

Chemical Analysis Report

SE-DIST-2018-07-26-02

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

Event Description: **SMP- Loxah**
Request ID: **RQ-2018-05-21-23**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 17-AUG-2018 12:02

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

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: ROEBUCK CREEK @ LOCKS

Collection Date/Time: 07/25/2018 11:10

Field ID: G2SE0029

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2011020	EPA 180.1 Rev. 2.0	Turbidity	36	A	NTU	P349233	
	SM 2320 B-97	Total Alkalinity	157		mg CaCO3/L	P349482	
	SM 2540 D-97	TSS	4	I	mg/L	P349437	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P349486	
2011024	EPA 350.1 Rev. 2.0	Ammonia-N	0.045		mg N/L	P349521	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P349441	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P349491	
	EPA 365.1 Rev. 2.0	Total-P	0.35		mg P/L	P349483	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P349364	
2011028	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.27		mg P/L	P349242	
2011045	EPA 8321B	2,4-D	0.029		ug/L	P349225	
		Sucralose**	2.7		ug/L	P349176	
		Bentazon	0.018		ug/L	P349225	
		MCP	0.024		ug/L	P349225	
		Triclopyr**	0.0040	U	ug/L	P349225	
		Imidacloprid	0.37		ug/L	P349225	
		Diuron	0.0025	I	ug/L	P349225	
		Pyraclostrobin**	0.0020	U	ug/L	P349225	
		Primidone**	0.013	I	ug/L	P349225	
		Linuron	0.0040	U	ug/L	P349225	
		Acetaminophen**	0.0080	U	ug/L	P349225	
		Fenuron	0.016	U	ug/L	P349225	
		Imazapyr**	0.22		ug/L	P349225	
		Carbamazepine**	0.0050		ug/L	P349225	
		Fluridone**	0.0035		ug/L	P349225	
		Hydrocodone**	8.0E-04	U	ug/L	P349225	
2011051	EPA 200.7 Rev. 4.4	Iron	760		ug/L	P349462	
		Zinc	5.6	I	ug/L	P349462	
	EPA 200.8 Rev. 5.4	Arsenic	2.12		ug/L	P349462	
		Cadmium	0.020	U	ug/L	P349462	
		Chromium	0.42	I	ug/L	P349462	
		Copper	0.79	I	ug/L	P349462	
		Lead	0.13	I	ug/L	P349462	
		Nickel	0.39	I	ug/L	P349462	
		Silver	0.010	U	ug/L	P349462	

Ref. Method and Comment:

SM 2540 D-97: The result was confirmed on 08/13/2018.

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

EPA 8321B: Insufficient sample to perform matrix spikes. Refer to the narrative for an explanation of QC Codes.

Sample Location: ROEBUCK CREEK @ MOUTH

Collection Date/Time: 07/25/2018 12:10

Field ID: G2SE0005

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2011021	EPA 180.1 Rev. 2.0	Turbidity	36		NTU	P349233	
	SM 2320 B-97	Total Alkalinity	109		mg CaCO3/L	P349482	
	SM 2540 D-97	TSS	14		mg/L	P349434	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P349486	
2011025	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P349525	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P349391	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.089		mg N/L	P349402	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P349483	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P349363	
2011029	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.099		mg P/L	P349239	
2011046	EPA 8321B	2,4-D	0.057		ug/L	P349225	
		Sucralose**	0.049		ug/L	P349177	
		Bentazon	0.0091		ug/L	P349225	
		MCP	0.0020	U	ug/L	P349225	
		Triclopyr**	0.0040	U	ug/L	P349225	
		Imidacloprid	0.010		ug/L	P349225	
		Diuron	0.0020	U	ug/L	P349225	
		Pyraclostrobin**	0.0020	U	ug/L	P349225	
		Primidone**	0.0040	U	ug/L	P349225	
		Linuron	0.0040	U	ug/L	P349225	
		Acetaminophen**	0.0080	U	ug/L	P349225	
		Fenuron	0.016	U	ug/L	P349225	
		Imazapyr**	0.030		ug/L	P349225	
		Carbamazepine**	8.0E-04	U	ug/L	P349225	
		Fluridone**	0.0053		ug/L	P349225	
		Hydrocodone**	8.0E-04	U	ug/L	P349225	
2011052	EPA 200.7 Rev. 4.4	Iron	900		ug/L	P349462	
		Zinc	5.0	U	ug/L	P349462	
	EPA 200.8 Rev. 5.4	Arsenic	1.91		ug/L	P349462	
		Cadmium	0.020	U	ug/L	P349462	
		Chromium	0.86	I	ug/L	P349462	
		Copper	1.27		ug/L	P349462	
		Lead	0.65		ug/L	P349462	
		Nickel	0.74	I	ug/L	P349462	
		Silver	0.010	U	ug/L	P349462	

Ref. Method and Comment:

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

EPA 8321B: Insufficient sample to perform matrix spikes. Refer to the narrative for an explanation of QC Codes.

Sample Location: C-17 @ 45TH

Collection Date/Time: 07/25/2018 13:50

Field ID: G3SE0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2011022	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P349233	
	SM 2320 B-97	Total Alkalinity	132		mg CaCO3/L	P349482	
	SM 2540 D-97	TSS	7	I	mg/L	P349434	
	SM 4500 F-C-97	Fluoride	0.084	I	mg F/L	P349486	
2011026	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P349525	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P349391	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.027		mg N/L	P349402	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P349483	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P349363	
2011030	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P349239	
2011053	EPA 200.7 Rev. 4.4	Iron	260		ug/L	P349462	
		Zinc	5.0	U	ug/L	P349462	
	EPA 200.8 Rev. 5.4	Arsenic	2.84		ug/L	P349462	
		Cadmium	0.020	U	ug/L	P349462	
		Chromium	0.50	I	ug/L	P349462	
		Copper	2.35		ug/L	P349462	
		Lead	0.22		ug/L	P349462	
		Nickel	0.32	I	ug/L	P349462	
		Silver	0.010	U	ug/L	P349462	

Ref. Method and Comment:

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

Sample Location: TIDAL CREEK TO LOX

Collection Date/Time: 07/25/2018 14:40

Field ID: G2SE0027

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2011023	EPA 180.1 Rev. 2.0	Turbidity	140		NTU	P349233	
	SM 2320 B-97	Total Alkalinity	68		mg CaCO3/L	P349482	
	SM 2540 D-97	TSS	311		mg/L	P349434	
	SM 4500 F-C-97	Fluoride	0.088	I	mg F/L	P349486	
2011027	EPA 350.1 Rev. 2.0	Ammonia-N	0.043		mg N/L	P349525	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	4.9		mg N/L	P349386	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.050		mg N/L	P349402	
	EPA 365.1 Rev. 2.0	Total-P	0.44		mg P/L	P349483	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P349363	
2011031	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P349239	
2011047	EPA 8321B	2,4-D	0.023		ug/L	P349225	
		Sucralose**	0.010	U	ug/L	P349177	
		Bentazon	0.034		ug/L	P349225	
		MCP	0.0020	U	ug/L	P349225	
		Triclopyr**	0.0040	U	ug/L	P349225	
		Imidacloprid	0.065		ug/L	P349225	
		Diuron	0.0020	U	ug/L	P349225	
		Pyraclostrobin**	0.0020	U	ug/L	P349225	
		Primidone**	0.0040	U	ug/L	P349225	
		Linuron	0.0040	U	ug/L	P349225	
		Acetaminophen**	0.0080	U	ug/L	P349225	
		Fenuron	0.016	U	ug/L	P349225	
		Imazapyr**	0.15		ug/L	P349225	
		Carbamazepine**	8.0E-04	U	ug/L	P349225	
		Fluridone**	0.0071		ug/L	P349225	
		Hydrocodone**	8.0E-04	U	ug/L	P349225	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample has large amount of particulate matter.

EPA 8321B: Insufficient sample to perform matrix spikes. Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P349233

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P349462

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P349462

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349521

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349525

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349391

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349441

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349402

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349491

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349483

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349239

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349242

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

Reference Method: EPA 8321B
Batch ID: P349176

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P349177

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P349225

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P349225

Component	Result	Code	Units
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P349482

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

Reference Method: SM 2540 D-97
Batch ID: P349434

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P349437

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P349486

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P349363

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

Reference Method: SM 5310 B-00
Batch ID: P349364

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: P349462

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	106		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P349462

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	93.7		P	85 - 115
Copper	95.9		P	85 - 115
Lead	97.2		P	85 - 115
Nickel	98.7		P	85 - 115
Silver	98.4		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349521

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349525

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349391

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349441

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349402

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P349491

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: P349483

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P349239

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P349242

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

Reference Method: EPA 8321B
 Batch ID: P349176

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	106		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P349177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	132		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P349225

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110	106	P/P	40 - 150
Acetaminophen	97.3	89.8	P/P	30 - 150
Bentazon	119	112	P/P	30 - 150
Carbamazepine	88.7	80.4	P/P	40 - 150
Diuron	102	97.4	P/P	40 - 150
Fenuron	107	101	P/P	40 - 150
Fluridone	92.8	80.6	P/P	40 - 150
Hydrocodone	93.3	82.1	P/P	40 - 150
Imazapyr	90.3	102	P/P	40 - 150
Imidacloprid	106	99.8	P/P	40 - 160
Linuron	97.3	90.3	P/P	40 - 150
MCPP	113	123	P/P	40 - 150
Primidone	96.4	95.4	P/P	40 - 150
Pyraclostrobin	83.5	72.9	P/P	40 - 150
Triclopyr	108	102	P/P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P349482

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P349486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.8		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P349363

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P349364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P349462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011598	Iron	106		P	80 - 120
2011598	Zinc	106		P	80 - 120
2011701	Iron	107	105	P/P	80 - 120
2011701	Zinc	103	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P349462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011598	Arsenic	105		P	80 - 120
2011598	Cadmium	105		P	80 - 120
2011598	Chromium	94.9		P	80 - 120
2011598	Copper	97.1		P	80 - 120
2011598	Lead	100		P	80 - 120
2011598	Nickel	98.7		P	80 - 120
2011598	Silver	98.0		P	80 - 120
2011701	Arsenic	104	102	P/P	80 - 120
2011701	Cadmium	105	104	P/P	80 - 120
2011701	Chromium	97.5	95.8	P/P	80 - 120
2011701	Copper	98.8	96.6	P/P	80 - 120
2011701	Lead	98.3	97.9	P/P	80 - 120
2011701	Nickel	101	99.0	P/P	80 - 120
2011701	Silver	100	98.6	P/P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010508	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349525

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011026	Ammonia-N	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010791	Kjeldahl Nitrogen	101	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010996	Kjeldahl Nitrogen	90.3	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349402

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010990	NO2NO3-N	100	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349491

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011876	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349483

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011060	Total-P	95.1	93.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010938	O-Phosphate-P	96.3	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011081	O-Phosphate-P	99.2	98.9	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P349176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010469	Sucralose	60.6	73.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P349177

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010908	Sucralose	101	101	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P349486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2011483	Fluoride	96.8	95.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P349363

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010869	Organic Carbon	103		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P349364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010509	Organic Carbon	95.2	96.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P349233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011020	Turbidity	0.556	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P349462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011701	Iron	1.91	Spike	P	0 - 20
2011701	Zinc	1.52	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P349462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011701	Arsenic	2.04	Spike	P	0 - 20
2011701	Cadmium	0.923	Spike	P	0 - 20
2011701	Chromium	1.82	Spike	P	0 - 20
2011701	Copper	2.21	Spike	P	0 - 20
2011701	Lead	0.389	Spike	P	0 - 20
2011701	Nickel	1.94	Spike	P	0 - 20
2011701	Silver	1.73	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010508	Ammonia-N	0.595	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349525

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011026	Ammonia-N	1.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010791	Kjeldahl Nitrogen	2.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010996	Kjeldahl Nitrogen	6.79	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011175	Kjeldahl Nitrogen	0.809	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010990	NO2NO3-N	1.62	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349491

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011876	NO2NO3-N	1.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011060	Total-P	2.19	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010938	O-Phosphate-P	0.0848	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011081	O-Phosphate-P	0.303	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P349176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010469	Sucralose	19.7	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P349177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010908	Sucralose	0.715	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P349225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	2,4-D	3.55	LCS	P	0 - 30
LFB	Acetaminophen	8.05	LCS	P	0 - 30
LFB	Bentazon	6.78	LCS	P	0 - 30
LFB	Carbamazepine	9.83	LCS	P	0 - 30
LFB	Diuron	4.60	LCS	P	0 - 30
LFB	Fenuron	5.49	LCS	P	0 - 30
LFB	Fluridone	14.1	LCS	P	0 - 30
LFB	Hydrocodone	12.8	LCS	P	0 - 30
LFB	Imazapyr	12.3	LCS	P	0 - 30
LFB	Imidacloprid	5.58	LCS	P	0 - 30
LFB	Linuron	7.51	LCS	P	0 - 30
LFB	MCPP	8.11	LCS	P	0 - 30
LFB	Primidone	1.09	LCS	P	0 - 30
LFB	Pyraclostrobin	13.5	LCS	P	0 - 30
LFB	Triclopyr	5.89	LCS	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P349482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011483	Total Alkalinity	0.273	Sample	P	0 - 1.6

Reference Method: SM 2540 D-97
Batch ID: P349437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011077	TSS	3.33	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P349486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2011483	Fluoride	0.959	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P349363

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010869	Organic Carbon	0.598	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P349364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010509	Organic Carbon	0.957	Spike	P	0 - 20

Quality Assurance Report

Precision

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2011045
Field Sample ID: G2SE0029

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	130	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.5	P	30 - 160
EPA 8321B	Diuron-d6	50.6	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	40 - 160

Lab Sample ID: 2011046
Field Sample ID: G2SE0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	132	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.5	P	30 - 160
EPA 8321B	Diuron-d6	63.1	P	30 - 160
EPA 8321B	Primidone-d5	90.6	P	30 - 160
EPA 8321B	Sucralose-d6	123	P	40 - 160

Lab Sample ID: 2011047
Field Sample ID: G2SE0027

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.2	P	30 - 160
EPA 8321B	Diuron-d6	58.6	P	30 - 160
EPA 8321B	Primidone-d5	97.5	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A85508

Included Lab Sample IDs: 2011020, 2011021, 2011022, 2011023

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A85510

Included Lab Sample IDs: 2011028, 2011029, 2011030, 2011031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.1	97.4	P/P	90 - 110
O-Phosphate-P	97.4	96.8	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A85549

Included Lab Sample IDs: 2011024, 2011025, 2011026, 2011027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	99.4	P/P	90 - 110
Organic Carbon	97.8	99.0	P/P	90 - 110
Organic Carbon	99.0	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A85559

Included Lab Sample IDs: 2011025, 2011026, 2011027

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85594

Included Lab Sample IDs: 2011025, 2011026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	91.4	P/P	90 - 110
Kjeldahl Nitrogen	92.9	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85602

Included Lab Sample IDs: 2011045, 2011046, 2011047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	109	118	P/P	60 - 160
Sucralose	122	110	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A85607

Included Lab Sample IDs: 2011020, 2011021, 2011022, 2011023

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A85607

Included Lab Sample IDs: 2011020, 2011021, 2011022, 2011023

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A85611

Included Lab Sample IDs: 2011024

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85615

Included Lab Sample IDs: 2011024, 2011027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	99.6	P/P	90 - 110
Kjeldahl Nitrogen	98.3	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A85619

Included Lab Sample IDs: 2011051, 2011052, 2011053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	100	103	P/P	95 - 105
Zinc	102	102	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A85621

Included Lab Sample IDs: 2011024, 2011025, 2011026, 2011027

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A85630

Included Lab Sample IDs: 2011024, 2011025, 2011026, 2011027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	94.4	95.7	P/P	90 - 110
Total-P	95.2	94.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A85689

Included Lab Sample IDs: 2011051, 2011052, 2011053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	101	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Chromium	92.6	94.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A85689

Included Lab Sample IDs: 2011051, 2011052, 2011053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	101	98.0	P/P	90 - 110
Lead	99.7	99.1	P/P	90 - 110
Nickel	101	98.2	P/P	90 - 110
Silver	96.6	95.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A85694

Included Lab Sample IDs: 2011045, 2011046, 2011047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	123	120	P/P	50 - 150
Bentazon	152	149	P/P	50 - 160
MCP	121	124	P/P	50 - 150
Triclopyr	112	102	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A85767

Included Lab Sample IDs: 2011045, 2011046, 2011047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	137	120	P/P	60 - 160
Carbamazepine	92.7	83.0	P/P	60 - 160
Diuron	98.6	97.0	P/P	60 - 150
Fenuron	111	111	P/P	60 - 150
Fluridone	85.2	93.5	P/P	60 - 160
Hydrocodone	106	110	P/P	60 - 150
Imazapyr	112	109	P/P	50 - 150
Imidacloprid	96.9	101	P/P	60 - 150
Linuron	62.7	76.4	P/P	60 - 150
Primidone	110	112	P/P	60 - 150
Pyraclostrobin	107	108	P/P	60 - 150

* 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	MS
									SMP	
EPA 180.1 Rev. 2.0	Turbidity								0.556	
EPA 200.7 Rev. 4.4	Iron	106			106	107	105			1.91
	Zinc	103			106	103	102			1.52
EPA 200.8 Rev. 5.4	Arsenic	101			105	104	102			2.04
	Cadmium	103			105	105	104			0.923
	Chromium	93.7			94.9	97.5	95.8			1.82
	Copper	95.9			97.1	98.8	96.6			2.21
	Lead	97.2			100	98.3	97.9			0.389
	Nickel	98.7			98.7	101	99.0			1.94
	Silver	98.4			98.0	100	98.6			1.73
EPA 350.1 Rev. 2.0	Ammonia-N	102			103	102				0.595
	Ammonia-N	104			102	100				1.63
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100			101	98.6				2.06
	Kjeldahl Nitrogen	102			90.3	101				6.79
	Kjeldahl Nitrogen	98.9								0.809
EPA 353.2 Rev. 2.0	NO2NO3-N	101			100	103				1.62
	NO2NO3-N	100			102	104				1.46
EPA 365.1 Rev. 2.0	Total-P	98.1			95.1	93.0				2.19
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5			96.3	96.2				0.0848
	O-Phosphate-P	98.7			99.2	98.9				0.303
EPA 8321B	2,4-D	110	106					3.55		
	Acetaminophen	89.8	97.3					8.05		
	Bentazon	119	112					6.78		
	Carbamazepine	88.7	80.4					9.83		
	Diuron	102	97.4					4.60		
	Fenuron	101	107					5.49		
	Fluridone	92.8	80.6					14.1		
	Hydrocodone	82.1	93.3					12.8		
	Imazapyr	90.3	102					12.3		
	Imidacloprid	99.8	106					5.58		
	Linuron	97.3	90.3					7.51		
	MCP	113	123					8.11		
	Primidone	95.4	96.4					1.09		
	Pyraclostrobin	83.5	72.9					13.5		
	Sucralose	106			60.6	73.9				19.7
	Sucralose	132			101	101				0.715
	Triclopyr	108	102					5.89		
SM 2320 B-97	Total Alkalinity	103							0.273	
SM 2540 D-97	TSS								3.33	
SM 4500 F-C-97	Fluoride	94.8			96.8	95.4				0.959
SM 5310 B-00	Organic Carbon	97.8			103					0.598
	Organic Carbon	96.4			95.2	96.4				0.957

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2011020, 2011021, 2011022, 2011023
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2011051, 2011052, 2011053
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2011051, 2011052, 2011053
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2011024, 2011025, 2011026, 2011027

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2011024, 2011025, 2011026, 2011027
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2011024, 2011025, 2011026, 2011027
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2011024, 2011025, 2011026, 2011027
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2011028, 2011029, 2011030, 2011031
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2011045, 2011046, 2011047
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2011045, 2011046, 2011047
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2011020, 2011021, 2011022, 2011023
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2011020, 2011021, 2011022, 2011023
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2011020, 2011021, 2011022, 2011023
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2011024, 2011025, 2011026, 2011027

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	07/26/2018			07/26/2018 16:36	Blanca Fach	2011020, 2011021, 2011022, 2011023
EPA 200.7 Rev. 4.4	07/26/2018	07/31/2018 17:45	Elliott D. Healy	08/01/2018 14:39	Betina Topolski	2011051
	07/26/2018	07/31/2018 17:45	Elliott D. Healy	08/01/2018 14:46	Betina Topolski	2011052
	07/26/2018	07/31/2018 17:45	Elliott D. Healy	08/01/2018 14:53	Betina Topolski	2011053
EPA 200.8 Rev. 5.4	07/26/2018	07/31/2018 17:45	Elliott D. Healy	08/03/2018 17:28	Allison Taylor	2011051
	07/26/2018	07/31/2018 17:45	Elliott D. Healy	08/03/2018 17:38	Allison Taylor	2011052
	07/26/2018	07/31/2018 17:45	Elliott D. Healy	08/03/2018 17:48	Allison Taylor	2011053
EPA 350.1 Rev. 2.0	07/26/2018			08/01/2018 11:27	Ping Hua	2011024
	07/26/2018			08/01/2018 13:11	Ping Hua	2011026
	07/26/2018			08/01/2018 13:23	Ping Hua	2011025
	07/26/2018			08/01/2018 13:48	Ping Hua	2011027
EPA 351.2 Rev. 2.0	07/26/2018	07/30/2018 15:30	Adrian Shelby	07/31/2018 16:44	Joseph Suarez	2011025
	07/26/2018	07/30/2018 15:30	Adrian Shelby	07/31/2018 16:48	Joseph Suarez	2011026
	07/26/2018	07/30/2018 15:30	Adrian Shelby	08/01/2018 14:23	Joseph Suarez	2011027
	07/26/2018	07/31/2018 11:15	Adrian Shelby	08/01/2018 12:35	Joseph Suarez	2011024
EPA 353.2 Rev. 2.0	07/26/2018			07/30/2018 12:24	Lauren Bottorf	2011025
	07/26/2018			07/30/2018 12:25	Lauren Bottorf	2011026
	07/26/2018			07/30/2018 12:27	Lauren Bottorf	2011027
	07/26/2018			08/01/2018 11:43	Lauren Bottorf	2011024
EPA 365.1 Rev. 2.0	07/26/2018	08/01/2018 12:35	Sima Feizi	08/02/2018 08:41	Beverly Y. Sanders	2011024
	07/26/2018	08/01/2018 12:35	Sima Feizi	08/02/2018 08:44	Beverly Y. Sanders	2011025
	07/26/2018	08/01/2018 12:35	Sima Feizi	08/02/2018 08:45	Beverly Y. Sanders	2011026
	07/26/2018	08/01/2018 12:35	Sima Feizi	08/02/2018 08:46	Beverly Y. Sanders	2011027
EPA 365.1 Rev. 2.0 dissolved	07/26/2018			07/26/2018 17:09	Julia Storbeck	2011028
	07/26/2018			07/26/2018 17:25	Julia Storbeck	2011029, 2011030
	07/26/2018			07/26/2018 17:26	Julia Storbeck	2011031
EPA 8321B	07/26/2018	07/27/2018 14:50	Hoor Shaik	08/01/2018 05:07	Mohammad Ghaffari	2011045
	07/26/2018	07/27/2018 14:50	Hoor Shaik	08/01/2018 08:47	Mohammad Ghaffari	2011046
	07/26/2018	07/27/2018 14:50	Hoor Shaik	08/01/2018 09:02	Mohammad Ghaffari	2011047
	07/26/2018	07/30/2018 10:00	Hoor Shaik	08/06/2018 00:54	Juyoung Kim	2011045
	07/26/2018	07/30/2018 10:00	Hoor Shaik	08/06/2018 01:29	Juyoung Kim	2011046
	07/26/2018	07/30/2018 10:00	Hoor Shaik	08/06/2018 02:03	Juyoung Kim	2011047
	07/26/2018	07/30/2018 10:00	Hoor Shaik	08/09/2018 08:20	Juyoung Kim	2011045
	07/26/2018	07/30/2018 10:00	Hoor Shaik	08/09/2018 08:55	Juyoung Kim	2011046
	07/26/2018	07/30/2018 10:00	Hoor Shaik	08/09/2018 09:30	Juyoung Kim	2011047
SM 2320 B-97	07/26/2018			07/31/2018 21:53	Dale L. Simmons	2011020
	07/26/2018			07/31/2018 22:03	Dale L. Simmons	2011021
	07/26/2018			07/31/2018 22:13	Dale L. Simmons	2011022
	07/26/2018			07/31/2018 23:26	Dale L. Simmons	2011023
SM 2540 D-97	07/26/2018			07/27/2018 14:57	William L. Brown IV	2011020, 2011021, 2011022, 2011023

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	07/26/2018			07/31/2018 21:53	Dale L. Simmons	2011020
	07/26/2018			07/31/2018 22:03	Dale L. Simmons	2011021
	07/26/2018			07/31/2018 22:13	Dale L. Simmons	2011022
	07/26/2018			07/31/2018 23:26	Dale L. Simmons	2011023
SM 5310 B-00	07/26/2018			07/28/2018 05:35	Megan Treadwell	2011025
	07/26/2018			07/28/2018 05:48	Megan Treadwell	2011026
	07/26/2018			07/28/2018 06:29	Megan Treadwell	2011027
	07/26/2018			07/28/2018 10:43	Megan Treadwell	2011024