

Chemical Analysis Report

NE-DIST-2017-07-12-01

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

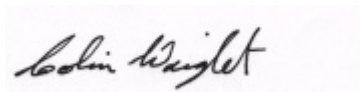
Event Description: **Suwannee 2**
Request ID: **RQ-2017-07-10-08**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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Attn: Jeremy Parrish

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Certified by: Colin Wright, Program Administrator

Date Certified: 02-AUG-2017 09:47

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored 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: CANNON CRK @ CANNON CRK RD W CR 47 **Collection Date/Time: 07/11/2017 11:15**

Field ID: G1NE0617 07112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1912896	EPA 180.1 Rev. 2.0	Turbidity	11	A	NTU	P328388	
	EPA 300.0 Rev. 2.1	Chloride	5.3		mg Cl/L	P328553	
		Sulfate	1.0		mg SO4/L	P328556	
	SM 2120 B	Color (true)	240		PCU	P328367	
	SM 2320 B-97	Total Alkalinity	42		mg CaCO3/L	P328661	
	SM 2540 C-97	TDS	93		mg/L	P328643	RPD
	SM 2540 D-97	TSS	6	I	mg/L	P328734	
	SM 4500 F-C-97	Fluoride	0.058	I	mg F/L	P328820	
1912897	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P328589	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P328714	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.096		mg N/L	P328765	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P328697	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P328861	
1912898	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.047		mg P/L	P328501	
1912917	EPA 8321B	Sucralose**	0.045		ug/L	P328402	
	USGS O-2060-01	2,4-D	0.023		ug/L	P328373	
		Diuron	0.0014	I	ug/L	P328373	
		Fenuron	0.0080	U	ug/L	P328373	
		Imidacloprid	0.067		ug/L	P328373	MS
		Bentazon	8.0E-04	U	ug/L	P328373	
		Linuron	0.0040	U	ug/L	P328373	
		Acetaminophen**	0.0080	U	ug/L	P328373	
		MCPP	0.0020	U	ug/L	P328373	
		Carbamazepine**	4.0E-04	U	ug/L	P328373	
		Triclopyr**	0.0040	U	ug/L	P328373	
		Primidone**	0.0040	U	ug/L	P328373	
		Fluridone**	0.0055		ug/L	P328373	RPD

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Precision data and batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: MS accuracy for diuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: OLUSTEE CREEK @ CR 238

Collection Date/Time: 07/11/2017 11:55

Field ID: G1NE0332 07112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1912893	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P328387	
	EPA 300.0 Rev. 2.1	Chloride	9.8		mg Cl/L	P328553	
		Sulfate	0.51		mg SO4/L	P328556	
	SM 2120 B	Color (true)	640		PCU	P328367	
	SM 2320 B-97	Total Alkalinity	2.7		mg CaCO3/L	P328661	
	SM 2540 C-97	TDS	94		mg/L	P328643	RPD
	SM 2540 D-97	TSS	4	I	mg/L	P328734	
	SM 4500 F-C-97	Fluoride	0.089	I	mg F/L	P328820	

Field ID: G1NE0332 07112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1912894	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P328589	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P328616	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P328674	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P328697	
	SM 5310 B-00	Organic Carbon	49		mg C/L	P328861	
1912895	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P328501	
1912914	EPA 8321B	Sucralose**	0.010	U	ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328373	
		Diuron	8.0E-04	U	ug/L	P328373	
		Fenuron	0.0080	U	ug/L	P328373	
		Imidacloprid	8.0E-04	U	ug/L	P328373	MS
		Bentazon	8.0E-04	U	ug/L	P328373	
		Linuron	0.0040	U	ug/L	P328373	
		Acetaminophen**	0.0080	U	ug/L	P328373	
		MCP	0.0020	U	ug/L	P328373	
		Carbamazepine**	4.0E-04	U	ug/L	P328373	
		Triclopyr**	0.0040	U	ug/L	P328373	
		Primidone**	0.0040	U	ug/L	P328373	
		Fluridone**	4.0E-04	U	ug/L	P328373	RPD

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Precision data and batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: MS accuracy for diuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: PARENERS BRANCH @ CR 1491

Collection Date/Time: 07/11/2017 12:30

Field ID: G1NE0600 07112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1912915	EPA 8321B	Sucralose**	0.010	U	ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328373	
		Diuron	0.030		ug/L	P328373	
		Fenuron	0.031	I	ug/L	P328373	
		Imidacloprid	0.0017	I	ug/L	P328373	MS
		Bentazon	8.0E-04	U	ug/L	P328373	
		Linuron	0.0040	U	ug/L	P328373	
		Acetaminophen**	0.0080	U	ug/L	P328373	
		MCP	0.0020	U	ug/L	P328373	
		Carbamazepine**	4.0E-04	U	ug/L	P328373	
		Triclopyr**	0.0040	U	ug/L	P328373	
		Primidone**	0.0040	U	ug/L	P328373	
		Fluridone**	9.0E-04	I	ug/L	P328373	RPD

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for diuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: NEW RIVER @ SR 100

Collection Date/Time: 07/11/2017 10:10

Field ID: G1NE0534 07112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1912916	EPA 8321B	Sucralose**	0.010	U	ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328373	
		Diuron	8.0E-04	U	ug/L	P328373	
		Fenuron	0.0080	U	ug/L	P328373	
		Imidacloprid	8.0E-04	U	ug/L	P328373	MS
		Bentazon	8.0E-04	U	ug/L	P328373	
		Linuron	0.0040	U	ug/L	P328373	
		Acetaminophen**	0.0080	U	ug/L	P328373	
		MCP	0.0020	U	ug/L	P328373	
		Carbamazepine**	0.0040		ug/L	P328373	
		Triclopyr**	0.0040	U	ug/L	P328373	
		Primidone**	0.0040	U	ug/L	P328373	
		Fluridone**	4.0E-04	U	ug/L	P328373	RPD

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for diuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: MILL CREEK @ BELLAMY/ALLIGATOR RD

Collection Date/Time: 07/11/2017 12:55

Field ID: G1NE0605 07112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1912890	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P328387	
	EPA 300.0 Rev. 2.1	Chloride	14	A	mg Cl/L	P328553	
		Sulfate	2.7	A	mg SO4/L	P328556	
	SM 2120 B	Color (true)	35		PCU	P328367	
	SM 2320 B-97	Total Alkalinity	42		mg CaCO3/L	P328661	
	SM 2540 C-97	TDS	88	AJ	mg/L	P328643	RPD
	SM 2540 D-97	TSS	3	IA	mg/L	P328734	
	SM 4500 F-C-97	Fluoride	0.40		mg F/L	P328820	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P328589	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P328616	
1912891	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P328673	
	EPA 365.1 Rev. 2.0	Total-P	0.61		mg P/L	P328697	
	SM 5310 B-00	Organic Carbon	5.8		mg C/L	P328861	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.53		mg P/L	P328381	
	EPA 8321B	Sucralose**	0.010	U	ug/L	P328402	
1912913	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328373	
		Diuron	8.0E-04	U	ug/L	P328373	
		Fenuron	0.0080	U	ug/L	P328373	
		Imidacloprid	8.0E-04	U	ug/L	P328373	MS
		Bentazon	8.0E-04	U	ug/L	P328373	
		Linuron	0.0040	U	ug/L	P328373	
		Acetaminophen**	0.0080	U	ug/L	P328373	
		MCP	0.0020	U	ug/L	P328373	
		Carbamazepine**	4.0E-04	UJ	ug/L	P328373	SUR
		Triclopyr**	0.0040	U	ug/L	P328373	

Field ID: G1NE0605 07112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1912913	USGS O-2060-01	Primidone**	0.0040	U	ug/L	P328373	
		Fluridone**	4.0E-04	U	ug/L	P328373	RPD

Ref. Method and Comment:
 SM 2540 C-97: Refer to the narrative for an explanation of QC Codes.
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 USGS O-2060-01: Refer to the narrative for an explanation of QC Codes. Carbamazepine-d10 surrogate spike recovery exceeding the control limits.
 MS accuracy for diuron could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P328387

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P328388

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P328553

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P328556

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P328589

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P328616

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P328714

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328673

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328674

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328765

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328697

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328381

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328501

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

Reference Method: EPA 8321B
Batch ID: P328402

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P328367

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P328661

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: P328643

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P328734

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P328820

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P328861

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

Reference Method: USGS O-2060-01
Batch ID: P328373

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: P328553

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328556

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328589

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328616

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328714

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328673

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328674

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328765

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328697

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328381

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328501

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P328402

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	89.0		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P328661

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

Reference Method: SM 4500 F-C-97
Batch ID: P328820

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P328861

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

Reference Method: USGS O-2060-01
Batch ID: P328373

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.2		P	40 - 150
Acetaminophen	134		P	30 - 150
Bentazon	94.8		P	40 - 150
Carbamazepine	118		P	40 - 150
Diuron	105		P	40 - 150
Fenuron	97.2		P	40 - 150
Fluridone	102		P	40 - 150
Imidacloprid	72.5		P	40 - 160
Linuron	109		P	40 - 150
MCPP	95.4		P	40 - 150
Primidone	102		P	40 - 150
Triclopyr	83.5		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912890	Chloride	98.7		P	90 - 110
1913066	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328556

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912890	Sulfate	98.2		P	90 - 110
1913066	Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912767	Ammonia-N	105	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912891	Kjeldahl Nitrogen	99.3	90.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913479	Kjeldahl Nitrogen	99.4	111	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912746	NO2NO3-N	99.9	99.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328674

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912894	NO2NO3-N	96.2	90.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912683	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912800	Total-P	97.5	96.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912892	O-Phosphate-P	96.6	96.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P328402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912913	Sucralose	118	114	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P328820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913130	Fluoride	100	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P328861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912852	Organic Carbon	99.0		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P328373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912651	2,4-D	101	114	P/P	40 - 150
1912651	Acetaminophen	113	106	P/P	30 - 150
1912651	Bentazon	85.2	84.1	P/P	40 - 150
1912651	Carbamazepine	137	130	P/P	40 - 150
1912651	Fenuron	87.8	87.0	P/P	40 - 150
1912651	Fluridone	55.9	83.1	P/P	40 - 150
1912651	Imidacloprid	157	172	P/F	40 - 160
1912651	Linuron	95.9	111	P/P	40 - 150
1912651	MCPP	104	103	P/P	40 - 150
1912651	Primidone	106	94.0	P/P	40 - 150
1912651	Triclopyr	101	91.5	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P328387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912760	Turbidity	3.37	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P328388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912896	Turbidity	1.89	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912890	Chloride	0.750	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912890	Sulfate	2.30	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912767	Ammonia-N	1.88	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912891	Kjeldahl Nitrogen	6.93	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913479	Kjeldahl Nitrogen	6.09	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912746	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912894	NO2NO3-N	4.69	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912683	NO2NO3-N	0.484	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912800	Total-P	1.07	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912892	O-Phosphate-P	0.0670	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P328402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912913	Sucralose	3.37	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P328367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912760	Color (true)	1.77	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P328661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912682	Total Alkalinity	0.253	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P328643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912890	TDS	10.2	Sample	F	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P328820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913130	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P328861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912852	Organic Carbon	0.315	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P328373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912651	2,4-D	6.78	Spike	P	0 - 30
1912651	Acetaminophen	5.91	Spike	P	0 - 30
1912651	Bentazon	1.30	Spike	P	0 - 30
1912651	Carbamazepine	5.59	Spike	P	0 - 30
1912651	Diuron	6.58	Spike	P	0 - 30
1912651	Fenuron	0.824	Spike	P	0 - 30
1912651	Fluridone	39.1	Spike	F	0 - 30
1912651	Imidacloprid	9.24	Spike	P	0 - 30
1912651	Linuron	14.3	Spike	P	0 - 30
1912651	MCP	1.64	Spike	P	0 - 30
1912651	Primidone	11.9	Spike	P	0 - 30
1912651	Triclopyr	9.39	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: 1912913
Field Sample ID: G1NE0605 07112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	113	P	40 - 160
USGS O-2060-01	2,4-D-d3	157	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	106	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	106	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	165	F	30 - 160
USGS O-2060-01	Carbamazepine-d10	165	F	30 - 160
USGS O-2060-01	Diuron-d6	136	P	30 - 160
USGS O-2060-01	Diuron-d6	136	P	30 - 160
USGS O-2060-01	Primidone-d5	143	P	30 - 160
USGS O-2060-01	Primidone-d5	143	P	30 - 160

Lab Sample ID: 1912914
Field Sample ID: G1NE0332 07112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	65.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	133	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	149	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	149	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	99.8	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	99.8	P	30 - 160
USGS O-2060-01	Diuron-d6	67.8	P	30 - 160
USGS O-2060-01	Diuron-d6	67.8	P	30 - 160
USGS O-2060-01	Primidone-d5	71.2	P	30 - 160
USGS O-2060-01	Primidone-d5	71.2	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1912915
Field Sample ID: G1NE0600 07112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	89.0	P	40 - 160
USGS O-2060-01	2,4-D-d3	150	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	98.2	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	98.2	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	151	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	151	P	30 - 160
USGS O-2060-01	Diuron-d6	117	P	30 - 160
USGS O-2060-01	Diuron-d6	117	P	30 - 160
USGS O-2060-01	Primidone-d5	126	P	30 - 160
USGS O-2060-01	Primidone-d5	126	P	30 - 160

Lab Sample ID: 1912916
Field Sample ID: G1NE0534 07112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	63.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	119	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	154	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	154	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	94.6	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	94.6	P	30 - 160
USGS O-2060-01	Diuron-d6	68.9	P	30 - 160
USGS O-2060-01	Diuron-d6	68.9	P	30 - 160
USGS O-2060-01	Primidone-d5	66.3	P	30 - 160
USGS O-2060-01	Primidone-d5	66.3	P	30 - 160

Lab Sample ID: 1912917
Field Sample ID: G1NE0617 07112017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	95.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	150	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	107	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	107	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	132	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	132	P	30 - 160
USGS O-2060-01	Diuron-d6	84.1	P	30 - 160
USGS O-2060-01	Diuron-d6	84.1	P	30 - 160
USGS O-2060-01	Primidone-d5	99.7	P	30 - 160
USGS O-2060-01	Primidone-d5	99.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A77661
Included Lab Sample IDs: 1912890, 1912893, 1912896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	104	P/P	85 - 115
Color (true)	104	106	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A77662

Included Lab Sample IDs: 1912892, 1912895, 1912898

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	98.7	P/P	90 - 110
O-Phosphate-P	99.3	98.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A77668

Included Lab Sample IDs: 1912890, 1912893, 1912896

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A77695

Included Lab Sample IDs: 1912890, 1912893, 1912896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	105	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77748

Included Lab Sample IDs: 1912891, 1912894, 1912897

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

Reference Method: SM 2320 B-97

Run ID: A77776

Included Lab Sample IDs: 1912890, 1912893, 1912896

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

Reference Method: EPA 8321B

Run ID: A77777

Included Lab Sample IDs: 1912913, 1912914, 1912915, 1912916, 1912917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	114	103	P/P	60 - 160
Sucralose	122	140	P/P	60 - 160
Sucralose	140	122	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77778

Included Lab Sample IDs: 1912891, 1912894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	98.0	P/P	90 - 110
NO2NO3-N	99.5	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77801

Included Lab Sample IDs: 1912891, 1912894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.6	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77806

Included Lab Sample IDs: 1912897

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77814

Included Lab Sample IDs: 1912891, 1912894, 1912897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.6	97.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A77832

Included Lab Sample IDs: 1912890, 1912893, 1912896

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

Reference Method: SM 5310 B-00

Run ID: A77848

Included Lab Sample IDs: 1912891, 1912894, 1912897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77857

Included Lab Sample IDs: 1912897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.8	96.0	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A77880

Included Lab Sample IDs: 1912913, 1912914, 1912915, 1912916, 1912917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	91.2	P/P	50 - 150
2,4-D	83.0	83.5	P/P	50 - 150
Acetaminophen	102	112	P/P	60 - 150
Acetaminophen	115	102	P/P	60 - 150
Bentazon	77.6	79.6	P/P	50 - 150
Bentazon	79.6	80.6	P/P	50 - 150
Carbamazepine	103	119	P/P	60 - 150
Carbamazepine	112	103	P/P	60 - 150
Diuron	101	103	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A77880

Included Lab Sample IDs: 1912913, 1912914, 1912915, 1912916, 1912917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Diuron	102	101	P/P	60 - 150
Fenuron	97.4	98.3	P/P	60 - 150
Fenuron	99.5	97.4	P/P	60 - 150
Fluridone	106	102	P/P	60 - 160
Fluridone	110	106	P/P	60 - 160
Imidacloprid	88.2	94.0	P/P	60 - 150
Imidacloprid	94.0	71.4	P/P	60 - 150
Linuron	103	113	P/P	60 - 150
Linuron	110	103	P/P	60 - 150
MCP	90.6	97.4	P/P	50 - 150
MCP	96.7	93.5	P/P	50 - 150
Primidone	117	97.4	P/P	60 - 150
Primidone	97.4	111	P/P	60 - 150
Triclopyr	101	88.8	P/P	50 - 150
Triclopyr	95.5	98.8	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				3.37	
	Turbidity				1.89	
EPA 300.0 Rev. 2.1	Chloride	102	98.7 99.7		0.750	
	Sulfate	99.9	98.2 98.7		2.30	
EPA 350.1 Rev. 2.0	Ammonia-N	102	105 102			1.88
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	99.3 90.3			6.93
	Kjeldahl Nitrogen	99.0	99.4 111			6.09
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101	99.9 99.9			0.0
	NO ₂ NO ₃ -N	99.5	96.2 90.8			4.69
	NO ₂ NO ₃ -N	102	104 103			0.484
EPA 365.1 Rev. 2.0	Total-P	94.6	97.5 96.3			1.07
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.2	96.6 96.5			0.0670
	O-Phosphate-P	103				
EPA 8321B	Sucralose	89.0	118 114			3.37
SM 2120 B	Color (true)				1.77	
SM 2320 B-97	Total Alkalinity	102			0.253	
SM 2540 C-97	TDS				10.2	
SM 4500 F-C-97	Fluoride	98.9	100 100			0.0
SM 5310 B-00	Organic Carbon	96.0	99.0			0.315
USGS O-2060-01	2,4-D	97.2	101 114			6.78
	Acetaminophen	134	113 106			5.91
	Bentazon	94.8	85.2 84.1			1.30
	Carbamazepine	118	137 130			5.59
	Diuron	105				6.58
	Fenuron	97.2	87.8 87.0			0.824

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
USGS O-2060-01	Fluridone	102	55.9	83.1		39.1
	Imidacloprid	72.5	157	172		9.24
	Linuron	109	95.9	111		14.3
	MCPP	95.4	104	103		1.64
	Primidone	102	106	94.0		11.9
	Triclopyr	83.5	101	91.5		9.39

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1912890, 1912893, 1912896
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1912890, 1912893, 1912896
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1912890, 1912893, 1912896
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1912891, 1912894, 1912897
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1912891, 1912894, 1912897
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1912891, 1912894, 1912897
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1912891, 1912894, 1912897
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1912892, 1912895, 1912898
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1912913, 1912914, 1912915, 1912916, 1912917
SM 2120 B / E31780	True Color measured at 450 nm	1912890, 1912893, 1912896
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1912890, 1912893, 1912896
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1912890, 1912893, 1912896
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1912890, 1912893, 1912896
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1912890, 1912893, 1912896
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1912891, 1912894, 1912897
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1912913, 1912914, 1912915, 1912916, 1912917
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1912913, 1912914, 1912915, 1912916, 1912917

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	07/12/2017			07/12/2017 17:13	DeAsia Armster	1912890, 1912893, 1912896
EPA 300.0 Rev. 2.1	07/12/2017			07/14/2017	Julia Storbeck	1912890, 1912893, 1912896
EPA 350.1 Rev. 2.0	07/12/2017			07/14/2017	Sofia Elnemr	1912891, 1912894, 1912897
EPA 351.2 Rev. 2.0	07/12/2017	07/18/2017	Adrian Shelby	07/19/2017	Joseph Suarez	1912891, 1912894
	07/12/2017	07/19/2017	Adrian Shelby	07/21/2017	Joseph Suarez	1912897
EPA 353.2 Rev. 2.0	07/12/2017			07/18/2017	Beverly Y. Sanders	1912891, 1912894
	07/12/2017			07/19/2017	Beverly Y. Sanders	1912897
EPA 365.1 Rev. 2.0	07/12/2017	07/18/2017	Vijayalakshmi Reddy	07/19/2017	Lipi Saha	1912891, 1912894, 1912897
EPA 365.1 Rev. 2.0 dissolved	07/12/2017			07/12/2017 14:47	Lipi Saha	1912895
	07/12/2017			07/12/2017 14:48	Lipi Saha	1912898
	07/12/2017			07/12/2017 15:18	Lipi Saha	1912892
EPA 8321B	07/12/2017	07/14/2017	Mohammad Ghaffari	07/14/2017	Mohammad Ghaffari	1912913, 1912914, 1912915, 1912916, 1912917
SM 2120 B	07/12/2017			07/12/2017 15:06	Tanya Welborn	1912890
	07/12/2017			07/12/2017 15:21	Tanya Welborn	1912893
	07/12/2017			07/12/2017 15:22	Tanya Welborn	1912896
SM 2320 B-97	07/12/2017			07/15/2017	Dale L. Simmons	1912890, 1912893, 1912896
SM 2540 C-97	07/12/2017			07/13/2017	Yijie Li	1912890, 1912893, 1912896
SM 2540 D-97	07/12/2017			07/13/2017	Yijie Li	1912890, 1912893, 1912896
SM 4500 F-C-97	07/12/2017			07/20/2017	Dale L. Simmons	1912890, 1912893, 1912896
SM 5310 B-00	07/12/2017			07/20/2017	Sofia Elnemr	1912891, 1912894, 1912897
USGS O-2060-01	07/12/2017	07/13/2017	Hoor Shaik	07/20/2017	Juyoung Kim	1912913, 1912914
	07/12/2017	07/13/2017	Hoor Shaik	07/21/2017	Juyoung Kim	1912915, 1912916, 1912917