

Chemical Analysis Report

SW-DIST-2019-04-17-02

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

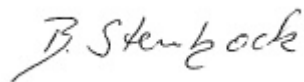
Event Description: **SMP: Cedar, Mocassin**
Request ID: **RQ-2019-04-15-03**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Bne 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: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 03-MAY-2019 18:12



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: MOCCASIN CREEK TIDAL

Collection Date/Time: 04/16/2019 10:00

Field ID: G1SW0051

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2078625	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P362372	
	EPA 300.0	Bromide	9.0		mg Br/L	P362586	
	SM 2320 B-97	Total Alkalinity	148	A	mg CaCO3/L	P362720	
	SM 2540 D-97	TSS	4	I	mg/L	P362917	
	SM 4500 F-C-97	Fluoride	0.35		mg F/L	P362951	
2078626	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P362715	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P362841	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P362648	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P362605	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P362487	
2078627	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.23		mg P/L	P362367	
2078658	EPA 8321B	Acesulfame K**	0.12	I	ug/L	P362469	
		2,4-D	0.068		ug/L	P362252	
		AMPA**	2.2	I	ug/L	P362469	
		Sucralose**	0.82		ug/L	P362469	
		Endothall**	0.25	U	ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362252	
		Glufosinate**	1.0	U	ug/L	P362469	
		Glyphosate**	1.0	U	ug/L	P362469	
		Bentazon	0.090		ug/L	P362252	
		Carbamazepine**	0.0014	I	ug/L	P362252	
		Diuron	0.0031	I	ug/L	P362252	
		Fenuron	0.016	U	ug/L	P362252	
		Fluridone**	0.23		ug/L	P362252	MS
		Imazapyr**	0.23		ug/L	P362252	
		Hydrocodone**	0.0020	U	ug/L	P362252	
		Ibuprofen**	0.020	U	ug/L	P362252	
		Imidacloprid	0.077		ug/L	P362252	MS
		Linuron	0.0040	U	ug/L	P362252	
		MCP	0.0054	I	ug/L	P362252	
		Naproxen**	0.0080	U	ug/L	P362252	
		Primidone**	0.0040	I	ug/L	P362252	
		Pyraclostrobin**	0.0020	U	ug/L	P362252	
		Triclopyr**	0.0040	U	ug/L	P362252	

Ref. Method and Comment:

EPA 300.0: Bromide: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.

EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: CEDAR CREEK @ PINEHURST (PC 09-02)

Collection Date/Time: 04/16/2019 11:20

Field ID: G5SW0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2078659	EPA 8321B	2,4-D	0.013		ug/L	P362252	
		Acesulfame K**	0.15	I	ug/L	P362469	
		AMPA**	0.54		ug/L	P362469	
		Sucralose**	1.8		ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362252	
		Endothall**	0.25	U	ug/L	P362469	
		Glufosinate**	0.10	U	ug/L	P362469	
		Bentazon	0.040		ug/L	P362252	
		Glyphosate**	1.1		ug/L	P362469	
		Carbamazepine**	0.0021	I	ug/L	P362252	
		Diuron	0.0060	I	ug/L	P362252	
		Fenuron	0.017	I	ug/L	P362252	
		Fluridone**	0.0022	I	ug/L	P362252	MS
		Imazapyr**	0.017		ug/L	P362252	
		Hydrocodone**	0.0020	U	ug/L	P362252	
		Ibuprofen**	0.020	U	ug/L	P362252	
		Imidacloprid	0.20		ug/L	P362252	MS
		Linuron	0.0040	U	ug/L	P362252	
		MCPP	0.0037	I	ug/L	P362252	
		Naproxen**	0.0080	U	ug/L	P362252	
		Primidone**	0.012	I	ug/L	P362252	
		Pyraclostrobin**	0.0020	U	ug/L	P362252	
		Triclopyr**	0.0040	U	ug/L	P362252	

Sample Location: CEDAR CREEK ABOVE PATRICIA AVE

Collection Date/Time: 04/16/2019 10:45

Field ID: G5SW0147

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2078622	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P362372	
	EPA 300.0 Rev. 2.1	Chloride	100		mg Cl/L	P362595	
		Sulfate	21		mg SO4/L	P362596	
	SM 2120 B	Color (true)	58	A	PCU	P362387	
	SM 2320 B-97	Total Alkalinity	116		mg CaCO3/L	P362851	
	SM 2540 C-97	TDS	352	A	mg/L	P363044	
	SM 2540 D-97	TSS	3	IA	mg/L	P362913	
2078623	SM 4500 F-C-97	Fluoride	0.30		mg F/L	P362853	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P363028	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P362839	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P362772	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P362429	
2078624	SM 5310 B-00	Organic Carbon	11		mg C/L	P362486	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.091		mg P/L	P362366	
2078657	EPA 8321B	2,4-D	0.0063	I	ug/L	P362252	
		Acesulfame K**	0.14	I	ug/L	P362469	
		AMPA**	0.48		ug/L	P362469	
		Sucralose**	1.6		ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362252	
		Endothall**	0.25	U	ug/L	P362469	
		Glufosinate**	0.10	U	ug/L	P362469	
		Bentazon	0.054		ug/L	P362252	
		Glyphosate**	0.76		ug/L	P362469	
		Carbamazepine**	0.0021	I	ug/L	P362252	
		Diuron	0.0053	I	ug/L	P362252	
		Fenuron	0.016	U	ug/L	P362252	
		Fluridone**	0.059		ug/L	P362252	MS
		Imazapyr**	0.037		ug/L	P362252	
		Hydrocodone**	0.0020	U	ug/L	P362252	
		Ibuprofen**	0.020	U	ug/L	P362252	
		Imidacloprid	0.12		ug/L	P362252	MS
		Linuron	0.0040	U	ug/L	P362252	
		MCPP	0.0024	I	ug/L	P362252	
		Naproxen**	0.0080	U	ug/L	P362252	
		Primidone**	0.011	I	ug/L	P362252	
		Pyraclostrobin**	0.0020	U	ug/L	P362252	
		Triclopyr**	0.0040	U	ug/L	P362252	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362372

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P362586

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362595

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362596

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362715

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362839

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362841

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362648

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: P362772

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362429

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362605

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362366

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362367

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

Reference Method: EPA 8321B
Batch ID: P362252

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: P362469

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P362469

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: P362387

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P362720

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

Reference Method: SM 2320 B-97
Batch ID: P362851

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

Reference Method: SM 2540 C-97
Batch ID: P363044

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P362913

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P362917

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P362853

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P362951

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P362486

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

Reference Method: SM 5310 B-00
Batch ID: P362487

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: P362586

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362595

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362596

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362715

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362839

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362841

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362648

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	97.5		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362429

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: P362605

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362366

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362367

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

Reference Method: EPA 8321B
Batch ID: P362252

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	66.6		P	40 - 150
Acetaminophen	88.0		P	30 - 150
Bentazon	99.8		P	30 - 150
Carbamazepine	81.6		P	40 - 150
Diuron	79.2		P	40 - 150
Fenuron	103		P	40 - 150
Fluridone	110		P	40 - 150
Hydrocodone	74.3		P	40 - 150
Ibuprofen	79.5		P	40 - 150
Imazapyr	78.4		P	40 - 150
Imidacloprid	89.3		P	40 - 150
Linuron	79.3		P	40 - 150
MCPP	80.4		P	40 - 150
Naproxen	52.3		P	40 - 150
Primidone	81.1		P	40 - 150
Pyraclostrobin	90.5		P	40 - 150
Triclopyr	56.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	116		P	40 - 150
Endothall	114		P	40 - 150
Glufosinate	119		P	40 - 150
Glyphosate	118		P	40 - 140
Sucralose	107		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P362387

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

Reference Method: SM 2320 B-97
Batch ID: P362720

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

Reference Method: SM 2320 B-97
Batch ID: P362851

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P362853

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P362951

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P362486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.5		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P362487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P362586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2076447	Bromide	102	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362595

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078628	Chloride	100		P	90 - 110
2078704	Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078628	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078380	Ammonia-N	107	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079856	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078981	Kjeldahl Nitrogen	95.1	97.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079178	Kjeldahl Nitrogen	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362648

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078626	NO2NO3-N	98.7	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078623	NO2NO3-N	97.5	98.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P362429

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077684	Total-P	97.3	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P362605

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078600	Total-P	90.9	93.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P362366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078527	O-Phosphate-P	95.0	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P362367

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078781	O-Phosphate-P	97.6	99.2	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P362252

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078237	2,4-D	86.5	87.4	P/P	40 - 150
2078237	Acetaminophen	77.5	83.3	P/P	30 - 150
2078237	Bentazon	67.3	66.2	P/P	30 - 150
2078237	Carbamazepine	86.6	94.4	P/P	40 - 150
2078237	Diuron	72.2	70.7	P/P	40 - 150
2078237	Fenuron	96.8	109	P/P	40 - 150
2078237	Fluridone	176	72.4	F/P	40 - 150
2078237	Hydrocodone	93.7	94.9	P/P	40 - 150
2078237	Ibuprofen	65.0	61.0	P/P	40 - 150
2078237	Imazapyr	97.0	55.2	P/P	40 - 150
2078237	Imidacloprid	159	170	F/F	40 - 150
2078237	Linuron	70.9	72.5	P/P	40 - 150
2078237	MCPP	101	105	P/P	40 - 150
2078237	Naproxen	69.9	56.9	P/P	40 - 150
2078237	Primidone	67.6	64.2	P/P	40 - 150
2078237	Pyraclostrobin	74.6	80.8	P/P	40 - 150
2078237	Triclopyr	61.2	56.0	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P362469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078457	Acesulfame K	102	86.1	P/P	40 - 150
2078457	AMPA	147	145	P/P	40 - 150
2078457	Endothall	103	105	P/P	40 - 150
2078457	Glufosinate	112	123	P/P	40 - 150
2078457	Glyphosate	113	114	P/P	40 - 140
2078457	Sucralose	76.2	93.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P362951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078751	Fluoride	97.3	97.3	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P362486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078623	Organic Carbon	98.2	98.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P362487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078600	Organic Carbon	96.7	97.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078542	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P362586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2076447	Bromide	1.41	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078704	Chloride	0.0472	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078704	Sulfate	0.365	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078380	Ammonia-N	0.0398	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079856	Ammonia-N	0.606	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078981	Kjeldahl Nitrogen	2.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079178	Kjeldahl Nitrogen	1.19	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078626	NO2NO3-N	0.471	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078623	NO2NO3-N	0.304	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362429

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077684	Total-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078600	Total-P	2.56	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078527	O-Phosphate-P	0.525	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078781	O-Phosphate-P	1.11	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P362252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078237	2,4-D	0.554	Spike	P	0 - 30
2078237	Acetaminophen	7.21	Spike	P	0 - 30
2078237	Bentazon	0.814	Spike	P	0 - 30
2078237	Carbamazepine	8.15	Spike	P	0 - 30
2078237	Diuron	2.18	Spike	P	0 - 30
2078237	Fenuron	12.0	Spike	P	0 - 30
2078237	Fluridone	20.4	Spike	P	0 - 30
2078237	Hydrocodone	1.28	Spike	P	0 - 30
2078237	Ibuprofen	6.24	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P362252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078237	Imazapyr	24.0	Spike	P	0 - 30
2078237	Imidacloprid	6.54	Spike	P	0 - 30
2078237	Linuron	2.32	Spike	P	0 - 30
2078237	MCP	4.19	Spike	P	0 - 30
2078237	Naproxen	20.6	Spike	P	0 - 30
2078237	Primidone	4.56	Spike	P	0 - 30
2078237	Pyraclostrobin	8.08	Spike	P	0 - 30
2078237	Triclopyr	8.83	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P362469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078457	Acesulfame K	16.8	Spike	P	0 - 30
2078457	AMPA	1.17	Spike	P	0 - 30
2078457	Endothall	1.13	Spike	P	0 - 30
2078457	Glufosinate	9.39	Spike	P	0 - 30
2078457	Glyphosate	1.08	Spike	P	0 - 30
2078457	Sucralose	20.7	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P362387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078622	Color (true)	0.00687	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P362720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078625	Total Alkalinity	0.551	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P362851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078704	Total Alkalinity	0.664	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P363044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078622	TDS	2.55	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P362853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078704	Fluoride	0.935	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P362951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078751	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P362486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078623	Organic Carbon	0.328	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P362487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078600	Organic Carbon	0.438	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: 2078657
Field Sample ID: G5SW0147

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	70.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.2	P	30 - 160
EPA 8321B	Diuron-d6	82.4	P	30 - 160
EPA 8321B	Endothall-d6	87.9	P	30 - 160
EPA 8321B	Endothall-d6	87.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	101	P	30 - 160
EPA 8321B	Primidone-d5	72.8	P	30 - 160
EPA 8321B	Sucralose-d6	93.4	P	30 - 160
EPA 8321B	Sucralose-d6	93.4	P	30 - 160

Lab Sample ID: 2078658
Field Sample ID: G1SW0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.0	P	30 - 160
EPA 8321B	Diuron-d6	75.5	P	30 - 160
EPA 8321B	Endothall-d6	69.9	P	30 - 160
EPA 8321B	Endothall-d6	69.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	133	P	30 - 160
EPA 8321B	Primidone-d5	74.3	P	30 - 160
EPA 8321B	Sucralose-d6	99.5	P	30 - 160
EPA 8321B	Sucralose-d6	99.5	P	30 - 160

Lab Sample ID: 2078659
Field Sample ID: G5SW0129

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.7	P	30 - 160
EPA 8321B	Diuron-d6	74.5	P	30 - 160
EPA 8321B	Endothall-d6	91.4	P	30 - 160
EPA 8321B	Endothall-d6	91.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.0	P	30 - 160
EPA 8321B	Primidone-d5	75.2	P	30 - 160
EPA 8321B	Sucralose-d6	98.7	P	30 - 160
EPA 8321B	Sucralose-d6	98.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A90760

Included Lab Sample IDs: 2078622

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A90794

Included Lab Sample IDs: 2078624, 2078627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	99.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A90795

Included Lab Sample IDs: 2078622, 2078625

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

Reference Method: SM 2120 B

Run ID: A90804

Included Lab Sample IDs: 2078622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 115

Reference Method: EPA 300.0

Run ID: A90809

Included Lab Sample IDs: 2078625

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

Reference Method: SM 5310 B-00

Run ID: A90843

Included Lab Sample IDs: 2078623, 2078626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	102	P/P	90 - 110
Organic Carbon	99.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90847

Included Lab Sample IDs: 2078623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A90848

Included Lab Sample IDs: 2078657, 2078658, 2078659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A90848

Included Lab Sample IDs: 2078657, 2078658, 2078659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	88.3	89.9	P/P	50 - 150
Acetaminophen	99.9	84.5	P/P	60 - 160
Bentazon	114	113	P/P	50 - 160
Carbamazepine	99.0	103	P/P	60 - 150
Diuron	102	100	P/P	60 - 150
Fenuron	99.0	100	P/P	60 - 150
Fluridone	63.3	62.6	P/P	60 - 160
Fluridone	98.6	87.5	P/P	60 - 160
Hydrocodone	97.8	91.3	P/P	60 - 150
Ibuprofen	111	111	P/P	50 - 160
Imazapyr	95.4	102	P/P	50 - 150
Imidacloprid	93.9	87.8	P/P	60 - 150
Linuron	96.8	93.3	P/P	60 - 150
MCP	90.3	92.7	P/P	50 - 150
Naproxen	69.0	82.0	P/P	50 - 160
Primidone	88.5	89.2	P/P	60 - 150
Pyraclostrobin	101	136	P/P	60 - 150
Triclopyr	101	101	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A90878

Included Lab Sample IDs: 2078657, 2078658, 2078659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	118	140	P/P	60 - 160
Acesulfame K	136	118	P/P	60 - 160
Endothall	107	117	P/P	60 - 160
Endothall	98.7	107	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A90917

Included Lab Sample IDs: 2078657, 2078658, 2078659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	119	128	P/P	60 - 160
AMPA	121	94.0	P/P	60 - 160
AMPA	94.0	117	P/P	60 - 160
Glufosinate	104	121	P/P	60 - 160
Glufosinate	116	104	P/P	60 - 160
Glufosinate	122	117	P/P	60 - 160
Glyphosate	105	120	P/P	60 - 160
Glyphosate	107	105	P/P	60 - 160
Glyphosate	118	115	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A90918

Included Lab Sample IDs: 2078626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	98.5	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90927

Included Lab Sample IDs: 2078626

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A90946

Included Lab Sample IDs: 2078626

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

Reference Method: SM 2320 B-97

Run ID: A90948

Included Lab Sample IDs: 2078625

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.9	99.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A90968

Included Lab Sample IDs: 2078623

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

Reference Method: SM 2320 B-97

Run ID: A90988

Included Lab Sample IDs: 2078622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.9	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A90988

Included Lab Sample IDs: 2078622

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

Reference Method: EPA 8321B

Run ID: A90990

Included Lab Sample IDs: 2078657, 2078658, 2078659

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.5	99.2	P/P	60 - 160
Sucralose	98.4	96.5	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91020

Included Lab Sample IDs: 2078623, 2078626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91020

Included Lab Sample IDs: 2078623, 2078626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	98.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A91045

Included Lab Sample IDs: 2078625

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A91070

Included Lab Sample IDs: 2078623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	102	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					0.0	
EPA 300.0	Bromide	103	102	100			1.41
EPA 300.0 Rev. 2.1	Chloride	98.9	99.8	100		0.0472	
	Sulfate	101	101			0.365	
EPA 350.1 Rev. 2.0	Ammonia-N	107	107	107			0.0398
	Ammonia-N	99.2	101	101			0.606
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	95.1	97.9			2.22
	Kjeldahl Nitrogen	102	101	102			1.19
EPA 353.2 Rev. 2.0	NO2NO3-N	100	98.7	98.2			0.471
	NO2NO3-N	97.5	97.5	98.0			0.304
EPA 365.1 Rev. 2.0	Total-P	104	97.3	97.3			0.0
	Total-P	101	90.9	93.4			2.56
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	95.0	95.5			0.525
	O-Phosphate-P	102	97.6	99.2			1.11
EPA 8321B	2,4-D	66.6	86.5	87.4			0.554
	Acesulfame K	106	102	86.1			16.8
	Acetaminophen	88.0	77.5	83.3			7.21
	AMPA	116	145	147			1.17
	Bentazon	99.8	67.3	66.2			0.814
	Carbamazepine	81.6	86.6	94.4			8.15
	Diuron	79.2	72.2	70.7			2.18
	Endothall	114	103	105			1.13
	Fenuron	103	96.8	109			12.0
	Fluridone	110	176	72.4			20.4
	Glufosinate	119	123	112			9.39
	Glyphosate	118	114	113			1.08
	Hydrocodone	74.3	93.7	94.9			1.28
	Ibuprofen	79.5	65.0	61.0			6.24
	Imazapyr	78.4	97.0	55.2			24.0
	Imidacloprid	89.3	159	170			6.54
	Linuron	79.3	70.9	72.5			2.32
	MCPP	80.4	101	105			4.19
	Naproxen	52.3	69.9	56.9			20.6
	Primidone	81.1	67.6	64.2			4.56
	Pyraclostrobin	90.5	74.6	80.8			8.08
	Sucralose	107	76.2	93.8			20.7
	Triclopyr	56.2	61.2	56.0			8.83
SM 2120 B	Color (true)	102				0.0068	
SM 2320 B-97	Total Alkalinity	100				0.551	
	Total Alkalinity	102				0.664	
SM 2540 C-97	TDS					2.55	
SM 4500 F-C-97	Fluoride	98.5					0.935
	Fluoride	98.3	97.3	97.3			0.0
SM 5310 B-00	Organic Carbon	99.5	98.2	98.8			0.328
	Organic Carbon	98.8	96.7	97.2			0.438

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2078622, 2078625
EPA 300.0 / E31780	Bromide in aqueous matrices	2078625

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2078622
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2078622
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2078623, 2078626
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2078623, 2078626
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2078623, 2078626
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2078623, 2078626
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2078624, 2078627
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2078657, 2078658, 2078659
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2078657, 2078658, 2078659
SM 2120 B / E31780	True Color measured at 450 nm	2078622
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2078622, 2078625
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2078622
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2078622, 2078625
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2078622, 2078625
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2078623, 2078626

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	04/17/2019			04/17/2019 17:22	Adrian Shelby	2078622, 2078625
EPA 300.0	04/17/2019			04/18/2019 19:47	Lipi Saha	2078625
EPA 300.0 Rev. 2.1	04/17/2019			04/19/2019 17:08	Lipi Saha	2078622
EPA 350.1 Rev. 2.0	04/17/2019			04/22/2019 13:01	Ping Hua	2078626
	04/17/2019			04/26/2019 10:37	Ping Hua	2078623
EPA 351.2 Rev. 2.0	04/17/2019	04/25/2019 12:20	Adrian Shelby	04/26/2019 09:10	Joseph Suarez	2078623
	04/17/2019	04/25/2019 12:20	Adrian Shelby	04/26/2019 09:39	Joseph Suarez	2078626
EPA 353.2 Rev. 2.0	04/17/2019			04/23/2019 10:54	Beverly Y. Sanders	2078626
	04/17/2019			04/24/2019 12:12	Beverly Y. Sanders	2078623
EPA 365.1 Rev. 2.0	04/17/2019	04/18/2019 13:40	Sima Feizi	04/19/2019 12:38	Rosalyn Ballman	2078623
	04/17/2019	04/22/2019 15:10	Sima Feizi	04/23/2019 11:47	Rosalyn Ballman	2078626
EPA 365.1 Rev. 2.0 dissolved	04/17/2019			04/17/2019 16:22	Jhamieka S. Greenwood	2078624
	04/17/2019			04/17/2019 16:27	Jhamieka S. Greenwood	2078627
EPA 8321B	04/17/2019	04/18/2019 12:00	Hoor Shaik	04/22/2019 01:35	Juyoung Kim	2078657
	04/17/2019	04/18/2019 12:00	Hoor Shaik	04/22/2019 02:09	Juyoung Kim	2078658
	04/17/2019	04/18/2019 12:00	Hoor Shaik	04/22/2019 02:44	Juyoung Kim	2078659
	04/17/2019	04/18/2019 12:00	Hoor Shaik	04/22/2019 11:27	Juyoung Kim	2078658
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 12:53	Rebecca Ware	2078657
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 13:07	Rebecca Ware	2078658
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 13:34	Rebecca Ware	2078659
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 11:09	Rebecca Ware	2078657
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 11:34	Rebecca Ware	2078659
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 14:19	Rebecca Ware	2078658
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 17:21	Rebecca Ware	2078657
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 17:33	Rebecca Ware	2078658
	04/17/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 17:56	Rebecca Ware	2078659
SM 2120 B	04/17/2019			04/17/2019 15:59	Mariam Hanna	2078622
SM 2320 B-97	04/17/2019			04/23/2019 23:38	Dale L. Simmons	2078625
	04/17/2019			04/25/2019 09:24	Dale L. Simmons	2078622
SM 2540 C-97	04/17/2019			04/22/2019 15:58	Yijie Li	2078622
SM 2540 D-97	04/17/2019			04/22/2019 15:58	Yijie Li	2078622, 2078625
SM 4500 F-C-97	04/17/2019			04/25/2019 09:24	Dale L. Simmons	2078622
	04/17/2019			04/26/2019 07:01	Dale L. Simmons	2078625
SM 5310 B-00	04/17/2019			04/18/2019 21:09	Julia Storbeck	2078623
	04/17/2019			04/19/2019 05:34	Julia Storbeck	2078626