

Chemical Analysis Report

WQAP-2017-10-26-02

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

Event Description: **Bellows Outlet**
Request ID: **RQ-2017-10-23-41**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Tampa, FL 33637
Attn: Judy Ashton

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

Certified by: Colin Wright, Program Administrator

Date Certified: 22-NOV-2017 10:23

A handwritten signature in black ink, appearing to read "Colin Wright", is written over 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: BELLOWS OUTLET

Collection Date/Time: 10/25/2017 09:20

Field ID: G1SW0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1940273	EPA 180.1 Rev. 2.0	Turbidity	6.5		NTU	P334128	
	EPA 300.0 Rev. 2.1	Chloride	6.4		mg Cl/L	P334678	
		Sulfate	6.2		mg SO4/L	P334679	
	SM 2120 B	Color (true)	46	A	PCU	P334153	
	SM 2320 B-97	Total Alkalinity	54		mg CaCO3/L	P334234	
	SM 2540 C-97	TDS	92		mg/L	P334420	
	SM 2540 D-97	TSS	8	I	mg/L	P334964	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P334461	
1940274	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P334711	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P334454	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P334456	
	EPA 365.1 Rev. 2.0	Total-P	0.088		mg P/L	P334306	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P334706	
1940275	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P334136	
1940279	EPA 8321B	Sucralose**	0.042		ug/L	P334230	
	USGS O-2060-01	2,4-D	0.20	Q	ug/L	P335526	
		Diuron	0.013		ug/L	P334217	
		Fenuron	0.0080	U	ug/L	P334217	
		Imidacloprid	0.0047		ug/L	P334217	MS
		Bentazon	8.0E-04	UQ	ug/L	P335526	
		Linuron	0.0040	U	ug/L	P334217	
		Acetaminophen**	0.014	IJ	ug/L	P334217	LCS
		MCP	0.0020	UQ	ug/L	P335526	
		Carbamazepine**	4.0E-04	U	ug/L	P334217	MS
		Triclopyr**	0.0040	UQ	ug/L	P335526	
		Primidone**	0.0040	U	ug/L	P334217	
		Fluridone**	0.019		ug/L	P334217	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P334128

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P334678

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: P334679

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334711

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334454

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334456

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334306

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P334136

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

Reference Method: EPA 8321B
Batch ID: P334230

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P334153

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P334234

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: P334420

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P334964

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P334461

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P334706

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

Reference Method: USGS O-2060-01
Batch ID: P334217

Component	Result	Code	Units
Acetaminophen	0.0080	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
Primidone	0.0040	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P335526

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
MCP	0.0020	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: P334678

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334679

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334454

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334456

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	108		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334306

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: P334136

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

Reference Method: EPA 8321B
Batch ID: P334230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	94.9		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P334234

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P334461

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P334706

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

Reference Method: USGS O-2060-01
Batch ID: P334217

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	151		F	30 - 150
Carbamazepine	143		P	40 - 150
Diuron	112		P	40 - 150
Fenuron	117		P	40 - 150
Fluridone	117		P	40 - 150
Imidacloprid	114		P	40 - 160
Linuron	116		P	40 - 150
Primidone	110		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	102		P	40 - 150
Bentazon	91.1		P	30 - 150
MCPP	91.5		P	40 - 150
Triclopyr	94.8		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334678

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940259	Chloride	104		P	90 - 110
1940442	Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940259	Sulfate	103		P	90 - 110
1940442	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940203	Ammonia-N	105	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334454

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940301	Kjeldahl Nitrogen	109	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940262	NO2NO3-N	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940299	Total-P	95.0	94.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P334136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940242	O-Phosphate-P	91.0	90.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P334230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940129	Sucralose	94.0	92.6	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P334461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940120	Fluoride	99.4	101	P/P	91 - 105

Reference Method: USGS O-2060-01
Batch ID: P334217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940229	Acetaminophen	97.1	103	P/P	30 - 150
1940229	Carbamazepine	136	154	P/F	40 - 150
1940229	Diuron	90.8	107	P/P	40 - 150
1940229	Fenuron	102	115	P/P	40 - 150
1940229	Fluridone	104	98.0	P/P	40 - 150
1940229	Imidacloprid	217	250	F/F	40 - 160
1940229	Linuron	108	118	P/P	40 - 150
1940229	Primidone	108	129	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940027	2,4-D	85.4	83.6	P/P	40 - 150
1940027	Bentazon	87.2	86.7	P/P	30 - 150
1940027	MCP	71.8	66.5	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P335526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940027	Triclopyr	69.0	65.9	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P334128

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940238	Turbidity	0.738	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334678

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940259	Chloride	0.458	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940259	Sulfate	0.255	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940203	Ammonia-N	0.547	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940301	Kjeldahl Nitrogen	2.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940262	NO2NO3-N	1.37	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P334306

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940299	Total-P	0.400	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P334136

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940242	O-Phosphate-P	1.10	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P334230

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940129	Sucralose	1.07	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P334153

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940273	Color (true)	1.06	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P334234

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940120	Total Alkalinity	0.152	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97

Batch ID: P334420

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940295	TDS	2.45	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97

Batch ID: P334461

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940120	Fluoride	1.45	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00

Batch ID: P334706

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940203	Organic Carbon	2.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
 Batch ID: P334217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940229	Acetaminophen	6.23	Spike	P	0 - 30
1940229	Carbamazepine	13.1	Spike	P	0 - 30
1940229	Diuron	16.3	Spike	P	0 - 30
1940229	Fenuron	11.6	Spike	P	0 - 30
1940229	Fluridone	4.88	Spike	P	0 - 30
1940229	Imidacloprid	14.5	Spike	P	0 - 30
1940229	Linuron	8.92	Spike	P	0 - 30
1940229	Primidone	17.6	Spike	P	0 - 30

Reference Method: USGS O-2060-01
 Batch ID: P335526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940027	2,4-D	2.07	Spike	P	0 - 30
1940027	Bentazon	0.633	Spike	P	0 - 30
1940027	MCP	7.60	Spike	P	0 - 30
1940027	Triclopyr	4.66	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: 1940279
 Field Sample ID: G1SW0060

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	94.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	123	P	30 - 160
EPA 8321B	Diuron-d6	84.3	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	77.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	51.6	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	94.7	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	123	P	30 - 160
USGS O-2060-01	Diuron-d6	84.3	P	30 - 160
USGS O-2060-01	Primidone-d5	111	P	30 - 160
USGS O-2060-01	Sucralose-d6	77.8	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A79831
 Included Lab Sample IDs: 1940273

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A79834

Included Lab Sample IDs: 1940275

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

Reference Method: SM 2120 B

Run ID: A79841

Included Lab Sample IDs: 1940273

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	99.3	P/P	85 - 115

Reference Method: SM 2320 B-97

Run ID: A79869

Included Lab Sample IDs: 1940273

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.3	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79934

Included Lab Sample IDs: 1940279

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	114	111	P/P	60 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A79937

Included Lab Sample IDs: 1940273

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	108	109	P/P	90 - 110
Sulfate	105	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79946

Included Lab Sample IDs: 1940274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	105	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79949

Included Lab Sample IDs: 1940273

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79994

Included Lab Sample IDs: 1940274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80031

Included Lab Sample IDs: 1940274

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

Reference Method: SM 5310 B-00

Run ID: A80051

Included Lab Sample IDs: 1940274

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A80055

Included Lab Sample IDs: 1940274

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

Reference Method: USGS O-2060-01

Run ID: A80386

Included Lab Sample IDs: 1940279

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	92.8	P/P	50 - 150
Bentazon	122	120	P/P	50 - 150
MCP	104	105	P/P	50 - 150
Triclopyr	101	95.7	P/P	50 - 150

Reference Method: USGS O-2060-01

Run ID: A80401

Included Lab Sample IDs: 1940279

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	124	126	P/P	60 - 150
Carbamazepine	132	132	P/P	60 - 150
Diuron	115	112	P/P	60 - 150
Fenuron	114	116	P/P	60 - 150
Fluridone	127	128	P/P	60 - 160
Imidacloprid	115	117	P/P	60 - 150
Linuron	128	117	P/P	60 - 150
Primidone	121	109	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.738	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 300.0 Rev. 2.1	Chloride	103	104	107		0.458	
	Sulfate	103	103	106		0.255	
EPA 350.1 Rev. 2.0	Ammonia-N	99.5	105	106			0.547
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108	109	105			2.01
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	108	107	106			1.37
EPA 365.1 Rev. 2.0	Total-P	102	95.0	94.3			0.400
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	91.0	90.0			1.10
EPA 8321B	Sucralose	94.9	94.0	92.6			1.07
SM 2120 B	Color (true)					1.06	
SM 2320 B-97	Total Alkalinity	102				0.152	
SM 2540 C-97	TDS					2.45	
SM 4500 F-C-97	Fluoride	98.7	99.4	101			1.45
SM 5310 B-00	Organic Carbon	99.5					2.12
USGS O-2060-01	2,4-D	102	85.4	83.6			2.07
	Acetaminophen	151	97.1	103			6.23
	Bentazon	91.1	87.2	86.7			0.633
	Carbamazepine	143	136	154			13.1
	Diuron	112	90.8	107			16.3
	Fenuron	117	102	115			11.6
	Fluridone	117	104	98.0			4.88
	Imidacloprid	114	217	250			14.5
	Linuron	116	108	118			8.92
	MCPP	91.5	71.8	66.5			7.60
	Primidone	110	108	129			17.6
	Triclopyr	94.8	69.0	65.9			4.66

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1940273
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1940273
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1940273
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1940274
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1940274
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1940274
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1940274
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1940275
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1940279
SM 2120 B / E31780	True Color measured at 450 nm	1940273
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1940273
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1940273
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1940273
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1940273
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1940274
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1940279
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1940279

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	10/26/2017			10/26/2017 16:10	DeAsia Armster	1940273
EPA 300.0 Rev. 2.1	10/26/2017			11/01/2017	Julia Storbeck	1940273
EPA 350.1 Rev. 2.0	10/26/2017			11/03/2017	Sofia Elnemr	1940274
EPA 351.2 Rev. 2.0	10/26/2017	11/01/2017	Adrian Shelby	11/02/2017	Joseph Suarez	1940274
EPA 353.2 Rev. 2.0	10/26/2017			11/01/2017	Beverly Y. Sanders	1940274
EPA 365.1 Rev. 2.0	10/26/2017	10/30/2017	Sima Feizi	10/31/2017	Lipi Saha	1940274
EPA 365.1 Rev. 2.0 dissolved	10/26/2017			10/26/2017 14:54	Megan Treadwell	1940275
EPA 8321B	10/26/2017	10/30/2017	Juyoung Kim	11/01/2017	Juyoung Kim	1940279
SM 2120 B	10/26/2017			10/26/2017 16:48	Tanya Welborn	1940273
SM 2320 B-97	10/26/2017			10/28/2017	Dale L. Simmons	1940273
SM 2540 C-97	10/26/2017			10/27/2017	DeAsia Armster	1940273
SM 2540 D-97	10/26/2017			10/27/2017	DeAsia Armster	1940273
SM 4500 F-C-97	10/26/2017			10/31/2017	Dale L. Simmons	1940273
SM 5310 B-00	10/26/2017			11/04/2017	Ping Hua	1940274
USGS O-2060-01	10/26/2017	10/31/2017	Hoor Shaik	11/03/2017	Julie Michelle Frank	1940279
	10/26/2017	11/16/2017	Hoor Shaik	11/20/2017	Julie Michelle Frank	1940279