

Chemical Analysis Report

NE-DIST-2018-05-17-01

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

Event Description: **LSJR NorthSalt Boat**

Request ID: **RQ-2018-05-14-21**

Customer: **NE-DIST**

Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
Jacksonville, FL 32256-7577
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 06-JUN-2018 15:30



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: RIBAUTL R 0.3MI AB TROUT R

Collection Date/Time: 05/16/2018 09:40

Field ID: 20030125

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993512	EPA 180.1 Rev. 2.0	Turbidity	7.2		NTU	P345531	
	SM 2320 B-97	Total Alkalinity	88		mg CaCO3/L	P345706	
	SM 2540 D-97	TSS	9	IA	mg/L	P345810	
	SM 4500 F-C-97	Fluoride	0.52		mg F/L	P345707	
1993515	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P345851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P345875	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.031		mg N/L	P345673	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P345665	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P345779	
1993518	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.063		mg P/L	P345528	

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: RIBAUTL R LEM TURNER RD

Collection Date/Time: 05/16/2018 09:20

Field ID: 20030126

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993513	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P345531	
	SM 2320 B-97	Total Alkalinity	86		mg CaCO3/L	P345706	
	SM 2540 D-97	TSS	18		mg/L	P345810	
	SM 4500 F-C-97	Fluoride	0.49	I	mg F/L	P345707	
1993516	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P345851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P345875	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P345672	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P345665	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P345779	
1993519	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.066		mg P/L	P345528	

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: RIBAUTL R LEM TURNER RD

Collection Date/Time: 05/16/2018 09:25

Field ID: 20030126DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993514	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P345531	
	SM 2320 B-97	Total Alkalinity	86		mg CaCO3/L	P345706	
	SM 2540 D-97	TSS	20		mg/L	P345810	
	SM 4500 F-C-97	Fluoride	0.49	I	mg F/L	P345707	
1993517	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P345851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P345875	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.027		mg N/L	P345672	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P345665	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P345779	
1993520	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.065		mg P/L	P345528	

Field ID: 20030126DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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: TROUT R MOUTH N OF SAND FLY PT

Collection Date/Time: 05/16/2018 10:30

Field ID: 20030124

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993500	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P345530	
	SM 2320 B-97	Total Alkalinity	88		mg CaCO3/L	P345706	
	SM 2540 D-97	TSS	4	I	mg/L	P345810	
	SM 4500 F-C-97	Fluoride	0.58		mg F/L	P345707	
1993504	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P345851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P345820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P345672	
	EPA 365.1 Rev. 2.0	Total-P	0.085		mg P/L	P345665	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P345787	
1993508	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.059		mg P/L	P345528	
1993539	EPA 8321B	2,4-D	0.0045	I	ug/L	P345505	
		Bentazon	0.0053		ug/L	P345505	
		MCP	0.0020	U	ug/L	P345505	
		Triclopyr**	0.0040	U	ug/L	P345505	MS
		Imidacloprid	0.019		ug/L	P345505	
		Diuron	0.066		ug/L	P345505	
		Pyraclostrobin**	0.0020	U	ug/L	P345505	
		Primidone**	0.0040	U	ug/L	P345505	
		Linuron	0.028		ug/L	P345505	
		Acetaminophen**	0.0080	U	ug/L	P345505	
		Fenuron	0.016	U	ug/L	P345505	
		Imazapyr**	0.059		ug/L	P345505	
		Carbamazepine**	0.0018		ug/L	P345505	
		Fluridone**	0.0031		ug/L	P345505	
		Hydrocodone**	8.0E-04	U	ug/L	P345505	
		Sucralose**	0.45		ug/L	P345394	

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: TROUT R @ I-95 BURT MAXWELL DOCK

Collection Date/Time: 05/16/2018 09:55

Field ID: 20030121

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993501	EPA 180.1 Rev. 2.0	Turbidity	5.8	A	NTU	P345531	
	SM 2320 B-97	Total Alkalinity	89		mg CaCO3/L	P345706	
	SM 2540 D-97	TSS	6	I	mg/L	P345810	
	SM 4500 F-C-97	Fluoride	0.57		mg F/L	P345707	
1993505	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P345851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P345820	

Field ID: 20030121

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993505	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038		mg N/L	P345672	
	EPA 365.1 Rev. 2.0	Total-P	0.098		mg P/L	P345665	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P345787	
1993509	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.062		mg P/L	P345528	
1993540	EPA 8321B	2,4-D	0.0050	I	ug/L	P345505	
		Bentazon	0.0058		ug/L	P345505	
		MCP	0.0020	U	ug/L	P345505	
		Tricopyr**	0.0040	U	ug/L	P345505	MS
		Imidacloprid	0.022		ug/L	P345505	
		Diuron	0.042		ug/L	P345505	
		Pyraclostrobin**	0.0020	U	ug/L	P345505	
		Primidone**	0.0040	U	ug/L	P345505	
		Linuron	0.025		ug/L	P345505	
		Acetaminophen**	0.0080	U	ug/L	P345505	
		Fenuron	0.016	U	ug/L	P345505	
		Imazapyr**	0.068		ug/L	P345505	
		Carbamazepine**	0.0018		ug/L	P345505	
		Fluridone**	0.0070		ug/L	P345505	
		Hydrocodone**	8.0E-04	U	ug/L	P345505	
		Sucralose**	0.29		ug/L	P345394	

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: TROUT RIVER ABOVE 295

Collection Date/Time: 05/16/2018 08:40

Field ID: G2NE1138

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993502	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P345531	
	SM 2320 B-97	Total Alkalinity	66		mg CaCO3/L	P345912	
	SM 2540 D-97	TSS	19		mg/L	P345809	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P345915	
1993506	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P345851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P345820	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P345672	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P345665	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P345777	
1993510	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.078		mg P/L	P345528	
1993541	EPA 8321B	2,4-D	0.013		ug/L	P345505	
		Bentazon	0.013		ug/L	P345505	
		MCP	0.0031	I	ug/L	P345505	
		Tricopyr**	0.0040	U	ug/L	P345505	MS
		Imidacloprid	0.021		ug/L	P345505	
		Diuron	0.0072	I	ug/L	P345505	
		Pyraclostrobin**	0.0020	U	ug/L	P345505	
		Primidone**	0.0040	U	ug/L	P345505	

Field ID: G2NE1138

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993541	EPA 8321B	Linuron	0.0054	I	ug/L	P345505	
		Acetaminophen**	0.0080	U	ug/L	P345505	
		Fenuron	0.016	U	ug/L	P345505	
		Imazapyr**	0.31		ug/L	P345505	
		Carbamazepine**	8.1E-04	I	ug/L	P345505	
		Fluridone**	0.019		ug/L	P345505	
		Hydrocodone**	8.0E-04	U	ug/L	P345505	
		Sucralose**	0.27		ug/L	P345394	

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: MONCRIEF CREEK NEAR MOUTH

Collection Date/Time: 05/16/2018 10:10

Field ID: 20030115

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993503	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P345531	
	SM 2320 B-97	Total Alkalinity	91		mg CaCO3/L	P345706	
	SM 2540 D-97	TSS	7	I	mg/L	P345810	
	SM 4500 F-C-97	Fluoride	0.61		mg F/L	P345707	
1993507	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P345851	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P345875	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P345672	
	EPA 365.1 Rev. 2.0	Total-P	0.096		mg P/L	P345665	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P345787	
1993511	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.061		mg P/L	P345528	
1993542	EPA 8321B	2,4-D	0.0049	I	ug/L	P345505	
		Bentazon	0.0050		ug/L	P345505	
		MCP	0.0020	U	ug/L	P345505	
		Triclopyr**	0.0040	U	ug/L	P345505	MS
		Imidacloprid	0.020		ug/L	P345505	
		Diuron	0.066		ug/L	P345505	
		Pyraclostrobin**	0.0020	U	ug/L	P345505	
		Primidone**	0.0040	U	ug/L	P345505	
		Linuron	0.030		ug/L	P345505	
		Acetaminophen**	0.0080	U	ug/L	P345505	
		Fenuron	0.016	U	ug/L	P345505	
		Imazapyr**	0.058		ug/L	P345505	
		Carbamazepine**	0.0018		ug/L	P345505	
		Fluridone**	0.0047		ug/L	P345505	
		Hydrocodone**	8.0E-04	U	ug/L	P345505	
		Sucralose**	0.50		ug/L	P345394	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345530

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345531

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345851

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345820

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345875

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345672

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345673

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345665

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345528

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P345394

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P345505

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

Reference Method: SM 2320 B-97
Batch ID: P345706

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

Reference Method: SM 2320 B-97
Batch ID: P345912

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

Reference Method: SM 2540 D-97
Batch ID: P345809

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P345810

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345707

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: P345915

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P345777

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

Reference Method: SM 5310 B-00
Batch ID: P345779

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

Reference Method: SM 5310 B-00
Batch ID: P345787

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345851

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345820

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345875

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345673

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345673

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345665

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345528

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

Reference Method: EPA 8321B
Batch ID: P345394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	79.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P345505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	65.0		P	40 - 150
Acetaminophen	102		P	30 - 150
Bentazon	81.7		P	30 - 150
Carbamazepine	87.4		P	40 - 150
Diuron	68.7		P	40 - 150
Fenuron	102		P	40 - 150
Fluridone	83.6		P	40 - 150
Hydrocodone	99.5		P	40 - 150
Imazapyr	88.5		P	40 - 150
Imidacloprid	93.1		P	40 - 160
Linuron	72.9		P	40 - 150
MCPP	88.5		P	40 - 150
Primidone	90.3		P	40 - 150
Pyraclostrobin	82.1		P	40 - 150
Triclopyr	85.3		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P345706

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

Reference Method: SM 2320 B-97
Batch ID: P345912

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P345707

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	93.3		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P345915

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.9		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P345777

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.9		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P345779

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

Reference Method: SM 5310 B-00
Batch ID: P345787

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 350.1 Rev. 2.0
Batch ID: P345851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993504	Ammonia-N	100	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993105	Kjeldahl Nitrogen	94.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994393	Kjeldahl Nitrogen	102	93.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345672

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993482	NO2NO3-N	98.7	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993515	NO2NO3-N	97.0	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345665

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993505	Total-P	97.5	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993483	O-Phosphate-P	97.4	98.6	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P345394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992930	Sucralose	78.8	70.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P345505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994050	2,4-D	122	149	P/P	40 - 150
1994050	Acetaminophen	87.5	87.6	P/P	30 - 150
1994050	Bentazon	49.3	45.1	P/P	30 - 150
1994050	Carbamazepine	51.5	58.3	P/P	40 - 150
1994050	Diuron	57.4	55.0	P/P	40 - 150
1994050	Fenuron	53.2	52.8	P/P	40 - 150
1994050	Fluridone	67.4	66.9	P/P	40 - 150
1994050	Hydrocodone	76.2	74.3	P/P	40 - 150
1994050	Imazapyr	69.7	95.3	P/P	40 - 150
1994050	Imidacloprid	122	118	P/P	40 - 160
1994050	Linuron	60.8	65.4	P/P	40 - 150
1994050	MCCP	134	130	P/P	40 - 150
1994050	Primidone	69.0	65.5	P/P	40 - 150
1994050	Pyraclostrobin	73.3	89.4	P/P	40 - 150
1994050	Triclopyr	187	171	F/F	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P345707

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993060	Fluoride	92.7	92.0	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P345915

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993351	Fluoride	94.7	94.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P345777

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993428	Organic Carbon	94.0	96.1	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P345779

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993515	Organic Carbon	92.3	95.1	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P345787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992441	Organic Carbon	97.0	97.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993427	Turbidity	4.39	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993501	Turbidity	5.82	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993504	Ammonia-N	1.49	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993105	Kjeldahl Nitrogen	6.04	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994393	Kjeldahl Nitrogen	7.78	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993482	NO2NO3-N	0.484	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993515	NO2NO3-N	0.443	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993505	Total-P	3.49	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993483	O-Phosphate-P	0.883	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P345394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992930	Sucralose	10.7	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P345505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994050	2,4-D	12.1	Spike	P	0 - 30
1994050	Acetaminophen	0.153	Spike	P	0 - 30
1994050	Bentazon	8.90	Spike	P	0 - 30
1994050	Carbamazepine	12.4	Spike	P	0 - 30
1994050	Diuron	4.31	Spike	P	0 - 30
1994050	Fenuron	0.887	Spike	P	0 - 30
1994050	Fluridone	0.658	Spike	P	0 - 30
1994050	Hydrocodone	2.55	Spike	P	0 - 30
1994050	Imazapyr	5.75	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P345505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994050	Imidacloprid	3.32	Spike	P	0 - 30
1994050	Linuron	7.36	Spike	P	0 - 30
1994050	MCP	3.40	Spike	P	0 - 30
1994050	Primidone	5.24	Spike	P	0 - 30
1994050	Pyraclostrobin	19.7	Spike	P	0 - 30
1994050	Triclopyr	8.55	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P345706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993060	Total Alkalinity	0.616	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P345912

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993351	Total Alkalinity	0.289	Sample	P	0 - 1.6

Reference Method: SM 4500 F-C-97
Batch ID: P345707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993060	Fluoride	0.476	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P345915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993351	Fluoride	0.474	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P345777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993428	Organic Carbon	1.49	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P345779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993515	Organic Carbon	2.30	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P345787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992441	Organic Carbon	0.694	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: 1993539
Field Sample ID: 20030124

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	120	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.7	P	30 - 160
EPA 8321B	Diuron-d6	76.6	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	78.6	P	40 - 160

Lab Sample ID: 1993540
Field Sample ID: 20030121

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.3	P	30 - 160
EPA 8321B	Diuron-d6	68.5	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	49.5	P	40 - 160

Lab Sample ID: 1993541
Field Sample ID: G2NE1138

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.9	P	30 - 160
EPA 8321B	Diuron-d6	54.2	P	30 - 160
EPA 8321B	Primidone-d5	87.2	P	30 - 160
EPA 8321B	Sucralose-d6	88.0	P	40 - 160

Lab Sample ID: 1993542
Field Sample ID: 20030115

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.3	P	30 - 160
EPA 8321B	Diuron-d6	76.3	P	30 - 160
EPA 8321B	Primidone-d5	98.9	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1993542
Field Sample ID: 20030115

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	81.9	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A83983

Included Lab Sample IDs: 1993508, 1993509, 1993510, 1993511, 1993518, 1993519, 1993520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A83984

Included Lab Sample IDs: 1993500, 1993501, 1993502, 1993503, 1993512, 1993513, 1993514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84050

Included Lab Sample IDs: 1993504, 1993505, 1993506, 1993507, 1993515, 1993516, 1993517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	97.5	P/P	90 - 110
NO2NO3-N	98.0	97.0	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A84069

Included Lab Sample IDs: 1993500, 1993501, 1993503, 1993512, 1993513, 1993514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84069

Included Lab Sample IDs: 1993500, 1993501, 1993503, 1993512, 1993513, 1993514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	95.2	96.6	P/P	90 - 110
Fluoride	97.6	95.2	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A84096

Included Lab Sample IDs: 1993506, 1993515, 1993516, 1993517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	96.6	P/P	90 - 110
Organic Carbon	97.2	96.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A84099

Included Lab Sample IDs: 1993504, 1993505, 1993507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	99.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84107

Included Lab Sample IDs: 1993539, 1993540, 1993541, 1993542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	84.8	81.0	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84126

Included Lab Sample IDs: 1993504, 1993505, 1993506, 1993507, 1993515, 1993516, 1993517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84131

Included Lab Sample IDs: 1993506, 1993516, 1993517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.3	P/P	90 - 110
Total-P	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84134

Included Lab Sample IDs: 1993504, 1993505, 1993507, 1993515

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84135

Included Lab Sample IDs: 1993504, 1993505, 1993506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.7	98.0	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A84146

Included Lab Sample IDs: 1993502

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.3	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84146

Included Lab Sample IDs: 1993502

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84152

Included Lab Sample IDs: 1993507, 1993515, 1993516, 1993517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	90.4	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84279

Included Lab Sample IDs: 1993539, 1993540, 1993541, 1993542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.1	93.6	P/P	50 - 150
2,4-D	93.6	93.6	P/P	50 - 150
Acetaminophen	125	123	P/P	60 - 150
Bentazon	107	95.2	P/P	50 - 150
Bentazon	95.2	99.5	P/P	50 - 150
Carbamazepine	117	118	P/P	60 - 150
Diuron	119	119	P/P	60 - 150
Fenuron	119	116	P/P	60 - 150
Fluridone	124	123	P/P	60 - 160
Hydrocodone	118	114	P/P	60 - 150
Imazapyr	98.3	99.1	P/P	50 - 150
Imidacloprid	97.3	97.5	P/P	60 - 150
Linuron	117	117	P/P	60 - 150
MCPP	92.7	82.2	P/P	50 - 150
MCPP	96.4	92.7	P/P	50 - 150
Primidone	111	111	P/P	60 - 150
Pyraclostrobin	111	105	P/P	60 - 150
Triclopyr	91.6	92.5	P/P	50 - 160
Triclopyr	92.5	95.8	P/P	50 - 160

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				4.39	
	Turbidity				5.82	
EPA 350.1 Rev. 2.0	Ammonia-N	99.9	100 103			1.49
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.0	94.2 101			6.04
	Kjeldahl Nitrogen	97.3	102 93.2			7.78
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	98.7 99.2			0.484
	NO2NO3-N	99.0	97.0 97.4			0.443
EPA 365.1 Rev. 2.0	Total-P	97.8	97.5 101			3.49
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5	97.4 98.6			0.883
EPA 8321B	2,4-D	65.0	122 149			12.1
	Acetaminophen	102	87.5 87.6			0.153
	Bentazon	81.7	49.3 45.1			8.90
	Carbamazepine	87.4	51.5 58.3			12.4
	Diuron	68.7	57.4 55.0			4.31

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Fenuron	102	53.2	52.8		0.887
	Fluridone	83.6	67.4	66.9		0.658
	Hydrocodone	99.5	76.2	74.3		2.55
	Imazapyr	88.5	69.7	95.3		5.75
	Imidacloprid	93.1	122	118		3.32
	Linuron	72.9	60.8	65.4		7.36
	MCPP	88.5	134	130		3.40
	Primidone	90.3	69.0	65.5		5.24
	Pyraclostrobin	82.1	73.3	89.4		19.7
	Sucralose	79.4	78.8	70.8		10.7
	Triclopyr	85.3	187	171		8.55
SM 2320 B-97	Total Alkalinity	102				0.616
	Total Alkalinity	102				0.289
SM 4500 F-C-97	Fluoride	93.3	92.7	92.0		0.476
	Fluoride	95.9	94.7	94.1		0.474
SM 5310 B-00	Organic Carbon	94.9	94.0	96.1		1.49
	Organic Carbon	96.6	92.3	95.1		2.30
	Organic Carbon	98.8	97.0	97.9		0.694

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1993500, 1993501, 1993502, 1993503, 1993512, 1993513, 1993514
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1993504, 1993505, 1993506, 1993507, 1993515, 1993516, 1993517
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1993504, 1993505, 1993506, 1993507, 1993515, 1993516, 1993517
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1993504, 1993505, 1993506, 1993507, 1993515, 1993516, 1993517
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1993504, 1993505, 1993506, 1993507, 1993515, 1993516, 1993517
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1993508, 1993509, 1993510, 1993511, 1993518, 1993519, 1993520
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1993539, 1993540, 1993541, 1993542
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1993500, 1993501, 1993502, 1993503, 1993512, 1993513, 1993514
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1993500, 1993501, 1993502, 1993503, 1993512, 1993513, 1993514
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1993500, 1993501, 1993502, 1993503, 1993512, 1993513, 1993514
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1993504, 1993505, 1993506, 1993507, 1993515, 1993516, 1993517

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	05/17/2018			05/17/2018 17:09	William L. Brown IV	1993500, 1993501, 1993502, 1993503, 1993512, 1993513, 1993514
EPA 350.1 Rev. 2.0	05/17/2018			05/22/2018 11:22	Ping Hua	1993504
	05/17/2018			05/22/2018 11:27	Ping Hua	1993505
	05/17/2018			05/22/2018 11:28	Ping Hua	1993506
	05/17/2018			05/22/2018 11:30	Ping Hua	1993507
	05/17/2018			05/22/2018 11:31	Ping Hua	1993516
	05/17/2018			05/22/2018 11:33	Ping Hua	1993517
	05/17/2018			05/22/2018 11:34	Ping Hua	1993515
EPA 351.2 Rev. 2.0	05/17/2018	05/23/2018 16:00	Adrian Shelby	05/24/2018 11:21	Joseph Suarez	1993504
	05/17/2018	05/23/2018 16:00	Adrian Shelby	05/24/2018 11:23	Joseph Suarez	1993505
	05/17/2018	05/23/2018 16:00	Adrian Shelby	05/24/2018 11:24	Joseph Suarez	1993506
	05/17/2018	05/24/2018 13:00	Adrian Shelby	05/25/2018 07:17	Joseph Suarez	1993507
	05/17/2018	05/24/2018 13:00	Adrian Shelby	05/25/2018 07:19	Joseph Suarez	1993515
	05/17/2018	05/24/2018 13:00	Adrian Shelby	05/25/2018 07:20	Joseph Suarez	1993516
	05/17/2018	05/24/2018 13:00	Adrian Shelby	05/25/2018 07:22	Joseph Suarez	1993517
EPA 353.2 Rev. 2.0	05/17/2018			05/21/2018 12:43	Lauren Bottorf	1993504
	05/17/2018			05/21/2018 12:44	Lauren Bottorf	1993505
	05/17/2018			05/21/2018 12:45	Lauren Bottorf	1993506
	05/17/2018			05/21/2018 12:46	Lauren Bottorf	1993507
	05/17/2018			05/21/2018 12:47	Lauren Bottorf	1993516
	05/17/2018			05/21/2018 12:49	Lauren Bottorf	1993517
	05/17/2018			05/21/2018 12:56	Lauren Bottorf	1993515
EPA 365.1 Rev. 2.0	05/17/2018	05/21/2018 13:05	Sima Feizi	05/23/2018 13:47	Beverly Y. Sanders	1993506
	05/17/2018	05/21/2018 13:05	Sima Feizi	05/23/2018 13:53	Beverly Y. Sanders	1993516
	05/17/2018	05/21/2018 13:05	Sima Feizi	05/23/2018 13:54	Beverly Y. Sanders	1993517
	05/17/2018	05/21/2018 13:05	Sima Feizi	05/24/2018 10:03	Beverly Y. Sanders	1993504
	05/17/2018	05/21/2018 13:05	Sima Feizi	05/24/2018 10:04	Beverly Y. Sanders	1993505
	05/17/2018	05/21/2018 13:05	Sima Feizi	05/24/2018 10:05	Beverly Y. Sanders	1993507
	05/17/2018	05/21/2018 13:05	Sima Feizi	05/24/2018 10:06	Beverly Y. Sanders	1993515
EPA 365.1 Rev. 2.0 dissolved	05/17/2018			05/17/2018 16:05	Megan Treadwell	1993508
	05/17/2018			05/17/2018 16:06	Megan Treadwell	1993509, 1993510
	05/17/2018			05/17/2018 16:07	Megan Treadwell	1993511
	05/17/2018			05/17/2018 16:08	Megan Treadwell	1993518
	05/17/2018			05/17/2018 16:09	Megan Treadwell	1993519
	05/17/2018			05/17/2018 16:10	Megan Treadwell	1993520
EPA 8321B	05/17/2018	05/18/2018 14:30	Juyoung Kim	05/21/2018 19:03	Juyoung Kim	1993539
	05/17/2018	05/18/2018 14:30	Juyoung Kim	05/21/2018 19:21	Juyoung Kim	1993540
	05/17/2018	05/18/2018 14:30	Juyoung Kim	05/21/2018 19:40	Juyoung Kim	1993541
	05/17/2018	05/18/2018 14:30	Juyoung Kim	05/21/2018 19:58	Juyoung Kim	1993542

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/23/2018 18:04	Juyoung Kim	1993539
	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/23/2018 18:39	Juyoung Kim	1993540
	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/23/2018 19:48	Juyoung Kim	1993541
	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/23/2018 20:23	Juyoung Kim	1993542
	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/24/2018 10:48	Juyoung Kim	1993539
	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/24/2018 11:57	Juyoung Kim	1993540
	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/24/2018 12:32	Juyoung Kim	1993541
	05/17/2018	05/23/2018 08:30	Hoor Shaik	05/24/2018 13:07	Juyoung Kim	1993542
SM 2320 B-97	05/17/2018			05/21/2018 18:33	Dale L. Simmons	1993513
	05/17/2018			05/21/2018 18:43	Dale L. Simmons	1993514
	05/17/2018			05/21/2018 19:12	Dale L. Simmons	1993500
	05/17/2018			05/21/2018 19:23	Dale L. Simmons	1993501
	05/17/2018			05/21/2018 19:32	Dale L. Simmons	1993503
	05/17/2018			05/21/2018 19:42	Dale L. Simmons	1993512
	05/17/2018			05/24/2018 03:04	Dale L. Simmons	1993502
SM 2540 D-97	05/17/2018			05/18/2018 16:00	William L. Brown IV	1993500, 1993501, 1993502, 1993503, 1993512, 1993513, 1993514
SM 4500 F-C-97	05/17/2018			05/21/2018 16:55	Dale L. Simmons	1993513
	05/17/2018			05/21/2018 16:59	Dale L. Simmons	1993514
	05/17/2018			05/21/2018 17:10	Dale L. Simmons	1993500
	05/17/2018			05/21/2018 17:58	Dale L. Simmons	1993501
	05/17/2018			05/21/2018 18:01	Dale L. Simmons	1993503
	05/17/2018			05/21/2018 18:05	Dale L. Simmons	1993512
	05/17/2018			05/24/2018 03:04	Dale L. Simmons	1993502
	05/17/2018			05/21/2018 19:48	Megan Treadwell	1993506
SM 5310 B-00	05/17/2018			05/22/2018 08:03	Megan Treadwell	1993515
	05/17/2018			05/22/2018 08:33	Megan Treadwell	1993504
	05/17/2018			05/22/2018 08:45	Megan Treadwell	1993505
	05/17/2018			05/22/2018 08:51	Megan Treadwell	1993516
	05/17/2018			05/22/2018 08:58	Megan Treadwell	1993507
	05/17/2018			05/22/2018 09:06	Megan Treadwell	1993517
	05/17/2018					