

Chemical Analysis Report

SW-DIST-2019-02-08-01

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

Event Description: **SMP: Cedar, Mullet, Woods, Long, Mocassin**

Request ID: **RQ-2019-02-04-50**

Customer: **SW-DIST**

Project ID: **SMP**

Send Reports to:

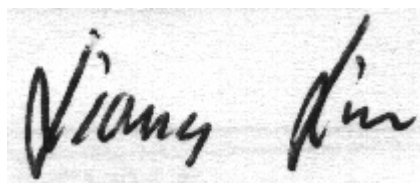
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Attn: Bne Paswater

For additional information please contact

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 04-MAR-2019 16:55

A handwritten signature in black ink, appearing to read "Liang Lin", 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: 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: CEDAR CREEK @ PINEHURST

Collection Date/Time: 02/07/2019 11:30

Field ID: G5SW0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061110	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P358622	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P359431	
		Sulfate	33		mg SO4/L	P359432	
	SM 2120 B	Color (true)	49	A	PCU	P358606	
	SM 2320 B-97	Total Alkalinity	101		mg CaCO3/L	P359099	
	SM 2540 C-97	TDS	420	A	mg/L	P359128	
	SM 2540 D-97	TSS	2	IA	mg/L	P359149	
	SM 4500 F-C-97	Fluoride	0.38		mg F/L	P359103	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P358909	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P358992	
2061111	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P358939	
	EPA 365.1 Rev. 2.0	Total-P	0.083		mg P/L	P358705	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P359405	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.048		mg P/L	P358620	
	dissolved						

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: CEDAR CREEK @ PINEHURST

Collection Date/Time: 02/07/2019 11:30

Field ID: G5SW0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061157	EPA 8321B	2,4-D	0.24		ug/L	P358573	
		Acesulfame K**	0.10	U	ug/L	P358574	
		AMPA**	0.35	I	ug/L	P358574	
		Sucralose**	1.6		ug/L	P358574	
		Acetaminophen**	0.0080	U	ug/L	P358573	
		Endothall**	0.25	U	ug/L	P358574	
		Glufosinate**	0.10	U	ug/L	P358574	
		Bentazon	0.085		ug/L	P358573	
		Glyphosate**	0.32	I	ug/L	P358574	
		Carbamazepine**	0.0014	I	ug/L	P358573	
		Diuron	0.0040	I	ug/L	P358573	
		Fenuron	0.016	U	ug/L	P358573	
		Imazapyr**	0.027		ug/L	P358573	
		Imidacloprid	0.045		ug/L	P358573	MS
		Linuron	0.0040	U	ug/L	P358573	
		MCPP	0.0056	I	ug/L	P358573	
		Primidone**	0.019		ug/L	P358573	
		Pyraclostrobin**	0.0020	U	ug/L	P358573	
		Triclopyr**	0.0040	U	ug/L	P358573	
		Fluridone**	0.0016	I	ug/L	P358573	
		Hydrocodone**	0.0020	U	ug/L	P358573	
		Naproxen**	0.0080	U	ug/L	P358573	
		Ibuprofen**	0.020	U	ug/L	P358573	

Ref. Method and Comment:

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

Sample Location: CEDAR CREEK ABOVE PATRICIA AVE

Collection Date/Time: 02/07/2019 11:20

Field ID: G5SW0147

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061158	EPA 8321B	2,4-D	0.011		ug/L	P358573	
		Acesulfame K**	0.10	U	ug/L	P358574	
		AMPA**	0.43		ug/L	P358574	
		Sucralose**	1.7		ug/L	P358574	
		Acetaminophen**	0.0080	U	ug/L	P358573	
		Endothall**	0.25	U	ug/L	P358574	
		Glufosinate**	0.10	U	ug/L	P358574	
		Bentazon	0.069		ug/L	P358573	
		Glyphosate**	0.38	I	ug/L	P358574	
		Carbamazepine**	0.0011	I	ug/L	P358573	
		Diuron	0.0029	I	ug/L	P358573	
		Fenuron	0.016	U	ug/L	P358573	
		Imazapyr**	0.20		ug/L	P358573	
		Imidacloprid	0.030		ug/L	P358573	MS
		Linuron	0.0040	U	ug/L	P358573	
		MCPP	0.0037	I	ug/L	P358573	
		Primidone**	0.017		ug/L	P358573	
		Pyraclostrobin**	0.0020	U	ug/L	P358573	
		Triclopyr**	0.0040	U	ug/L	P358573	
		Fluridone**	0.031		ug/L	P358573	
		Hydrocodone**	0.0020	U	ug/L	P358573	
		Naproxen**	0.0080	U	ug/L	P358573	
		Ibuprofen**	0.020	U	ug/L	P358573	

Ref. Method and Comment:

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

Sample Location: MOCCASIN CREEK TIDAL

Collection Date/Time: 02/07/2019 10:40

Field ID: G1SW0051

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061113	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P358622	
	EPA 300.0	Bromide	2.6		mg Br/L	P358982	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P359099	
	SM 2540 D-97	TSS	5	I	mg/L	P359153	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P359103	
2061114	EPA 350.1 Rev. 2.0	Ammonia-N	0.066		mg N/L	P358911	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95		mg N/L	P358837	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P359046	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P358863	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P359419	
2061115	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.094		mg P/L	P358619	

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: MOCCASIN CREEK TIDAL

Collection Date/Time: 02/07/2019 10:40

Field ID: G1SW0051

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2061159	EPA 8321B	2,4-D	0.032		ug/L	P358573	
		Acesulfame K**	0.10	U	ug/L	P358574	
		AMPA**	0.26	IJ	ug/L	P358574	SUR
		Sucralose**	0.69		ug/L	P358574	
		Acetaminophen**	0.0080	U	ug/L	P358573	
		Endothall**	0.25	U	ug/L	P358574	
		Glufosinate**	0.10	UJ	ug/L	P358574	SUR
		Bentazon	0.057		ug/L	P358573	
		Glyphosate**	1.2	J	ug/L	P358574	SUR
		Carbamazepine**	8.0E-04	U	ug/L	P358573	
		Diuron	0.0020	U	ug/L	P358573	
		Fenuron	0.016	U	ug/L	P358573	
		Imazapyr**	0.15		ug/L	P358573	
		Imidacloprid	0.15		ug/L	P358573	MS
		Linuron	0.0040	U	ug/L	P358573	
		MCPP	0.0020	I	ug/L	P358573	
		Primidone**	0.0040	U	ug/L	P358573	
		Pyraclostrobin**	0.0020	U	ug/L	P358573	
		Triclopyr**	0.0040	U	ug/L	P358573	
		Fluridone**	0.058		ug/L	P358573	
		Hydrocodone**	0.0020	U	ug/L	P358573	
		Naproxen**	0.0080	U	ug/L	P358573	
		Ibuprofen**	0.020	U	ug/L	P358573	

Ref. Method and Comment:

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

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358622

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P358982

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359431

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359432

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358909

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358911

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358837

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358992

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358939

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: P359046

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358705

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358863

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358619

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358620

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

Reference Method: EPA 8321B
Batch ID: P358573

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	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P358574

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P358574

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
Batch ID: P358606

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P359099

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

Reference Method: SM 2540 C-97
Batch ID: P359128

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359149

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P359153

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P359103

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P359405

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P359419

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
Batch ID: P358982

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359431

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359432

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358909

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358911

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	92.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358837

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358992

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359046

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	100		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358705

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358863

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358619

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358620

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

Reference Method: EPA 8321B
Batch ID: P358573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	60.5		P	40 - 150
Acetaminophen	82.2		P	30 - 150
Bentazon	64.9		P	30 - 150
Carbamazepine	85.2		P	40 - 150
Diuron	83.0		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	101		P	40 - 150
Hydrocodone	96.7		P	40 - 150
Ibuprofen	75.9		P	40 - 150
Imazapyr	74.4		P	40 - 150
Imidacloprid	111		P	40 - 150
Linuron	82.4		P	40 - 150
MCPP	79.2		P	40 - 150
Naproxen	70.7		P	40 - 150
Primidone	94.4		P	40 - 150
Pyraclostrobin	78.1		P	40 - 150
Triclopyr	50.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P358574

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	101		P	40 - 150
Endothall	63.1		P	40 - 150
Glufosinate	91.0		P	40 - 150
Glyphosate	98.4		P	40 - 140
Sucralose	80.6		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P358606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P359099

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P359103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P359405

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

Reference Method: SM 5310 B-00
Batch ID: P359419

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P358982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2058620	Bromide	96.0		P	90 - 110
2061372	Bromide	96.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061033	Chloride	98.8		P	90 - 110
2061276	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359432

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061033	Sulfate	96.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358909

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061135	Ammonia-N	98.2	95.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061085	Ammonia-N	96.9	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061648	Kjeldahl Nitrogen	107	96.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358992

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061111	Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061043	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061082	NO2NO3-N	97.3	96.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P358705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061111	Total-P	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P358863

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061614	Total-P	97.7	94.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P358619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061077	O-Phosphate-P	97.1	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P358620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061112	O-Phosphate-P	94.7	95.9	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P358573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061239	2,4-D	70.1	65.3	P/P	40 - 150
2061239	Acetaminophen	118	116	P/P	30 - 150
2061239	Bentazon	36.7	36.3	P/P	30 - 150
2061239	Carbamazepine	71.9	74.9	P/P	40 - 150
2061239	Diuron	62.4	66.4	P/P	40 - 150
2061239	Fenuron	83.3	80.6	P/P	40 - 150
2061239	Fluridone	80.8	87.0	P/P	40 - 150
2061239	Hydrocodone	78.8	79.7	P/P	40 - 150
2061239	Ibuprofen	87.9	87.0	P/P	40 - 150
2061239	Imidacloprid	184	167	F/F	40 - 150
2061239	Linuron	66.6	70.5	P/P	40 - 150
2061239	MCP	88.5	79.5	P/P	40 - 150
2061239	Naproxen	51.7	50.3	P/P	40 - 150
2061239	Primidone	109	102	P/P	40 - 150
2061239	Pyraclostrobin	78.7	76.3	P/P	40 - 150
2061239	Triclopyr	47.4	40.6	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P358574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2061097	Acesulfame K	95.9	90.2	P/P	40 - 150
2061097	AMPA	91.2	80.9	P/P	40 - 150
2061097	Endothall	73.1	64.2	P/P	40 - 150
2061097	Glufosinate	87.8	89.2	P/P	40 - 150
2061097	Glyphosate	77.5	62.6	P/P	40 - 140
2061097	Sucralose	109	87.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P359103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2060786	Fluoride	97.0	97.0	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P359405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2060778	Organic Carbon	97.0	98.7	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P359419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2062785	Organic Carbon	96.2	96.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P358622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061081	Turbidity	0.803	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P358982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2058620	Bromide	0.790	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P359431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061033	Chloride	0.565	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061135	Ammonia-N	2.02	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P358911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061085	Ammonia-N	2.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061648	Kjeldahl Nitrogen	5.98	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P358992

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061111	Kjeldahl Nitrogen	2.61	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P358939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061043	NO2NO3-N	0.499	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P359046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061082	NO2NO3-N	1.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061111	Total-P	0.917	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P358863

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061614	Total-P	2.83	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061077	O-Phosphate-P	0.918	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P358620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061112	O-Phosphate-P	0.836	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P358573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061239	2,4-D	4.88	Spike	P	0 - 30
2061239	Acetaminophen	2.21	Spike	P	0 - 30
2061239	Bentazon	0.308	Spike	P	0 - 30
2061239	Carbamazepine	3.99	Spike	P	0 - 30
2061239	Diuron	5.81	Spike	P	0 - 30
2061239	Fenuron	3.35	Spike	P	0 - 30
2061239	Fluridone	3.32	Spike	P	0 - 30
2061239	Hydrocodone	1.14	Spike	P	0 - 30
2061239	Ibuprofen	1.12	Spike	P	0 - 30
2061239	Imazapyr	24.4	Spike	P	0 - 30
2061239	Imidacloprid	7.98	Spike	P	0 - 30
2061239	Linuron	5.72	Spike	P	0 - 30
2061239	MCP	10.6	Spike	P	0 - 30
2061239	Naproxen	2.75	Spike	P	0 - 30
2061239	Primidone	6.24	Spike	P	0 - 30
2061239	Pyraclostrobin	3.10	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P358573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061239	Triclopyr	15.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P358574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061097	Acesulfame K	6.10	Spike	P	0 - 30
2061097	AMPA	8.02	Spike	P	0 - 30
2061097	Endothall	13.0	Spike	P	0 - 30
2061097	Glufosinate	1.54	Spike	P	0 - 30
2061097	Glyphosate	14.1	Spike	P	0 - 30
2061097	Sucralose	21.3	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P358606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061110	Color (true)	2.44	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P359099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2060786	Total Alkalinity	0.489	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P359128

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2061110	TDS	4.29	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P359103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2060786	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P359405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2060778	Organic Carbon	1.09	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P359419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2062785	Organic Carbon	0.337	Spike	P	0 - 20

* 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: 2061157
Field Sample ID: G5SW0129

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	119	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.8	P	30 - 160
EPA 8321B	Diuron-d6	70.6	P	30 - 160
EPA 8321B	Endothall-d6	133	P	40 - 160
EPA 8321B	Endothall-d6	133	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	68.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	68.7	P	40 - 160
EPA 8321B	Ibuprofen-d3	87.1	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	95.0	P	40 - 160
EPA 8321B	Sucralose-d6	95.0	P	40 - 160

Lab Sample ID: 2061158
Field Sample ID: G5SW0147

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	109	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.8	P	30 - 160
EPA 8321B	Diuron-d6	60.0	P	30 - 160
EPA 8321B	Endothall-d6	118	P	40 - 160
EPA 8321B	Endothall-d6	118	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	64.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	64.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	84.4	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	40 - 160
EPA 8321B	Sucralose-d6	108	P	40 - 160

Lab Sample ID: 2061159
Field Sample ID: G1SW0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.8	P	30 - 160
EPA 8321B	Diuron-d6	55.0	P	30 - 160
EPA 8321B	Endothall-d6	59.3	P	40 - 160
EPA 8321B	Endothall-d6	59.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	13.5	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	13.5	F	40 - 160
EPA 8321B	Ibuprofen-d3	76.1	P	30 - 160
EPA 8321B	Primidone-d5	86.0	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A89300
Included Lab Sample IDs: 2061110

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A89302
Included Lab Sample IDs: 2061112, 2061115

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.7	98.4	P/P	90 - 110
O-Phosphate-P	98.4	97.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A89303
Included Lab Sample IDs: 2061110, 2061113

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	101	P/P	95 - 105

Reference Method: EPA 8321B
Run ID: A89308
Included Lab Sample IDs: 2061157, 2061158, 2061159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.9	107	P/P	60 - 160
Glufosinate	76.1	73.2	P/P	60 - 160
Glyphosate	89.9	86.5	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A89359
Included Lab Sample IDs: 2061111

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A89410
Included Lab Sample IDs: 2061114

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A89413
Included Lab Sample IDs: 2061111, 2061114

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A89422

Included Lab Sample IDs: 2061111

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

Reference Method: EPA 300.0

Run ID: A89435

Included Lab Sample IDs: 2061113

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A89437

Included Lab Sample IDs: 2061114

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A89458

Included Lab Sample IDs: 2061114

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

Reference Method: EPA 8321B

Run ID: A89461

Included Lab Sample IDs: 2061157, 2061158, 2061159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	106	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A89481

Included Lab Sample IDs: 2061111

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.8	103	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A89482

Included Lab Sample IDs: 2061110, 2061113

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

Reference Method: SM 4500 F-C-97

Run ID: A89482

Included Lab Sample IDs: 2061110, 2061113

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A89502

Included Lab Sample IDs: 2061157, 2061158, 2061159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	69.5	80.2	P/P	50 - 150
Acetaminophen	115	111	P/P	60 - 160
Bentazon	83.7	74.6	P/P	50 - 160
Carbamazepine	99.4	98.4	P/P	60 - 150
Diuron	97.4	89.5	P/P	60 - 150
Fenuron	100	97.0	P/P	60 - 150
Fluridone	98.2	104	P/P	60 - 160
Hydrocodone	110	98.7	P/P	60 - 150
Ibuprofen	71.3	82.8	P/P	50 - 160
Imazapyr	79.3	63.5	P/P	50 - 150
Imidacloprid	108	93.7	P/P	60 - 150
Linuron	96.1	104	P/P	60 - 150
MCP	83.5	87.0	P/P	50 - 150
Naproxen	102	93.1	P/P	50 - 160
Primidone	106	91.5	P/P	60 - 150
Pyraclostrobin	115	111	P/P	60 - 150
Triclopyr	79.0	82.1	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A89585

Included Lab Sample IDs: 2061157, 2061158, 2061159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	106	103	P/P	60 - 160
Acesulfame K	106	106	P/P	60 - 160
Endothall	105	86.5	P/P	60 - 160
Endothall	95.0	105	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A89598

Included Lab Sample IDs: 2061111

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.6	98.2	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A89603

Included Lab Sample IDs: 2061114

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.0	94.1	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A89611

Included Lab Sample IDs: 2061110

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

Quality Assurance Report

Calibration Verification

* 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					0.803	
EPA 300.0	Bromide	100	96.0	96.0		0.790	
EPA 300.0 Rev. 2.1	Chloride	106	98.8	96.3		0.565	
	Sulfate	106	96.1				
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	98.2	95.8			2.02
	Ammonia-N	92.5	96.9	99.4			2.22
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	107	96.9			5.98
	Kjeldahl Nitrogen	109	101	105			2.61
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	100	100			0.499
	NO2NO3-N	100	97.3	96.3			1.03
EPA 365.1 Rev. 2.0	Total-P	104	101	103			0.917
	Total-P	103	97.7	94.9			2.83
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.1	98.8			0.918
	O-Phosphate-P	103	94.7	95.9			0.836
EPA 8321B	2,4-D	60.5	65.3	70.1			4.88
	Acesulfame K	106	95.9	90.2			6.10
	Acetaminophen	82.2	116	118			2.21
	AMPA	101	91.2	80.9			8.02
	Bentazon	64.9	36.3	36.7			0.308
	Carbamazepine	85.2	74.9	71.9			3.99
	Diuron	83.0	66.4	62.4			5.81
	Endothall	63.1	73.1	64.2			13.0
	Fenuron	101	80.6	83.3			3.35
	Fluridone	101	87.0	80.8			3.32
	Glufosinate	91.0	87.8	89.2			1.54
	Glyphosate	98.4	77.5	62.6			14.1
	Hydrocodone	96.7	79.7	78.8			1.14
	Ibuprofen	75.9	87.0	87.9			1.12
	Imazapyr	74.4					24.4
	Imidacloprid	111	167	184			7.98
	Linuron	82.4	70.5	66.6			5.72
	MCPP	79.2	79.5	88.5			10.6
	Naproxen	70.7	50.3	51.7			2.75
	Primidone	94.4	102	109			6.24
	Pyraclostrobin	78.1	76.3	78.7			3.10
	Sucralose	80.6	109	87.6			21.3
	Triclopyr	50.5	40.6	47.4			15.6
SM 2120 B	Color (true)	100				2.44	
SM 2320 B-97	Total Alkalinity	104				0.489	
SM 2540 C-97	TDS					4.29	
SM 4500 F-C-97	Fluoride	98.2	97.0	97.0			0.0
SM 5310 B-00	Organic Carbon	95.2	97.0	98.7			1.09
	Organic Carbon	97.2	96.2	96.6			0.337

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2061110, 2061113
EPA 300.0 / E31780	Bromide in aqueous matrices	2061113
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2061110

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2061110
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2061111, 2061114
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2061111, 2061114
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2061111, 2061114
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2061111, 2061114
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2061112, 2061115
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2061157, 2061158, 2061159
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2061157, 2061158, 2061159
SM 2120 B / E31780	True Color measured at 450 nm	2061110
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2061110, 2061113
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2061110
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2061110, 2061113
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2061110, 2061113
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2061111, 2061114

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	02/08/2019			02/08/2019 17:16	Adrian Shelby	2061110, 2061113
EPA 300.0	02/08/2019			02/14/2019 19:02	Lipi Saha	2061113
EPA 300.0 Rev. 2.1	02/08/2019			02/22/2019 01:02	Lipi Saha	2061110
EPA 350.1 Rev. 2.0	02/08/2019			02/13/2019 12:48	Ping Hua	2061111
	02/08/2019			02/13/2019 13:56	Ping Hua	2061114
EPA 351.2 Rev. 2.0	02/08/2019	02/13/2019 12:15	Adrian Shelby	02/15/2019 08:58	Joseph Suarez	2061114
	02/08/2019	02/15/2019 12:45	Adrian Shelby	02/18/2019 11:40	Joseph Suarez	2061111
EPA 353.2 Rev. 2.0	02/08/2019			02/14/2019 11:21	Beverly Y. Sanders	2061111
	02/08/2019			02/15/2019 12:27	Beverly Y. Sanders	2061114
EPA 365.1 Rev. 2.0	02/08/2019	02/11/2019 13:40	Sima Feizi	02/12/2019 10:57	Rosalyn Ballman	2061111
	02/08/2019	02/13/2019 12:40	Sima Feizi	02/13/2019 19:57	Rosalyn Ballman	2061114
EPA 365.1 Rev. 2.0 dissolved	02/08/2019			02/08/2019 16:11	Lipi Saha	2061112
	02/08/2019			02/08/2019 16:25	Lipi Saha	2061115
EPA 8321B	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/08/2019 14:56	Mohammad Ghaffari	2061157
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/08/2019 15:07	Mohammad Ghaffari	2061158
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/08/2019 15:18	Mohammad Ghaffari	2061159
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/13/2019 15:49	Mohammad Ghaffari	2061157
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/13/2019 16:16	Mohammad Ghaffari	2061158
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/13/2019 16:30	Mohammad Ghaffari	2061159
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/16/2019 02:07	Mohammad Ghaffari	2061157
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/16/2019 02:21	Mohammad Ghaffari	2061158
	02/08/2019	02/08/2019 14:45	Mohammad Ghaffari	02/16/2019 02:34	Mohammad Ghaffari	2061159
	02/08/2019	02/12/2019 12:00	Hoor Shaik	02/20/2019 00:54	Juyoung Kim	2061157
	02/08/2019	02/12/2019 12:00	Hoor Shaik	02/20/2019 01:29	Juyoung Kim	2061158
	02/08/2019	02/12/2019 12:00	Hoor Shaik	02/20/2019 02:03	Juyoung Kim	2061159
SM 2120 B	02/08/2019			02/08/2019 15:52	Chelsea Hernandez	2061110
SM 2320 B-97	02/08/2019			02/15/2019 05:53	Dale L. Simmons	2061110
	02/08/2019			02/15/2019 06:20	Dale L. Simmons	2061113
SM 2540 C-97	02/08/2019			02/13/2019 15:22	Yijie Li	2061110
SM 2540 D-97	02/08/2019			02/13/2019 15:22	Yijie Li	2061110, 2061113
SM 4500 F-C-97	02/08/2019			02/15/2019 05:53	Dale L. Simmons	2061110
	02/08/2019			02/15/2019 06:20	Dale L. Simmons	2061113
SM 5310 B-00	02/08/2019			02/22/2019 11:20	Julia Storbeck	2061111
	02/08/2019			02/24/2019 09:18	Julia Storbeck	2061114