

Chemical Analysis Report

SO-DIST-2018-04-03-03

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

Event Description: **SFM: Oak, Hendry, Winkler, Manuel**
Request ID: **RQ-2018-04-02-64**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901
Attn: Maryann Dugan

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 20-APR-2018 11:41



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 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: Manuel Branch @Broadway

Collection Date/Time: 04/02/2018 08:25

Field ID: G3SD0078

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1980005	EPA 8321B	2,4-D	0.0030	I	ug/L	P342539	
		Bentazon	0.017		ug/L	P342539	
		MCP	0.0085		ug/L	P342539	
		Triclopyr**	0.0040	U	ug/L	P342539	
		Imidacloprid	0.0020	U	ug/L	P342539	MS
		Diuron	0.0020	U	ug/L	P342539	
		Pyraclostrobin**	0.0020	U	ug/L	P342539	
		Primidone**	0.0040	U	ug/L	P342539	
		Linuron	0.0040	U	ug/L	P342539	
		Acetaminophen**	0.0080	U	ug/L	P342539	
		Fenuron	0.016	U	ug/L	P342539	
		Imazapyr**	0.013	I	ug/L	P342539	
		Carbamazepine**	0.0027		ug/L	P342539	
		Fluridone**	8.0E-04	U	ug/L	P342539	
		Hydrocodone**	8.0E-04	U	ug/L	P342539	
		Sucralose**	0.19	I	ug/L	P342714	
		Glyphosate**	2.6		ug/L	P342714	
		AMPA**	0.67		ug/L	P342714	
		Endothal**	0.10	U	ug/L	P342714	
		Glufosinate**	0.10	U	ug/L	P342714	

Ref. Method and Comment:

EPA 8321B: MS accuracy for 2,4-D and imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Winkler Canal@Princeton

Collection Date/Time: 04/02/2018 08:50

Field ID: G3SD0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979967	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P342707	
	EPA 300.0 Rev. 2.1	Chloride	140		mg Cl/L	P342831	
		Sulfate	57		mg SO4/L	P342834	
	SM 2120 B	Color (true)	23		PCU	P342639	
	SM 2320 B-97	Total Alkalinity	197		mg CaCO3/L	P343370	
	SM 2540 C-97	TDS	546	A	mg/L	P343339	
	SM 2540 D-97	TSS	3	IA	mg/L	P343451	
	SM 4500 F-C-97	Fluoride	0.38		mg F/L	P343375	
1979968	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P343232	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P342813	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P342940	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P342808	
	SM 5310 B-00	Organic Carbon	6.0		mg C/L	P343191	
1979969	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P342697	
1980004	EPA 8321B	2,4-D	0.0064	I	ug/L	P342539	
		Sucralose**	0.75		ug/L	P342825	
		Bentazon	0.034		ug/L	P342539	

Field ID: G3SD0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1980004	EPA 8321B	MCP	0.0020	U	ug/L	P342539	
		Triclopyr**	0.0040	U	ug/L	P342539	
		Imidacloprid	0.035		ug/L	P342539	MS
		Diuron	0.0020	U	ug/L	P342539	
		Pyraclostrobin**	0.0020	U	ug/L	P342539	
		Primidone**	0.0040	U	ug/L	P342539	
		Linuron	0.0040	U	ug/L	P342539	
		Acetaminophen**	0.0080	U	ug/L	P342539	
		Fenuron	0.016	U	ug/L	P342539	
		Imazapyr**	0.0040	U	ug/L	P342539	
		Carbamazepine**	0.0010	I	ug/L	P342539	
		Fluridone**	0.020		ug/L	P342539	
		Hydrocodone**	9.8E-04	I	ug/L	P342539	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: 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: MS accuracy for 2,4-D and imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: HendryCrk@OldGladiolus

Collection Date/Time: 04/02/2018 09:45

Field ID: G1SD0062

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979970	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P342707	
	SM 2320 B-97	Total Alkalinity	217		mg CaCO ₃ /L	P343500	
	SM 2540 D-97	TSS	6	I	mg/L	P343511	
	SM 4500 F-C-97	Fluoride	0.72		mg F/L	P343506	
1979972	EPA 350.1 Rev. 2.0	Ammonia-N	0.059		mg N/L	P343146	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P342777	
	EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	0.006	I	mg N/L	P342758	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P342914	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P343001	
1979974	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P342702	

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: HendryCrk@OldGladiolus

Collection Date/Time: 04/02/2018 09:50

Field ID: G1SD0062_DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979976	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P342708	
	SM 2320 B-97	Total Alkalinity	215		mg CaCO ₃ /L	P343500	
	SM 2540 D-97	TSS	4	I	mg/L	P343511	
	SM 4500 F-C-97	Fluoride	0.73		mg F/L	P343506	
1979977	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P343146	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P342777	
	EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	0.007	I	mg N/L	P342758	

Field ID: G1SD0062_DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979977	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P342914	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P343001	
1979978	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P342702	

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: OakCreek@OakCrkPreserve

Collection Date/Time: 04/02/2018 10:35

Field ID: G1SD0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979971	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P342707	
	EPA 300.0 Rev. 2.1	Chloride	52		mg Cl/L	P342831	
		Sulfate	23		mg SO4/L	P342834	
	SM 2120 B	Color (true)	25		PCU	P342639	
	SM 2320 B-97	Total Alkalinity	310		mg CaCO3/L	P343370	
	SM 2540 C-97	TDS	448		mg/L	P343339	
	SM 2540 D-97	TSS	3	I	mg/L	P343451	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P343375	
1979973	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P343232	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P342813	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.095		mg N/L	P342940	
	EPA 365.1 Rev. 2.0	Total-P	0.089		mg P/L	P342808	
	SM 5310 B-00	Organic Carbon	7.8		mg C/L	P343191	
1979975	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.039		mg P/L	P342697	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: 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.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P342707

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P342708

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P342831

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342834

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343146

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343232

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342777

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342813

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342758

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342940

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342808

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342914

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342697

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342702

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

Reference Method: EPA 8321B
Batch ID: P342539

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	0.017	I	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	8.0E-04	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
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P342714

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Endothall	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P342825

Component	Result	Code	Units
Sucralose	0.11	U	ug/L

Reference Method: SM 2120 B
Batch ID: P342639

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P343370

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2320 B-97
Batch ID: P343500

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P343339

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343451

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343511

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P343375

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P343506

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P343001

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

Reference Method: SM 5310 B-00
Batch ID: P343191

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342831

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342834

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343146

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342777

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342813

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342758

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342940

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342808

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342914

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342697

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P342539

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	64.8		P	40 - 150
Acetaminophen	99.8		P	30 - 150
Bentazon	68.3		P	30 - 150
Carbamazepine	83.6		P	40 - 150
Diuron	66.7		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	62.2		P	40 - 150
Hydrocodone	118		P	40 - 150
Imazapyr	73.4		P	40 - 150
Imidacloprid	106		P	40 - 160
Linuron	79.8		P	40 - 150
MCPP	61.0		P	40 - 150
Primidone	110		P	40 - 150
Pyraclostrobin	66.6		P	40 - 150
Triclopyr	56.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342714

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	109		P	40 - 140
Endothall	105		P	40 - 140
Glufosinate	99.1		P	40 - 140
Glyphosate	101		P	40 - 140
Sucralose	117		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342825

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	117		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P343370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P343500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P343375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P343506

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343001

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P343191

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342831

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1980171	Chloride	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979904	Sulfate	96.9		P	90 - 110
1980171	Sulfate	100		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343146

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979443	Ammonia-N	97.5	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979968	Ammonia-N	97.2	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342777

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979972	Kjeldahl Nitrogen	95.9	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979968	Kjeldahl Nitrogen	95.1	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342758

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979750	NO2NO3-N	106	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342940

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979928	NO2NO3-N	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979928	Total-P	95.9	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979991	Total-P	96.6	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979933	O-Phosphate-P	94.6	94.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979706	O-Phosphate-P	96.4	97.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P342539

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979892	Acetaminophen	127	125	P/P	30 - 150
1979892	Bentazon	37.7	33.9	P/P	30 - 150
1979892	Carbamazepine	94.2	92.9	P/P	40 - 150
1979892	Diuron	72.4	79.4	P/P	40 - 150
1979892	Fenuron	101	106	P/P	40 - 150
1979892	Fluridone	65.1	62.8	P/P	40 - 150
1979892	Hydrocodone	139	140	P/P	40 - 150
1979892	Imidacloprid	185	197	F/F	40 - 160
1979892	Linuron	82.6	91.5	P/P	40 - 150
1979892	MCCP	55.2	56.7	P/P	40 - 150
1979892	Primidone	132	132	P/P	40 - 150
1979892	Pyraclostrobin	75.7	73.6	P/P	40 - 150
1979892	Triclopyr	59.3	54.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979892	AMPA	51.5	53.2	P/P	40 - 140
1979892	Endothall	105	111	P/P	40 - 140
1979892	Glufosinate	101	106	P/P	40 - 140
1979892	Glyphosate	85.2	82.3	P/P	40 - 140
1979892	Sucralose	60.8	56.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979892	Sucralose	69.9	75.2	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P343375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1980245	Fluoride	96.9	98.6	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P343506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979698	Fluoride	93.2	94.0	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343001

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P343001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979078	Organic Carbon	92.1	92.0	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P343191

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979921	Organic Carbon	97.6	95.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P342707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979905	Turbidity	1.72	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P342708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980091	Turbidity	5.08	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342831

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979904	Chloride	0.304	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979904	Sulfate	0.243	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979443	Ammonia-N	0.769	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979968	Ammonia-N	0.204	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979972	Kjeldahl Nitrogen	1.40	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979968	Kjeldahl Nitrogen	0.744	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979750	NO2NO3-N	0.863	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979928	NO2NO3-N	1.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979928	Total-P	2.80	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979991	Total-P	1.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979933	O-Phosphate-P	0.318	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979706	O-Phosphate-P	0.661	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P342539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979892	2,4-D	3.02	Spike	P	0 - 30
1979892	Acetaminophen	1.33	Spike	P	0 - 30
1979892	Bentazon	9.31	Spike	P	0 - 30
1979892	Carbamazepine	1.36	Spike	P	0 - 30
1979892	Diuron	9.25	Spike	P	0 - 30
1979892	Fenuron	5.30	Spike	P	0 - 30
1979892	Fluridone	3.64	Spike	P	0 - 30
1979892	Hydrocodone	0.429	Spike	P	0 - 30
1979892	Imazapyr	7.98	Spike	P	0 - 30
1979892	Imidacloprid	5.04	Spike	P	0 - 30
1979892	Linuron	10.2	Spike	P	0 - 30
1979892	MCCPP	2.68	Spike	P	0 - 30
1979892	Primidone	0.439	Spike	P	0 - 30
1979892	Pyraclostrobin	2.75	Spike	P	0 - 30
1979892	Triclopyr	7.82	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979892	AMPA	3.41	Spike	P	0 - 30
1979892	Endothall	5.16	Spike	P	0 - 30
1979892	Glufosinate	4.23	Spike	P	0 - 30
1979892	Glyphosate	3.39	Spike	P	0 - 30
1979892	Sucralose	4.72	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979892	Sucralose	4.85	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P342639

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979918	Color (true)	3.50	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P343370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980245	Total Alkalinity	0.247	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
 Batch ID: P343500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979698	Total Alkalinity	0.0803	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P343339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979967	TDS	1.10	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P343375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980245	Fluoride	1.49	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P343506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979698	Fluoride	0.480	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P343001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979078	Organic Carbon	0.0906	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P343191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979921	Organic Carbon	1.16	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

Quality Assurance Report Surrogates

Lab Sample ID: 1980004
Field Sample ID: G3SD0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	134	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.4	P	30 - 160
EPA 8321B	Diuron-d6	81.4	P	30 - 160
EPA 8321B	Primidone-d5	135	P	30 - 160
EPA 8321B	Sucralose-d6	69.3	P	40 - 160

Lab Sample ID: 1980005
Field Sample ID: G3SD0078

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.5	P	30 - 160
EPA 8321B	2,4-D-d3	80.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	137	P	30 - 160
EPA 8321B	Acetaminophen-d4	137	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Diuron-d6	88.4	P	30 - 160
EPA 8321B	Diuron-d6	88.4	P	30 - 160
EPA 8321B	Endothall-d6	98.0	P	40 - 160
EPA 8321B	Endothall-d6	98.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	78.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	78.1	P	40 - 160
EPA 8321B	Primidone-d5	135	P	30 - 160
EPA 8321B	Primidone-d5	135	P	30 - 160
EPA 8321B	Sucralose-d6	55.0	P	40 - 160
EPA 8321B	Sucralose-d6	55.0	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A83001
Included Lab Sample IDs: 1979967, 1979971

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

Reference Method: SM 2120 B
Run ID: A83009
Included Lab Sample IDs: 1979967, 1979971

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A83021
Included Lab Sample IDs: 1979969, 1979974, 1979975, 1979978

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A83021

Included Lab Sample IDs: 1979969, 1979974, 1979975, 1979978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	98.4	P/P	90 - 110
O-Phosphate-P	98.4	98.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A83022

Included Lab Sample IDs: 1979967, 1979970, 1979971, 1979976

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83035

Included Lab Sample IDs: 1979972, 1979977

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83073

Included Lab Sample IDs: 1979973

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83074

Included Lab Sample IDs: 1979972, 1979977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.3	101	P/P	90 - 110
Kjeldahl Nitrogen	96.9	94.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83076

Included Lab Sample IDs: 1979968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83084

Included Lab Sample IDs: 1979968, 1979973

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83103

Included Lab Sample IDs: 1979968, 1979973

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83103

Included Lab Sample IDs: 1979968, 1979973

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	90.9	P/P	90 - 110
Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A83104

Included Lab Sample IDs: 1979972, 1979977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.0	93.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A83110

Included Lab Sample IDs: 1980004, 1980005

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.8	99.1	P/P	50 - 150
Acetaminophen	114	103	P/P	60 - 150
Bentazon	106	104	P/P	50 - 150
Carbamazepine	108	106	P/P	60 - 150
Diuron	121	122	P/P	60 - 150
Fenuron	108	103	P/P	60 - 150
Fluridone	120	119	P/P	60 - 160
Hydrocodone	120	104	P/P	60 - 150
Imazapyr	90.5	85.0	P/P	50 - 150
Imidacloprid	107	103	P/P	60 - 150
Linuron	118	129	P/P	60 - 150
MCPP	102	100	P/P	50 - 150
Primidone	118	106	P/P	60 - 150
Pyraclostrobin	117	111	P/P	60 - 150
Triclopyr	94.9	95.1	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83113

Included Lab Sample IDs: 1979972, 1979977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83153

Included Lab Sample IDs: 1979972, 1979977

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

Reference Method: SM 5310 B-00

Run ID: A83162

Included Lab Sample IDs: 1979968, 1979973

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	92.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A83174
Included Lab Sample IDs: 1979968, 1979973

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

Reference Method: EPA 8321B
Run ID: A83190
Included Lab Sample IDs: 1980005

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.2	108	P/P	60 - 150
Endothall	103	99.6	P/P	60 - 150
Glufosinate	102	95.7	P/P	60 - 150
Glyphosate	101	109	P/P	60 - 150
Sucralose	106	109	P/P	60 - 130

Reference Method: EPA 8321B
Run ID: A83192
Included Lab Sample IDs: 1980004

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	101	P/P	60 - 130

Reference Method: SM 2320 B-97
Run ID: A83225
Included Lab Sample IDs: 1979967, 1979971

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: A83225
Included Lab Sample IDs: 1979967, 1979971

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

Reference Method: SM 2320 B-97
Run ID: A83264
Included Lab Sample IDs: 1979970, 1979976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.6	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A83264
Included Lab Sample IDs: 1979970, 1979976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	97.1	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					1.72	
	Turbidity					5.08	
EPA 300.0 Rev. 2.1	Chloride	99.7	98.1			0.304	
	Sulfate	99.1	96.9	100		0.243	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	97.5	98.8			0.769
	Ammonia-N	97.3	97.2	97.4			0.204
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	95.9	97.8			1.40
	Kjeldahl Nitrogen	93.5	95.1	96.0			0.744
EPA 353.2 Rev. 2.0	NO2NO3-N	105	106	105			0.863
	NO2NO3-N	102	104	106			1.61
EPA 365.1 Rev. 2.0	Total-P	106	95.9	98.8			2.80
	Total-P	102	96.6	97.9			1.14
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.2	94.6	94.3			0.318
	O-Phosphate-P	98.3	96.4	97.2			0.661
EPA 8321B	2,4-D	64.8					3.02
	Acetaminophen	99.8	127	125			1.33
	AMPA	109	51.5	53.2			3.41
	Bentazon	68.3	37.7	33.9			9.31
	Carbamazepine	83.6	94.2	92.9			1.36
	Diuron	66.7	72.4	79.4			9.25
	Endothall	105	105	111			5.16
	Fenuron	114	101	106			5.30
	Fluridone	62.2	65.1	62.8			3.64
	Glufosinate	99.1	101	106			4.23
	Glyphosate	101	85.2	82.3			3.39
	Hydrocodone	118	139	140			0.429
	Imazapyr	73.4					7.98
	Imidacloprid	106	185	197			5.04
	Linuron	79.8	82.6	91.5			10.2
	MCPP	61.0	55.2	56.7			2.68
	Primidone	110	132	132			0.439
	Pyraclostrobin	66.6	75.7	73.6			2.75
	Sucralose	117	60.8	56.5			4.72
	Sucralose	117	69.9	75.2			4.85
	Triclopyr	56.8	59.3	54.8			7.82
SM 2120 B	Color (true)					3.50	
SM 2320 B-97	Total Alkalinity	102				0.247	
	Total Alkalinity	100				0.0803	
SM 2540 C-97	TDS					1.10	
SM 4500 F-C-97	Fluoride	95.6	96.9	98.6			1.49
	Fluoride	94.1	93.2	94.0			0.480
SM 5310 B-00	Organic Carbon	96.0	92.1	92.0			0.0906
	Organic Carbon	104	97.6	95.8			1.16

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1979967, 1979970, 1979971, 1979976
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1979967, 1979971
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1979967, 1979971

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1979968, 1979972, 1979973, 1979977
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1979968, 1979972, 1979973, 1979977
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1979968, 1979972, 1979973, 1979977
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1979968, 1979972, 1979973, 1979977
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1979969, 1979974, 1979975, 1979978
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1980004, 1980005
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1980005
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1980004
SM 2120 B / E31780	True Color measured at 450 nm	1979967, 1979971
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1979967, 1979970, 1979971, 1979976
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1979967, 1979971
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1979967, 1979970, 1979971, 1979976
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1979967, 1979970, 1979971, 1979976
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1979968, 1979972, 1979973, 1979977

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	04/03/2018			04/03/2018 16:07	DeAsia Armster	1979967, 1979970, 1979971, 1979976
EPA 300.0 Rev. 2.1	04/03/2018			04/05/2018 05:07	Lipi Saha	1979967
	04/03/2018			04/05/2018 05:19	Lipi Saha	1979971
EPA 350.1 Rev. 2.0	04/03/2018			04/10/2018 11:09	Ping Hua	1979972
	04/03/2018			04/10/2018 11:10	Ping Hua	1979977
	04/03/2018			04/11/2018 12:15	Ping Hua	1979968
	04/03/2018			04/11/2018 12:19	Ping Hua	1979973
EPA 351.2 Rev. 2.0	04/03/2018	04/05/2018 10:14	Tanya Welborn	04/06/2018 09:46	Joseph Suarez	1979972
	04/03/2018	04/05/2018 10:14	Tanya Welborn	04/06/2018 09:54	Joseph Suarez	1979977
	04/03/2018	04/05/2018 10:30	Adrian Shelby	04/06/2018 13:33	Joseph Suarez	1979968
	04/03/2018	04/05/2018 10:30	Adrian Shelby	04/06/2018 13:41	Joseph Suarez	1979973
EPA 353.2 Rev. 2.0	04/03/2018			04/04/2018 14:55	Lauren Bottorf	1979972
	04/03/2018			04/04/2018 14:56	Lauren Bottorf	1979977
	04/03/2018			04/06/2018 12:52	Lauren Bottorf	1979968
	04/03/2018			04/06/2018 12:53	Lauren Bottorf	1979973
EPA 365.1 Rev. 2.0	04/03/2018	04/05/2018 11:16	Sima Feizi	04/06/2018 09:52	Beverly Y. Sanders	1979973
	04/03/2018	04/05/2018 11:16	Sima Feizi	04/06/2018 11:41	Beverly Y. Sanders	1979968
	04/03/2018	04/06/2018 13:01	Sima Feizi	04/09/2018 11:34	Beverly Y. Sanders	1979972
	04/03/2018	04/06/2018 13:01	Sima Feizi	04/09/2018 11:35	Beverly Y. Sanders	1979977
EPA 365.1 Rev. 2.0 dissolved	04/03/2018			04/03/2018 15:55	Megan Treadwell	1979969
	04/03/2018			04/03/2018 15:56	Megan Treadwell	1979974
	04/03/2018			04/03/2018 16:01	Megan Treadwell	1979975
	04/03/2018			04/03/2018 16:02	Megan Treadwell	1979978
EPA 8321B	04/03/2018	04/04/2018 12:00	Hoor Shaik	04/05/2018 04:23	Julie Michelle Frank	1980004
	04/03/2018	04/04/2018 12:00	Hoor Shaik	04/05/2018 04:58	Julie Michelle Frank	1980005
	04/03/2018	04/04/2018 12:00	Hoor Shaik	04/05/2018 20:33	Julie Michelle Frank	1980004
	04/03/2018	04/04/2018 12:00	Hoor Shaik	04/05/2018 21:07	Julie Michelle Frank	1980005
	04/03/2018	04/05/2018 14:00	Julie Michelle Frank	04/05/2018 20:19	Julie Michelle Frank	1980005
	04/03/2018	04/05/2018 14:30	Julie Michelle Frank	04/10/2018 19:26	Julie Michelle Frank	1980004
SM 2120 B	04/03/2018			04/03/2018 14:29	Tanya Welborn	1979967
	04/03/2018			04/03/2018 14:30	Tanya Welborn	1979971
SM 2320 B-97	04/03/2018			04/13/2018 09:04	Dale L. Simmons	1979967
	04/03/2018			04/13/2018 09:16	Dale L. Simmons	1979971
	04/03/2018			04/15/2018 19:45	Dale L. Simmons	1979970
	04/03/2018			04/15/2018 19:56	Dale L. Simmons	1979976
SM 2540 C-97	04/03/2018			04/06/2018 16:01	Yijie Li	1979967, 1979971
SM 2540 D-97	04/03/2018			04/06/2018 16:01	Yijie Li	1979967, 1979970, 1979971, 1979976
SM 4500 F-C-97	04/03/2018			04/13/2018 09:04	Dale L. Simmons	1979967
	04/03/2018			04/13/2018 09:16	Dale L. Simmons	1979971
	04/03/2018			04/15/2018 16:58	Dale L. Simmons	1979970

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	04/03/2018			04/15/2018 17:02	Dale L. Simmons	1979976
SM 5310 B-00	04/03/2018			04/07/2018 15:30	Megan Treadwell	1979972
	04/03/2018			04/07/2018 15:45	Megan Treadwell	1979977
	04/03/2018			04/10/2018 17:42	Julia Storbeck	1979968
	04/03/2018			04/10/2018 17:57	Julia Storbeck	1979973