

Chemical Analysis Report

NE-DIST-2017-12-22-01

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

Event Description: **Deployment pick up-12/21/17**
Request ID: **RQ-2017-12-18-17**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way W
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Certified by: Colin Wright, Program Administrator

Date Certified: 09-JAN-2018 12:14

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: McCoys Creek @ Leland St

Collection Date/Time: 12/21/2017 11:00

Field ID: G2NE0733 12152017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955925	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P337433	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P337530	
		Sulfate	54		mg SO4/L	P337534	
	SM 2120 B	Color (true)	19		PCU	P337430	
	SM 2320 B-97	Total Alkalinity	189		mg CaCO3/L	P337549	
	SM 2540 C-97	TDS	334	A	mg/L	P337682	
	SM 2540 D-97	TSS	4	IA	mg/L	P337678	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P337552	
1955926	EPA 350.1 Rev. 2.0	Ammonia-N	0.079		mg N/L	P337717	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P337456	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P337468	
	EPA 365.1 Rev. 2.0	Total-P	0.079		mg P/L	P337479	
	SM 5310 B-00	Organic Carbon	6.9		mg C/L	P337560	
1955927	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P337435	
1955931	EPA 8321B	Sucralose**	0.17		ug/L	P337442	
	USGS O-2060-01	2,4-D	0.0035	I	ug/L	P337440	
		Diuron	0.021		ug/L	P337440	
		Fenuron	0.0080	U	ug/L	P337440	
		Imidacloprid	0.086		ug/L	P337440	MS
		Bentazon	0.010		ug/L	P337440	
		Linuron	0.0040	U	ug/L	P337440	
		Acetaminophen**	0.0080	U	ug/L	P337440	
		MCP	0.0020	U	ug/L	P337440	
		Carbamazepine**	6.1E-04	I	ug/L	P337440	
		Triclopyr**	0.0040	U	ug/L	P337440	
		Primidone**	0.0040	U	ug/L	P337440	
		Fluridone**	0.0019		ug/L	P337440	

Ref. Method and Comment:

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

EPA 353.2 Rev. 2.0: NO2NO3-N: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Results confirmed in re-extraction.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P337433

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P337530

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: P337534

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337717

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337456

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337468

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337479

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P337435

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

Reference Method: EPA 8321B
Batch ID: P337442

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P337430

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P337549

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P337682

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P337678

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P337552

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P337560

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

Reference Method: USGS O-2060-01
Batch ID: P337440

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	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337530

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337534

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337717

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337456

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337468

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337479

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: P337435

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

Reference Method: EPA 8321B
Batch ID: P337442

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	81.7		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P337549

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P337552

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P337560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.7		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P337440

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	88.1		P	40 - 150
Acetaminophen	106		P	30 - 150
Bentazon	89.1		P	30 - 150
Carbamazepine	81.6		P	40 - 150
Diuron	69.8		P	40 - 150
Fenuron	111		P	40 - 150
Fluridone	74.6		P	40 - 150
Imidacloprid	103		P	40 - 160
Linuron	58.7		P	40 - 150
MCPP	85.3		P	40 - 150
Primidone	106		P	40 - 150
Triclopyr	85.7		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P337530

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955828	Chloride	108		P	90 - 110
1955899	Chloride	108		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P337534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955828	Sulfate	105		P	90 - 110
1955899	Sulfate	107		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P337717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955904	Ammonia-N	102	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P337456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955858	Kjeldahl Nitrogen	110	108	F/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P337479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955926	Total-P	98.2	98.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P337435

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955927	O-Phosphate-P	95.8	96.2	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P337442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955505	Sucralose	104	109	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P337552

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955911	Fluoride	95.0	95.0	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P337560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955829	Organic Carbon	96.4	96.6	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P337440

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955840	2,4-D	67.3	68.1	P/P	40 - 150
1955840	Acetaminophen	142	148	P/P	30 - 150
1955840	Bentazon	41.1	43.2	P/P	30 - 150
1955840	Carbamazepine	102	105	P/P	40 - 150
1955840	Diuron	79.2	86.7	P/P	40 - 150
1955840	Fenuron	96.4	95.7	P/P	40 - 150
1955840	Fluridone	77.7	83.4	P/P	40 - 150
1955840	Imidacloprid	173	173	F/F	40 - 160
1955840	Linuron	70.8	75.2	P/P	40 - 150
1955840	MCP	59.5	57.2	P/P	40 - 150
1955840	Primidone	124	125	P/P	40 - 150
1955840	Triclopyr	55.7	51.8	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P337433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955911	Turbidity	0.0	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955828	Chloride	2.66	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955828	Sulfate	3.27	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955904	Ammonia-N	5.60	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955858	Kjeldahl Nitrogen	1.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955902	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955926	Total-P	0.148	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P337435

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955927	O-Phosphate-P	0.338	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P337442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955505	Sucralose	5.30	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P337430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955901	Color (true)	0.551	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P337549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955911	Total Alkalinity	0.0960	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
 Batch ID: P337682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955925	TDS	3.30	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P337552

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955911	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P337560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955829	Organic Carbon	0.161	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P337440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955840	2,4-D	1.15	Spike	P	0 - 30
1955840	Acetaminophen	3.58	Spike	P	0 - 30
1955840	Bentazon	4.91	Spike	P	0 - 30
1955840	Carbamazepine	3.02	Spike	P	0 - 30
1955840	Diuron	8.87	Spike	P	0 - 30
1955840	Fenuron	0.750	Spike	P	0 - 30
1955840	Fluridone	7.00	Spike	P	0 - 30
1955840	Imidacloprid	0.0267	Spike	P	0 - 30
1955840	Linuron	5.94	Spike	P	0 - 30
1955840	MCP	3.96	Spike	P	0 - 30
1955840	Primidone	1.15	Spike	P	0 - 30
1955840	Triclopyr	7.33	Spike	P	0 - 30

* 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: 1955931
Field Sample ID: G2NE0733 12152017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	129	P	30 - 160
EPA 8321B	Carbamazepine-d10	114	P	30 - 160
EPA 8321B	Diuron-d6	95.4	P	30 - 160
EPA 8321B	Primidone-d5	135	P	30 - 160
EPA 8321B	Sucralose-d6	131	P	40 - 160
USGS O-2060-01	2,4-D-d3	81.8	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	129	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	114	P	30 - 160
USGS O-2060-01	Diuron-d6	95.4	P	30 - 160
USGS O-2060-01	Primidone-d5	135	P	30 - 160
USGS O-2060-01	Sucralose-d6	131	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A81101
Included Lab Sample IDs: 1955925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	98.5	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A81102
Included Lab Sample IDs: 1955925

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A81103
Included Lab Sample IDs: 1955927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.8	99.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A81116
Included Lab Sample IDs: 1955926

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

Reference Method: EPA 8321B
Run ID: A81137
Included Lab Sample IDs: 1955931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	92.0	89.2	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A81150

Included Lab Sample IDs: 1955925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	106	P/P	90 - 110
Sulfate	99.1	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81151

Included Lab Sample IDs: 1955926

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81156

Included Lab Sample IDs: 1955926

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

Reference Method: SM 2320 B-97

Run ID: A81158

Included Lab Sample IDs: 1955925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A81158

Included Lab Sample IDs: 1955925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	99.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A81160

Included Lab Sample IDs: 1955926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	97.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81230

Included Lab Sample IDs: 1955926

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

Reference Method: USGS O-2060-01

Run ID: A81280

Included Lab Sample IDs: 1955931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.1	92.7	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A81280
Included Lab Sample IDs: 1955931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	96.2	108	P/P	60 - 150
Bentazon	91.2	89.5	P/P	50 - 150
Carbamazepine	101	111	P/P	60 - 150
Diuron	102	101	P/P	60 - 150
Fenuron	99.3	111	P/P	60 - 150
Fluridone	96.3	112	P/P	60 - 160
Imidacloprid	97.3	105	P/P	60 - 150
Linuron	98.2	116	P/P	60 - 150
MCPP	97.2	93.0	P/P	50 - 150
Primidone	89.7	95.9	P/P	60 - 150
Triclopyr	90.0	86.3	P/P	50 - 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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.0	
EPA 300.0 Rev. 2.1	Chloride	107	108 108		2.66	
	Sulfate	106	105 107		3.27	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	102 108			5.60
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.7	110 108			1.45
EPA 353.2 Rev. 2.0	NO2NO3-N	100				0.0
EPA 365.1 Rev. 2.0	Total-P	102	98.2 98.4			0.148
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	95.8 96.2			0.338
EPA 8321B	Sucralose	81.7	104 109			5.30
SM 2120 B	Color (true)				0.551	
SM 2320 B-97	Total Alkalinity	101			0.0960	
SM 2540 C-97	TDS				3.30	
SM 4500 F-C-97	Fluoride	95.4	95.0 95.0			0.0
SM 5310 B-00	Organic Carbon	94.7	96.4 96.6			0.161
USGS O-2060-01	2,4-D	88.1	68.1 67.3			1.15
	Acetaminophen	106	142 148			3.58
	Bentazon	89.1	43.2 41.1			4.91
	Carbamazepine	81.6	102 105			3.02
	Diuron	69.8	79.2 86.7			8.87
	Fenuron	111	96.4 95.7			0.750
	Fluridone	74.6	77.7 83.4			7.00
	Imidacloprid	103	173 173			0.0267
	Linuron	58.7	70.8 75.2			5.94
	MCPP	85.3	57.2 59.5			3.96
	Primidone	106	124 125			1.15
	Triclopyr	85.7	51.8 55.7			7.33

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1955925
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1955925
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1955925
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1955926
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1955926
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1955926
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1955926
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1955927
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1955931
SM 2120 B / E31780	True Color measured at 450 nm	1955925
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1955925
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1955925
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1955925
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1955925
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1955926
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1955931
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1955931

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	12/22/2017			12/22/2017 14:32	DeAsia Armster	1955925
EPA 300.0 Rev. 2.1	12/22/2017			12/27/2017	Julia Storbeck	1955925
EPA 350.1 Rev. 2.0	12/22/2017			01/02/2018	Sofia Elnemr	1955926
EPA 351.2 Rev. 2.0	12/22/2017	12/26/2017	Adrian Shelby	12/27/2017	Joseph Suarez	1955926
EPA 353.2 Rev. 2.0	12/22/2017			12/26/2017	Beverly Y. Sanders	1955926
EPA 365.1 Rev. 2.0	12/22/2017	12/27/2017	Sima Feizi	12/28/2017	Lipi Saha	1955926
EPA 365.1 Rev. 2.0 dissolved	12/22/2017			12/22/2017 16:14	Megan Treadwell	1955927
EPA 8321B	12/22/2017	12/26/2017	Juyoung Kim	12/27/2017	Juyoung Kim	1955931
SM 2120 B	12/22/2017			12/22/2017 15:54	Julia Storbeck	1955925
SM 2320 B-97	12/22/2017			12/27/2017	Dale L. Simmons	1955925
SM 2540 C-97	12/22/2017			12/27/2017	Yijie Li	1955925
SM 2540 D-97	12/22/2017			12/27/2017	Yijie Li	1955925
SM 4500 F-C-97	12/22/2017			12/27/2017	Dale L. Simmons	1955925
SM 5310 B-00	12/22/2017			12/28/2017	Megan Treadwell	1955926
USGS O-2060-01	12/22/2017	12/28/2017	Julie Michelle Frank	12/28/2017	Julie Michelle Frank	1955931
	12/22/2017	12/28/2017	Julie Michelle Frank	12/29/2017	Julie Michelle Frank	1955931