

Chemical Analysis Report

NE-DIST-2018-11-29-01

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

Event Description: **LSJR North Salt**
Request ID: **RQ-2018-11-26-14**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 18-DEC-2018 13:34

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: MONCREIF CR LEM TURNER RD
BR,NORWOOD AVE.**

Collection Date/Time: 11/28/2018 11:45

Field ID: 20030114

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2044562	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P355351	
	EPA 300.0 Rev. 2.1	Sulfate	510		mg SO4/L	P355699	
	SM 2320 B-97	Total Alkalinity	115		mg CaCO3/L	P355707	
	SM 2540 D-97	TSS	7	I	mg/L	P355823	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P355711	
2044564	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P355591	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38	I	mg N/L	P355404	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P355482	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P355408	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P355514	
2044566	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.071		mg P/L	P355344	
2044602	EPA 8321B	2,4-D	0.0089		ug/L	P355221	
		Bentazon	0.0053		ug/L	P355221	
		MCP	0.0020	U	ug/L	P355221	
		Triclopyr**	0.0040	U	ug/L	P355221	
		Imidacloprid	0.010		ug/L	P355221	MS
		Diuron	0.0073	I	ug/L	P355221	
		Pyraclostrobin**	0.0020	U	ug/L	P355221	
		Primidone**	0.0040	U	ug/L	P355221	
		Linuron	0.0040	U	ug/L	P355221	
		Acetaminophen**	0.032		ug/L	P355221	
		Fenuron	0.016	U	ug/L	P355221	
		Imazapyr**	0.38		ug/L	P355221	
		Carbamazepine**	8.0E-04	U	ug/L	P355221	
		Fluridone**	0.023		ug/L	P355221	
		Hydrocodone**	8.0E-04	U	ug/L	P355221	
		Naproxen**	0.0080	U	ug/L	P355221	
		Ibuprofen**	0.020	U	ug/L	P355221	
		Sucralose**	0.34		ug/L	P355297	
		Acesulfame K**	0.11	I	ug/L	P355297	

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: DEER CR @ TALLEYRAND AVE

Collection Date/Time: 11/28/2018 12:10

Field ID: 20030792

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2044604	EPA 8321B	2,4-D	0.0032	I	ug/L	P355375	
		Sucralose**	0.34		ug/L	P355526	
		Bentazon	0.0029	I	ug/L	P355375	
		MCP	0.0020	U	ug/L	P355375	
		Triclopyr**	0.0040	U	ug/L	P355375	
		Imidacloprid	0.0035	IJ	ug/L	P355375	MS
		Diuron	0.013		ug/L	P355375	
		Pyraclostrobin**	0.0020	U	ug/L	P355375	
		Primidone**	0.0040	U	ug/L	P355375	
		Linuron	0.0040	U	ug/L	P355375	
		Acetaminophen**	0.059		ug/L	P355375	
		Fenuron	0.016	U	ug/L	P355375	
		Imazapyr**	0.076		ug/L	P355375	
		Carbamazepine**	8.0E-04	U	ug/L	P355375	
		Fluridone**	0.0012	I	ug/L	P355375	
		Hydrocodone**	8.0E-04	U	ug/L	P355375	
		Naproxen**	0.011	IJ	ug/L	P355375	MS, RPD
		Ibuprofen**	0.020	U	ug/L	P355375	
		Acesulfame K**	0.12	I	ug/L	P355297	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes.

Sample Location: DUNNS CR AT FAYE RD

Collection Date/Time: 11/28/2018 10:25

Field ID: 20030140

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2044568	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P355352	
	SM 2320 B-97	Total Alkalinity	83		mg CaCO3/L	P355707	
	SM 2540 D-97	TSS	4	I	mg/L	P355825	
	SM 4500 F-C-97	Fluoride	0.52		mg F/L	P355711	
2044569	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P355591	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P355404	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P355482	
	EPA 365.1 Rev. 2.0	Total-P	0.082		mg P/L	P355408	
	SM 5310 B-00	Organic Carbon	8.8		mg C/L	P355517	
2044570	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.056		mg P/L	P355344	

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: OPEN CREEK AT SAN PABLO ROAD

Collection Date/Time: 11/28/2018 09:50

Field ID: 20030695

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2044563	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P355352	
	EPA 300.0 Rev. 2.1	Sulfate	77		mg SO4/L	P355699	
	SM 2320 B-97	Total Alkalinity	71		mg CaCO3/L	P355560	
	SM 2540 D-97	TSS	3	I	mg/L	P355823	
	SM 4500 F-C-97	Fluoride	0.091	I	mg F/L	P355563	
2044565	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P355590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P355402	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P355381	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P355405	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P355514	
2044567	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P355340	
2044603	EPA 8321B	2,4-D	0.020		ug/L	P355221	
		Bentazon	0.047		ug/L	P355221	
		MCP	0.0029	I	ug/L	P355221	
		Triclopyr**	0.0040	U	ug/L	P355221	
		Imidacloprid	0.029		ug/L	P355221	MS
		Diuron	0.0021	I	ug/L	P355221	
		Pyraclostrobin**	0.0020	U	ug/L	P355221	
		Primidone**	0.0040	U	ug/L	P355221	
		Linuron	0.0040	U	ug/L	P355221	
		Acetaminophen**	0.0080	U	ug/L	P355221	
		Fenuron	0.016	U	ug/L	P355221	
		Imazapyr**	0.16		ug/L	P355221	
		Carbamazepine**	8.0E-04	U	ug/L	P355221	
		Fluridone**	0.077		ug/L	P355221	
		Hydrocodone**	8.0E-04	U	ug/L	P355221	
		Naproxen**	0.0080	U	ug/L	P355221	
		Ibuprofen**	0.020	U	ug/L	P355221	
		Sucralose**	0.43		ug/L	P355297	
		Acesulfame K**	0.10	U	ug/L	P355297	

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: DEER CR @ TALLEYRAND AVE

Collection Date/Time: 11/28/2018 12:15

Field ID: 20030792dup

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2044605	EPA 8321B	2,4-D	0.0026	I	ug/L	P355375	
		Sucralose**	0.32		ug/L	P355526	
		Bentazon	0.0028	I	ug/L	P355375	
		MCP	0.0020	U	ug/L	P355375	
		Triclopyr**	0.0040	U	ug/L	P355375	
		Imidacloprid	0.0029	I	ug/L	P355375	MS
		Diuron	0.012		ug/L	P355375	
		Pyraclostrobin**	0.0020	U	ug/L	P355375	
		Primidone**	0.0040	U	ug/L	P355375	
		Linuron	0.0040	U	ug/L	P355375	
		Acetaminophen**	0.057		ug/L	P355375	
		Fenuron	0.016	U	ug/L	P355375	
		Imazapyr**	0.081		ug/L	P355375	
		Carbamazepine**	8.0E-04	U	ug/L	P355375	
		Fluridone**	9.5E-04	I	ug/L	P355375	
		Hydrocodone**	8.0E-04	U	ug/L	P355375	
		Naproxen**	0.014	I	ug/L	P355375	MS, RPD
		Ibuprofen**	0.020	U	ug/L	P355375	
		Acesulfame K**	0.11	I	ug/L	P355297	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355351

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355352

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355699

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355590

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355591

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355402

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355404

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355381

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355482

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355405

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355408

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355340

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355344

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

Reference Method: EPA 8321B
Batch ID: P355221

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	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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: P355297

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P355375

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	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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: P355526

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P355560

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

Reference Method: SM 2320 B-97
Batch ID: P355707

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

Reference Method: SM 2540 D-97
Batch ID: P355823

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P355825

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P355563

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P355563

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P355711

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P355514

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

Reference Method: SM 5310 B-00
Batch ID: P355517

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: P355699

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355590

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355402

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355404

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355381

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355482

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355405

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355408

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355340

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355344

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

Reference Method: EPA 8321B
Batch ID: P355221

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.0		P	40 - 150
Acetaminophen	105		P	30 - 150
Bentazon	113		P	30 - 150
Carbamazepine	92.0		P	40 - 150
Diuron	74.8		P	40 - 150
Fenuron	95.9		P	40 - 150
Fluridone	102		P	40 - 150
Hydrocodone	91.1		P	40 - 150
Ibuprofen	72.7		P	40 - 150
Imazapyr	105		P	40 - 150
Imidacloprid	101		P	40 - 160
Linuron	71.7		P	40 - 150
MCPP	111		P	40 - 150
Naproxen	88.0		P	40 - 150
Primidone	95.6		P	40 - 150
Pyraclostrobin	56.6		P	40 - 150
Triclopyr	69.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355297

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 150
Sucralose	109		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	60.3		P	40 - 150
Acetaminophen	71.3		P	30 - 150
Bentazon	31.6		P	30 - 150
Carbamazepine	82.4		P	40 - 150
Diuron	67.0		P	40 - 150
Fenuron	99.4		P	40 - 150
Fluridone	96.9		P	40 - 150
Hydrocodone	96.2		P	40 - 150
Ibuprofen	59.7		P	40 - 150
Imazapyr	76.3		P	40 - 150
Imidacloprid	90.9		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P355375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	70.9		P	40 - 150
MCPP	81.7		P	40 - 150
Naproxen	52.5		P	40 - 150
Primidone	70.9		P	40 - 150
Pyraclostrobin	60.9		P	40 - 150
Triclopyr	49.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	148		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P355560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.7		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P355707

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

Reference Method: SM 4500 F-C-97
Batch ID: P355563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P355711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P355514

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P355517

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355699

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044613	Sulfate	99.4		P	90 - 110
2044657	Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044328	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044460	Ammonia-N	99.7	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044473	Kjeldahl Nitrogen	111	107	F/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044471	Kjeldahl Nitrogen	105	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044531	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044470	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044540	Total-P	98.2	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044470	Total-P	97.5	93.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355340

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044321	O-Phosphate-P	96.0	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044566	O-Phosphate-P	96.2	98.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P355221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043959	2,4-D	92.1	104	P/P	40 - 150
2043959	Acetaminophen	115	114	P/P	30 - 150
2043959	Bentazon	73.3	75.9	P/P	30 - 150
2043959	Carbamazepine	82.0	86.1	P/P	40 - 150
2043959	Diuron	61.3	65.9	P/P	40 - 150
2043959	Fenuron	98.7	104	P/P	40 - 150
2043959	Fluridone	109	119	P/P	40 - 150
2043959	Hydrocodone	65.4	79.8	P/P	40 - 150
2043959	Ibuprofen	67.7	71.1	P/P	40 - 150
2043959	Imazapyr	99.9	103	P/P	40 - 150
2043959	Imidacloprid	168	180	F/F	40 - 160
2043959	Linuron	67.5	73.0	P/P	40 - 150
2043959	MCPP	110	128	P/P	40 - 150
2043959	Naproxen	68.0	69.0	P/P	40 - 150
2043959	Primidone	94.1	101	P/P	40 - 150
2043959	Pyraclostrobin	61.4	69.3	P/P	40 - 150
2043959	Triclopyr	51.7	68.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044792	Acesulfame K	127	122	P/P	40 - 150
2044792	Sucralose	101	120	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044604	2,4-D	85.9	94.2	P/P	40 - 150
2044604	Acetaminophen	83.5	85.3	P/P	30 - 150
2044604	Bentazon	34.5	39.4	P/P	30 - 150
2044604	Carbamazepine	77.3	82.2	P/P	40 - 150
2044604	Diuron	59.1	64.3	P/P	40 - 150
2044604	Fenuron	87.4	89.5	P/P	40 - 150
2044604	Fluridone	97.0	104	P/P	40 - 150
2044604	Hydrocodone	113	117	P/P	40 - 150
2044604	Ibuprofen	60.7	67.9	P/P	40 - 150
2044604	Imazapyr	113	98.3	P/P	40 - 150
2044604	Imidacloprid	177	180	F/F	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P355375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044604	Linuron	65.1	65.6	P/P	40 - 150
2044604	MCP	107	115	P/P	40 - 150
2044604	Naproxen	34.7	58.8	F/P	40 - 150
2044604	Primidone	85.8	87.1	P/P	40 - 150
2044604	Pyraclostrobin	60.6	60.2	P/P	40 - 150
2044604	Triclopyr	63.6	64.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045739	Sucralose	138	139	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P355563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043988	Fluoride	100	99.7	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P355711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043746	Fluoride	99.0	99.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P355514

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043995	Organic Carbon	98.2	97.4	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P355517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044534	Organic Carbon	99.5	94.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044326	Turbidity	3.27	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044618	Turbidity	14.7	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044613	Sulfate	0.893	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044328	Ammonia-N	0.166	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044460	Ammonia-N	0.636	Spike	P	0 - 15

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044473	Kjeldahl Nitrogen	3.38	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044471	Kjeldahl Nitrogen	0.0567	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044531	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044470	NO2NO3-N	0.966	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044540	Total-P	3.87	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044470	Total-P	3.92	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355340

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044321	O-Phosphate-P	1.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044566	O-Phosphate-P	1.07	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P355221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043959	2,4-D	10.7	Spike	P	0 - 30
2043959	Acetaminophen	0.693	Spike	P	0 - 30
2043959	Bentazon	3.50	Spike	P	0 - 30
2043959	Carbamazepine	4.83	Spike	P	0 - 30
2043959	Diuron	7.10	Spike	P	0 - 30
2043959	Fenuron	5.25	Spike	P	0 - 30
2043959	Fluridone	8.56	Spike	P	0 - 30
2043959	Hydrocodone	19.8	Spike	P	0 - 30
2043959	Ibuprofen	4.94	Spike	P	0 - 30
2043959	Imazapyr	2.92	Spike	P	0 - 30
2043959	Imidacloprid	6.95	Spike	P	0 - 30
2043959	Linuron	7.89	Spike	P	0 - 30
2043959	MCP	14.8	Spike	P	0 - 30
2043959	Naproxen	1.41	Spike	P	0 - 30
2043959	Primidone	6.64	Spike	P	0 - 30
2043959	Pyraclostrobin	12.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P355221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043959	Triclopyr	28.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P355297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044792	Acesulfame K	3.84	Spike	P	0 - 30
2044792	Sucralose	15.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P355375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044604	2,4-D	8.84	Spike	P	0 - 30
2044604	Acetaminophen	1.13	Spike	P	0 - 30
2044604	Bentazon	12.0	Spike	P	0 - 30
2044604	Carbamazepine	6.13	Spike	P	0 - 30
2044604	Diuron	6.61	Spike	P	0 - 30
2044604	Fenuron	2.34	Spike	P	0 - 30
2044604	Fluridone	6.65	Spike	P	0 - 30
2044604	Hydrocodone	3.32	Spike	P	0 - 30
2044604	Ibuprofen	11.2	Spike	P	0 - 30
2044604	Imazapyr	7.20	Spike	P	0 - 30
2044604	Imidacloprid	1.85	Spike	P	0 - 30
2044604	Linuron	0.692	Spike	P	0 - 30
2044604	MCP	6.79	Spike	P	0 - 30
2044604	Naproxen	39.6	Spike	F	0 - 30
2044604	Primidone	1.54	Spike	P	0 - 30
2044604	Pyraclostrobin	0.548	Spike	P	0 - 30
2044604	Triclopyr	1.39	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P355526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045739	Sucralose	1.17	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P355560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043988	Total Alkalinity	0.379	Sample	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P355707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043746	Total Alkalinity	0.211	Sample	P	0 - 1.6

Reference Method: SM 4500 F-C-97
Batch ID: P355563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043988	Fluoride	0.470	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P355711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043746	Fluoride	0.470	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P355514

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043995	Organic Carbon	0.556	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P355517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044534	Organic Carbon	4.07	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: 2044602
Field Sample ID: 20030114

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	92.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	130	P	30 - 160
EPA 8321B	Carbamazepine-d10	65.0	P	30 - 160
EPA 8321B	Diuron-d6	59.8	P	30 - 160
EPA 8321B	Endothall-d6	80.4	P	40 - 160
EPA 8321B	Ibuprofen-d3	70.3	P	30 - 160
EPA 8321B	Primidone-d5	85.6	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	40 - 160

Lab Sample ID: 2044603
Field Sample ID: 20030695

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	146	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.2	P	30 - 160
EPA 8321B	Diuron-d6	70.5	P	30 - 160
EPA 8321B	Endothall-d6	108	P	40 - 160
EPA 8321B	Ibuprofen-d3	74.4	P	30 - 160
EPA 8321B	Primidone-d5	85.1	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	40 - 160

Lab Sample ID: 2044604
Field Sample ID: 20030792

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	70.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.5	P	30 - 160
EPA 8321B	Diuron-d6	67.3	P	30 - 160
EPA 8321B	Endothall-d6	90.3	P	40 - 160
EPA 8321B	Endothall-d6	90.3	P	40 - 160
EPA 8321B	Ibuprofen-d3	76.9	P	30 - 160
EPA 8321B	Primidone-d5	72.8	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160

Lab Sample ID: 2044605
Field Sample ID: 20030792dup

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	77.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.1	P	30 - 160
EPA 8321B	Diuron-d6	73.9	P	30 - 160
EPA 8321B	Endothall-d6	111	P	40 - 160
EPA 8321B	Endothall-d6	111	P	40 - 160
EPA 8321B	Ibuprofen-d3	77.1	P	30 - 160
EPA 8321B	Primidone-d5	79.4	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	40 - 160
EPA 8321B	Sucralose-d6	110	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A88047
Included Lab Sample IDs: 2044566, 2044567, 2044570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.9	P/P	90 - 110
O-Phosphate-P	99.6	99.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A88051
Included Lab Sample IDs: 2044562, 2044563, 2044568

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A88055
Included Lab Sample IDs: 2044565

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

Reference Method: EPA 8321B
Run ID: A88074
Included Lab Sample IDs: 2044602, 2044603, 2044604, 2044605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	79.7	72.1	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A88078
Included Lab Sample IDs: 2044602, 2044603

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	98.8	P/P	50 - 150
Acetaminophen	106	130	P/P	60 - 160
Bentazon	121	133	P/P	50 - 160
Carbamazepine	110	103	P/P	60 - 160
Diuron	99.4	107	P/P	60 - 150
Fenuron	101	97.1	P/P	60 - 150
Fluridone	108	107	P/P	60 - 160
Hydrocodone	99.9	94.8	P/P	60 - 150
Ibuprofen	95.6	76.3	P/P	50 - 160
Imazapyr	102	115	P/P	50 - 150
Imidacloprid	99.7	96.8	P/P	60 - 160
Linuron	96.8	102	P/P	60 - 150
MCP	96.8	94.2	P/P	50 - 150
Naproxen	94.6	80.6	P/P	50 - 160
Primidone	93.7	98.4	P/P	60 - 160
Pyraclostrobin	98.9	97.9	P/P	60 - 150
Triclopyr	102	83.9	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A88081

Included Lab Sample IDs: 2044602, 2044603

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	122	121	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88100

Included Lab Sample IDs: 2044564, 2044569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A88116

Included Lab Sample IDs: 2044564, 2044565, 2044569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.5	98.0	P/P	90 - 110
Organic Carbon	96.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A88120

Included Lab Sample IDs: 2044564, 2044565, 2044569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	105	P/P	90 - 110
Kjeldahl Nitrogen	99.3	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88125

Included Lab Sample IDs: 2044564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88130

Included Lab Sample IDs: 2044565, 2044569

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

Reference Method: SM 2320 B-97

Run ID: A88134

Included Lab Sample IDs: 2044563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A88134

Included Lab Sample IDs: 2044563

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88149

Included Lab Sample IDs: 2044564, 2044565, 2044569

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

Reference Method: SM 2320 B-97

Run ID: A88191

Included Lab Sample IDs: 2044562, 2044568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.9	P/P	90 - 110
Total Alkalinity	98.2	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A88191

Included Lab Sample IDs: 2044562, 2044568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	P/P	90 - 110
Fluoride	99.5	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A88194

Included Lab Sample IDs: 2044562, 2044563

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

Reference Method: EPA 8321B

Run ID: A88245

Included Lab Sample IDs: 2044604, 2044605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.2	85.0	P/P	50 - 150
Acetaminophen	81.7	76.4	P/P	60 - 160
Bentazon	110	104	P/P	50 - 160
Carbamazepine	115	109	P/P	60 - 160
Diuron	113	107	P/P	60 - 150
Fenuron	91.3	93.9	P/P	60 - 150
Fluridone	109	106	P/P	60 - 160
Hydrocodone	85.2	93.2	P/P	60 - 150
Ibuprofen	64.7	79.0	P/P	50 - 160
Imazapyr	73.5	71.1	P/P	50 - 150
Imidacloprid	93.1	87.4	P/P	60 - 160
Linuron	101	92.0	P/P	60 - 150
MCPP	95.6	92.4	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A88245

Included Lab Sample IDs: 2044604, 2044605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Naproxen	81.6	126	P/P	50 - 160
Primidone	83.1	84.3	P/P	60 - 160
Pyraclostrobin	100	104	P/P	60 - 150
Triclopyr	95.6	86.3	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A88326

Included Lab Sample IDs: 2044604, 2044605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	106	P/P	60 - 150

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					3.27	
	Turbidity					14.7	
EPA 300.0 Rev. 2.1	Sulfate	99.8	99.4	98.1		0.893	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	100	100			0.166
	Ammonia-N	97.0	99.7	101			0.636
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	111	107			3.38
	Kjeldahl Nitrogen	104	105	105			0.0567
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	101			0.0
	NO2NO3-N	101	103	104			0.966
EPA 365.1 Rev. 2.0	Total-P	102	98.2	102			3.87
	Total-P	104	97.5	93.7			3.92
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.1	96.0	97.7			1.16
	O-Phosphate-P	99.2	96.2	98.0			1.07
EPA 8321B	2,4-D	95.0	92.1	104			10.7
	2,4-D	60.3	85.9	94.2			8.84
	Acesulfame K	102	127	122			3.84
	Acetaminophen	105	115	114			0.693
	Acetaminophen	71.3	83.5	85.3			1.13
	Bentazon	113	73.3	75.9			3.50
	Bentazon	31.6	34.5	39.4			12.0
	Carbamazepine	92.0	82.0	86.1			4.83
	Carbamazepine	82.4	77.3	82.2			6.13
	Diuron	74.8	61.3	65.9			7.10
	Diuron	67.0	59.1	64.3			6.61
	Fenuron	95.9	98.7	104			5.25
	Fenuron	99.4	87.4	89.5			2.34
	Fluridone	102	109	119			8.56
	Fluridone	96.9	97.0	104			6.65
	Hydrocodone	91.1	65.4	79.8			19.8
	Hydrocodone	96.2	113	117			3.32
	Ibuprofen	72.7	67.7	71.1			4.94
	Ibuprofen	59.7	60.7	67.9			11.2
	Imazapyr	105	99.9	103			2.92
	Imazapyr	76.3	113	98.3			7.20
	Imidacloprid	101	168	180			6.95
	Imidacloprid	90.9	177	180			1.85
	Linuron	71.7	67.5	73.0			7.89
	Linuron	70.9	65.1	65.6			0.692
	MCPP	111	110	128			14.8
	MCPP	81.7	107	115			6.79
	Naproxen	88.0	68.0	69.0			1.41
	Naproxen	52.5	34.7	58.8			39.6
	Primidone	95.6	94.1	101			6.64
	Primidone	70.9	85.8	87.1			1.54
	Pyraclostrobin	56.6	61.4	69.3			12.1
	Pyraclostrobin	60.9	60.6	60.2			0.548
	Sucralose	109	101	120			15.1
	Sucralose	148	138	139			1.17
	Triclopyr	69.9	51.7	68.6			28.1
	Triclopyr	49.6	63.6	64.5			1.39
SM 2320 B-97	Total Alkalinity	98.7				0.379	
	Total Alkalinity	100				0.211	
SM 4500 F-C-97	Fluoride	97.2	100	99.7			0.470
	Fluoride	97.4	99.0	99.7			0.470

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 5310 B-00	Organic Carbon	98.0	98.2	97.4		0.556
	Organic Carbon	93.6	99.5	94.9		4.07

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2044562, 2044563, 2044568
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2044562, 2044563
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2044564, 2044565, 2044569
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2044564, 2044565, 2044569
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2044564, 2044565, 2044569
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2044564, 2044565, 2044569
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2044566, 2044567, 2044570
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2044602, 2044603, 2044604, 2044605
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2044604, 2044605
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2044562, 2044563, 2044568
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2044562, 2044563, 2044568
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2044562, 2044563, 2044568
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2044564, 2044565, 2044569

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	11/29/2018			11/29/2018 17:05	Megan Treadwell	2044562, 2044563, 2044568
EPA 300.0 Rev. 2.1	11/29/2018			12/06/2018 02:11	Lipi Saha	2044562
	11/29/2018			12/06/2018 02:23	Lipi Saha	2044563
EPA 350.1 Rev. 2.0	11/29/2018			12/04/2018 13:06	Ping Hua	2044564
	11/29/2018			12/04/2018 13:08	Ping Hua	2044569
	11/29/2018			12/04/2018 14:01	Ping Hua	2044565
EPA 351.2 Rev. 2.0	11/29/2018	11/30/2018 12:15	Adrian Shelby	12/04/2018 09:58	Joseph Suarez	2044565
	11/29/2018	11/30/2018 12:15	Adrian Shelby	12/04/2018 10:49	Joseph Suarez	2044564
	11/29/2018	11/30/2018 12:15	Adrian Shelby	12/04/2018 10:51	Joseph Suarez	2044569
EPA 353.2 Rev. 2.0	11/29/2018			11/30/2018 10:57	Beverly Y. Sanders	2044565
	11/29/2018			12/03/2018 12:32	Lauren Bottorf	2044564
	11/29/2018			12/03/2018 12:33	Lauren Bottorf	2044569
EPA 365.1 Rev. 2.0	11/29/2018	11/30/2018 13:35	Sima Feizi	12/03/2018 13:14	Beverly Y. Sanders	2044564
	11/29/2018	11/30/2018 13:35	Sima Feizi	12/03/2018 15:50	Beverly Y. Sanders	2044565
	11/29/2018	11/30/2018 13:35	Sima Feizi	12/03/2018 16:11	Beverly Y. Sanders	2044569
EPA 365.1 Rev. 2.0 dissolved	11/29/2018			11/29/2018 17:01	Jhamieka S. Greenwood	2044566
	11/29/2018			11/29/2018 17:03	Jhamieka S. Greenwood	2044567
	11/29/2018			11/29/2018 17:43	Jhamieka S. Greenwood	2044570
EPA 8321B	11/29/2018	11/29/2018 14:00	Hoor Shaik	12/01/2018 23:00	Juyoung Kim	2044602
	11/29/2018	11/29/2018 14:00	Hoor Shaik	12/01/2018 23:35	Juyoung Kim	2044603
	11/29/2018	11/30/2018 15:00	Rebecca Ware	11/30/2018 18:27	Rebecca Ware	2044602
	11/29/2018	11/30/2018 15:00	Rebecca Ware	11/30/2018 18:41	Rebecca Ware	2044603
	11/29/2018	11/30/2018 15:00	Rebecca Ware	12/01/2018 15:28	Mohammad Ghaffari	2044602
	11/29/2018	11/30/2018 15:00	Rebecca Ware	12/01/2018 15:41	Mohammad Ghaffari	2044603
	11/29/2018	11/30/2018 15:00	Rebecca Ware	12/01/2018 15:55	Mohammad Ghaffari	2044604
	11/29/2018	11/30/2018 15:00	Rebecca Ware	12/01/2018 16:09	Mohammad Ghaffari	2044605
	11/29/2018	12/05/2018 08:30	Rebecca Ware	12/12/2018 16:10	Mohammad Ghaffari	2044604
	11/29/2018	12/05/2018 08:30	Rebecca Ware	12/12/2018 16:24	Mohammad Ghaffari	2044605
	11/29/2018	12/05/2018 10:00	Hoor Shaik	12/07/2018 03:37	Juyoung Kim	2044604
	11/29/2018	12/05/2018 10:00	Hoor Shaik	12/07/2018 04:12	Juyoung Kim	2044605
SM 2320 B-97	11/29/2018			12/04/2018 08:51	Dale L. Simmons	2044563
	11/29/2018			12/05/2018 10:20	Dale L. Simmons	2044562
	11/29/2018			12/05/2018 13:29	Dale L. Simmons	2044568
SM 2540 D-97	11/29/2018			11/30/2018 16:02	Yijie Li	2044562, 2044563, 2044568
SM 4500 F-C-97	11/29/2018			12/04/2018 08:51	Dale L. Simmons	2044563
	11/29/2018			12/05/2018 07:38	Dale L. Simmons	2044562
	11/29/2018			12/05/2018 09:09	Dale L. Simmons	2044568
SM 5310 B-00	11/29/2018			12/03/2018 08:05	Megan Treadwell	2044564
	11/29/2018			12/03/2018 08:17	Megan Treadwell	2044565
	11/29/2018			12/04/2018 06:33	Megan Treadwell	2044569