

Chemical Analysis Report

NE-DIST-2021-12-21-01

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

Event Description: **Suwannee Spring 2021**
Request ID: **RQ-2021-12-20-29**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 18-JAN-2022 09:41



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 by the Florida Department of Health Environmental Laboratory Certification Program 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: Trail Springs (Spring Vent)

Collection Date/Time: 12/20/2021 11:30

Field ID: 22051007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2296480	EPA 180.1 Rev. 2.0	Turbidity	0.30		NTU	P407776	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P407903	
		Sulfate	32		mg SO4/L	P407905	
		Color (true)	6.9		PCU	P407774	
	SM 2320 B-2011	Total Alkalinity	164		mg CaCO3/L	P407987	
	SM 2540 C-2011	TDS	257		mg/L	P407915	
	SM 2540 D-2011	TSS	2	U	mg/L	P407819	
	SM 4500 F-C-2011	Fluoride	0.071	I	mg F/L	P407994	
2296481	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P408071	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P408017	
	EPA 353.2 Rev. 2.0	NO2NO3-N	7.7		mg N/L	P407883	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P408002	MS
	SM 5310 B-2011	Organic Carbon	1.1		mg C/L	P408266	
2296482	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.059		mg P/L	P407770	
2296487	EPA 8276	Chlordane	2.7	U	ng/L	P407980	
		Toxaphene	16	U	ng/L	P407980	
2296489	EPA 200.7 Rev. 4.4	Barium	10.2		ug/L	P407790	
		Calcium	79.6		mg/L	P407790	
		Iron	30	U	ug/L	P407790	
		Magnesium	6.98		mg/L	P407790	
		Manganese	2.2	I	ug/L	P407790	
		Potassium	8.7		mg/L	P407790	
		Sodium	6.7		mg/L	P407790	
		Zinc	5.9	I	ug/L	P407790	
		Aluminum	14	I	ug/L	P407790	
		Antimony	0.050	U	ug/L	P407790	
		Arsenic	0.51		ug/L	P407790	
		Beryllium	0.010	U	ug/L	P407790	
		Boron**	20.7		ug/L	P407790	
	EPA 200.8 Rev. 5.4	Cadmium	0.057	I	ug/L	P407790	
		Chromium	0.50	I	ug/L	P407790	
		Copper	0.40	U	ug/L	P407790	
		Lead	0.20	U	ug/L	P407790	
		Nickel	0.50	U	ug/L	P407790	
		Selenium	0.70	I	ug/L	P407790	
		Silver	0.010	U	ug/L	P407790	
		Thallium	0.13	I	ug/L	P407790	
		Hardness	228		mg/L	P407790	
	SM 2340B	Hardness	228		mg/L	P407790	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Twin Spring at Vent

Collection Date/Time: 12/20/2021 13:25

Field ID: G1NE0943

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2296488	EPA 8321B	2,4-D	0.0020	U	ug/L	P407753	
		Acesulfame K	0.10	UJ	ug/L	P407735	MS
		AMPA	0.10	U	ug/L	P407735	
		2,4,5-T	0.0040	U	ug/L	P407753	
		Acetaminophen	0.0080	U	ug/L	P407753	
		Endothall	0.25	U	ug/L	P407735	
		Acetamiprid	0.0020	U	ug/L	P407753	
		Glufosinate	0.10	U	ug/L	P407735	
		Glyphosate	0.10	U	ug/L	P407735	
		Afidopyropen	0.0020	U	ug/L	P407753	RPD
		Sucralose	0.010	U	ug/L	P407735	
		Bentazon	8.0E-04	U	ug/L	P407753	
		Benzovindiflupyr	0.0020	U	ug/L	P407753	
		Carbamazepine	8.0E-04	U	ug/L	P407753	
		Clothianidin	0.0024	I	ug/L	P407753	
		Dinotefuran	0.0020	U	ug/L	P407753	
		Diuron	0.0020	U	ug/L	P407753	
		Fenuron	0.016	U	ug/L	P407753	
		Fluridone	8.0E-04	U	ug/L	P407753	
		Imazapyr	0.0040	U	ug/L	P407753	
		Hydrocodone	0.0020	U	ug/L	P407753	
		Ibuprofen	0.020	U	ug/L	P407753	
		Imidacloprid	0.0020	U	ug/L	P407753	
		Linuron	0.0040	U	ug/L	P407753	
		Mandestrobin	0.0020	U	ug/L	P407753	
		MCPP	0.0040	U	ug/L	P407753	
		Naproxen	0.0080	U	ug/L	P407753	
		Primidone	0.0040	U	ug/L	P407753	RPD
		Pyraclostrobin	0.0020	U	ug/L	P407753	
		Silvex	0.0040	U	ug/L	P407753	
		Thiamethoxam	0.0020	U	ug/L	P407753	
		Tolfenpyrad	0.0020	U	ug/L	P407753	
		Triclopyr	0.0040	U	ug/L	P407753	

Ref. Method and Comment:
EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P407776

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P407790

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/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: P407790

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407903

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407905

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408071

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408017

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P407883

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408002

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P407770

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

Reference Method: EPA 8276
Batch ID: P407980

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B
Batch ID: P407735

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P407753

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P407753

Component	Result	Code	Units
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011

Batch ID: P407774

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P407987

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

Reference Method: SM 2540 C-2011

Batch ID: P407915

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P407819

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P407994

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P408266

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P407790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	107		P	85 - 115
Iron	108		P	85 - 115
Magnesium	107		P	85 - 115
Manganese	102		P	85 - 115
Potassium	106		P	85 - 115
Sodium	105		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P407790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	97.6		P	85 - 115
Boron	98.6		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	103		P	85 - 115
Copper	102		P	85 - 115
Lead	98.2		P	85 - 115
Nickel	104		P	85 - 115
Selenium	104		P	85 - 115
Silver	107		P	85 - 115
Thallium	99.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407903

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408071

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	105		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P407883

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408002

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P407770

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

Reference Method: EPA 8276

Batch ID: P407980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	94.4	76.7	P/P	56 - 117
Toxaphene	92.8	73.8	P/P	45 - 116

Reference Method: EPA 8321B

Batch ID: P407735

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	140		P	40 - 160
AMPA	129		P	40 - 160
Endothall	86.1		P	40 - 150
Glufosinate	134		P	40 - 160
Glyphosate	124		P	40 - 160
Sucralose	96.2		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P407753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	98.4		P	40 - 150
2,4,5-T	92.0		P	40 - 150
Acetaminophen	79.0		P	30 - 150
Acetamiprid	75.0		P	40 - 150
Afidopyropen	40.3		P	40 - 150
Bentazon	104		P	30 - 150
Benzovindiflupyr	83.7		P	40 - 150
Carbamazepine	80.0		P	40 - 150
Clothianidin	81.4		P	40 - 150
Dinotefuran	72.9		P	40 - 150
Diuron	81.5		P	40 - 150
Fenuron	79.8		P	40 - 150
Fluridone	76.5		P	40 - 150
Hydrocodone	92.6		P	40 - 150
Ibuprofen	110		P	40 - 150
Imazapyr	86.0		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P407753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	96.9		P	40 - 150
Linuron	81.2		P	40 - 150
Mandestrobin	72.9		P	40 - 150
MCPP	104		P	40 - 150
Naproxen	47.1		P	40 - 150
Primidone	99.5		P	40 - 150
Pyraclostrobin	70.1		P	40 - 150
Silvex	105		P	40 - 150
Thiamethoxam	74.8		P	40 - 150
Tolfenpyrad	33.9		P	30 - 150
Triclopyr	96.6		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P407774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	90 - 110

Reference Method: SM 2320 B-2011

Batch ID: P407987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.9		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P407994

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P408266

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P407790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296447	Barium	99.4		P	80 - 120
2296447	Calcium	98.8		P	80 - 120
2296447	Iron	104		P	80 - 120
2296447	Magnesium	99.2		P	80 - 120
2296447	Manganese	98.8		P	80 - 120
2296447	Potassium	103		P	80 - 120
2296447	Sodium	99.5		P	80 - 120
2296447	Zinc	102		P	80 - 120
2296531	Barium	101	101	P/P	80 - 120
2296531	Calcium	99.7	103	P/P	80 - 120
2296531	Iron	103	106	P/P	80 - 120
2296531	Magnesium	100	105	P/P	80 - 120
2296531	Manganese	101	101	P/P	80 - 120
2296531	Potassium	109	111	P/P	80 - 120
2296531	Sodium	104	103	P/P	80 - 120
2296531	Zinc	104	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P407790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296447	Aluminum	104		P	80 - 120
2296447	Antimony	105		P	80 - 120
2296447	Arsenic	102		P	80 - 120
2296447	Beryllium	95.3		P	80 - 120
2296447	Boron	103		P	80 - 120
2296447	Cadmium	104		P	80 - 120
2296447	Chromium	105		P	80 - 120
2296447	Copper	101		P	80 - 120
2296447	Lead	98.6		P	80 - 120
2296447	Nickel	101		P	80 - 120
2296447	Selenium	101		P	80 - 120
2296447	Silver	107		P	80 - 120
2296447	Thallium	101		P	80 - 120
2296531	Aluminum	105	103	P/P	80 - 120
2296531	Antimony	103	103	P/P	80 - 120
2296531	Arsenic	103	102	P/P	80 - 120
2296531	Beryllium	96.6	96.4	P/P	80 - 120
2296531	Boron	103	101	P/P	80 - 120
2296531	Cadmium	102	102	P/P	80 - 120
2296531	Chromium	104	104	P/P	80 - 120
2296531	Copper	106	105	P/P	80 - 120
2296531	Lead	101	100	P/P	80 - 120
2296531	Nickel	105	105	P/P	80 - 120
2296531	Selenium	103	104	P/P	80 - 120
2296531	Silver	107	107	P/P	80 - 120
2296531	Thallium	102	103	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P407903

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407903

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2295799	Chloride	96.9		P	90 - 110
2296187	Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P407905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2295799	Sulfate	96.7		P	90 - 110
2296187	Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296481	Ammonia-N	93.8	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2295142	Kjeldahl Nitrogen	106	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P407883

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296368	NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296510	Total-P	110	113	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P407770

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296482	O-Phosphate-P	98.3	98.6	P/P	90 - 110

Reference Method: EPA 8276
Batch ID: P407980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296487	Chlordane	79.8	84.6	P/P	47 - 128
2296487	Toxaphene	83.8	89.3	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P407735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296488	Acesulfame K	227	230	F/F	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P407735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296488	AMPA	120	119	P/P	40 - 160
2296488	Endothall	98.5	98.0	P/P	40 - 150
2296488	Glufosinate	121	122	P/P	40 - 160
2296488	Glyphosate	109	110	P/P	40 - 160
2296488	Sucralose	97.8	99.6	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P407753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296200	2,4-D	91.0	104	P/P	40 - 150
2296200	2,4,5-T	113	115	P/P	40 - 150
2296200	Acetaminophen	86.7	99.7	P/P	30 - 150
2296200	Acetamiprid	73.6	85.8	P/P	40 - 150
2296200	Afidopyropen	45.1	68.4	P/P	40 - 150
2296200	Bentazon	95.9	98.0	P/P	30 - 150
2296200	Benzovindiflupyr	80.1	67.3	P/P	40 - 150
2296200	Carbamazepine	87.2	82.7	P/P	40 - 150
2296200	Clothianidin	94.2	86.0	P/P	40 - 150
2296200	Dinotefuran	79.9	93.9	P/P	40 - 150
2296200	Diuron	80.6	75.4	P/P	40 - 150
2296200	Fenuron	75.4	77.5	P/P	40 - 150
2296200	Fluridone	73.1	69.9	P/P	40 - 150
2296200	Hydrocodone	91.8	94.3	P/P	40 - 150
2296200	Ibuprofen	104	81.1	P/P	40 - 150
2296200	Imazapyr	115	123	P/P	40 - 150
2296200	Imidacloprid	107	110	P/P	40 - 150
2296200	Linuron	50.4	62.2	P/P	40 - 150
2296200	Mandestrobin	85.6	79.6	P/P	40 - 150
2296200	MCPP	110	108	P/P	40 - 150
2296200	Naproxen	54.3	44.0	P/P	40 - 150
2296200	Primidone	64.9	128	P/P	40 - 150
2296200	Pyraclostrobin	74.4	64.2	P/P	40 - 150
2296200	Silvex	102	91.1	P/P	40 - 150
2296200	Thiamethoxam	85.0	98.5	P/P	40 - 150
2296200	Tolfenpyrad	35.1	39.9	P/P	30 - 150
2296200	Triclopyr	110	88.4	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P407994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296526	Fluoride	98.6	99.2	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P408266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2296426	Organic Carbon	92.1	94.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P407776

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296430	Turbidity	8.55	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P407790

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296531	Barium	0.579	Spike	P	0 - 20
2296531	Calcium	3.09	Spike	P	0 - 20
2296531	Iron	3.00	Spike	P	0 - 20
2296531	Magnesium	3.74	Spike	P	0 - 20
2296531	Manganese	0.858	Spike	P	0 - 20
2296531	Potassium	1.43	Spike	P	0 - 20
2296531	Sodium	0.354	Spike	P	0 - 20
2296531	Zinc	1.25	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P407790

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296531	Aluminum	1.69	Spike	P	0 - 20
2296531	Antimony	0.126	Spike	P	0 - 20
2296531	Arsenic	0.426	Spike	P	0 - 20
2296531	Beryllium	0.255	Spike	P	0 - 20
2296531	Boron	1.27	Spike	P	0 - 20
2296531	Cadmium	0.0844	Spike	P	0 - 20
2296531	Chromium	0.427	Spike	P	0 - 20
2296531	Copper	0.537	Spike	P	0 - 20
2296531	Lead	0.604	Spike	P	0 - 20
2296531	Nickel	0.438	Spike	P	0 - 20
2296531	Selenium	0.734	Spike	P	0 - 20
2296531	Silver	0.470	Spike	P	0 - 20
2296531	Thallium	1.43	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P407903

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2295799	Chloride	0.389	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P407905

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2295799	Sulfate	0.364	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296481	Ammonia-N	1.20	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2295142	Kjeldahl Nitrogen	2.85	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P407883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296368	NO2NO3-N	0.271	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296510	Total-P	2.98	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P407770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296482	O-Phosphate-P	0.190	Spike	P	0 - 20

Reference Method: EPA 8276
Batch ID: P407980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296487	Chlordane	5.82	Spike	P	0 - 30
2296487	Toxaphene	6.33	Spike	P	0 - 30
LFB	Chlordane	20.7	LCS	P	0 - 30
LFB	Toxaphene	22.9	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P407735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296488	Acesulfame K	1.42	Spike	P	0 - 30
2296488	AMPA	1.02	Spike	P	0 - 30
2296488	Endothall	0.593	Spike	P	0 - 30
2296488	Glufosinate	0.761	Spike	P	0 - 30
2296488	Glyphosate	0.833	Spike	P	0 - 30
2296488	Sucralose	1.86	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P407753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296200	2,4-D	13.4	Spike	P	0 - 30
2296200	2,4,5-T	1.84	Spike	P	0 - 30
2296200	Acetaminophen	13.9	Spike	P	0 - 30
2296200	Acetamiprid	15.3	Spike	P	0 - 30
2296200	Afidopyropen	41.0	Spike	F	0 - 30
2296200	Bentazon	2.17	Spike	P	0 - 30
2296200	Benzovindiflupyr	17.4	Spike	P	0 - 30
2296200	Carbamazepine	5.25	Spike	P	0 - 30
2296200	Clothianidin	9.14	Spike	P	0 - 30
2296200	Dinotefuran	16.0	Spike	P	0 - 30
2296200	Diuron	6.63	Spike	P	0 - 30
2296200	Fenuron	2.77	Spike	P	0 - 30
2296200	Fluridone	4.42	Spike	P	0 - 30
2296200	Hydrocodone	2.73	Spike	P	0 - 30
2296200	Ibuprofen	24.5	Spike	P	0 - 30
2296200	Imazapyr	5.39	Spike	P	0 - 30
2296200	Imidacloprid	3.32	Spike	P	0 - 30
2296200	Linuron	21.0	Spike	P	0 - 30
2296200	Mandestrobin	7.26	Spike	P	0 - 30
2296200	MCPP	2.44	Spike	P	0 - 30
2296200	Naproxen	21.0	Spike	P	0 - 30
2296200	Primidone	65.7	Spike	F	0 - 30
2296200	Pyraclostrobin	14.7	Spike	P	0 - 30
2296200	Silvex	11.7	Spike	P	0 - 30
2296200	Thiamethoxam	14.7	Spike	P	0 - 30
2296200	Tolfenpyrad	12.7	Spike	P	0 - 30
2296200	Triclopyr	21.5	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P407774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296537	Color (true)	3.14	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P407987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296526	Total Alkalinity	3.63	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P407915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2295938	TDS	2.87	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P407994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296526	Fluoride	0.492	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P408266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2296426	Organic Carbon	1.62	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2296487
Field Sample ID: 22051007

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	72.7	P	29 - 92.0
EPA 8276	PCNB	80.8	P	43 - 134

Lab Sample ID: 2296488
Field Sample ID: G1NE0943

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	71.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.2	P	30 - 160
EPA 8321B	Diuron-d6	75.8	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.4	P	30 - 160
EPA 8321B	Primidone-d5	75.4	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A109514

Included Lab Sample IDs: 2296482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	100	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A109516

Included Lab Sample IDs: 2296480

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109517

Included Lab Sample IDs: 2296480

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

Reference Method: EPA 8321B

Run ID: A109521

Included Lab Sample IDs: 2296488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	130	137	P/P	60 - 160
Glufosinate	128	130	P/P	60 - 160
Glyphosate	121	118	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109560

Included Lab Sample IDs: 2296488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endothall	78.1	74.7	P/P	60 - 160
Sucralose	93.4	90.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109561

Included Lab Sample IDs: 2296488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	139	156	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109563

Included Lab Sample IDs: 2296481

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A109573

Included Lab Sample IDs: 2296480

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A109575

Included Lab Sample IDs: 2296489

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	98.4	96.0	P/P	90 - 110
Calcium	97.9	97.0	P/P	90 - 110
Iron	98.7	98.1	P/P	90 - 110
Magnesium	98.0	97.3	P/P	90 - 110
Manganese	98.0	97.1	P/P	90 - 110
Potassium	98.3	98.4	P/P	90 - 110
Sodium	97.8	97.8	P/P	90 - 110
Zinc	100	96.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109624

Included Lab Sample IDs: 2296489

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	101	P/P	90 - 110
Antimony	100	99.3	P/P	90 - 110
Arsenic	100	100	P/P	90 - 110
Beryllium	96.2	94.4	P/P	90 - 110
Boron	99.8	99.6	P/P	90 - 110
Cadmium	99.5	100	P/P	90 - 110
Chromium	97.9	96.7	P/P	90 - 110
Nickel	97.9	96.9	P/P	90 - 110
Selenium	100	98.9	P/P	90 - 110
Silver	103	103	P/P	90 - 110
Thallium	109	107	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A109630

Included Lab Sample IDs: 2296487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	101		P	80 - 120

Reference Method: SM 2320 B-2011

Run ID: A109633

Included Lab Sample IDs: 2296480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.3	96.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A109633

Included Lab Sample IDs: 2296480

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109643

Included Lab Sample IDs: 2296489

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	100	98.0	P/P	90 - 110
Lead	93.2	93.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A109654

Included Lab Sample IDs: 2296488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	110	102	P/P	50 - 150
2,4,5-T	113	109	P/P	50 - 150
Acetaminophen	87.2	86.1	P/P	60 - 160
Acetamiprid	94.3	98.0	P/P	50 - 150
Afidopyropen	86.5	90.8	P/P	50 - 150
Bentazon	136	145	P/P	50 - 160
Benzovindiflupyr	88.4	90.2	P/P	50 - 150
Carbamazepine	87.7	102	P/P	60 - 150
Clothianidin	93.1	95.5	P/P	60 - 150
Dinotefuran	109	98.6	P/P	50 - 150
Diuron	84.5	89.1	P/P	60 - 160
Fenuron	99.3	98.6	P/P	60 - 150
Fluridone	99.4	96.9	P/P	60 - 160
Hydrocodone	117	108	P/P	60 - 150
Ibuprofen	106	128	P/P	50 - 160
Imazapyr	125	126	P/P	50 - 150
Imidacloprid	92.1	97.0	P/P	60 - 150
Linuron	98.4	97.2	P/P	60 - 150
Mandestrobin	108	100	P/P	50 - 150
MCPP	102	111	P/P	50 - 150
Naproxen	111	105	P/P	50 - 160
Primidone	124	123	P/P	60 - 150
Pyraclostrobin	104	96.0	P/P	60 - 150
Silvex	111	119	P/P	50 - 150
Thiamethoxam	97.7	95.1	P/P	50 - 150
Tolfenpyrad	97.9	104	P/P	60 - 150
Triclopyr	103	112	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A109659

Included Lab Sample IDs: 2296481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.0	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109698

Included Lab Sample IDs: 2296481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7	96.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A109719

Included Lab Sample IDs: 2296481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	105	106	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A109754

Included Lab Sample IDs: 2296481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	98.4	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							8.55	
EPA 200.7 Rev. 4.4	Barium	102		99.4	101	101			0.579
	Calcium	107		98.8	99.7	103			3.09
	Iron	108		104	103	106			3.00
	Magnesium	107		99.2	100	105			3.74
	Manganese	102		98.8	101	101			0.858
	Potassium	106		103	109	111			1.43
	Sodium	105		99.5	104	103			0.354
	Zinc	104		102	104	105			1.25
EPA 200.8 Rev. 5.4	Aluminum	102		105	103	104			1.69
	Antimony	102		103	103	105			0.126
	Arsenic	102		103	102	102			0.426
	Beryllium	97.6		96.6	96.4	95.3			0.255
	Boron	98.6		103	101	103			1.27
	Cadmium	101		102	102	104			0.0844
	Chromium	103		104	104	105			0.427
	Copper	102		106	105	101			0.537
	Lead	98.2		101	100	98.6			0.604
	Nickel	104		105	105	101			0.438
	Selenium	104		103	104	101			0.734
	Silver	107		107	107	107			0.470
	Thallium	99.8		102	103	101			1.43
EPA 300.0 Rev. 2.1	Chloride	98.4		96.9	98.8			0.389	
	Sulfate	96.7		96.7	97.5			0.364	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0		93.8	95.0				1.20
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105		103	106				2.85
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5		98.5	99.0				0.271
EPA 365.1 Rev. 2.0	Total-P	106		110	113				2.98
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		98.3	98.6				0.190
EPA 8276	Chlordane	94.4	76.7	79.8	84.6		20.7		5.82
	Toxaphene	92.8	73.8	83.8	89.3		22.9		6.33
EPA 8321B	2,4-D	98.4		91.0	104				13.4
	2,4,5-T	92.0		113	115				1.84
	Acesulfame K	140		227	230				1.42
	Acetaminophen	79.0		86.7	99.7				13.9
	Acetamiprid	75.0		73.6	85.8				15.3
	Afidopyropen	40.3		45.1	68.4				41.0
	AMPA	129		120	119				1.02
	Bentazon	104		95.9	98.0				2.17
	Benzovindiflupyr	83.7		80.1	67.3				17.4
	Carbamazepine	80.0		87.2	82.7				5.25
	Clothianidin	81.4		94.2	86.0				9.14
	Dinotefuran	72.9		79.9	93.9				16.0
	Diuron	81.5		80.6	75.4				6.63
	Endothall	86.1		98.5	98.0				0.593
	Fenuron	79.8		75.4	77.5				2.77
	Fluridone	76.5		73.1	69.9				4.42
	Glufosinate	134		121	122				0.761
	Glyphosate	124		109	110				0.833
	Hydrocodone	92.6		91.8	94.3				2.73
	Ibuprofen	110		104	81.1				24.5
	Imazapyr	86.0		115	123				5.39
	Imidacloprid	96.9		107	110				3.32
	Linuron	81.2		50.4	62.2				21.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Mandestrobin	72.9	85.6	79.6		
	MCCP	104	110	108		
	Naproxen	47.1	54.3	44.0		
	Primidone	99.5	64.9	128		
	Pyraclostrobin	70.1	74.4	64.2		
	Silvex	105	102	91.1		
	Sucralose	96.2	97.8	99.6		
	Thiamethoxam	74.8	85.0	98.5		
	Tolfenpyrad	33.9	35.1	39.9		
	Triclopyr	96.6	110	88.4		
SM 2120 B-2011	Color (true)	103				3.14
SM 2320 B-2011	Total Alkalinity	99.9				3.63
SM 2540 C-2011	TDS					2.87
SM 4500 F-C-2011	Fluoride	99.8	98.6	99.2		
SM 5310 B-2011	Organic Carbon	95.5	92.1	94.6		

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2296480
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2296489
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2296489
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2296480
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2296480
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2296481
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2296481
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2296481
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2296481
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2296482
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2296487
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2296488
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2296480
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2296480
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2296489
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2296480
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2296480
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2296480
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2296481

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	12/21/2021			12/21/2021 16:02	Khloe J Berg	2296480
EPA 200.7 Rev. 4.4	12/21/2021	12/22/2021 10:05	Vijayalakshmi Reddy	12/28/2021 03:04	Josef B Mick	2296489
EPA 200.8 Rev. 5.4	12/21/2021	12/22/2021 10:05	Vijayalakshmi Reddy	01/03/2022 17:34	Alexander Thompson	2296489
	12/21/2021	12/22/2021 10:05	Vijayalakshmi Reddy	12/29/2021 17:13	McKinley C Carter	2296489
EPA 300.0 Rev. 2.1	12/21/2021			12/22/2021 15:50	Roberta Tatti	2296480
EPA 350.1 Rev. 2.0	12/21/2021			01/04/2022 12:00	Roberta Tatti	2296481
EPA 351.2 Rev. 2.0	12/21/2021	01/04/2022 12:52	Samantha L Bates	01/06/2022 11:30	Alexandra J Mattheus	2296481
EPA 353.2 Rev. 2.0	12/21/2021			12/27/2021 12:36	Beverly Y. Sanders	2296481
EPA 365.1 Rev. 2.0	12/21/2021	01/04/2022 16:25	Simonne.V. Calhoun	01/05/2022 19:54	Sarah A Nixon	2296481
EPA 365.1 Rev. 2.0 dissolved	12/21/2021			12/21/2021 14:48	James L Waggeberby	2296482
EPA 8276	12/21/2021	12/27/2021 08:30	Rasheda Ghaffari	12/30/2021 03:13	Arthur Maknenko	2296487
EPA 8321B	12/21/2021	12/21/2021 13:21	Juyoung Kim	12/21/2021 17:18	Juyoung Kim	2296488
	12/21/2021	12/21/2021 13:21	Juyoung Kim	12/21/2021 21:06	Manjita Shrestha	2296488
	12/21/2021	12/21/2021 13:21	Juyoung Kim	12/22/2021 23:57	Manjita Shrestha	2296488
	12/21/2021	12/27/2021 09:00	Hoor Shaik	12/29/2021 11:45	Juyoung Kim	2296488
SM 2120 B-2011	12/21/2021			12/21/2021 16:35	Samantha L Bates	2296480
SM 2320 B-2011	12/21/2021			12/28/2021 19:41	Dale L. Simmons	2296480
SM 2340B	12/21/2021			12/28/2021 03:04	Josef B Mick	2296489
SM 2540 C-2011	12/21/2021			12/21/2021 16:06	Yijie Li	2296480
SM 2540 D-2011	12/21/2021			12/21/2021 16:06	Yijie Li	2296480
SM 4500 F-C-2011	12/21/2021			12/28/2021 19:41	Dale L. Simmons	2296480
SM 5310 B-2011	12/21/2021			01/07/2022 00:04	Touraj Touran	2296481