

Chemical Analysis Report

NE-DIST-2017-03-15-02

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

Event Description: **LSJR SouthWest and LSJR South Boat**

Request ID: **RQ-2017-03-13-11**

Customer: **NE-DIST**

Project ID: **SMP**

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

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 10-APR-2017 10:52



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: Little Black Creek @ SR 220

Collection Date/Time: 03/14/2017 08:55

Field ID: G2NE0626 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880195	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P321634	
	EPA 300.0 Rev. 2.1	Chloride	27	A	mg Cl/L	P322217	
		Sulfate	9.2	A	mg SO4/L	P322220	
	SM 2120 B	Color (true)	110		PCU	P321606	
	SM 2320 B-97	Total Alkalinity	38		mg CaCO3/L	P321867	
	SM 2540 C-97	TDS	127		mg/L	P322314	
	SM 2540 D-97	TSS	3	I	mg/L	P322177	
	SM 4500 F-C-97	Fluoride	0.063	I	mg F/L	P321870	
1880200	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P321646	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P321714	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P321990	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P321656	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P321720	
1880205	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P321629	

Ref. Method and Comment:

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

Sample Location: Little Black Creek @ SR 220

Collection Date/Time: 03/14/2017 08:55

Field ID: G2NE0626 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880224	EPA 8321B	Sucralose**	2.3		ug/L	P321518	
1880228	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P321577	
		Diuron	0.0040	U	ug/L	P321577	
		Fenuron	0.0080	U	ug/L	P321577	
		Imidacloprid	0.0062	I	ug/L	P321577	
		Bentazon	0.065		ug/L	P321577	MS
		Linuron	0.0040	UJ	ug/L	P321577	CCV
		Acetaminophen**	0.0040	U	ug/L	P321577	
		MCPD	0.0040	U	ug/L	P321577	
		Carbamazepine**	0.0022		ug/L	P321577	
		Triclopyr**	0.010	U	ug/L	P321577	
		Primidone**	0.0080	U	ug/L	P321577	
		Fluridone**	0.0030		ug/L	P321577	

Ref. Method and Comment:

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

Sample Location: Grog Branch @ SR 220

Collection Date/Time: 03/14/2017 09:20

Field ID: G2NE0674 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880196	EPA 180.1 Rev. 2.0	Turbidity	8.7		NTU	P321634	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P322223	
		Sulfate	1.4		mg SO4/L	P322409	
	SM 2120 B	Color (true)	190		PCU	P321606	

Field ID: G2NE0674 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880196	SM 2320 B-97	Total Alkalinity	53		mg CaCO3/L	P321867	
	SM 2540 C-97	TDS	114		mg/L	P322314	
	SM 2540 D-97	TSS	4	I	mg/L	P322177	
	SM 4500 F-C-97	Fluoride	0.079	I	mg F/L	P321870	
1880201	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P321646	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P321715	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P321990	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P321656	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P321720	
1880206	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P321629	

Ref. Method and Comment:

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

Sample Location: Grog Branch @ SR 220

Collection Date/Time: 03/14/2017 09:20

Field ID: G2NE0674 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880225	EPA 8321B	Sucralose**	0.082		ug/L	P321518	
1880229	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P321577	
		Diuron	0.0040	U	ug/L	P321577	
		Fenuron	0.0080	U	ug/L	P321577	
		Imidacloprid	0.0040	U	ug/L	P321577	
		Bentazon	0.0040	U	ug/L	P321577	MS
		Linuron	0.0040	UJ	ug/L	P321577	CCV
		Acetaminophen**	0.0040	U	ug/L	P321577	
		MCP	0.0040	U	ug/L	P321577	
		Carbamazepine**	4.0E-04	U	ug/L	P321577	
		Triclopyr**	0.010	U	ug/L	P321577	
		Primidone**	0.0080	U	ug/L	P321577	
		Fluridone**	4.0E-04	U	ug/L	P321577	

Ref. Method and Comment:

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

Sample Location: Peters Creek @ SR 16

Collection Date/Time: 03/14/2017 10:00

Field ID: G2NE0719 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880197	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P321634	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P322223	
		Sulfate	3.0		mg SO4/L	P322408	
	SM 2120 B	Color (true)	100		PCU	P321606	
	SM 2320 B-97	Total Alkalinity	11		mg CaCO3/L	P321868	
	SM 2540 C-97	TDS	54		mg/L	P322314	
	SM 2540 D-97	TSS	2	I	mg/L	P322177	
	SM 4500 F-C-97	Fluoride	0.047	I	mg F/L	P321871	
1880202	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P321646	

Field ID: G2NE0719 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880202	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P321715	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P321990	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P321656	
	SM 5310 B-00	Organic Carbon	9.9		mg C/L	P321720	
1880207	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P321629	

Ref. Method and Comment:

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

Sample Location: Peters Creek @ SR 16

Collection Date/Time: 03/14/2017 10:00

Field ID: G2NE0719 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880226	EPA 8321B	Sucralose**	0.010	U	ug/L	P321518	
1880230	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P321577	
		Diuron	0.0040	U	ug/L	P321577	
		Fenuron	0.0080	U	ug/L	P321577	
		Imidacloprid	0.0040	U	ug/L	P321577	
		Bentazon	0.0040	U	ug/L	P321577	MS
		Linuron	0.0040	UJ	ug/L	P321577	CCV
		Acetaminophen**	0.0040	U	ug/L	P321577	
		MCP	0.0040	U	ug/L	P321577	
		Carbamazepine**	4.0E-04	U	ug/L	P321577	
		Triclopyr**	0.010	U	ug/L	P321577	
		Primidone**	0.0080	U	ug/L	P321577	
		Fluridone**	4.0E-04	U	ug/L	P321577	

Ref. Method and Comment:

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

Sample Location: Greene Creek @ SR 315 (Sharon Rd)

Collection Date/Time: 03/14/2017 10:25

Field ID: G2NE0744 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880198	EPA 180.1 Rev. 2.0	Turbidity	2.9	A	NTU	P321635	
	EPA 300.0 Rev. 2.1	Chloride	12	A	mg Cl/L	P322223	
		Sulfate	1.0	A	mg SO4/L	P322409	
	SM 2120 B	Color (true)	140		PCU	P321606	
	SM 2320 B-97	Total Alkalinity	13		mg CaCO3/L	P321868	
	SM 2540 C-97	TDS	73		mg/L	P322314	
	SM 2540 D-97	TSS	3	I	mg/L	P322177	
	SM 4500 F-C-97	Fluoride	0.047	I	mg F/L	P321871	
1880203	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P321775	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P321715	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P321990	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P321657	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P321720	
1880208	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P321629	

Field ID: G2NE0744 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							

Sample Location: Greene Creek @ SR 315 (Sharon Rd)

Collection Date/Time: 03/14/2017 10:25

Field ID: G2NE0744 03142017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880227	EPA 8321B	Sucralose**	0.010	U	ug/L	P321668	
1880231	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P321577	
		Diuron	0.0040	U	ug/L	P321577	
		Fenuron	0.0080	U	ug/L	P321577	
		Imidacloprid	0.0040	U	ug/L	P321577	
		Bentazon	0.0040	U	ug/L	P321577	MS
		Linuron	0.0040	UJ	ug/L	P321577	CCV
		Acetaminophen**	0.0040	U	ug/L	P321577	
		MCP	0.0040	U	ug/L	P321577	
		Carbamazepine**	4.0E-04	U	ug/L	P321577	
		Triclopyr**	0.010	U	ug/L	P321577	
		Primidone**	0.0080	U	ug/L	P321577	
		Fluridone**	4.0E-04	U	ug/L	P321577	

Ref. Method and Comment:
 EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.
 USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: Un. at Brit pl.

Collection Date/Time: 03/14/2017 11:20

Field ID: G2NE11403142017

Matrix: WATER

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1880199	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P321635	
	EPA 300.0 Rev. 2.1	Chloride	7.6		mg Cl/L	P322223	
		Sulfate	5.0		mg SO4/L	P322409	
	SM 2120 B	Color (true)	140		PCU	P321606	
	SM 2320 B-97	Total Alkalinity	6.0		mg CaCO3/L	P321868	
	SM 2540 C-97	TDS	59		mg/L	P322314	
	SM 2540 D-97	TSS	3	I	mg/L	P322177	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P321871	
1880204	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P321775	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P321715	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P321990	
	EPA 365.1 Rev. 2.0	Total-P	0.47		mg P/L	P321797	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P321720	
1880209	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.41		mg P/L	P321629	

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

Quality Assurance Report

Method Blank Results

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321634

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321635

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322217

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322220

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322223

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322408

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322409

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321646

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321775

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: P321714

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321715

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321990

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321656

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321657

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321797

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321629

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

Reference Method: EPA 8321B
Batch ID: P321518

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P321668

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P321606

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P321867

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

Reference Method: SM 2320 B-97
Batch ID: P321868

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

Reference Method: SM 2540 C-97
Batch ID: P322314

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P322177

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P321870

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P321871

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P321720

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

Reference Method: USGS O-2060-01
Batch ID: P321577

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.0040	U	ug/L
Bentazon	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P321577

Component	Result	Code	Units
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322217

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322220

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322223

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	94.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322408

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322409

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321646

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321775

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: P321714

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: P321715

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321990

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321656

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321657

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321797

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321629

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

Reference Method: EPA 8321B
Batch ID: P321518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	67.5		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
 Batch ID: P321668

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	102		P	40 - 140

Reference Method: SM 2320 B-97
 Batch ID: P321867

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 2320 B-97
 Batch ID: P321868

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
 Batch ID: P321870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	92 - 103

Reference Method: SM 4500 F-C-97
 Batch ID: P321871

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P321720

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.3		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P321577

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	106		P	40 - 140
Acetaminophen	108		P	40 - 140
Bentazon	94.8		P	40 - 140
Carbamazepine	79.2		P	40 - 140
Diuron	59.6		P	40 - 140
Fenuron	77.6		P	40 - 140
Fluridone	76.0		P	40 - 140
Imidacloprid	67.6		P	40 - 160
Linuron	97.2		P	40 - 140
MCPP	106		P	40 - 140
Primidone	108		P	40 - 140
Triclopyr	87.6		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880121	Chloride	96.0		P	90 - 110
1880195	Chloride	95.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880121	Sulfate	97.3		P	90 - 110
1880195	Sulfate	98.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322223

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880198	Chloride	93.5		P	90 - 110
1880354	Chloride	93.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880008	Sulfate	103		P	90 - 110
1880197	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880198	Sulfate	101		P	90 - 110
1880354	Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321646

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880016	Ammonia-N	98.1	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880203	Ammonia-N	98.6	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880125	Kjeldahl Nitrogen	103	107	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880304	Kjeldahl Nitrogen	95.0	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321990

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880202	NO2NO3-N	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321656

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880139	Total-P	94.4	94.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321657

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880305	Total-P	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880357	Total-P	99.6	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321629

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880205	O-Phosphate-P	95.4	95.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P321518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880183	Sucralose	63.4	86.4	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P321870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880619	Fluoride	95.4	95.4	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P321871

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880388	Fluoride	96.6	96.1	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P321720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880079	Organic Carbon	95.5	97.3	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P321577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1880315	2,4-D	134	137	P/P	40 - 140
1880315	Acetaminophen	66.4	62.4	P/P	40 - 140
1880315	Bentazon	206	199	F/F	40 - 140
1880315	Carbamazepine	80.0	86.0	P/P	40 - 140
1880315	Diuron	79.2	74.4	P/P	40 - 140
1880315	Fenuron	75.2	74.4	P/P	40 - 140
1880315	Fluridone	72.8	65.6	P/P	40 - 140
1880315	Imidacloprid	142	138	P/P	40 - 160
1880315	Linuron	135	128	P/P	40 - 140
1880315	MCP	128	129	P/P	40 - 140
1880315	Primidone	105	81.2	P/P	40 - 140
1880315	Triclopyr	106	102	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P321634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880120	Turbidity	1.53	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P321635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880198	Turbidity	10.7	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880195	Chloride	0.0821	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322220

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880195	Sulfate	0.218	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880198	Chloride	0.0537	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880008	Sulfate	0.133	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880198	Sulfate	3.67	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321646

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880016	Ammonia-N	0.154	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880203	Ammonia-N	0.214	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880125	Kjeldahl Nitrogen	2.49	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880304	Kjeldahl Nitrogen	0.976	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880202	NO2NO3-N	1.53	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321656

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880139	Total-P	0.181	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880305	Total-P	0.801	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880357	Total-P	2.34	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321629

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880205	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P321518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880183	Sucralose	14.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P321668

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880583	Sucralose	8.35	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P321606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880303	Color (true)	3.93	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P321867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880619	Total Alkalinity	0.128	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P321868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880388	Total Alkalinity	0.0966	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
 Batch ID: P322314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880121	TDS	8.61	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P321870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880619	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
 Batch ID: P321871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880388	Fluoride	0.498	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P321720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880079	Organic Carbon	1.47	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P321577

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880315	2,4-D	2.50	Spike	P	0 - 30
1880315	Acetaminophen	6.21	Spike	P	0 - 30
1880315	Bentazon	3.36	Spike	P	0 - 30
1880315	Carbamazepine	7.23	Spike	P	0 - 30
1880315	Diuron	6.25	Spike	P	0 - 30
1880315	Fenuron	1.07	Spike	P	0 - 30
1880315	Fluridone	10.2	Spike	P	0 - 30
1880315	Imidacloprid	2.58	Spike	P	0 - 30
1880315	Linuron	5.16	Spike	P	0 - 30
1880315	MCP	1.25	Spike	P	0 - 30
1880315	Primidone	25.8	Spike	P	0 - 30
1880315	Triclopyr	3.47	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: 1880224
Field Sample ID: G2NE0626 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	71.5	P	40 - 150

Lab Sample ID: 1880225
Field Sample ID: G2NE0674 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	73.5	P	40 - 150

Lab Sample ID: 1880226
Field Sample ID: G2NE0719 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	64.5	P	40 - 150

Lab Sample ID: 1880227
Field Sample ID: G2NE0744 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	91.5	P	40 - 150

Lab Sample ID: 1880228
Field Sample ID: G2NE0626 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	2,4-D-d3	127	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	61.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	63.4	P	40 - 160
USGS O-2060-01	Diuron-d6	51.0	P	40 - 150
USGS O-2060-01	Primidone-d5	68.8	P	40 - 150

Lab Sample ID: 1880229
Field Sample ID: G2NE0674 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	2,4-D-d3	145	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	70.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	60.0	P	40 - 160
USGS O-2060-01	Diuron-d6	46.4	P	40 - 150
USGS O-2060-01	Primidone-d5	57.6	P	40 - 150

Lab Sample ID: 1880230
Field Sample ID: G2NE0719 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	2,4-D-d3	120	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	71.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	76.2	P	40 - 160
USGS O-2060-01	Diuron-d6	75.6	P	40 - 150
USGS O-2060-01	Primidone-d5	89.2	P	40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1880231
Field Sample ID: G2NE0744 03142017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	2,4-D-d3	116	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	63.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	65.0	P	40 - 160
USGS O-2060-01	Diuron-d6	56.6	P	40 - 150
USGS O-2060-01	Primidone-d5	72.4	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A75118
Included Lab Sample IDs: 1880195, 1880196, 1880197, 1880198, 1880199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	85 - 115
Color (true)	100	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75129
Included Lab Sample IDs: 1880205, 1880206, 1880207, 1880208, 1880209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	100	99.6	P/P	90 - 110
O-Phosphate-P	99.6	99.9	P/P	90 - 110
O-Phosphate-P	99.9	99.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A75131
Included Lab Sample IDs: 1880195, 1880196, 1880197, 1880198, 1880199

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

Reference Method: EPA 8321B
Run ID: A75135
Included Lab Sample IDs: 1880224, 1880225, 1880226

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	74.8	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75137
Included Lab Sample IDs: 1880200, 1880201, 1880202

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	99.9	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A75159

Included Lab Sample IDs: 1880228, 1880229, 1880230, 1880231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	100	104	P/P	60 - 150
Carbamazepine	149	146	P/P	60 - 150
Diuron	128	134	P/P	60 - 150
Fenuron	126	135	P/P	60 - 150
Fluridone	98.4	104	P/P	60 - 150
Imidacloprid	129	130	P/P	60 - 150
Linuron	192*	225*	F/F	60 - 150
Primidone	122	102	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A75160

Included Lab Sample IDs: 1880200, 1880201, 1880202, 1880203, 1880204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.1	99.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75184

Included Lab Sample IDs: 1880203, 1880204

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75195

Included Lab Sample IDs: 1880200, 1880201, 1880202, 1880203

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

Reference Method: SM 2320 B-97

Run ID: A75223

Included Lab Sample IDs: 1880195, 1880196, 1880197, 1880198, 1880199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A75223

Included Lab Sample IDs: 1880195, 1880196, 1880197, 1880198, 1880199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110
Fluoride	97.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75227

Included Lab Sample IDs: 1880200, 1880201, 1880202, 1880203, 1880204

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75227

Included Lab Sample IDs: 1880200, 1880201, 1880202, 1880203, 1880204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.1	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75232

Included Lab Sample IDs: 1880204

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

Reference Method: EPA 8321B

Run ID: A75233

Included Lab Sample IDs: 1880227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	106	95.9	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75268

Included Lab Sample IDs: 1880200, 1880201, 1880202, 1880203, 1880204

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

Reference Method: USGS O-2060-01

Run ID: A75269

Included Lab Sample IDs: 1880228, 1880229, 1880230, 1880231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	119	117	P/P	50 - 150
Bentazon	111	97.4	P/P	50 - 150
MCP	133	122	P/P	50 - 150
Triclopyr	97.8	100	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75326

Included Lab Sample IDs: 1880195, 1880196, 1880197, 1880198, 1880199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.2	95.6	P/P	90 - 110
Chloride	95.6	94.1	P/P	90 - 110
Chloride	99.9	100	P/P	90 - 110
Sulfate	95.9	97.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75396

Included Lab Sample IDs: 1880196, 1880197, 1880198, 1880199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	102	98.8	P/P	90 - 110
Sulfate	97.5	102	P/P	90 - 110
Sulfate	98.6	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

* 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		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					1.53	
	Turbidity					10.7	
EPA 300.0 Rev. 2.1	Chloride	97.9	95.7	96.0		0.0821	
	Chloride	94.7	93.5	93.1		0.0537	
	Sulfate	96.3	98.5	97.3		0.218	
	Sulfate	101	103	102		0.133	
	Sulfate	103	101	104		3.67	
EPA 350.1 Rev. 2.0	Ammonia-N	100	98.1	98.4			0.154
	Ammonia-N	99.5	98.6	98.8			0.214
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	103	107			2.49
	Kjeldahl Nitrogen	107	95.0	96.0			0.976
EPA 353.2 Rev. 2.0	NO2NO3-N	103	103	105			1.53
EPA 365.1 Rev. 2.0	Total-P	99.9	94.4	94.8			0.181
	Total-P	99.0	101	100			0.801
	Total-P	106	99.6	102			2.34
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5	95.4	95.4			0.0
EPA 8321B	Sucralose	67.5	63.4	86.4			14.6
	Sucralose	102					8.35
SM 2120 B	Color (true)					3.93	
SM 2320 B-97	Total Alkalinity	103				0.128	
	Total Alkalinity	103				0.0966	
SM 2540 C-97	TDS					8.61	
SM 4500 F-C-97	Fluoride	95.6	95.4	95.4			0.0
	Fluoride	95.6	96.6	96.1			0.498
SM 5310 B-00	Organic Carbon	97.3	95.5	97.3			1.47
USGS O-2060-01	2,4-D	106	134	137			2.50
	Acetaminophen	108	66.4	62.4			6.21
	Bentazon	94.8	206	199			3.36
	Carbamazepine	79.2	80.0	86.0			7.23
	Diuron	59.6	79.2	74.4			6.25
	Fenuron	77.6	75.2	74.4			1.07
	Fluridone	76.0	72.8	65.6			10.2
	Imidacloprid	67.6	142	138			2.58
	Linuron	97.2	135	128			5.16
	MCP	106	128	129			1.25
	Primidone	108	105	81.2			25.8
	Triclopyr	87.6	106	102			3.47

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1880195, 1880196, 1880197, 1880198, 1880199
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1880195, 1880196, 1880197, 1880198, 1880199

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1880195, 1880196, 1880197, 1880198, 1880199
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1880200, 1880201, 1880202, 1880203, 1880204
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1880200, 1880201, 1880202, 1880203, 1880204
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1880200, 1880201, 1880202, 1880203, 1880204
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1880200, 1880201, 1880202, 1880203, 1880204
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1880205, 1880206, 1880207, 1880208, 1880209
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1880224, 1880225, 1880226, 1880227
SM 2120 B / E31780	True Color measured at 450 nm	1880195, 1880196, 1880197, 1880198, 1880199
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1880195, 1880196, 1880197, 1880198, 1880199
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1880195, 1880196, 1880197, 1880198, 1880199
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1880195, 1880196, 1880197, 1880198, 1880199
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1880195, 1880196, 1880197, 1880198, 1880199
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1880200, 1880201, 1880202, 1880203, 1880204
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1880228, 1880229, 1880230, 1880231
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1880228, 1880229, 1880230, 1880231

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	03/15/2017			03/15/2017 16:15	Blanca Fach	1880195, 1880196, 1880197, 1880198, 1880199
EPA 300.0 Rev. 2.1	03/15/2017			03/24/2017	Ping Hua	1880195, 1880198
	03/15/2017			03/25/2017	Ping Hua	1880196, 1880197, 1880199
	03/15/2017			03/28/2017	Ping Hua	1880196, 1880197, 1880198, 1880199
EPA 350.1 Rev. 2.0	03/15/2017			03/15/2017	Sofia Elnemr	1880200, 1880201, 1880202
	03/15/2017			03/17/2017	Sofia Elnemr	1880203, 1880204
EPA 351.2 Rev. 2.0	03/15/2017	03/17/2017	Adrian Shelby	03/21/2017	Joseph Suarez	1880200, 1880201, 1880202, 1880203, 1880204
EPA 353.2 Rev. 2.0	03/15/2017			03/22/2017	Beverly Y. Sanders	1880200, 1880201, 1880202, 1880203, 1880204
EPA 365.1 Rev. 2.0	03/15/2017	03/16/2017	Adrian Shelby	03/20/2017	Lipi Saha	1880200, 1880201, 1880202, 1880203
	03/15/2017	03/20/2017	Vijayalakshmi Reddy	03/21/2017	Lipi Saha	1880204
EPA 365.1 Rev. 2.0 dissolved	03/15/2017			03/15/2017 15:38	Ping Hua	1880205
	03/15/2017			03/15/2017 15:51	Ping Hua	1880206
	03/15/2017			03/15/2017 16:00	Ping Hua	1880207
	03/15/2017			03/15/2017 16:01	Ping Hua	1880208
	03/15/2017			03/15/2017 16:12	Ping Hua	1880209
EPA 8321B	03/15/2017	03/15/2017	Mohammad Ghaffari	03/16/2017	Mohammad Ghaffari	1880224, 1880225, 1880226
	03/15/2017	03/20/2017	Mohammad Ghaffari	03/20/2017	Mohammad Ghaffari	1880227
SM 2120 B	03/15/2017			03/15/2017 14:00	Julie Michelle Frank	1880195
	03/15/2017			03/15/2017 14:01	Julie Michelle Frank	1880197
	03/15/2017			03/15/2017 14:02	Julie Michelle Frank	1880198
	03/15/2017			03/15/2017 14:03	Julie Michelle Frank	1880199
	03/15/2017			03/15/2017 14:26	Julie Michelle Frank	1880196
SM 2320 B-97	03/15/2017			03/17/2017	Dale L. Simmons	1880195
	03/15/2017			03/18/2017	Dale L. Simmons	1880196, 1880197, 1880198, 1880199
SM 2540 C-97	03/15/2017			03/17/2017	Yijie Li	1880195, 1880196, 1880197, 1880198, 1880199
SM 2540 D-97	03/15/2017			03/17/2017	Yijie Li	1880195, 1880196, 1880197, 1880198, 1880199
SM 4500 F-C-97	03/15/2017			03/17/2017	Dale L. Simmons	1880195
	03/15/2017			03/18/2017	Dale L. Simmons	1880196, 1880197, 1880198, 1880199
SM 5310 B-00	03/15/2017			03/16/2017	Julie Michelle Frank	1880200, 1880201, 1880202, 1880203, 1880204
USGS O-2060-01	03/15/2017	03/16/2017	Hoor Shaik	03/18/2017	Juyoung Kim	1880228, 1880229, 1880230, 1880231
	03/15/2017	03/16/2017	Hoor Shaik	03/22/2017	Juyoung Kim	1880228, 1880229, 1880230, 1880231