

Chemical Analysis Report

NW-DIST-2017-09-29-01

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

Event Description: **ENR C WBID 49A 722 742 789 712 BLANK DUP**
Request ID: **RQ-2017-09-25-18**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208A
Pensacola, FL 32502-5794
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 17-OCT-2017 15:26



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: Rocky Bayou Mouth

Collection Date/Time: 09/28/2017 11:20

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932780	EPA 180.1 Rev. 2.0	Turbidity	1.5	A	NTU	P332488	
	SM 2320 B-97	Total Alkalinity	57	A	mg CaCO3/L	P332841	
	SM 2540 D-97	TSS	3	IA	mg/L	P332956	
	SM 4500 F-C-97	Fluoride	0.45		mg F/L	P332844	
1932786	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P332822	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	I	mg N/L	P332596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P332772	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P332624	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P332615	
1932792	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332478	

Ref. Method and Comment:

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

Sample Location: Rocky Bayou Mouth

Collection Date/Time: 09/28/2017 11:20

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932816	EPA 8321B	Sucralose**	0.12		ug/L	P332449	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332448	
		Diuron	8.0E-04	U	ug/L	P332448	
		Fenuron	0.0080	U	ug/L	P332448	
		Imidacloprid	0.0020	I	ug/L	P332448	MS
		Bentazon	8.0E-04	U	ug/L	P332448	MS
		Linuron	0.0040	U	ug/L	P332448	
		Acetaminophen**	0.0080	U	ug/L	P332448	
		MCP	0.0020	U	ug/L	P332448	
		Carbamazepine**	4.0E-04	U	ug/L	P332448	
		Triclopyr**	0.0040	U	ug/L	P332448	
		Primidone**	0.0040	U	ug/L	P332448	
		Fluridone**	4.0E-04	U	ug/L	P332448	

Sample Location: Mullet Creek upstream of Hwy 20

Collection Date/Time: 09/28/2017 12:00

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932781	EPA 180.1 Rev. 2.0	Turbidity	0.50		NTU	P332488	
	SM 2320 B-97	Total Alkalinity	2.5		mg CaCO3/L	P332668	
	SM 2540 D-97	TSS	2	I	mg/L	P332954	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P332671	MS
1932787	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P332824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P332596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P332860	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P332620	
	SM 5310 B-00	Organic Carbon	2.5		mg C/L	P332872	

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932793	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P332476	

Sample Location: Mullet Creek upstream of Hwy 20

Collection Date/Time: 09/28/2017 12:00

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932817	EPA 8321B	Sucralose**	0.018	I	ug/L	P332449	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332448	
		Diuron	8.0E-04	U	ug/L	P332448	
		Fenuron	0.0080	U	ug/L	P332448	
		Imidacloprid	0.0062		ug/L	P332448	MS
		Bentazon	8.0E-04	U	ug/L	P332448	MS
		Linuron	0.0040	U	ug/L	P332448	
		Acetaminophen**	0.0080	U	ug/L	P332448	
		MCP	0.0020	U	ug/L	P332448	
		Carbamazepine**	4.0E-04	U	ug/L	P332448	
		Triclopyr**	0.0040	U	ug/L	P332448	
		Primidone**	0.0040	U	ug/L	P332448	
		Fluridone**	4.0E-04	U	ug/L	P332448	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 09/28/2017 12:35

Field ID: G3NW0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932782	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P332488	
	SM 2320 B-97	Total Alkalinity	5.2		mg CaCO3/L	P332668	
	SM 2540 D-97	TSS	2	I	mg/L	P332954	
	SM 4500 F-C-97	Fluoride	0.043	I	mg F/L	P332671	MS
1932788	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P332824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20		mg N/L	P332596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332860	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P332625	
	SM 5310 B-00	Organic Carbon	3.4		mg C/L	P332872	
1932794	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332476	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 09/28/2017 12:35

Field ID: G3NW0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932818	EPA 8321B	Sucralose**	0.010	U	ug/L	P332449	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332448	
		Diuron	8.0E-04	U	ug/L	P332448	
		Fenuron	0.0080	U	ug/L	P332448	
		Imidacloprid	8.0E-04	U	ug/L	P332448	MS
		Bentazon	8.0E-04	U	ug/L	P332448	MS

Field ID: G3NW0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932818	USGS O-2060-01	Linuron	0.0040	U	ug/L	P332448	
		Acetaminophen**	0.0080	U	ug/L	P332448	
		MCP	0.0020	U	ug/L	P332448	
		Carbamazepine**	4.0E-04	U	ug/L	P332448	
		Triclopyr**	0.0040	U	ug/L	P332448	
		Primidone**	0.0040	U	ug/L	P332448	
		Fluridone**	4.0E-04	U	ug/L	P332448	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 09/28/2017 12:40

Field ID: G3NW0101DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932783	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P332488	
	SM 2320 B-97	Total Alkalinity	5.1		mg CaCO3/L	P332668	
	SM 2540 D-97	TSS	3	I	mg/L	P332954	
	SM 4500 F-C-97	Fluoride	0.046	I	mg F/L	P332671	MS
1932789	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P332824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P332596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332860	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P332625	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P332872	
1932795	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332476	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 09/28/2017 12:40

Field ID: G3NW0101DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932819	EPA 8321B	Sucralose**	0.010	U	ug/L	P332449	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332448	
		Diuron	8.0E-04	U	ug/L	P332448	
		Fenuron	0.0080	U	ug/L	P332448	
		Imidacloprid	8.0E-04	U	ug/L	P332448	MS
		Bentazon	8.0E-04	U	ug/L	P332448	MS
		Linuron	0.0040	U	ug/L	P332448	
		Acetaminophen**	0.0080	U	ug/L	P332448	
		MCP	0.0020	U	ug/L	P332448	
		Carbamazepine**	4.0E-04	U	ug/L	P332448	
		Triclopyr**	0.0040	U	ug/L	P332448	
		Primidone**	0.0040	U	ug/L	P332448	
		Fluridone**	4.0E-04	U	ug/L	P332448	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 09/28/2017 12:45

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932784	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P332488	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P332668	
	SM 2540 D-97	TSS	2	U	mg/L	P332954	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P332671	MS
1932790	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P332824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P332596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332860	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P332625	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P332874	
1932796	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332476	

Sample Location: Basin Bayou at Inlet

Collection Date/Time: 09/28/2017 12:45

Field ID: FIELDBLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932820	EPA 8321B	Sucralose**	0.010	U	ug/L	P332449	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P332448	
		Diuron	8.0E-04	U	ug/L	P332448	
		Fenuron	0.0080	U	ug/L	P332448	
		Imidacloprid	8.0E-04	U	ug/L	P332448	MS
		Bentazon	8.0E-04	U	ug/L	P332448	MS
		Linuron	0.0040	U	ug/L	P332448	
		Acetaminophen**	0.0080	U	ug/L	P332448	
		MCP	0.0020	U	ug/L	P332448	
		Carbamazepine**	4.0E-04	U	ug/L	P332448	
		Triclopyr**	0.0040	U	ug/L	P332448	
		Primidone**	0.0040	U	ug/L	P332448	
		Fluridone**	4.0E-04	U	ug/L	P332448	

Sample Location: LaGrange Bayou, Middle

Collection Date/Time: 09/28/2017 13:30

Field ID: G3NW0036

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1932785	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P332488	
	SM 2320 B-97	Total Alkalinity	46		mg CaCO3/L	P332841	
	SM 2540 D-97	TSS	4	I	mg/L	P332956	
	SM 4500 F-C-97	Fluoride	0.33		mg F/L	P332844	
1932791	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P332822	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P332976	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P332772	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P332624	
	SM 5310 B-00	Organic Carbon	4.5		mg C/L	P332615	
1932797	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332478	

Ref. Method and Comment:

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: 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: P332488

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332822

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332824

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332596

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332976

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332772

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332860

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332620

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332624

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332625

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332476

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332478

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

Reference Method: EPA 8321B
Batch ID: P332449

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P332668

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

Reference Method: SM 2320 B-97
Batch ID: P332841

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

Reference Method: SM 2540 D-97
Batch ID: P332954

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P332956

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P332671

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P332844

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P332615

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

Reference Method: SM 5310 B-00
Batch ID: P332872

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

Reference Method: SM 5310 B-00
Batch ID: P332874

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

Reference Method: USGS O-2060-01
Batch ID: P332448

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
MCPD	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: P332822

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: P332824

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 351.2 Rev. 2.0
Batch ID: P332596

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332976

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332772

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332860

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332620

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332624

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332625

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332476

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332478

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P332449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	86.6		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P332668

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

Reference Method: SM 2320 B-97
Batch ID: P332841

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

Reference Method: SM 4500 F-C-97
Batch ID: P332671

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P332844

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P332615

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.7		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P332872

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.7		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P332874

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P332448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	69.5		P	40 - 150
Acetaminophen	126		P	30 - 150
Bentazon	41.3		P	40 - 150
Carbamazepine	124		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P332448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	111		P	40 - 150
Fenuron	115		P	40 - 150
Fluridone	101		P	40 - 150
Imidacloprid	107		P	40 - 160
Linuron	115		P	40 - 150
MCPP	72.8		P	40 - 150
Primidone	107		P	40 - 150
Triclopyr	75.6		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332824

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932787	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932744	Kjeldahl Nitrogen	97.6	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931101	Kjeldahl Nitrogen	98.5	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932473	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932714	NO2NO3-N	106	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932574	Total-P	97.2	97.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332624

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932527	Total-P	94.9	95.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932849	Total-P	99.2	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932850	O-Phosphate-P	93.0	95.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932792	O-Phosphate-P	95.4	97.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P332449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932400	Sucralose	88.4	77.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P332671

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932743	Fluoride	106	106	F/F	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P332844

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932780	Fluoride	95.9	95.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P332615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932411	Organic Carbon	96.0	94.9	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P332872

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932492	Organic Carbon	99.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P332874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932889	Organic Carbon	93.4	94.6	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P332448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1932495	2,4-D	73.9	74.8	P/P	40 - 150
1932495	Acetaminophen	85.1	95.2	P/P	30 - 150
1932495	Bentazon	29.1	30.2	F/F	40 - 150
1932495	Carbamazepine	96.0	91.3	P/P	40 - 150
1932495	Diuron	76.4	69.4	P/P	40 - 150
1932495	Fenuron	90.4	83.0	P/P	40 - 150
1932495	Fluridone	49.3	49.3	P/P	40 - 150
1932495	Imidacloprid	213	192	F/F	40 - 160
1932495	Linuron	97.8	95.8	P/P	40 - 150
1932495	MCCP	59.6	56.8	P/P	40 - 150
1932495	Primidone	109	101	P/P	40 - 150
1932495	Triclopyr	55.5	59.0	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P332488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932780	Turbidity	1.32	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932467	Ammonia-N	0.130	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932787	Ammonia-N	1.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932744	Kjeldahl Nitrogen	4.79	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931101	Kjeldahl Nitrogen	0.104	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932473	NO2NO3-N	0.264	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932714	NO2NO3-N	0.952	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932574	Total-P	0.164	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332624

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932527	Total-P	0.335	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932849	Total-P	3.27	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932850	O-Phosphate-P	2.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932792	O-Phosphate-P	2.07	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P332449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932400	Sucralose	6.88	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P332668

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932743	Total Alkalinity	0.548	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P332841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932780	Total Alkalinity	0.145	Sample	P	0 - 4.8

Reference Method: SM 2540 D-97
Batch ID: P332954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1933515	TSS	9.23	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P332671

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932743	Fluoride	0.492	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P332844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932780	Fluoride	0.480	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P332615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932411	Organic Carbon	0.918	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P332872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932492	Organic Carbon	0.0952	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P332874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932889	Organic Carbon	0.909	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P332448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1932495	2,4-D	0.857	Spike	P	0 - 30
1932495	Acetaminophen	11.2	Spike	P	0 - 30
1932495	Bentazon	3.30	Spike	P	0 - 30
1932495	Carbamazepine	4.90	Spike	P	0 - 30
1932495	Diuron	5.00	Spike	P	0 - 30
1932495	Fenuron	8.51	Spike	P	0 - 30
1932495	Fluridone	0.0367	Spike	P	0 - 30
1932495	Imidacloprid	8.31	Spike	P	0 - 30
1932495	Linuron	1.98	Spike	P	0 - 30
1932495	MCPP	4.71	Spike	P	0 - 30
1932495	Primidone	7.65	Spike	P	0 - 30
1932495	Triclopyr	6.15	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: 1932816
Field Sample ID: G3NW0031

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	94.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	120	P	30 - 160
EPA 8321B	Diuron-d6	86.9	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	77.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	57.9	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	94.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	120	P	30 - 160
USGS O-2060-01	Diuron-d6	86.9	P	30 - 160
USGS O-2060-01	Primidone-d5	116	P	30 - 160
USGS O-2060-01	Sucralose-d6	77.5	P	40 - 160

Lab Sample ID: 1932817
Field Sample ID: G3NW0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	94.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	119	P	30 - 160
EPA 8321B	Diuron-d6	94.3	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1932817

Field Sample ID: G3NW0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	66.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	56.3	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	94.4	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	119	P	30 - 160
USGS O-2060-01	Diuron-d6	94.3	P	30 - 160
USGS O-2060-01	Primidone-d5	101	P	30 - 160
USGS O-2060-01	Sucralose-d6	66.8	P	40 - 160

Lab Sample ID: 1932818

Field Sample ID: G3NW0101

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	90.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	120	P	30 - 160
EPA 8321B	Diuron-d6	87.8	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	65.9	P	40 - 160
USGS O-2060-01	2,4-D-d3	63.1	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	90.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	120	P	30 - 160
USGS O-2060-01	Diuron-d6	87.8	P	30 - 160
USGS O-2060-01	Primidone-d5	104	P	30 - 160
USGS O-2060-01	Sucralose-d6	65.9	P	40 - 160

Lab Sample ID: 1932819

Field Sample ID: G3NW0101DUPLICATE

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	93.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	76.6	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	82.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	54.8	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	93.8	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	111	P	30 - 160
USGS O-2060-01	Diuron-d6	76.6	P	30 - 160
USGS O-2060-01	Primidone-d5	113	P	30 - 160
USGS O-2060-01	Sucralose-d6	82.5	P	40 - 160

Lab Sample ID: 1932820

Field Sample ID: FIELDBLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	128	P	30 - 160
EPA 8321B	Carbamazepine-d10	116	P	30 - 160
EPA 8321B	Diuron-d6	105	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	79.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	64.8	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	128	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	116	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1932820
Field Sample ID: FIELDBLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Diuron-d6	105	P	30 - 160
USGS O-2060-01	Primidone-d5	106	P	30 - 160
USGS O-2060-01	Sucralose-d6	79.4	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A79251

Included Lab Sample IDs: 1932792, 1932793, 1932794, 1932795, 1932796, 1932797

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A79255

Included Lab Sample IDs: 1932780, 1932781, 1932782, 1932783, 1932784, 1932785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	100	P/P	95 - 105

Reference Method: SM 5310 B-00

Run ID: A79302

Included Lab Sample IDs: 1932786, 1932791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A79318

Included Lab Sample IDs: 1932781, 1932782, 1932783, 1932784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	99.4	P/P	90 - 110
Total Alkalinity	98.5	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79318

Included Lab Sample IDs: 1932781, 1932782, 1932783, 1932784

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79342

Included Lab Sample IDs: 1932786, 1932787, 1932788, 1932789, 1932790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.3	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79342

Included Lab Sample IDs: 1932786, 1932787, 1932788, 1932789, 1932790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	96.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79348

Included Lab Sample IDs: 1932786, 1932791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79355

Included Lab Sample IDs: 1932786, 1932787, 1932788, 1932789, 1932790, 1932791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	100	P/P	90 - 110
Total-P	102	98.2	P/P	90 - 110
Total-P	98.2	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79368

Included Lab Sample IDs: 1932786, 1932787, 1932788, 1932789, 1932790, 1932791

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

Reference Method: SM 2320 B-97

Run ID: A79374

Included Lab Sample IDs: 1932780, 1932785

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

Reference Method: SM 4500 F-C-97

Run ID: A79374

Included Lab Sample IDs: 1932780, 1932785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	99.0	P/P	90 - 110
Fluoride	99.5	99.0	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A79377

Included Lab Sample IDs: 1932816, 1932817, 1932818, 1932819, 1932820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	100	P/P	50 - 150
Acetaminophen	104	106	P/P	60 - 150
Bentazon	120	122	P/P	50 - 150
Carbamazepine	109	109	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A79377

Included Lab Sample IDs: 1932816, 1932817, 1932818, 1932819, 1932820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Diuron	102	100	P/P	60 - 150
Fenuron	101	101	P/P	60 - 150
Fluridone	104	104	P/P	60 - 160
Imidacloprid	96.3	99.4	P/P	60 - 150
Linuron	109	107	P/P	60 - 150
MCPP	101	99.0	P/P	50 - 150
Primidone	90.4	93.4	P/P	60 - 150
Triclopyr	97.8	98.8	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79383

Included Lab Sample IDs: 1932787, 1932788, 1932789, 1932790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	102	P/P	90 - 110
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A79389

Included Lab Sample IDs: 1932787, 1932788, 1932789, 1932790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	97.0	P/P	90 - 110
Organic Carbon	97.0	95.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79445

Included Lab Sample IDs: 1932816, 1932817, 1932818, 1932819, 1932820

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	93.1	101	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79459

Included Lab Sample IDs: 1932791

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

* 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				1.32	
EPA 350.1 Rev. 2.0	Ammonia-N	103				0.130

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 350.1 Rev. 2.0	Ammonia-N	100	102	101		1.06
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.4	97.6	102		4.79
	Kjeldahl Nitrogen	102	98.5	98.4		0.104
EPA 353.2 Rev. 2.0	NO2NO3-N	103	104	103		0.264
	NO2NO3-N	104	106	104		0.952
EPA 365.1 Rev. 2.0	Total-P	96.2	97.2	97.1		0.164
	Total-P	99.2	94.9	95.2		0.335
	Total-P	102	99.2	103		3.27
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.7	93.0	95.3		2.44
	O-Phosphate-P	98.8	95.4	97.4		2.07
EPA 8321B	Sucralose	86.6	88.4	77.9		6.88
SM 2320 B-97	Total Alkalinity	102			0.548	
	Total Alkalinity	101			0.145	
SM 2540 D-97	TSS				9.23	
SM 4500 F-C-97	Fluoride	98.3	106	106		0.492
	Fluoride	96.3	95.9	95.1		0.480
SM 5310 B-00	Organic Carbon	96.7	96.0	94.9		0.918
	Organic Carbon	95.7	99.1			0.0952
	Organic Carbon	95.0	93.4	94.6		0.909
USGS O-2060-01	2,4-D	69.5	73.9	74.8		0.857
	Acetaminophen	126	85.1	95.2		11.2
	Bentazon	41.3	29.1	30.2		3.30
	Carbamazepine	124	96.0	91.3		4.90
	Diuron	111	76.4	69.4		5.00
	Fenuron	115	90.4	83.0		8.51
	Fluridone	101	49.3	49.3		0.0367
	Imidacloprid	107	213	192		8.31
	Linuron	115	97.8	95.8		1.98
	MCPP	72.8	59.6	56.8		4.71
	Primidone	107	109	101		7.65
	Triclopyr	75.6	55.5	59.0		6.15

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1932780, 1932781, 1932782, 1932783, 1932784, 1932785
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1932786, 1932787, 1932788, 1932789, 1932790, 1932791
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1932786, 1932787, 1932788, 1932789, 1932790, 1932791
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1932786, 1932787, 1932788, 1932789, 1932790, 1932791
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1932786, 1932787, 1932788, 1932789, 1932790, 1932791
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1932792, 1932793, 1932794, 1932795, 1932796, 1932797
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1932816, 1932817, 1932818, 1932819, 1932820
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1932780, 1932781, 1932782, 1932783, 1932784, 1932785
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1932780, 1932781, 1932782, 1932783, 1932784, 1932785
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1932780, 1932781, 1932782, 1932783, 1932784, 1932785

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1932786, 1932787, 1932788, 1932789, 1932790, 1932791
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1932816, 1932817, 1932818, 1932819, 1932820
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1932816, 1932817, 1932818, 1932819, 1932820

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	09/29/2017			09/29/2017 14:45	DeAsia Armster	1932780, 1932781, 1932782, 1932783, 1932784, 1932785
EPA 350.1 Rev. 2.0	09/29/2017			10/05/2017	Sofia Elnemr	1932786, 1932787, 1932788, 1932789, 1932790, 1932791
EPA 351.2 Rev. 2.0	09/29/2017	10/03/2017	Adrian Shelby	10/04/2017	Tanya Welborn	1932786, 1932787, 1932788, 1932789, 1932790
	09/29/2017	10/09/2017	Adrian Shelby	10/10/2017	Virginia P. Brown	1932791
EPA 353.2 Rev. 2.0	09/29/2017			10/05/2017	Beverly Y. Sanders	1932786, 1932791
	09/29/2017			10/06/2017	Beverly Y. Sanders	1932787, 1932788, 1932789, 1932790
EPA 365.1 Rev. 2.0	09/29/2017	10/03/2017	Sima Feizi	10/05/2017	Lipi Saha	1932786, 1932787, 1932788, 1932789, 1932790, 1932791
EPA 365.1 Rev. 2.0 dissolved	09/29/2017			09/29/2017 15:01	Megan Treadwell	1932792
	09/29/2017			09/29/2017 15:05	Megan Treadwell	1932793
	09/29/2017			09/29/2017 15:06	Megan Treadwell	1932794
	09/29/2017			09/29/2017 15:07	Megan Treadwell	1932795
	09/29/2017			09/29/2017 15:12	Megan Treadwell	1932797
	09/29/2017			09/29/2017 15:13	Megan Treadwell	1932796
EPA 8321B	09/29/2017	10/03/2017	Hoor Shaik	10/06/2017	Juyoung Kim	1932816, 1932817, 1932818, 1932819, 1932820
SM 2320 B-97	09/29/2017			10/04/2017	Dale L. Simmons	1932781, 1932782, 1932783, 1932784
	09/29/2017			10/06/2017	Dale L. Simmons	1932780, 1932785
SM 2540 D-97	09/29/2017			10/04/2017	Yijie Li	1932780, 1932781, 1932782, 1932783, 1932784, 1932785
SM 4500 F-C-97	09/29/2017			10/04/2017	Dale L. Simmons	1932781, 1932782, 1932783, 1932784
	09/29/2017			10/06/2017	Dale L. Simmons	1932780, 1932785
SM 5310 B-00	09/29/2017			10/03/2017	Ping Hua	1932786, 1932791
	09/29/2017			10/05/2017	Ping Hua	1932787, 1932788, 1932789
	09/29/2017			10/06/2017	Ping Hua	1932790
USGS O-2060-01	09/29/2017	10/03/2017	Hoor Shaik	10/07/2017	Julie Michelle Frank	1932816, 1932817, 1932818, 1932819, 1932820