

Chemical Analysis Report

WQ-ASSESS-2017-03-28-01

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

Event Description: **Sand, Sally, Alford, Eight, Chicken, Lafayette Draine**
Request ID: **RQ-2017-03-27-11**
Customer: **WQ-ASSESS**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
Division Of Water Facilities, FL DEP
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
Attn: curtis musson

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 20-APR-2017 12:10

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored 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: Metals, 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: SAND POND MIDDLE

Collection Date/Time: 03/28/2017 08:35

Field ID: G1WA0044_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883910	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P322452	
	EPA 300.0 Rev. 2.1	Chloride	2.1		mg Cl/L	P322951	
		Sulfate	0.43	I	mg SO4/L	P322950	
	SM 2120 B	Color (true)	24		PCU	P322339	
	SM 2320 B-97	Total Alkalinity	0.87	IJ	mg CaCO3/L	P322915	
	SM 2540 C-97	TDS	15	U	mg/L	P322948	
	SM 2540 D-97	TSS	2	U	mg/L	P322698	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P322806	
1883914	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P322423	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P322456	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P322474	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P322555	
	SM 5310 B-00	Organic Carbon	6.5		mg C/L	P322430	
1883918	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P322364	

Ref. Method and Comment:

SM 2320 B-97: The result may be biased high due to background contamination.

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

Sample Location: SALLY WARD SPRING AT WAKULLA PARK DR Collection Date/Time: 03/28/2017 09:30

Field ID: G1WA0021_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883911	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P322452	
	EPA 300.0 Rev. 2.1	Chloride	9.0		mg Cl/L	P322951	
		Sulfate	10		mg SO4/L	P322950	
	SM 2120 B	Color (true)	2.5	U	PCU	P322339	
	SM 2320 B-97	Total Alkalinity	154	A	mg CaCO3/L	P322803	
	SM 2540 C-97	TDS	182	A	mg/L	P322948	
	SM 2540 D-97	TSS	2	U	mg/L	P322698	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P322806	
1883915	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P322423	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.12	I	mg N/L	P322456	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.68		mg N/L	P322474	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P322555	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P322430	
1883919	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.033		mg P/L	P322364	

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: EIGHT MILE POND MIDDLE

Collection Date/Time: 03/28/2017 10:15

Field ID: G1WA0024_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883912	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P322452	
	EPA 300.0 Rev. 2.1	Chloride	3.2		mg Cl/L	P323117	

Field ID: G1WA0024_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883912	EPA 300.0 Rev. 2.1	Sulfate	1.1		mg SO4/L	P323120	
	SM 2120 B	Color (true)	43	A	PCU	P322339	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P322803	
	SM 2540 C-97	TDS	50		mg/L	P322948	
	SM 2540 D-97	TSS	6	I	mg/L	P322698	
	SM 4500 F-C-97	Fluoride	0.088	I	mg F/L	P322806	
1883916	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P322423	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P322456	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P322474	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P322555	
	SM 5310 B-00	Organic Carbon	9.3		mg C/L	P322430	
1883920	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.065		mg P/L	P322364	

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: CHICKEN BRANCH AT OLD PLANK RD

Collection Date/Time: 03/28/2017 11:10

Field ID: G1WA0031_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883913	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P322452	
	EPA 300.0 Rev. 2.1	Chloride	6.0		mg Cl/L	P322951	
		Sulfate	11		mg SO4/L	P322950	
	SM 2120 B	Color (true)	13		PCU	P322339	
	SM 2320 B-97	Total Alkalinity	134		mg CaCO3/L	P322803	
	SM 2540 C-97	TDS	165		mg/L	P322948	
	SM 2540 D-97	TSS	3	I	mg/L	P322698	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P322806	
1883917	EPA 350.1 Rev. 2.0	Ammonia-N	0.044		mg N/L	P322423	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P322456	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P322474	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P322555	
	SM 5310 B-00	Organic Carbon	1.8		mg C/L	P322430	
1883921	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.033		mg P/L	P322364	

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: LAKE LAFAYETTE DRAIN 250 METERS
DOWNSTREAM OF WEEMS RD

Collection Date/Time: 03/28/2017 12:20

Field ID: G1WA0007_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883922	EPA 180.1 Rev. 2.0	Turbidity	1.6	A	NTU	P322453	
	EPA 300.0 Rev. 2.1	Chloride	5.8		mg Cl/L	P323117	
		Sulfate	26		mg SO4/L	P323120	
	SM 2120 B	Color (true)	8.8		PCU	P322339	
	SM 2320 B-97	Total Alkalinity	27		mg CaCO3/L	P322803	

Field ID: G1WA0007_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883922	SM 2540 C-97	TDS	71		mg/L	P322948	
	SM 2540 D-97	TSS	2	U	mg/L	P322698	
	SM 4500 F-C-97	Fluoride	0.069	I	mg F/L	P322806	
1883923	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P322423	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P322456	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P322474	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P322555	
	SM 5310 B-00	Organic Carbon	2.9		mg C/L	P322430	
1883924	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P322364	
1883935	EPA 200.7 Rev. 4.4	Calcium	15.0		mg/L	P322485	
		Iron	130		ug/L	P322485	
		Magnesium	4.72		mg/L	P322485	
		Potassium	0.91	I	mg/L	P322485	
		Sodium	3.3		mg/L	P322485	
		Zinc	5.0	U	ug/L	P322485	
	EPA 200.8 Rev. 5.4	Arsenic	0.37		ug/L	P322485	
		Cadmium	0.020	U	ug/L	P322485	
		Chromium	0.40	U	ug/L	P322485	
		Copper	0.40	I	ug/L	P322485	
		Lead	0.072	I	ug/L	P322485	
		Nickel	0.28	I	ug/L	P322485	
		Silver	0.010	U	ug/L	P322485	

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: LAKE LAFAYETTE DRAIN 250 METERS
DOWNSTREAM OF WEEMS RD**

Collection Date/Time: 03/28/2017 12:20

Field ID: G1WA0007_03282017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1883934	EPA 8321B	Sucralose**	0.056		ug/L	P322307	
	USGS O-2060-01	2,4-D	0.014	I	ug/L	P322308	
		Diuron	0.0040	U	ug/L	P322308	MS
		Fenuron	0.0080	U	ug/L	P322308	
		2,4,5-T	0.0040	U	ug/L	P322308	
		Acifluorfen	0.010	U	ug/L	P322308	RPD
		Imidacloprid	0.0049	I	ug/L	P322308	
		Bentazon	0.0064	I	ug/L	P322308	MS
		Linuron	0.0040	U	ug/L	P322308	
		Acetaminophen**	0.010	U	ug/L	P322308	
		Carbamazepine**	4.0E-04	U	ug/L	P322308	
		Silvex	0.0040	U	ug/L	P322308	
		Primidone**	0.0080	U	ug/L	P322308	
		Fluridone**	0.0014	I	ug/L	P322308	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P322452

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P322453

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P322485

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P322485

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322950

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322951

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323117

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323120

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P322423

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322456

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322474

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322555

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322364

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

Reference Method: EPA 8321B
Batch ID: P322307

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P322339

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P322803

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
 Batch ID: P322915

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

Reference Method: SM 2540 C-97
 Batch ID: P322948

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
 Batch ID: P322698

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
 Batch ID: P322806

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
 Batch ID: P322430

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

Reference Method: USGS O-2060-01
 Batch ID: P322308

Component	Result	Code	Units
2,4,5-T	0.0040	U	ug/L
2,4-D	0.0040	U	ug/L
Acetaminophen	0.010	U	ug/L
Acifluorfen	0.010	U	ug/L
Bentazon	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
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
Primidone	0.0080	U	ug/L
Silvex	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P322485

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

Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P322485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	94.8		P	85 - 115
Iron	107		P	85 - 115
Magnesium	94.9		P	85 - 115
Potassium	102		P	85 - 115
Sodium	103		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P322485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	98.3		P	85 - 115
Chromium	97.9		P	85 - 115
Copper	99.1		P	85 - 115
Lead	102		P	85 - 115
Nickel	102		P	85 - 115
Silver	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P322950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P322951

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P323117

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P323120

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	94.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P322423

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322456

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322474

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322555

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P322307

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	88.9		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P322803

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

Reference Method: SM 2320 B-97
Batch ID: P322915

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

Reference Method: SM 4500 F-C-97
Batch ID: P322806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P322430

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.9		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01

Batch ID: P322308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	80.8		P	40 - 140
2,4-D	110		P	40 - 140
Acetaminophen	94.4		P	40 - 140
Acifluorfen	138		P	40 - 140
Bentazon	52.4		P	40 - 140
Carbamazepine	98.0		P	40 - 140
Diuron	63.6		P	40 - 140
Fenuron	92.8		P	40 - 140
Fluridone	104		P	40 - 140
Imidacloprid	66.0		P	40 - 160
Linuron	88.8		P	40 - 140
Primidone	79.6		P	40 - 140
Silvex	76.4		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P322485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883509	Calcium	101		P	80 - 120
1883509	Iron	110		P	80 - 120
1883509	Magnesium	105		P	80 - 120
1883509	Potassium	103		P	80 - 120
1883509	Sodium	102		P	80 - 120
1883509	Zinc	102		P	80 - 120
1883935	Calcium	104		P	80 - 120
1883935	Iron	108	107	P/P	80 - 120
1883935	Magnesium	104		P	80 - 120
1883935	Potassium	101	99.5	P/P	80 - 120
1883935	Sodium	102	102	P/P	80 - 120
1883935	Zinc	98.1	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P322485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883509	Arsenic	102		P	80 - 120
1883509	Cadmium	102		P	80 - 120
1883509	Chromium	99.2		P	80 - 120
1883509	Copper	97.4		P	80 - 120
1883509	Lead	104		P	80 - 120
1883509	Nickel	97.2		P	80 - 120
1883509	Silver	104		P	80 - 120
1883935	Arsenic	95.4	97.6	P/P	80 - 120
1883935	Cadmium	94.0	92.9	P/P	80 - 120
1883935	Chromium	93.5	95.3	P/P	80 - 120
1883935	Copper	90.9	92.2	P/P	80 - 120
1883935	Lead	97.5	98.4	P/P	80 - 120
1883935	Nickel	91.4	93.9	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P322485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883935	Silver	101	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883759	Sulfate	99.4		P	90 - 110
1884006	Sulfate	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883759	Chloride	99.8		P	90 - 110
1884006	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323117

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883912	Chloride	98.7		P	90 - 110
1884041	Chloride	98.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323120

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883912	Sulfate	94.3		P	90 - 110
1884041	Sulfate	94.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P322423

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883914	Ammonia-N	107	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883914	Kjeldahl Nitrogen	99.2	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322474

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883916	NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322555

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P322555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883923	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P322364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883918	O-Phosphate-P	98.1	97.9	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P322307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883895	Sucralose	113	115	P/P	40 - 140

Reference Method: SM 4500 F-C-97
 Batch ID: P322806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883911	Fluoride	102	103	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P322430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883696	Organic Carbon	105		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P322308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1883897	2,4,5-T	82.0	80.8	P/P	40 - 140
1883897	2,4-D	130	128	P/P	40 - 140
1883897	Acetaminophen	52.8	49.2	P/P	40 - 140
1883897	Acifluorfen	41.2	67.2	P/P	40 - 140
1883897	Bentazon	153	175	F/F	40 - 140
1883897	Carbamazepine	49.6	45.2	P/P	40 - 140
1883897	Diuron	40.8	37.6	P/F	40 - 140
1883897	Fenuron	48.8	42.8	P/P	40 - 140
1883897	Fluridone	59.9	47.9	P/P	40 - 140
1883897	Imidacloprid	96.4	79.2	P/P	40 - 160
1883897	Linuron	52.4	60.0	P/P	40 - 140
1883897	Primidone	43.2	40.4	P/P	40 - 140
1883897	Silvex	124	132	P/P	40 - 140

Quality Assurance Report Precision

Quality Assurance Report

Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P322452

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883857	Turbidity	4.42	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P322453

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883922	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P322485

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883935	Calcium	1.14	Spike	P	0 - 20
1883935	Iron	1.25	Spike	P	0 - 20
1883935	Magnesium	0.386	Spike	P	0 - 20
1883935	Potassium	1.20	Spike	P	0 - 20
1883935	Sodium	0.167	Spike	P	0 - 20
1883935	Zinc	2.41	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P322485

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883935	Arsenic	2.29	Spike	P	0 - 20
1883935	Cadmium	1.10	Spike	P	0 - 20
1883935	Chromium	1.94	Spike	P	0 - 20
1883935	Copper	1.41	Spike	P	0 - 20
1883935	Lead	0.972	Spike	P	0 - 20
1883935	Nickel	2.64	Spike	P	0 - 20
1883935	Silver	1.41	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P322950

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883759	Sulfate	4.25	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P322951

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883759	Chloride	0.00432	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884041	Chloride	0.279	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884041	Sulfate	0.174	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P322423

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883914	Ammonia-N	2.76	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883914	Kjeldahl Nitrogen	3.78	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322474

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883916	NO2NO3-N	0.501	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883923	Total-P	1.96	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883918	O-Phosphate-P	0.204	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P322307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883895	Sucralose	1.55	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P322339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883912	Color (true)	0.599	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P322803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883911	Total Alkalinity	3.47	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
 Batch ID: P322915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884162	Total Alkalinity	0.905	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
 Batch ID: P322948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883911	TDS	1.65	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P322806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883911	Fluoride	0.477	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P322430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883696	Organic Carbon	1.23	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P322308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883897	2,4,5-T	1.47	Spike	P	0 - 30
1883897	2,4-D	1.86	Spike	P	0 - 30
1883897	Acetaminophen	7.06	Spike	P	0 - 30
1883897	Acifluorfen	48.0	Spike	F	0 - 30
1883897	Bentazon	10.1	Spike	P	0 - 30
1883897	Carbamazepine	9.28	Spike	P	0 - 30
1883897	Diuron	8.16	Spike	P	0 - 30
1883897	Fenuron	13.1	Spike	P	0 - 30
1883897	Fluridone	22.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P322308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1883897	Imidacloprid	19.6	Spike	P	0 - 30
1883897	Linuron	13.5	Spike	P	0 - 30
1883897	Primidone	6.70	Spike	P	0 - 30
1883897	Silvex	6.27	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: 1883934
Field Sample ID: G1WA0007_03282017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	95.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	92.8	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	68.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	59.6	P	40 - 160
USGS O-2060-01	Diuron-d6	56.4	P	40 - 150
USGS O-2060-01	Primidone-d5	108	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A75416
Included Lab Sample IDs: 1883910, 1883911, 1883912, 1883913, 1883922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.8	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75426
Included Lab Sample IDs: 1883918, 1883919, 1883920, 1883921, 1883924

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	97.3	P/P	90 - 110
O-Phosphate-P	99.0	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75437
Included Lab Sample IDs: 1883914, 1883915, 1883916, 1883917, 1883923

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A75441

Included Lab Sample IDs: 1883914, 1883915, 1883916, 1883917, 1883923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	95.9	P/P	90 - 110
Organic Carbon	95.9	96.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75454

Included Lab Sample IDs: 1883910, 1883911, 1883912, 1883913, 1883922

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

Reference Method: EPA 8321B

Run ID: A75457

Included Lab Sample IDs: 1883934

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75463

Included Lab Sample IDs: 1883914, 1883915, 1883916, 1883917, 1883923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	97.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75489

Included Lab Sample IDs: 1883914, 1883915, 1883916, 1883917, 1883923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	100	P/P	90 - 110
Kjeldahl Nitrogen	98.0	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75523

Included Lab Sample IDs: 1883916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	107	106	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A75525

Included Lab Sample IDs: 1883935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	98.4	98.4	P/P	90 - 110
Zinc	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75528

Included Lab Sample IDs: 1883914, 1883915, 1883917, 1883923

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A75535

Included Lab Sample IDs: 1883935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	99.2	P/P	90 - 110
Cadmium	97.8	96.0	P/P	90 - 110
Chromium	98.4	97.0	P/P	90 - 110
Copper	99.2	99.8	P/P	90 - 110
Lead	101	99.3	P/P	90 - 110
Nickel	99.8	101	P/P	90 - 110
Silver	102	101	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A75578

Included Lab Sample IDs: 1883911, 1883912, 1883913, 1883922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	107	P/P	90 - 110
Total Alkalinity	107	105	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A75578

Included Lab Sample IDs: 1883910, 1883911, 1883912, 1883913, 1883922

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

Reference Method: SM 2320 B-97

Run ID: A75625

Included Lab Sample IDs: 1883910

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75640

Included Lab Sample IDs: 1883910, 1883911, 1883913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	99.2	P/P	90 - 110
Sulfate	93.8	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01
 Run ID: A75654
 Included Lab Sample IDs: 1883934

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	111	106	P/P	60 - 150
Carbamazepine	120	117	P/P	60 - 150
Diuron	92.8	94.8	P/P	60 - 150
Fenuron	111	112	P/P	60 - 150
Fluridone	105	109	P/P	60 - 150
Imidacloprid	96.8	96.4	P/P	60 - 150
Linuron	98.8	97.6	P/P	60 - 150
Primidone	135	119	P/P	60 - 150

Reference Method: USGS O-2060-01
 Run ID: A75705
 Included Lab Sample IDs: 1883934

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	94.2	97.8	P/P	50 - 150
2,4-D	132	136	P/P	50 - 150
Acifluorfen	117	106	P/P	50 - 150
Bentazon	89.8	75.0	P/P	50 - 150
Silvex	86.8	80.0	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1
 Run ID: A75723
 Included Lab Sample IDs: 1883912, 1883922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.3	98.9	P/P	90 - 110
Chloride	98.9	97.9	P/P	90 - 110
Sulfate	94.6	97.2	P/P	90 - 110
Sulfate	97.2	93.7	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			Precision	
			LCS			SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					4.42	
	Turbidity					0.0	
EPA 200.7 Rev. 4.4	Calcium	94.8	101	104			1.14
	Iron	107	110	108	107		1.25
	Magnesium	94.9	105	104			0.386
	Potassium	102	103	101	99.5		1.20
	Sodium	103	102	102	102		0.167
	Zinc	101	102	98.1	100		2.41
EPA 200.8 Rev. 5.4	Arsenic	102	102	95.4	97.6		2.29
	Cadmium	98.3	94.0	92.9	102		1.10
	Chromium	97.9	99.2	93.5	95.3		1.94

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 200.8 Rev. 5.4	Copper	99.1	97.4	90.9	92.2		1.41
	Lead	102	104	97.5	98.4		0.972
	Nickel	102	97.2	91.4	93.9		2.64
	Silver	104	104	101	102		1.41
EPA 300.0 Rev. 2.1	Chloride	102	99.8	100		0.0043	
	Chloride	96.6	98.2	98.7		0.279	
	Sulfate	99.1	99.4	97.7		4.25	
	Sulfate	94.9	94.4	94.3		0.174	
EPA 350.1 Rev. 2.0	Ammonia-N	101	107	104			2.76
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.7	99.2	104			3.78
EPA 353.2 Rev. 2.0	NO2NO3-N	100	100	99.5			0.501
EPA 365.1 Rev. 2.0	Total-P	104	104	106			1.96
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	98.1	97.9			0.204
EPA 8321B	Sucralose	88.9	113	115			1.55
SM 2120 B	Color (true)					0.599	
SM 2320 B-97	Total Alkalinity	104				3.47	
	Total Alkalinity	104				0.905	
SM 2540 C-97	TDS					1.65	
SM 4500 F-C-97	Fluoride	100	102	103			0.477
SM 5310 B-00	Organic Carbon	97.9	105				1.23
USGS O-2060-01	2,4,5-T	80.8	82.0	80.8			1.47
	2,4-D	110	130	128			1.86
	Acetaminophen	94.4	52.8	49.2			7.06
	Acifluorfen	138	41.2	67.2			48.0
	Bentazon	52.4	153	175			10.1
	Carbamazepine	98.0	49.6	45.2			9.28
	Diuron	63.6	40.8	37.6			8.16
	Fenuron	92.8	48.8	42.8			13.1
	Fluridone	104	59.9	47.9			22.1
	Imidacloprid	66.0	96.4	79.2			19.6
	Linuron	88.8	52.4	60.0			13.5
	Primidone	79.6	43.2	40.4			6.70
	Silvex	76.4	124	132			6.27

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1883910, 1883911, 1883912, 1883913, 1883922
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1883935
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1883935
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1883910, 1883911, 1883912, 1883913, 1883922
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1883910, 1883911, 1883912, 1883913, 1883922
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1883914, 1883915, 1883916, 1883917, 1883923
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1883914, 1883915, 1883916, 1883917, 1883923
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1883914, 1883915, 1883916, 1883917, 1883923
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1883914, 1883915, 1883916, 1883917, 1883923

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1883918, 1883919, 1883920, 1883921, 1883924
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1883934
SM 2120 B / E31780	True Color measured at 450 nm	1883910, 1883911, 1883912, 1883913, 1883922
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1883910, 1883911, 1883912, 1883913, 1883922
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1883910, 1883911, 1883912, 1883913, 1883922
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1883910, 1883911, 1883912, 1883913, 1883922
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1883910, 1883911, 1883912, 1883913, 1883922
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1883914, 1883915, 1883916, 1883917, 1883923
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1883934
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1883934

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	03/28/2017			03/28/2017 16:08	Blanca Fach	1883910, 1883911, 1883912, 1883913, 1883922
EPA 200.7 Rev. 4.4	03/28/2017	03/30/2017	Elliott D. Healy	03/31/2017	Martin Acosta	1883935
EPA 200.8 Rev. 5.4	03/28/2017	03/30/2017	Elliott D. Healy	04/03/2017	Betina Topolski	1883935
EPA 300.0 Rev. 2.1	03/28/2017			04/07/2017	Ping Hua	1883910, 1883911, 1883913
	03/28/2017			04/10/2017	Ping Hua	1883912, 1883922
EPA 350.1 Rev. 2.0	03/28/2017			03/29/2017	Julie Michelle Frank	1883914, 1883915, 1883916, 1883917, 1883923
EPA 351.2 Rev. 2.0	03/28/2017	03/30/2017	Adrian Shelby	03/31/2017	Joseph Suarez	1883914, 1883915, 1883916, 1883917, 1883923
EPA 353.2 Rev. 2.0	03/28/2017			03/30/2017	Beverly Y. Sanders	1883914, 1883915, 1883916, 1883917, 1883923
EPA 365.1 Rev. 2.0	03/28/2017	03/31/2017	Adrian Shelby	04/03/2017	Lipi Saha	1883914, 1883915, 1883916, 1883917, 1883923
EPA 365.1 Rev. 2.0 dissolved	03/28/2017			03/28/2017 16:19	Virginia P. Brown	1883918
	03/28/2017			03/28/2017 16:33	Virginia P. Brown	1883919, 1883920
	03/28/2017			03/28/2017 16:34	Virginia P. Brown	1883921
	03/28/2017			03/28/2017 16:35	Virginia P. Brown	1883924
EPA 8321B	03/28/2017	03/29/2017	Mohammad Ghaffari	03/29/2017	Mohammad Ghaffari	1883934
SM 2120 B	03/28/2017			03/28/2017 17:10	Julie Michelle Frank	1883910
	03/28/2017			03/28/2017 17:11	Julie Michelle Frank	1883911
	03/28/2017			03/28/2017 17:12	Julie Michelle Frank	1883912
	03/28/2017			03/28/2017 17:13	Julie Michelle Frank	1883913
	03/28/2017			03/28/2017 17:14	Julie Michelle Frank	1883922
SM 2320 B-97	03/28/2017			04/05/2017	Dale L. Simmons	1883910, 1883911, 1883912, 1883913, 1883922
SM 2540 C-97	03/28/2017			03/30/2017	Sima Feizi	1883910, 1883911, 1883912, 1883913, 1883922
SM 2540 D-97	03/28/2017			03/30/2017	Sima Feizi	1883910, 1883911, 1883912, 1883913, 1883922
SM 4500 F-C-97	03/28/2017			04/05/2017	Dale L. Simmons	1883910, 1883911, 1883912, 1883913, 1883922
SM 5310 B-00	03/28/2017			03/29/2017	Julie Michelle Frank	1883914, 1883915, 1883916, 1883917, 1883923
USGS O-2060-01	03/28/2017	03/30/2017	Hoor Shaik	04/07/2017	Juyoung Kim	1883934
	03/28/2017	03/30/2017	Hoor Shaik	04/11/2017	Juyoung Kim	1883934