

Chemical Analysis Report

NW-DIST-2017-06-13-02

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

Event Description: **ENR C WBID 722 742 789 712 Blank/DUP**
Request ID: **RQ-2017-06-05-64**
Customer: **NW-DIST**
Project ID: **SMP**

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

For additional information please contact
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Certified by: Colin Wright, Program Administrator

Date Certified: 05-JUL-2017 11:35

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: LaGrange Bayou (middle)

Collection Date/Time: 06/12/2017 11:30

Field ID: G3NW0036

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905529	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P326751	
	SM 2320 B-97	Total Alkalinity	53	A	mg CaCO3/L	P326901	
	SM 2540 D-97	TSS	6	I	mg/L	P327094	
	SM 4500 F-C-97	Fluoride	0.40		mg F/L	P326907	
1905535	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P326812	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P326727	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P326877	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P326805	
	SM 5310 B-00	Organic Carbon	4.2		mg C/L	P326873	
1905541	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P326749	

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: Basin Bayou at Inlet

Collection Date/Time: 06/12/2017 12:15

Field ID: G3NW0101

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905530	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P326751	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P326900	
	SM 2540 D-97	TSS	2	I	mg/L	P327091	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P326906	
1905536	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P326812	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35	I	mg N/L	P326727	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326877	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P326805	
	SM 5310 B-00	Organic Carbon	4.1		mg C/L	P326871	
1905542	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P326749	

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: Basin Bayou at Inlet

Collection Date/Time: 06/12/2017 12:15

Field ID: G3NW0101

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905563	EPA 8321B	Sucralose**	0.022	I	ug/L	P326632	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P326684	
		Diuron	8.0E-04	U	ug/L	P326684	
		Fenuron	0.0013	T	ug/L	P326684	RPD
		Imidacloprid	8.0E-04	U	ug/L	P326684	
		Bentazon	8.0E-04	U	ug/L	P326684	
		Linuron	0.0040	U	ug/L	P326684	
		Acetaminophen**	0.0080	U	ug/L	P326684	
		MCPD	0.0020	U	ug/L	P326684	
		Carbamazepine**	4.0E-04	U	ug/L	P326684	
		Triclopyr**	0.0040	U	ug/L	P326684	

Field ID: G3NW0101

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905563	USGS O-2060-01	Primidone**	0.0040	U	ug/L	P326684	
		Fluridone**	4.0E-04	U	ug/L	P326684	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 06/12/2017 12:20

Field ID: G3NW0101DUPLICATE

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905531	EPA 180.1 Rev. 2.0	Turbidity	1.2	A	NTU	P326752	
	SM 2320 B-97	Total Alkalinity	15		mg CaCO3/L	P326900	
	SM 2540 D-97	TSS	3	I	mg/L	P327091	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P326906	
1905537	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P326812	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32	I	mg N/L	P326727	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326878	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P326805	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P326871	
1905543	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P326749	
	dissolved						

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: Basin Bayou at Inlet

Collection Date/Time: 06/12/2017 12:20

Field ID: G3NW0101DUPLICATE

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905564	EPA 8321B	Sucralose**	0.022	I	ug/L	P326632	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P326684	
		Diuron	8.0E-04	U	ug/L	P326684	
		Fenuron	0.0051	I	ug/L	P326684	RPD
		Imidacloprid	8.0E-04	U	ug/L	P326684	
		Bentazon	8.0E-04	U	ug/L	P326684	
		Linuron	0.0040	U	ug/L	P326684	
		Acetaminophen**	0.0080	U	ug/L	P326684	
		MCPD	0.0020	U	ug/L	P326684	
		Carbamazepine**	4.0E-04	U	ug/L	P326684	
		Triclopyr**	0.0040	U	ug/L	P326684	
		Primidone**	0.0040	U	ug/L	P326684	
		Fluridone**	4.0E-04	U	ug/L	P326684	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 06/12/2017 12:25

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905532	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P326752	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P326900	
	SM 2540 D-97	TSS	2	U	mg/L	P327092	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P326906	

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905538	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P326801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P326725	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326758	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P326803	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P326871	
1905544	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P326749	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 06/12/2017 12:25

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905565	EPA 8321B	Sucralose**	0.010	U	ug/L	P326632	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P326684	
		Diuron	8.0E-04	U	ug/L	P326684	
		Fenuron	0.0040	U	ug/L	P326684	RPD
		Imidacloprid	8.0E-04	U	ug/L	P326684	
		Bentazon	8.0E-04	U	ug/L	P326684	
		Linuron	0.0040	U	ug/L	P326684	
		Acetaminophen**	0.0080	U	ug/L	P326684	
		MCP	0.0020	U	ug/L	P326684	
		Carbamazepine**	4.0E-04	U	ug/L	P326684	
		Triclopyr**	0.0040	U	ug/L	P326684	
		Primidone**	0.0040	U	ug/L	P326684	
		Fluridone**	4.0E-04	U	ug/L	P326684	

Sample Location: Mullet Creek @ Hwy 20

Collection Date/Time: 06/12/2017 13:00

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905533	EPA 180.1 Rev. 2.0	Turbidity	6.5		NTU	P326752	
	SM 2320 B-97	Total Alkalinity	3.4		mg CaCO3/L	P326900	
	SM 2540 D-97	TSS	19	A	mg/L	P327092	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P326906	
1905539	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P326974	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P326728	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P326759	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P326803	
	SM 5310 B-00	Organic Carbon	2.9		mg C/L	P326871	
1905545	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P326746	

Sample Location: Mullet Creek @ Hwy 20

Collection Date/Time: 06/12/2017 13:00

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905566	EPA 8321B	Sucralose**	0.019	I	ug/L	P326843	

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905566	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P326684	
		Diuron	8.0E-04	U	ug/L	P326684	
		Fenuron	0.016	I	ug/L	P326684	RPD
		Imidacloprid	0.0011	I	ug/L	P326684	
		Bentazon	8.0E-04	U	ug/L	P326684	
		Linuron	0.0040	U	ug/L	P326684	
		Acetaminophen**	0.0080	U	ug/L	P326684	
		MCP	0.0020	U	ug/L	P326684	
		Carbamazepine**	4.0E-04	U	ug/L	P326684	
		Triclopyr**	0.0040	U	ug/L	P326684	
		Primidone**	0.0040	U	ug/L	P326684	
		Fluridone**	4.0E-04	U	ug/L	P326684	

Sample Location: Rocky Bayou (mouth)

Collection Date/Time: 06/12/2017 13:40

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905534	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P326752	
	SM 2320 B-97	Total Alkalinity	69		mg CaCO3/L	P326901	
	SM 2540 D-97	TSS	3	U	mg/L	P327094	
	SM 4500 F-C-97	Fluoride	0.60		mg F/L	P326907	
1905540	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P326812	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40	I	mg N/L	P326915	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	U	mg N/L	P326878	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P326805	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P326873	
1905546	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P326749	
	dissolved						

Ref. Method and Comment:

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

EPA 353.2 Rev. 2.0: NO2NO3-N: The MDL was elevated due to sample matrix interference.

Sample Location: Rocky Bayou (mouth)

Collection Date/Time: 06/12/2017 13:40

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905567	EPA 8321B	Sucralose**	0.11		ug/L	P326843	
	USGS O-2060-01	2,4-D	0.0047		ug/L	P326684	
		Diuron	8.0E-04	U	ug/L	P326684	
		Fenuron	0.0040	U	ug/L	P326684	RPD
		Imidacloprid	0.0012	I	ug/L	P326684	
		Bentazon	8.0E-04	U	ug/L	P326684	
		Linuron	0.0040	U	ug/L	P326684	
		Acetaminophen**	0.0080	U	ug/L	P326684	
		MCP	0.0020	U	ug/L	P326684	
		Carbamazepine**	4.0E-04	U	ug/L	P326684	
		Triclopyr**	0.0040	U	ug/L	P326684	

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905567	USGS O-2060-01	Primidone**	0.0040	U	ug/L	P326684	
		Fluridone**	4.0E-04	U	ug/L	P326684	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P326751

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P326752

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P326801

Component	Result	Code	Units
Ammonia-N	0.003	I	mg N/L

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P326812

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P326974

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P326725

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P326727

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P326728

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326915

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326759

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326877

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326878

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326803

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326805

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326746

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326749

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P326632

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P326843

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P326900

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

Reference Method: SM 2320 B-97
Batch ID: P326901

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

Reference Method: SM 2540 D-97
Batch ID: P327091

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P327092

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P327094

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P326906

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P326907

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P326871

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

Reference Method: SM 5310 B-00
Batch ID: P326873

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

Reference Method: USGS O-2060-01
Batch ID: P326684

Component	Result	Code	Units
2,4-D	8.0E-04	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	0.0040	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 350.1 Rev. 2.0
Batch ID: P326801

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326812

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326974

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326725

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326727

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326728

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326915

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326759

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326877

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: P326878

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326803

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326805

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326746

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326749

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

Reference Method: EPA 8321B
Batch ID: P326632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	83.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P326843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	79.0		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P326900

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

Reference Method: SM 2320 B-97
Batch ID: P326901

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P326906

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

Reference Method: SM 4500 F-C-97
Batch ID: P326907

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

Reference Method: SM 5310 B-00
Batch ID: P326871

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.1		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P326873

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

Reference Method: USGS O-2060-01
Batch ID: P326684

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	75.8		P	40 - 140
Acetaminophen	42.9		P	40 - 140
Bentazon	68.2		P	40 - 140
Carbamazepine	118		P	40 - 140
Diuron	109		P	40 - 140
Fenuron	105		P	40 - 140
Fluridone	108		P	40 - 140
Imidacloprid	96.7		P	40 - 160
Linuron	103		P	40 - 140
MCPP	79.6		P	40 - 140
Primidone	100		P	40 - 140
Triclopyr	79.0		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905442	Ammonia-N	95.3	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905535	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1906109	Ammonia-N	98.2	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326725

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905492	Kjeldahl Nitrogen	109	110	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905521	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326728

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905759	Kjeldahl Nitrogen	107	110	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326915

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905947	Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905442	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326759

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905595	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905309	NO2NO3-N	108	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905537	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905600	Total-P	104	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326805

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905521	Total-P	97.3	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905502	O-Phosphate-P	94.7	96.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P326749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905541	O-Phosphate-P	97.1	97.6	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P326632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905341	Sucralose	82.0	77.5	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P326843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905633	Sucralose	83.5	82.5	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P326906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905717	Fluoride	100	96.3	P/P	91 - 105

Reference Method: SM 4500 F-C-97
 Batch ID: P326907

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905529	Fluoride	95.6	93.5	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P326871

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905300	Organic Carbon	99.1	96.2	P/P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P326873

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1904963	Organic Carbon	91.3	95.2	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P326684

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905398	2,4-D	72.8	74.8	P/P	40 - 140
1905398	Acetaminophen	82.7	72.5	P/P	40 - 140
1905398	Bentazon	56.0	56.0	P/P	40 - 140
1905398	Carbamazepine	137	135	P/P	40 - 140
1905398	Diuron	117	117	P/P	40 - 140
1905398	Fenuron	92.2	64.2	P/P	40 - 140
1905398	Fluridone	117	116	P/P	40 - 140
1905398	Imidacloprid	123	120	P/P	40 - 160
1905398	Linuron	121	123	P/P	40 - 140
1905398	MCP	74.0	78.0	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
 Batch ID: P326684

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905398	Primidone	127	119	P/P	40 - 140
1905398	Triclopyr	72.4	79.8	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P326751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905441	Turbidity	5.87	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P326752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905531	Turbidity	8.55	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P326801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905442	Ammonia-N	1.51	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P326812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905535	Ammonia-N	0.541	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P326974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1906109	Ammonia-N	0.248	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P326725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905492	Kjeldahl Nitrogen	0.771	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905521	Kjeldahl Nitrogen	0.600	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905759	Kjeldahl Nitrogen	2.73	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905947	Kjeldahl Nitrogen	0.0778	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905442	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905595	NO2NO3-N	1.27	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905309	NO2NO3-N	1.00	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905537	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905600	Total-P	2.11	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326805

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905521	Total-P	1.57	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905502	O-Phosphate-P	1.99	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905541	O-Phosphate-P	0.514	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P326632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905341	Sucralose	5.47	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P326843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905633	Sucralose	1.14	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P326900

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905717	Total Alkalinity	0.799	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P326901

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905529	Total Alkalinity	0.286	Sample	P	0 - 4.8

Reference Method: SM 2540 D-97
Batch ID: P327092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905533	TSS	4.17	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P326906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905717	Fluoride	2.41	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P326907

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905529	Fluoride	1.46	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P326871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905300	Organic Carbon	2.01	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P326873

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1904963	Organic Carbon	3.55	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P326684

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905398	2,4-D	2.42	Spike	P	0 - 30
1905398	Acetaminophen	13.1	Spike	P	0 - 30
1905398	Bentazon	0.0	Spike	P	0 - 30
1905398	Carbamazepine	1.59	Spike	P	0 - 30
1905398	Diuron	0.135	Spike	P	0 - 30
1905398	Fenuron	35.9	Spike	F	0 - 30
1905398	Fluridone	1.08	Spike	P	0 - 30
1905398	Imidacloprid	2.34	Spike	P	0 - 30
1905398	Linuron	1.83	Spike	P	0 - 30
1905398	MCPP	5.26	Spike	P	0 - 30
1905398	Primidone	6.43	Spike	P	0 - 30
1905398	Triclopyr	9.72	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

Quality Assurance Report Surrogates

Lab Sample ID: 1905563

Field Sample ID: G3NW0101

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	57.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	72.0	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	90.7	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	117	P	30 - 160
USGS O-2060-01	Diuron-d6	89.1	P	30 - 160
USGS O-2060-01	Primidone-d5	108	P	30 - 150

Lab Sample ID: 1905564

Field Sample ID: G3NW0101DUPLICATE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	72.0	P	40 - 160
USGS O-2060-01	2,4-D-d3	87.6	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	115	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	140	P	30 - 160
USGS O-2060-01	Diuron-d6	111	P	30 - 160
USGS O-2060-01	Primidone-d5	114	P	30 - 150

Lab Sample ID: 1905565

Field Sample ID: FIELDBLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	70.0	P	40 - 160
USGS O-2060-01	2,4-D-d3	72.5	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	105	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	118	P	30 - 160
USGS O-2060-01	Diuron-d6	124	P	30 - 160
USGS O-2060-01	Primidone-d5	101	P	30 - 150

Lab Sample ID: 1905566

Field Sample ID: G3NW0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	82.0	P	40 - 160
USGS O-2060-01	2,4-D-d3	75.4	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	108	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	125	P	30 - 160
USGS O-2060-01	Diuron-d6	100	P	30 - 160
USGS O-2060-01	Primidone-d5	99.5	P	30 - 150

Lab Sample ID: 1905567

Field Sample ID: G3NW0031

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	93.0	P	40 - 160
USGS O-2060-01	2,4-D-d3	77.8	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	90.7	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	144	P	30 - 160
USGS O-2060-01	Diuron-d6	106	P	30 - 160
USGS O-2060-01	Primidone-d5	107	P	30 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A77060

Included Lab Sample IDs: 1905541, 1905542, 1905543, 1905544, 1905545, 1905546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	101	P/P	90 - 110
O-Phosphate-P	101	101	P/P	90 - 110
O-Phosphate-P	102	102	P/P	90 - 110
O-Phosphate-P	102	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A77064

Included Lab Sample IDs: 1905529, 1905530, 1905531, 1905532, 1905533, 1905534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	99.5	P/P	95 - 105
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77069

Included Lab Sample IDs: 1905538, 1905539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77081

Included Lab Sample IDs: 1905538

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77085

Included Lab Sample IDs: 1905535, 1905536, 1905537, 1905540

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

Reference Method: SM 5310 B-00

Run ID: A77100

Included Lab Sample IDs: 1905535, 1905536, 1905537, 1905538, 1905539, 1905540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	98.4	P/P	90 - 110
Organic Carbon	98.8	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77102

Included Lab Sample IDs: 1905535, 1905536, 1905537, 1905540

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77106

Included Lab Sample IDs: 1905535, 1905536, 1905537, 1905538, 1905539, 1905540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.0	P/P	90 - 110
Total-P	99.0	99.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A77119

Included Lab Sample IDs: 1905529, 1905530, 1905531, 1905532, 1905533, 1905534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A77119

Included Lab Sample IDs: 1905529, 1905530, 1905531, 1905532, 1905533, 1905534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	95.3	96.1	P/P	90 - 110
Fluoride	96.1	95.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77139

Included Lab Sample IDs: 1905539

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77142

Included Lab Sample IDs: 1905538

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77178

Included Lab Sample IDs: 1905540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77179

Included Lab Sample IDs: 1905535, 1905536, 1905537, 1905539

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

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A77208

Included Lab Sample IDs: 1905563, 1905564, 1905565, 1905566, 1905567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.2	78.4	P/P	50 - 150
Acetaminophen	89.8	94.6	P/P	60 - 150
Bentazon	97.2	94.0	P/P	50 - 150
Carbamazepine	103	108	P/P	60 - 150
Diuron	96.0	99.3	P/P	60 - 150
Fenuron	94.6	98.6	P/P	60 - 150
Fluridone	97.3	96.4	P/P	60 - 160
Imidacloprid	96.8	91.1	P/P	60 - 150
Linuron	98.3	91.0	P/P	60 - 150
MCPP	72.8	74.4	P/P	50 - 150
Primidone	91.9	100	P/P	60 - 150
Triclopyr	76.0	76.0	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A77273

Included Lab Sample IDs: 1905565, 1905566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	85.8	P/P	60 - 160
Sucralose	81.1	89.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A77393

Included Lab Sample IDs: 1905563, 1905564, 1905567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	75.0	116	P/P	60 - 160

* 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				5.87	
	Turbidity				8.55	
EPA 350.1 Rev. 2.0	Ammonia-N	104	95.3 98.6			1.51
	Ammonia-N	103	102 101			0.541
	Ammonia-N	103	98.2 98.5			0.248
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	109 110			0.771
	Kjeldahl Nitrogen	101	102 103			0.600
	Kjeldahl Nitrogen	103	107 110			2.73
	Kjeldahl Nitrogen	104	102 102			0.0778
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102 102			0.0
	NO2NO3-N	104	102 100			1.27
	NO2NO3-N	106	108 106			1.00
	NO2NO3-N	108	102 102			0.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 365.1 Rev. 2.0	Total-P	103	104	100		2.11
	Total-P	102	97.3	98.8		1.57
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	94.7	96.7		1.99
	O-Phosphate-P	99.6	97.1	97.6		0.514
EPA 8321B	Sucralose	83.0	82.0	77.5		5.47
	Sucralose	79.0	83.5	82.5		1.14
SM 2320 B-97	Total Alkalinity	103			0.799	
	Total Alkalinity	104			0.286	
SM 2540 D-97	TSS				4.17	
SM 4500 F-C-97	Fluoride	95.4	100	96.3		2.41
	Fluoride	95.4	95.6	93.5		1.46
SM 5310 B-00	Organic Carbon	94.1	99.1	96.2		2.01
	Organic Carbon	96.4	91.3	95.2		3.55
USGS O-2060-01	2,4-D	75.8	72.8	74.8		2.42
	Acetaminophen	42.9	82.7	72.5		13.1
	Bentazon	68.2	56.0	56.0		0.0
	Carbamazepine	118	137	135		1.59
	Diuron	109	117	117		0.135
	Fenuron	105	92.2	64.2		35.9
	Fluridone	108	117	116		1.08
	Imidacloprid	96.7	123	120		2.34
	Linuron	103	121	123		1.83
	MCP	79.6	74.0	78.0		5.26
	Primidone	100	127	119		6.43
	Triclopyr	79.0	72.4	79.8		9.72

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1905529, 1905530, 1905531, 1905532, 1905533, 1905534
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1905535, 1905536, 1905537, 1905538, 1905539, 1905540
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1905535, 1905536, 1905537, 1905538, 1905539, 1905540
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1905535, 1905536, 1905537, 1905538, 1905539, 1905540
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1905535, 1905536, 1905537, 1905538, 1905539, 1905540
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1905541, 1905542, 1905543, 1905544, 1905545, 1905546
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1905563, 1905564, 1905565, 1905566, 1905567
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1905529, 1905530, 1905531, 1905532, 1905533, 1905534
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1905529, 1905530, 1905531, 1905532, 1905533, 1905534
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1905529, 1905530, 1905531, 1905532, 1905533, 1905534
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1905535, 1905536, 1905537, 1905538, 1905539, 1905540
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1905563, 1905564, 1905565, 1905566, 1905567
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1905563, 1905564, 1905565, 1905566, 1905567

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	06/13/2017			06/13/2017 17:34	Blanca Fach	1905529, 1905530, 1905531, 1905532, 1905533, 1905534
EPA 350.1 Rev. 2.0	06/13/2017			06/13/2017	Sofia Elnemr	1905538
	06/13/2017			06/14/2017	Sofia Elnemr	1905535, 1905536, 1905537, 1905540
	06/13/2017			06/15/2017	Sofia Elnemr	1905539
EPA 351.2 Rev. 2.0	06/13/2017	06/14/2017	Adrian Shelby	06/16/2017	Joseph Suarez	1905538
	06/13/2017	06/14/2017	Adrian Shelby	06/19/2017	Joseph Suarez	1905535, 1905536, 1905537, 1905539
	06/13/2017	06/15/2017	Adrian Shelby	06/19/2017	Joseph Suarez	1905540
EPA 353.2 Rev. 2.0	06/13/2017			06/14/2017	Beverly Y. Sanders	1905538, 1905539
	06/13/2017			06/15/2017	Beverly Y. Sanders	1905535, 1905536, 1905537, 1905540
EPA 365.1 Rev. 2.0	06/13/2017	06/14/2017	Vijayalakshmi Reddy	06/15/2017	Lipi Saha	1905535, 1905536, 1905537, 1905538, 1905539, 1905540
EPA 365.1 Rev. 2.0 dissolved	06/13/2017			06/13/2017 15:19	Anthony C. Onicha	1905545
	06/13/2017			06/13/2017 15:30	Anthony C. Onicha	1905541
	06/13/2017			06/13/2017 16:15	Anthony C. Onicha	1905542
	06/13/2017			06/13/2017 16:20	Anthony C. Onicha	1905543
	06/13/2017			06/13/2017 16:21	Anthony C. Onicha	1905544
	06/13/2017			06/13/2017 16:22	Anthony C. Onicha	1905546
EPA 8321B	06/13/2017	06/15/2017	Mohammad Ghaffari	06/21/2017	Mohammad Ghaffari	1905565
	06/13/2017	06/15/2017	Mohammad Ghaffari	06/27/2017	Mohammad Ghaffari	1905563, 1905564
	06/13/2017	06/21/2017	Mohammad Ghaffari	06/22/2017	Mohammad Ghaffari	1905566
	06/13/2017	06/21/2017	Mohammad Ghaffari	06/27/2017	Mohammad Ghaffari	1905567
SM 2320 B-97	06/13/2017			06/14/2017	Dale L. Simmons	1905530, 1905531, 1905532, 1905533
	06/13/2017			06/15/2017	Dale L. Simmons	1905529, 1905534
SM 2540 D-97	06/13/2017			06/14/2017	Yijie Li	1905529, 1905530, 1905531, 1905532, 1905533, 1905534
SM 4500 F-C-97	06/13/2017			06/14/2017	Dale L. Simmons	1905529, 1905530, 1905531, 1905532, 1905533
	06/13/2017			06/15/2017	Dale L. Simmons	1905534
SM 5310 B-00	06/13/2017			06/14/2017	Christopher Armour	1905536, 1905537, 1905538, 1905539
	06/13/2017			06/15/2017	Christopher Armour	1905535, 1905540
USGS O-2060-01	06/13/2017	06/15/2017	Hoor Shaik	06/18/2017	Juyoung Kim	1905563, 1905564, 1905565, 1905566, 1905567