nickel	1.56	Spike	P	0 - 20
2266597	Selenium	0.304	Spike	P	0 - 20
2266597	Silver	0.635	Spike	P	0 - 20
2266597	Thallium	0.523	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265305	Copper	2.65	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P402078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265759	Chloride	0.114	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P402124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267909	Ammonia-N	2.16	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P402182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265760	Ammonia-N	0.149	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P402526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265722	Kjeldahl Nitrogen	0.827	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P402635

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265865	Kjeldahl Nitrogen	2.99	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401733

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265775	NO2NO3-N	0.743	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401870

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265721	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P401763

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265721	Total-P	2.38	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401710

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265870	O-Phosphate-P	3.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401711

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265840	O-Phosphate-P	0.910	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P401633

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264998	2,4-D	9.08	Spike	P	0 - 30
2264998	2,4,5-T	7.96	Spike	P	0 - 30
2264998	Acetaminophen	10.7	Spike	P	0 - 30
2264998	Acetamiprid	2.62	Spike	P	0 - 30
2264998	Afidopyropen	15.6	Spike	P	0 - 30
2264998	Bentazon	7.74	Spike	P	0 - 30
2264998	Benzovindiflupyr	10.6	Spike	P	0 - 30
2264998	Carbamazepine	10.1	Spike	P	0 - 30
2264998	Clothianidin	9.03	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P401633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264998	Dinotefuran	3.39	Spike	P	0 - 30
2264998	Diuron	8.95	Spike	P	0 - 30
2264998	Fenuron	8.08	Spike	P	0 - 30
2264998	Fluridone	10.1	Spike	P	0 - 30
2264998	Hydrocodone	8.75	Spike	P	0 - 30
2264998	Ibuprofen	7.51	Spike	P	0 - 30
2264998	Imazapyr	8.09	Spike	P	0 - 30
2264998	Imidacloprid	7.84	Spike	P	0 - 30
2264998	Linuron	15.0	Spike	P	0 - 30
2264998	Mandestrobin	9.64	Spike	P	0 - 30
2264998	MCPPP	9.10	Spike	P	0 - 30
2264998	Naproxen	6.67	Spike	P	0 - 30
2264998	Primidone	4.91	Spike	P	0 - 30
2264998	Pyraclostrobin	10.9	Spike	P	0 - 30
2264998	Thiamethoxam	7.64	Spike	P	0 - 30
2264998	Tolfenpyrad	12.4	Spike	P	0 - 30
2264998	Triclopyr	5.20	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P401726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265882	Acesulfame K	0.980	Spike	P	0 - 30
2265882	AMPA	1.01	Spike	P	0 - 30
2265882	Endothall	0.681	Spike	P	0 - 30
2265882	Glufosinate	6.72	Spike	P	0 - 30
2265882	Glyphosate	1.41	Spike	P	0 - 30
2265882	Sucralose	1.02	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P401720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265836	Color (true)	2.39	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P401791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265774	Total Alkalinity	0.925	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P401792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265700	Total Alkalinity	0.908	Sample	P	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
 Batch ID: P402221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265774	TDS	6.74	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
 Batch ID: P402222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266078	TDS	6.64	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P401793

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265774	Fluoride	0.460	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
 Batch ID: P401794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265700	Fluoride	0.499	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
 Batch ID: P402251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265394	Organic Carbon	2.19	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P402468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266214	Organic Carbon	0.218	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2265882

Field Sample ID: G3SW0064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	105	P	30 - 160
EPA 8321B	Diuron-d6	86.2	P	30 - 160
EPA 8321B	Endothall-d6	94.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.6	P	30 - 160
EPA 8321B	Primidone-d5	97.2	P	30 - 160
EPA 8321B	Sucralose-d6	93.5	P	30 - 160

Lab Sample ID: 2265883

Field Sample ID: G3SW0103

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	105	P	30 - 160
EPA 8321B	Diuron-d6	84.1	P	30 - 160
EPA 8321B	Endothall-d6	87.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.4	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	85.3	P	30 - 160

Lab Sample ID: 2265884

Field Sample ID: G3SW0108

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.2	P	30 - 160
EPA 8321B	Diuron-d6	86.1	P	30 - 160
EPA 8321B	Endothall-d6	74.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	37.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.5	P	30 - 160
EPA 8321B	Primidone-d5	87.0	P	30 - 160
EPA 8321B	Sucralose-d6	85.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A106918

Included Lab Sample IDs: 2265866, 2265867, 2265870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.8	P/P	90 - 110
O-Phosphate-P	99.7	98.5	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A106921

Included Lab Sample IDs: 2265862, 2265863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115
Color (true)	99.8	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106926

Included Lab Sample IDs: 2265862, 2265863, 2265868

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: A106927

Included Lab Sample IDs: 2265865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	106	110	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A106940

Included Lab Sample IDs: 2265882, 2265883, 2265884

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.0	90.1	P/P	50 - 150
2,4,5-T	95.6	97.1	P/P	50 - 150
Acetaminophen	104	101	P/P	60 - 160
Acetamiprid	96.1	97.6	P/P	50 - 150
Afidopyropen	94.0	95.1	P/P	50 - 150
Bentazon	107	109	P/P	50 - 160
Benzovindiflupyr	93.9	96.0	P/P	50 - 150
Carbamazepine	99.3	99.9	P/P	60 - 150
Clothianidin	95.5	94.2	P/P	60 - 150
Dinotefuran	104	102	P/P	50 - 150
Diuron	113	110	P/P	60 - 160
Fenuron	96.7	96.1	P/P	60 - 150
Fluridone	98.6	101	P/P	60 - 160
Hydrocodone	100	105	P/P	60 - 150
Ibuprofen	97.4	94.3	P/P	50 - 160
Imazapyr	107	111	P/P	50 - 150
Imidacloprid	91.9	92.8	P/P	60 - 150
Linuron	102	95.1	P/P	60 - 150
Mandestrobin	96.4	95.6	P/P	50 - 150
MCPP	90.4	90.0	P/P	50 - 150
Naproxen	108	101	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A106940

Included Lab Sample IDs: 2265882, 2265883, 2265884

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	101	92.7	P/P	60 - 150
Pyraclostrobin	97.5	98.2	P/P	60 - 150
Thiamethoxam	97.6	97.3	P/P	50 - 150
Tolfenpyrad	95.2	96.2	P/P	60 - 150
Triclopyr	90.6	92.4	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A106958

Included Lab Sample IDs: 2265886

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

Reference Method: SM 2320 B-2011

Run ID: A106969

Included Lab Sample IDs: 2265862, 2265863, 2265868

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.6	P/P	90 - 110
Total Alkalinity	99.4	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A106969

Included Lab Sample IDs: 2265862, 2265863, 2265868

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106978

Included Lab Sample IDs: 2265869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.2	97.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A106982

Included Lab Sample IDs: 2265886

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Manganese	102	105	P/P	90 - 110
Zinc	101	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106984

Included Lab Sample IDs: 2265886

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	104	P/P	90 - 110
Antimony	103	104	P/P	90 - 110
Arsenic	103	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106984

Included Lab Sample IDs: 2265886

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	99.6	100	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Lead	101	101	P/P	90 - 110
Nickel	107	107	P/P	90 - 110
Selenium	99.5	99.8	P/P	90 - 110
Silver	98.5	99.1	P/P	90 - 110
Thallium	100	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A106987

Included Lab Sample IDs: 2265882, 2265883, 2265884

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	112	136	P/P	60 - 160
AMPA	123	117	P/P	60 - 160
Glufosinate	103	103	P/P	60 - 160
Glufosinate	90.9	101	P/P	60 - 160
Glyphosate	103	104	P/P	60 - 160
Glyphosate	93.4	107	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106997

Included Lab Sample IDs: 2265864, 2265869

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107000

Included Lab Sample IDs: 2265886

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	98.6	95.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107002

Included Lab Sample IDs: 2265882, 2265883, 2265884

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	124	115	P/P	60 - 160
Endothall	89.2	84.7	P/P	60 - 160
Sucralose	110	104	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107025

Included Lab Sample IDs: 2265862, 2265863

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	99.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107048

Included Lab Sample IDs: 2265885

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	104	P/P	90 - 110
Antimony	105	106	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Boron	104	102	P/P	90 - 110
Cadmium	104	104	P/P	90 - 110
Chromium	100	100	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Silver	96.8	97.0	P/P	90 - 110
Thallium	109	108	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107070

Included Lab Sample IDs: 2265885

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107098

Included Lab Sample IDs: 2265864, 2265869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107121

Included Lab Sample IDs: 2265865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	98.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107127

Included Lab Sample IDs: 2265885

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	105	105	P/P	90 - 110
Calcium	99.7	98.9	P/P	90 - 110
Iron	95.0	94.5	P/P	90 - 110
Magnesium	96.9	95.9	P/P	90 - 110
Potassium	105	105	P/P	90 - 110
Sodium	99.9	99.3	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107149

Included Lab Sample IDs: 2265864, 2265869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	97.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107192

Included Lab Sample IDs: 2265885

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	93.4	91.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107246

Included Lab Sample IDs: 2265865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	97.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107254

Included Lab Sample IDs: 2265885

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	100	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107325

Included Lab Sample IDs: 2265864, 2265869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107354

Included Lab Sample IDs: 2265865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	104	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						2.47	
EPA 200.7 Rev. 4.4	Barium	104	111	106	105			0.563
	Calcium	101	104	104				0.583
	Iron	109	111	109				1.79
	Iron	96.9	107	96.1	99.8			3.11
	Magnesium	103	109	100	103			2.06
	Manganese	104	89.3	87.3				1.78
	Potassium	106	110	102	105			3.04
	Sodium	101	103	103				0.147
	Zinc	86.4	84.4	85.0				0.713
	Zinc	108	108	105	102			2.48
EPA 200.8 Rev. 5.4	Aluminum	102	102	100				2.22
	Aluminum	103	101	102	118			1.19
	Antimony	103	105	103				1.92
	Antimony	107	104	106	103			1.21
	Arsenic	100	113	111				1.98
	Arsenic	102	97.3	98.3	97.9			1.03
	Boron	104	103	105	107			0.996
	Cadmium	98.3	95.9	93.8				2.12
	Cadmium	103	100	102	103			1.63
	Chromium	98.9	104	102				1.97
	Chromium	100	98.0	99.8	102			1.78
	Copper	98.7	101	98.6				2.34
	Copper	96.7	90.1	92.5	87.4			2.65
	Lead	99.2	107	105				2.03
	Lead	105	102	102	100			0.0791
	Nickel	100	114	112				1.76
	Nickel	103	97.8	99.3	101			1.56
	Selenium	103	101	99.8				1.43
	Selenium	99.0	94.5	94.7	95.3			0.304
	Silver	107	102	101				1.53
	Silver	102	101	101	103			0.635
	Thallium	101	111	110				0.949
	Thallium	107	108	108	110			0.523
EPA 300.0 Rev. 2.1	Chloride	98.2	98.7	99.4			0.114	
EPA 350.1 Rev. 2.0	Ammonia-N	103	102	106				2.16
	Ammonia-N	100	99.2	99.4				0.149
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	108	106				0.827
	Kjeldahl Nitrogen	106						2.99
EPA 353.2 Rev. 2.0	NO2NO3-N	108	106	107				0.743
	NO2NO3-N	100	100	100				0.0
EPA 365.1 Rev. 2.0	Total-P	104	102	99.0				2.38
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7	94.6	98.0				3.11
	O-Phosphate-P	99.0	99.4	98.5				0.910
EPA 8321B	2,4-D	118	98.6	111				9.08
	2,4,5-T	121	107	116				7.96
	Acesulfame K	79.4	136	135				0.980
	Acetaminophen	107	104	115				10.7
	Acetamiprid	88.4	82.9	85.1				2.62
	Afidopyropen	64.9	58.4	50.0				15.6
	AMPA	116	89.2	90.6				1.01
	Bentazon	113	95.2	107				7.74
	Benzovindiflupyr	86.8	80.7	89.7				10.6
	Carbamazepine	101	94.2	105				10.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Clothianidin	99.5	95.7	105		9.03
	Dinotefuran	89.4	96.8	100		3.39
	Diuron	107	94.1	105		8.95
	Endothall	83.5	98.2	98.8		0.681
	Fenuron	98.9	88.1	95.5		8.08
	Fluridone	95.1	86.9	96.2		10.1
	Glufosinate	108	117	125		6.72
	Glyphosate	107	99.3	103		1.41
	Hydrocodone	95.4	90.2	98.4		8.75
	Ibuprofen	88.8	96.8	89.8		7.51
	Imazapyr	107	94.4	105		8.09
	Imidacloprid	100	110	120		7.84
	Linuron	84.9	76.0	88.3		15.0
	Mandestrobin	86.1	82.9	91.3		9.64
	MCPPP	116	107	118		9.10
	Naproxen	86.6	86.3	92.2		6.67
	Primidone	105	102	107		4.91
	Pyraclostrobin	82.4	78.6	87.7		10.9
	Sucralose	93.2	94.1	95.3		1.02
	Thiamethoxam	93.5	102	110		7.64
	Tolfenpyrad	48.2	47.8	54.0		12.4
	Triclopyr	114	103	109		5.20
SM 2120 B-2011	Color (true)	101			2.39	
SM 2320 B-2011	Total Alkalinity	101			0.925	
	Total Alkalinity	101			0.908	
SM 2540 C-2011	TDS				6.74	
	TDS				6.64	
SM 4500 F-C-2011	Fluoride	98.5	99.6	98.9		0.460
	Fluoride	99.9	101	99.8		0.499
SM 5310 B-2011	Organic Carbon	97.6	94.2	96.6		2.19
	Organic Carbon	97.6	98.6	99.0		0.218

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2265862, 2265863, 2265868
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2265885, 2265886
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2265885, 2265886
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2265862, 2265863
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2265864, 2265865, 2265869
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2265864, 2265865, 2265869
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2265864, 2265865, 2265869
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2265869
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2265866, 2265867, 2265870
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2265882, 2265883, 2265884
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2265862, 2265863
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2265862, 2265863, 2265868
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2265885
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2265862, 2265863
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2265862, 2265863, 2265868

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2265862, 2265863, 2265868
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2265864, 2265865, 2265869

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	07/29/2021			07/29/2021 16:09	Blanca Fach	2265862, 2265863, 2265868
EPA 200.7 Rev. 4.4	07/29/2021	07/29/2021 14:20	Elliott D. Healy	07/31/2021 02:51	Betina Topolski	2265886
	07/29/2021	07/29/2021 14:20	Elliott D. Healy	08/02/2021 17:17	Betina Topolski	2265886
	07/29/2021	08/03/2021 13:50	Elliott D. Healy	08/09/2021 19:40	Josef B Mick	2265885
	07/29/2021	08/12/2021 14:40	Elliott D. Healy	08/13/2021 21:58	Josef B Mick	2265885
EPA 200.8 Rev. 5.4	07/29/2021	07/29/2021 14:20	Elliott D. Healy	08/03/2021 00:37	Alexander Thompson	2265886
	07/29/2021	07/29/2021 14:20	Elliott D. Healy	08/03/2021 02:14	Alexander Thompson	2265886
	07/29/2021	07/29/2021 14:20	Elliott D. Healy	08/03/2021 12:12	Alexander Thompson	2265886
	07/29/2021	08/03/2021 13:50	Elliott D. Healy	08/05/2021 03:49	Alexander Thompson	2265885
	07/29/2021	08/03/2021 13:50	Elliott D. Healy	08/05/2021 20:27	Alexander Thompson	2265885
	07/29/2021	08/10/2021 13:10	Elliott D. Healy	08/11/2021 14:43	Alexander Thompson	2265885
EPA 300.0 Rev. 2.1	07/29/2021			08/05/2021 23:31	Lipi Saha	2265862
	07/29/2021			08/06/2021 00:08	Lipi Saha	2265863
EPA 350.1 Rev. 2.0	07/29/2021			08/06/2021 14:44	Roberta Tatti	2265864
	07/29/2021			08/06/2021 14:45	Roberta Tatti	2265869
	07/29/2021			08/09/2021 13:46	Ping Hua	2265865
EPA 351.2 Rev. 2.0	07/29/2021	08/16/2021 18:04	Madeline Gruver	08/18/2021 14:01	Virginia P. Brown	2265864
	07/29/2021	08/16/2021 18:04	Madeline Gruver	08/18/2021 14:03	Virginia P. Brown	2265869
	07/29/2021	08/18/2021 14:21	Benjamin T. Nordmann	08/19/2021 11:51	Virginia P. Brown	2265865
EPA 353.2 Rev. 2.0	07/29/2021			07/30/2021 09:37	Beverly Y. Sanders	2265865
	07/29/2021			08/03/2021 11:11	Beverly Y. Sanders	2265864
	07/29/2021			08/03/2021 11:13	Beverly Y. Sanders	2265869
EPA 365.1 Rev. 2.0	07/29/2021	07/30/2021 15:31	Simonne.V. Calhoun	08/02/2021 12:57	Shengyu Ding	2265869
EPA 365.1 Rev. 2.0 dissolved	07/29/2021			07/29/2021 13:52	Lipi Saha	2265870
	07/29/2021			07/29/2021 13:57	Lipi Saha	2265866
	07/29/2021			07/29/2021 14:15	Lipi Saha	2265867
EPA 8321B	07/29/2021	07/29/2021 13:00	Hoor Shaik	07/30/2021 02:50	Juyoung Kim	2265882
	07/29/2021	07/29/2021 13:00	Hoor Shaik	07/30/2021 03:24	Juyoung Kim	2265883
	07/29/2021	07/29/2021 13:00	Hoor Shaik	07/30/2021 03:59	Juyoung Kim	2265884
	07/29/2021	08/02/2021 09:00	Pramila Ghimire	08/02/2021 10:29	Juyoung Kim	2265882
	07/29/2021	08/02/2021 09:00	Pramila Ghimire	08/02/2021 10:40	Juyoung Kim	2265883
	07/29/2021	08/02/2021 09:00	Pramila Ghimire	08/02/2021 14:27	Juyoung Kim	2265884
	07/29/2021	08/02/2021 09:00	Pramila Ghimire	08/03/2021 09:33	Pramila Ghimire	2265882
	07/29/2021	08/02/2021 09:00	Pramila Ghimire	08/03/2021 09:46	Pramila Ghimire	2265883
	07/29/2021	08/02/2021 09:00	Pramila Ghimire	08/03/2021 10:00	Pramila Ghimire	2265884
SM 2120 B-2011	07/29/2021			07/29/2021 16:14	Sarah A Nixon	2265862
	07/29/2021			07/29/2021 16:27	Sarah A Nixon	2265863
SM 2320 B-2011	07/29/2021			07/30/2021 20:51	Dale L. Simmons	2265863
	07/29/2021			07/30/2021 23:27	Dale L. Simmons	2265862
	07/29/2021			07/30/2021 23:42	Dale L. Simmons	2265868

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340B	07/29/2021			08/09/2021 19:40	Josef B Mick	2265885
SM 2540 C-2011	07/29/2021			08/03/2021 14:36	Yijie Li	2265862, 2265863
SM 2540 D-2011	07/29/2021			08/03/2021 14:36	Yijie Li	2265862, 2265863, 2265868
SM 4500 F-C-2011	07/29/2021			07/30/2021 20:51	Dale L. Simmons	2265863
	07/29/2021			07/30/2021 21:41	Dale L. Simmons	2265862
	07/29/2021			07/30/2021 21:46	Dale L. Simmons	2265868
SM 5310 B-2011	07/29/2021			08/10/2021 09:52	Madeline Gruver	2265864
	07/29/2021			08/10/2021 10:04	Madeline Gruver	2265869
	07/29/2021			08/12/2021 04:33	Madeline Gruver	2265865