

Chemical Analysis Report

NW-DIST-2017-09-06-01

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

Event Description: **NWRUN WBID 111 118 25 7 71 87 4 72 Blank/DUP**
Request ID: **RQ-2017-09-04-47**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government St
Suite 208A
Pensacola, FL 32502-5794
Attn: Michael King

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: 29-SEP-2017 12:01

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: Brushy Creek abv Pineville Rd.

Collection Date/Time: 09/05/2017 11:40

Field ID: G5NW0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927575	EPA 8321B	Sucralose**	0.15		ug/L	P331186	MS, RPD
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P331187	
		Diuron	0.037		ug/L	P331187	
		Fenuron	0.0080	U	ug/L	P331187	
		Imidacloprid	0.063		ug/L	P331187	MS
		Bentazon	8.0E-04	U	ug/L	P331187	MS
		Linuron	0.0040	U	ug/L	P331187	
		Acetaminophen**	0.0080	U	ug/L	P331187	
		MCP	0.0020	U	ug/L	P331187	
		Carbamazepine**	0.0028	J	ug/L	P331187	SUR
		Triclopyr**	0.0040	U	ug/L	P331187	
		Primidone**	0.0040	U	ug/L	P331187	
		Fluridone**	4.0E-04	U	ug/L	P331187	

Ref. Method and Comment:

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes. Carbamazepine-d10 surrogate spike recovery exceeding the control limits.

Sample Location: Little Pine Barren abv CR99

Collection Date/Time: 09/05/2017 12:20

Field ID: G4NW0192

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927535	EPA 180.1 Rev. 2.0	Turbidity	5.5		NTU	P331384	
	EPA 300.0 Rev. 2.1	Chloride	5.8	A	mg Cl/L	P331706	
		Sulfate	0.49	IA	mg SO4/L	P331708	
	SM 2120 B	Color (true)	70		PCU	P331376	
	SM 2320 B-97	Total Alkalinity	8.7		mg CaCO3/L	P331729	
	SM 2540 C-97	TDS	37		mg/L	P331697	
	SM 2540 D-97	TSS	5	I	mg/L	P331824	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927543	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P331514	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P331578	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.64		mg N/L	P331544	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P331562	
	SM 5310 B-00	Organic Carbon	3.4		mg C/L	P331764	
1927551	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P331472	
	dissolved						

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Mitchell Creek @ Hwy 29

Collection Date/Time: 09/05/2017 12:55

Field ID: G4NW0116

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927536	EPA 180.1 Rev. 2.0	Turbidity	2.9	A	NTU	P331386	
	EPA 300.0 Rev. 2.1	Chloride	2.9		mg Cl/L	P331706	
		Sulfate	0.73		mg SO4/L	P331708	

Field ID: G4NW0116

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927536	SM 2120 B	Color (true)	54		PCU	P331377	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P331729	
	SM 2540 C-97	TDS	29		mg/L	P331697	
	SM 2540 D-97	TSS	6	I	mg/L	P331824	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927544	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P331514	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P331578	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P331544	
	EPA 365.1 Rev. 2.0	Total-P	0.005		mg P/L	P331562	
	SM 5310 B-00	Organic Carbon	5.0		mg C/L	P331764	
1927552	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331472	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Canoe Creek @ Roach Drive Bridge

Collection Date/Time: 09/05/2017 13:25

Field ID: G4NW0201

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927537	EPA 180.1 Rev. 2.0	Turbidity	8.0		NTU	P331386	
	EPA 300.0 Rev. 2.1	Chloride	4.2		mg Cl/L	P331706	
		Sulfate	0.72		mg SO4/L	P331708	
	SM 2120 B	Color (true)	49		PCU	P331377	
	SM 2320 B-97	Total Alkalinity	2.8		mg CaCO3/L	P331729	
	SM 2540 C-97	TDS	35		mg/L	P331697	
	SM 2540 D-97	TSS	12		mg/L	P331824	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927545	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P331514	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20		mg N/L	P331578	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.76		mg N/L	P331544	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P331562	
	SM 5310 B-00	Organic Carbon	3.6		mg C/L	P331764	
1927553	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331472	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Wiggins Branch Below HWY 29 s of Century

Collection Date/Time: 09/05/2017 13:55

Field ID: G4NW0163

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927538	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P331386	
	EPA 300.0 Rev. 2.1	Chloride	2.5		mg Cl/L	P331706	
		Sulfate	0.89		mg SO4/L	P331708	
	SM 2120 B	Color (true)	49	A	PCU	P331377	
	SM 2320 B-97	Total Alkalinity	8.4		mg CaCO3/L	P331729	

Field ID: G4NW0163

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927538	SM 2540 C-97	TDS	36		mg/L	P331697	
	SM 2540 D-97	TSS	7	I	mg/L	P331824	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927546	EPA 350.1 Rev. 2.0	Ammonia-N	0.055		mg N/L	P331514	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P331578	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P331544	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P331562	
	SM 5310 B-00	Organic Carbon	7.0		mg C/L	P331764	
1927554	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331472	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: McCostill Mill Creek west of Ebenezer Church Road **Collection Date/Time: 09/05/2017 14:30**

Field ID: G4NW0320

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927539	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P331386	
	EPA 300.0 Rev. 2.1	Chloride	5.7		mg Cl/L	P331706	
		Sulfate	0.47	I	mg SO4/L	P331708	
	SM 2120 B	Color (true)	12		PCU	P331377	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P331729	
	SM 2540 C-97	TDS	27		mg/L	P331697	
	SM 2540 D-97	TSS	3	I	mg/L	P331824	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927547	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P331514	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P331578	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.0		mg N/L	P331545	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P331562	
	SM 5310 B-00	Organic Carbon	1.5		mg C/L	P331764	
1927555	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331472	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Moore Creek abv Chamuckla Springs Road. **Collection Date/Time: 09/05/2017 15:15**

Field ID: G4NW0355

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927540	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P331386	
	EPA 300.0 Rev. 2.1	Chloride	5.5		mg Cl/L	P331706	
		Sulfate	0.58		mg SO4/L	P331708	
	SM 2120 B	Color (true)	23		PCU	P331377	
	SM 2320 B-97	Total Alkalinity	3.0		mg CaCO3/L	P331729	
	SM 2540 C-97	TDS	39		mg/L	P331697	
	SM 2540 D-97	TSS	6	I	mg/L	P331824	

Field ID: G4NW0355

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927540	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927548	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P331515	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P331578	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.0		mg N/L	P331544	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P331562	
	SM 5310 B-00	Organic Carbon	2.1		mg C/L	P331764	
1927556	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331472	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Moore Creek abv Chamuckla Springs Road.

Collection Date/Time: 09/05/2017 15:20

Field ID: G4NW0355DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927541	EPA 180.1 Rev. 2.0	Turbidity	4.9		NTU	P331386	
	EPA 300.0 Rev. 2.1	Chloride	5.5		mg Cl/L	P331706	
		Sulfate	0.57		mg SO4/L	P331708	
	SM 2120 B	Color (true)	25		PCU	P331377	
	SM 2320 B-97	Total Alkalinity	2.8		mg CaCO3/L	P331729	
	SM 2540 C-97	TDS	42		mg/L	P331698	
	SM 2540 D-97	TSS	6	I	mg/L	P331825	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927549	EPA 350.1 Rev. 2.0	Ammonia-N	0.007	J	mg N/L	P331767	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.12	I	mg N/L	P331571	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.0		mg N/L	P331544	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P331562	
	SM 5310 B-00	Organic Carbon	1.9		mg C/L	P331764	
1927557	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331472	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 350.1 Rev. 2.0: The sample appears to be heterogeneous with respect to ammonia analysis.

Sample Location: Moore Creek abv Chamuckla Springs Road.

Collection Date/Time: 09/05/2017 15:25

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927542	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P331386	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P331706	
		Sulfate	0.20	U	mg SO4/L	P331708	
	SM 2120 B	Color (true)	2.5	U	PCU	P331377	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P331729	
	SM 2540 C-97	TDS	15	U	mg/L	P331695	
	SM 2540 D-97	TSS	2	U	mg/L	P331822	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P331735	
1927550	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P331515	

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927550	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P331603	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P331545	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P331464	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P331764	
1927558	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331472	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P331384

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P331386

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P331706

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P331708

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P331514

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P331515

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P331767

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331571

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331578

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331603

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331544

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331545

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331464

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331562

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331472

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

Reference Method: EPA 8321B
Batch ID: P331186

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P331376

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P331377

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P331729

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P331695

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P331697

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P331698

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P331822

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P331824

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P331825

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P331735

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P331764

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

Reference Method: USGS O-2060-01
Batch ID: P331187

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: P331706

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	92.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331514

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331515

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331767

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331571

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331578

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331603

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331544

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331545

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331464

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P331186

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	96.6		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P331729

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

Reference Method: SM 4500 F-C-97
Batch ID: P331735

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

Reference Method: SM 5310 B-00
Batch ID: P331764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.3		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P331187

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	53.0		P	40 - 150
Acetaminophen	134		P	30 - 150
Bentazon	41.4		P	40 - 150
Carbamazepine	124		P	40 - 150
Diuron	103		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	68.5		P	40 - 150
Imidacloprid	94.9		P	40 - 160
Linuron	86.9		P	40 - 150
MCPP	52.9		P	40 - 150
Primidone	111		P	40 - 150
Triclopyr	54.0		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927535	Chloride	95.8		P	90 - 110
1927536	Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331708

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: P331708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927535	Sulfate	93.4		P	90 - 110
1927536	Sulfate	93.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331514

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927507	Ammonia-N	96.2	95.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927548	Ammonia-N	99.4	99.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1928379	Ammonia-N	97.4	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927549	Kjeldahl Nitrogen	99.9	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927543	Kjeldahl Nitrogen	96.7	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927514	NO2NO3-N	103		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927599	NO2NO3-N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927543	Total-P	93.6	92.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P331472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927551	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P331186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927171	Sucralose	34.7	9.82	F/F	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P331735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1928613	Fluoride	98.1	97.4	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P331764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927451	Organic Carbon	95.4	95.2	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P331187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927171	2,4-D	58.1	60.9	P/P	40 - 150
1927171	Acetaminophen	64.5	63.0	P/P	30 - 150
1927171	Bentazon	30.9	29.1	F/F	40 - 150
1927171	Carbamazepine	100	98.5	P/P	40 - 150
1927171	Diuron	80.4	79.7	P/P	40 - 150
1927171	Fenuron	89.9	91.9	P/P	40 - 150
1927171	Fluridone	54.5	54.6	P/P	40 - 150
1927171	Imidacloprid	228	228	F/F	40 - 160
1927171	Linuron	95.7	94.0	P/P	40 - 150
1927171	MCP	51.0	51.3	P/P	40 - 150
1927171	Primidone	111	107	P/P	40 - 150
1927171	Triclopyr	48.6	50.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P331384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927471	Turbidity	2.83	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P331386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927536	Turbidity	4.43	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927535	Chloride	1.48	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331514

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927507	Ammonia-N	0.361	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927548	Ammonia-N	0.0676	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928379	Ammonia-N	1.00	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927549	Kjeldahl Nitrogen	0.303	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927543	Kjeldahl Nitrogen	3.82	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927597	Kjeldahl Nitrogen	0.149	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331544

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927514	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927599	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331464

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927597	Total-P	3.04	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927543	Total-P	0.997	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P331472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927551	O-Phosphate-P	0.591	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P331186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927171	Sucralose	39.6	Spike	F	0 - 30

Reference Method: SM 2120 B
 Batch ID: P331376

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927512	Color (true)	0.712	Sample	P	0 - 20

Reference Method: SM 2120 B
 Batch ID: P331377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927538	Color (true)	3.49	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P331729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928613	Total Alkalinity	0.249	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P331695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927448	TDS	4.32	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P331697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927474	TDS	2.22	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P331698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927906	TDS	2.29	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P331735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928613	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P331764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927451	Organic Carbon	0.115	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P331187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927171	2,4-D	3.87	Spike	P	0 - 30
1927171	Acetaminophen	2.42	Spike	P	0 - 30
1927171	Bentazon	5.87	Spike	P	0 - 30
1927171	Carbamazepine	1.73	Spike	P	0 - 30
1927171	Diuron	0.775	Spike	P	0 - 30
1927171	Fenuron	2.22	Spike	P	0 - 30
1927171	Fluridone	0.257	Spike	P	0 - 30
1927171	Imidacloprid	0.0876	Spike	P	0 - 30
1927171	Linuron	1.86	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P331187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927171	MCP	0.743	Spike	P	0 - 30
1927171	Primidone	3.77	Spike	P	0 - 30
1927171	Triclopyr	4.03	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: 1927575
Field Sample ID: G5NW0001

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	123	P	30 - 160
EPA 8321B	Carbamazepine-d10	172	F	30 - 160
EPA 8321B	Diuron-d6	134	P	30 - 160
EPA 8321B	Primidone-d5	154	P	30 - 160
EPA 8321B	Sucralose-d6	137	P	40 - 160
USGS O-2060-01	2,4-D-d3	94.1	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	123	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	172	F	30 - 160
USGS O-2060-01	Diuron-d6	134	P	30 - 160
USGS O-2060-01	Primidone-d5	154	P	30 - 160
USGS O-2060-01	Sucralose-d6	137	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A78828
Included Lab Sample IDs: 1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	85 - 115
Color (true)	103	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A78829
Included Lab Sample IDs: 1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542

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

Reference Method: EPA 8321B
Run ID: A78859
Included Lab Sample IDs: 1927575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A78859

Included Lab Sample IDs: 1927575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	97.4	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A78860

Included Lab Sample IDs: 1927551, 1927552, 1927553, 1927554, 1927555, 1927556, 1927557, 1927558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	102	P/P	90 - 110
O-Phosphate-P	102	102	P/P	90 - 110
O-Phosphate-P	102	100	P/P	90 - 110
O-Phosphate-P	99.1	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78868

Included Lab Sample IDs: 1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927550

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78876

Included Lab Sample IDs: 1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	102	103	P/P	90 - 110
NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78910

Included Lab Sample IDs: 1927550

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78933

Included Lab Sample IDs: 1927549

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78938

Included Lab Sample IDs: 1927543, 1927544, 1927545, 1927546, 1927547, 1927548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.1	99.1	P/P	90 - 110
Kjeldahl Nitrogen	99.1	92.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78941

Included Lab Sample IDs: 1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	96.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78948

Included Lab Sample IDs: 1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.7	97.9	P/P	90 - 110
Chloride	97.9	98.0	P/P	90 - 110
Sulfate	91.6	96.1	P/P	90 - 110
Sulfate	96.1	96.4	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78958

Included Lab Sample IDs: 1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.1	P/P	90 - 110
Total Alkalinity	98.1	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78958

Included Lab Sample IDs: 1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	98.5	P/P	90 - 110
Fluoride	98.5	97.6	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A78968

Included Lab Sample IDs: 1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.7	95.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78970

Included Lab Sample IDs: 1927549

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78981

Included Lab Sample IDs: 1927550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.4	95.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A79030
Included Lab Sample IDs: 1927575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.3	106	P/P	50 - 150
Acetaminophen	103	102	P/P	60 - 150
Bentazon	100	110	P/P	50 - 150
Carbamazepine	116	121	P/P	60 - 150
Diuron	98.8	108	P/P	60 - 150
Fenuron	100	102	P/P	60 - 150
Fluridone	102	109	P/P	60 - 160
Imidacloprid	95.1	98.5	P/P	60 - 150
Linuron	91.6	109	P/P	60 - 150
MCPD	91.6	99.5	P/P	50 - 150
Primidone	97.7	106	P/P	60 - 150
Triclopyr	101	96.3	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				2.83	
	Turbidity				4.43	
EPA 300.0 Rev. 2.1	Chloride	96.4	95.8 95.5		1.48	
	Sulfate	92.5	93.4 93.1			
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	96.2 95.7			0.361
	Ammonia-N	102	99.4 99.3			0.0676
	Ammonia-N	104	97.4 98.4			1.00
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	99.9 99.5			0.303
	Kjeldahl Nitrogen	107	96.7 101			3.82
	Kjeldahl Nitrogen	99.5				0.149
EPA 353.2 Rev. 2.0	NO2NO3-N	106	103			0.0
	NO2NO3-N	106	103			0.0
EPA 365.1 Rev. 2.0	Total-P	94.2				3.04
	Total-P	96.9	93.6 92.6			0.997
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	101 102			0.591
EPA 8321B	Sucralose	96.6	34.7 9.82			39.6
SM 2120 B	Color (true)				0.712	
	Color (true)				3.49	
SM 2320 B-97	Total Alkalinity	101			0.249	
SM 2540 C-97	TDS				4.32	
	TDS				2.22	
	TDS				2.29	
SM 4500 F-C-97	Fluoride	95.4	98.1 97.4			0.473
SM 5310 B-00	Organic Carbon	96.3	95.4 95.2			0.115
USGS O-2060-01	2,4-D	53.0	58.1 60.9			3.87
	Acetaminophen	134	64.5 63.0			2.42
	Bentazon	41.4	30.9 29.1			5.87
	Carbamazepine	124	100 98.5			1.73

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
USGS O-2060-01	Diuron	103	80.4	79.7		0.775
	Fenuron	114	89.9	91.9		2.22
	Fluridone	68.5	54.5	54.6		0.257
	Imidacloprid	94.9	228	228		0.0876
	Linuron	86.9	95.7	94.0		1.86
	MCP	52.9	51.0	51.3		0.743
	Primidone	111	111	107		3.77
	Triclopyr	54.0	48.6	50.6		4.03

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1927551, 1927552, 1927553, 1927554, 1927555, 1927556, 1927557, 1927558
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1927575
SM 2120 B / E31780	True Color measured at 450 nm	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1927575
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1927575

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	09/06/2017			09/06/2017 17:24	DeAsia Armster	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
EPA 300.0 Rev. 2.1	09/06/2017			09/14/2017	Julia Storbeck	1927535, 1927536, 1927537, 1927538, 1927539
	09/06/2017			09/15/2017	Julia Storbeck	1927540, 1927541, 1927542
EPA 350.1 Rev. 2.0	09/06/2017			09/07/2017	Sofia Elnemr	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927550
	09/06/2017			09/15/2017	Sofia Elnemr	1927549
EPA 351.2 Rev. 2.0	09/06/2017	09/13/2017	Adrian Shelby	09/15/2017	Joseph Suarez	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549
	09/06/2017	09/14/2017	Adrian Shelby	09/18/2017	Joseph Suarez	1927550
EPA 353.2 Rev. 2.0	09/06/2017			09/13/2017	Beverly Y. Sanders	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550
EPA 365.1 Rev. 2.0	09/06/2017	09/07/2017	Sima Feizi	09/14/2017	Lipi Saha	1927550
	09/06/2017	09/13/2017	Sima Feizi	09/15/2017	Lipi Saha	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549
EPA 365.1 Rev. 2.0 dissolved	09/06/2017			09/06/2017 14:16	Megan Treadwell	1927551
	09/06/2017			09/06/2017 14:33	Megan Treadwell	1927553
	09/06/2017			09/06/2017 14:34	Megan Treadwell	1927554
	09/06/2017			09/06/2017 14:35	Megan Treadwell	1927555
	09/06/2017			09/06/2017 14:40	Megan Treadwell	1927556
	09/06/2017			09/06/2017 14:41	Megan Treadwell	1927557
	09/06/2017			09/06/2017 14:42	Megan Treadwell	1927558
	09/06/2017			09/06/2017 14:53	Megan Treadwell	1927552
EPA 8321B	09/06/2017	09/06/2017	Hoor Shaik	09/07/2017	Julie Michelle Frank	1927575
SM 2120 B	09/06/2017			09/06/2017 15:39	Tanya Welborn	1927535
	09/06/2017			09/06/2017 15:42	Tanya Welborn	1927536
	09/06/2017			09/06/2017 15:43	Tanya Welborn	1927537
	09/06/2017			09/06/2017 15:45	Tanya Welborn	1927538, 1927539
	09/06/2017			09/06/2017 15:46	Tanya Welborn	1927540
	09/06/2017			09/06/2017 15:47	Tanya Welborn	1927541
	09/06/2017			09/06/2017 15:48	Tanya Welborn	1927542
SM 2320 B-97	09/06/2017			09/14/2017	Dale L. Simmons	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 2540 C-97	09/06/2017			09/08/2017	Yijie Li	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 2540 D-97	09/06/2017			09/08/2017	Yijie Li	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 4500 F-C-97	09/06/2017			09/14/2017	Dale L. Simmons	1927535, 1927536, 1927537, 1927538, 1927539, 1927540, 1927541, 1927542
SM 5310 B-00	09/06/2017			09/16/2017	Sofia Elnemr	1927543, 1927544, 1927545, 1927546, 1927547, 1927548, 1927549, 1927550

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
USGS O-2060-01	09/06/2017	09/06/2017	Hoor Shaik	09/19/2017	Julie Michelle Frank	1927575