

Chemical Analysis Report

SE-DIST-2021-08-17-03

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

Event Description: **SMP - 3208B Deployment Q3 2021**

Request ID: **RQ-2021-08-16-22**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

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Date Certified: 10-SEP-2021 09:55



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 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: Warner Creek @ 24th

Collection Date/Time: 08/16/2021 14:30

Field ID: G2SE0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2269833	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P402587	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P402996	
		Sulfate	10		mg SO4/L	P402999	
	SM 2120 B-2011	Color (true)	92	A	PCU	P402584	
	SM 2320 B-2011	Total Alkalinity	66		mg CaCO3/L	P402802	
	SM 2540 C-2011	TDS	199		mg/L	P402819	
	SM 2540 D-2011	TSS	2	I	mg/L	P403005	
2269834	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P402804	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P402762	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P403024	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P402810	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P403029	
2269835	SM 5310 B-2011	Organic Carbon	20		mg C/L	P403116	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P402585	
2269839	EPA 8321B	Acesulfame K	0.33	I	ug/L	P402556	
		2,4-D	0.0081		ug/L	P402616	
		2,4,5-T	0.0040	U	ug/L	P402616	
		AMPA	0.15	I	ug/L	P402556	MS
		Acetaminophen	0.0080	U	ug/L	P402616	
		Endothall	0.25	U	ug/L	P402556	
		Acetamiprid	0.0020	U	ug/L	P402616	
		Glufosinate	0.10	U	ug/L	P402556	
		Glyphosate	0.40		ug/L	P402556	
		Afidopyropen	0.0020	U	ug/L	P402616	
		Sucralose	1.4		ug/L	P402556	
		Bentazon	0.029		ug/L	P402616	
		Benzovindiflupyr	0.0020	U	ug/L	P402616	
		Carbamazepine	0.0012	I	ug/L	P402616	
		Clothianidin	0.0020	U	ug/L	P402616	
		Dinotefuran	0.0020	U	ug/L	P402616	
		Diuron	0.0031	I	ug/L	P402616	
		Fenuron	0.016	U	ug/L	P402616	
		Fluridone	0.054		ug/L	P402616	
		Imazapyr	0.16		ug/L	P402616	
		Hydrocodone	0.0020	U	ug/L	P402616	
		Ibuprofen	0.020	U	ug/L	P402616	
		Imidacloprid	0.047		ug/L	P402616	
		Linuron	0.0040	U	ug/L	P402616	
		Mandestrobin	0.0020	U	ug/L	P402616	
		MCP	0.0020	U	ug/L	P402616	
		Naproxen	0.0080	U	ug/L	P402616	
		Primidone	0.0040	U	ug/L	P402616	
		Pyraclostrobin	0.0020	U	ug/L	P402616	

Field ID: G2SE0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2269839	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P402616	
		Tolfenpyrad	0.0020	U	ug/L	P402616	
		Triclopyr	0.0040	U	ug/L	P402616	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for glyphosate could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402587

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402996

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402999

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402762

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403024

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402810

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403029

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402585

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

Reference Method: EPA 8321B
Batch ID: P402556

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P402556

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P402616

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
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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	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: P402584

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P402802

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

Reference Method: SM 2540 C-2011

Batch ID: P402819

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P403005

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P402804

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P403116

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402996

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402999

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402762

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403024

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: P402810

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: P403029

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402585

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.9		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P402556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	88.2		P	40 - 150
AMPA	98.9		P	40 - 160
Endothall	126		P	40 - 150
Glufosinate	96.1		P	40 - 160
Glyphosate	96.4		P	40 - 160
Sucralose	105		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P402616

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	137		P	30 - 160
2,4,5-T	125		P	30 - 160
Acetaminophen	91.5		P	30 - 160
Acetamiprid	92.4		P	30 - 160
Afidopyropen	70.4		P	30 - 160
Bentazon	107		P	30 - 160
Benzovindiflupyr	97.0		P	30 - 160
Carbamazepine	86.8		P	30 - 160
Clothianidin	97.8		P	30 - 160
Dinotefuran	93.3		P	30 - 160
Diuron	69.7		P	30 - 160
Fenuron	94.4		P	30 - 160
Fluridone	90.4		P	30 - 160
Hydrocodone	100		P	30 - 160
Ibuprofen	91.9		P	30 - 160
Imazapyr	99.5		P	30 - 160
Imidacloprid	98.3		P	30 - 160
Linuron	70.7		P	30 - 160
Mandestrobin	95.2		P	30 - 160
MCPP	126		P	30 - 160
Naproxen	61.8		P	30 - 160
Primidone	105		P	30 - 160
Pyraclostrobin	84.3		P	30 - 160
Thiamethoxam	107		P	30 - 160
Tolfenpyrad	58.3		P	30 - 160
Triclopyr	129		P	30 - 160

Reference Method: SM 2120 B-2011

Batch ID: P402584

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

Reference Method: SM 2320 B-2011

Batch ID: P402802

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P402804

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P403116

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402996

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269293	Chloride	97.5		P	90 - 110
2269459	Chloride	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402999

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269293	Sulfate	97.5		P	90 - 110
2269459	Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402762

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269742	Ammonia-N	97.8	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269889	Kjeldahl Nitrogen	95.9	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269742	NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269524	Total-P	106	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402585

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269743	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P402556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269820	Acesulfame K	81.1	65.2	P/P	40 - 150
2269820	AMPA	55.8	39.5	P/F	40 - 160
2269820	Endothall	69.7	64.1	P/P	40 - 150
2269820	Glufosinate	158	143	P/P	40 - 160
2269820	Sucralose	114	110	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P402616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269820	2,4,5-T	92.5	86.2	P/P	30 - 160
2269820	Acetaminophen	93.9	95.3	P/P	30 - 160
2269820	Acetamiprid	45.4	35.7	P/P	30 - 160
2269820	Afidopyropen	64.2	51.9	P/P	30 - 160
2269820	Benzovindiflupyr	82.1	76.6	P/P	30 - 160
2269820	Carbamazepine	46.0	44.6	P/P	30 - 160
2269820	Clothianidin	55.3	58.4	P/P	30 - 160
2269820	Dinotefuran	67.6	71.4	P/P	30 - 160
2269820	Diuron	30.9	30.1	P/P	30 - 160
2269820	Fenuron	32.6	33.7	P/P	30 - 160
2269820	Fluridone	67.1	67.9	P/P	30 - 160
2269820	Hydrocodone	56.1	60.2	P/P	30 - 160
2269820	Ibuprofen	69.1	59.6	P/P	30 - 160
2269820	Imidacloprid	91.5	86.2	P/P	30 - 160
2269820	Linuron	52.7	52.0	P/P	30 - 160
2269820	Mandestrobin	80.6	81.1	P/P	30 - 160
2269820	MCPP	81.2	81.8	P/P	30 - 160
2269820	Naproxen	76.4	63.5	P/P	30 - 160
2269820	Primidone	58.5	62.6	P/P	30 - 160
2269820	Pyraclostrobin	71.6	75.1	P/P	30 - 160
2269820	Thiamethoxam	70.9	73.0	P/P	30 - 160
2269820	Tolfenpyrad	50.5	51.9	P/P	30 - 160
2269820	Triclopyr	94.3	92.6	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P402804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269861	Fluoride	99.8	99.8	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P403116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269862	Organic Carbon	96.4	96.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269741	Turbidity	1.38	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269293	Chloride	2.23	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269293	Sulfate	0.141	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269742	Ammonia-N	0.716	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269889	Kjeldahl Nitrogen	1.51	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269742	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269524	Total-P	1.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402585

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269743	O-Phosphate-P	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P402556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269820	Acesulfame K	21.6	Spike	P	0 - 30
2269820	AMPA	18.8	Spike	P	0 - 30
2269820	Endothall	8.35	Spike	P	0 - 30
2269820	Glufosinate	9.49	Spike	P	0 - 30
2269820	Glyphosate	0.454	Spike	P	0 - 30
2269820	Sucralose	3.85	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269820	2,4-D	0.694	Spike	P	0 - 30
2269820	2,4,5-T	7.06	Spike	P	0 - 30
2269820	Acetaminophen	1.51	Spike	P	0 - 30
2269820	Acetamiprid	23.8	Spike	P	0 - 30
2269820	Afidopyropen	21.2	Spike	P	0 - 30
2269820	Bentazon	5.64	Spike	P	0 - 30
2269820	Benzovindiflupyr	6.94	Spike	P	0 - 30
2269820	Carbamazepine	3.01	Spike	P	0 - 30
2269820	Clothianidin	5.62	Spike	P	0 - 30
2269820	Dinotefuran	5.36	Spike	P	0 - 30
2269820	Diuron	2.66	Spike	P	0 - 30
2269820	Fenuron	3.31	Spike	P	0 - 30
2269820	Fluridone	1.27	Spike	P	0 - 30
2269820	Hydrocodone	7.00	Spike	P	0 - 30
2269820	Ibuprofen	14.7	Spike	P	0 - 30
2269820	Imazapyr	0.332	Spike	P	0 - 30
2269820	Imidacloprid	5.67	Spike	P	0 - 30
2269820	Linuron	1.35	Spike	P	0 - 30
2269820	Mandestrobin	0.654	Spike	P	0 - 30
2269820	MCPP	0.741	Spike	P	0 - 30
2269820	Naproxen	18.5	Spike	P	0 - 30
2269820	Primidone	6.75	Spike	P	0 - 30
2269820	Pyraclostrobin	4.76	Spike	P	0 - 30
2269820	Thiamethoxam	2.97	Spike	P	0 - 30
2269820	Tolfenpyrad	2.67	Spike	P	0 - 30
2269820	Triclopyr	1.82	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P402584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269833	Color (true)	0.468	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P402802

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P402802

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269861	Total Alkalinity	1.22	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P402819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269417	TDS	3.98	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P402804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269861	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P403116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269862	Organic Carbon	0.114	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2269839

Field Sample ID: G2SE0038

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	50.9	P	30 - 160
EPA 8321B	Diuron-d6	41.2	P	30 - 160
EPA 8321B	Endothall-d6	99.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	67.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.3	P	30 - 160
EPA 8321B	Primidone-d5	65.3	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A107296

Included Lab Sample IDs: 2269833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107297

Included Lab Sample IDs: 2269835

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107298

Included Lab Sample IDs: 2269833

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

Reference Method: EPA 8321B

Run ID: A107353

Included Lab Sample IDs: 2269839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	95.3	99.0	P/P	60 - 160
Glufosinate	93.3	102	P/P	60 - 160
Glyphosate	91.8	98.3	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107367

Included Lab Sample IDs: 2269834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	98.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107377

Included Lab Sample IDs: 2269839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.5	80.0	P/P	60 - 160
Endothall	136	122	P/P	60 - 160
Sucralose	100	102	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A107380

Included Lab Sample IDs: 2269833

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A107380

Included Lab Sample IDs: 2269833

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107385

Included Lab Sample IDs: 2269834

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107449

Included Lab Sample IDs: 2269833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.4	99.2	P/P	90 - 110
Sulfate	99.4	99.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107453

Included Lab Sample IDs: 2269839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	126	121	P/P	50 - 150
2,4,5-T	111	103	P/P	50 - 150
Acetaminophen	115	109	P/P	60 - 160
Acetamiprid	114	102	P/P	50 - 150
Afidopyropen	105	103	P/P	50 - 150
Bentazon	93.9	130	P/P	50 - 160
Benzovindiflupyr	120	120	P/P	50 - 160
Carbamazepine	119	107	P/P	60 - 150
Clothianidin	126	113	P/P	60 - 150
Dinotefuran	106	100	P/P	50 - 150
Diuron	108	115	P/P	60 - 160
Fenuron	106	107	P/P	60 - 150
Fluridone	111	112	P/P	60 - 160
Hydrocodone	116	103	P/P	60 - 150
Ibuprofen	82.9	101	P/P	50 - 160
Imazapyr	126	100	P/P	50 - 160
Imidacloprid	108	105	P/P	60 - 150
Linuron	109	109	P/P	60 - 150
Mandestrobin	117	115	P/P	50 - 150
MCPP	113	109	P/P	50 - 150
Naproxen	70.0	97.6	P/P	50 - 160
Primidone	94.8	109	P/P	60 - 150
Pyraclostrobin	105	105	P/P	60 - 150
Thiamethoxam	118	106	P/P	50 - 150
Tolfenpyrad	98.9	109	P/P	60 - 150
Triclopyr	115	118	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107509

Included Lab Sample IDs: 2269834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.3	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107510

Included Lab Sample IDs: 2269834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107529

Included Lab Sample IDs: 2269834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	96.8	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					1.38	
EPA 300.0 Rev. 2.1	Chloride	98.6	97.5	97.8		2.23	
	Sulfate	98.7	97.5	97.8		0.141	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	97.8	97.0			0.716
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	95.9	98.3			1.51
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	97.5	99.5	99.5			0.0
EPA 365.1 Rev. 2.0	Total-P	105	106	104			1.13
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.9	100	100			0.0
EPA 8321B	2,4-D	137					0.694
	2,4,5-T	125	92.5	86.2			7.06
	Acesulfame K	88.2	81.1	65.2			21.6
	Acetaminophen	91.5	93.9	95.3			1.51
	Acetamiprid	92.4	45.4	35.7			23.8
	Afidopyropen	70.4	64.2	51.9			21.2
	AMPA	98.9	55.8	39.5			18.8
	Bentazon	107					5.64
	Benzovindiflupyr	97.0	82.1	76.6			6.94
	Carbamazepine	86.8	46.0	44.6			3.01
	Clothianidin	97.8	55.3	58.4			5.62
	Dinotefuran	93.3	67.6	71.4			5.36
	Diuron	69.7	30.9	30.1			2.66
	Endothall	126	69.7	64.1			8.35
	Fenuron	94.4	32.6	33.7			3.31
	Fluridone	90.4	67.1	67.9			1.27
	Glufosinate	96.1	158	143			9.49
	Glyphosate	96.4					0.454
	Hydrocodone	100	56.1	60.2			7.00
	Ibuprofen	91.9	69.1	59.6			14.7
	Imazapyr	99.5					0.332
	Imidacloprid	98.3	91.5	86.2			5.67
	Linuron	70.7	52.7	52.0			1.35
	Mandestrobin	95.2	80.6	81.1			0.654
	MCPP	126	81.2	81.8			0.741
	Naproxen	61.8	76.4	63.5			18.5
	Primidone	105	58.5	62.6			6.75
	Pyraclostrobin	84.3	71.6	75.1			4.76
	Sucralose	105	114	110			3.85
	Thiamethoxam	107	70.9	73.0			2.97
	Tolfenpyrad	58.3	50.5	51.9			2.67
	Triclopyr	129	94.3	92.6			1.82
SM 2120 B-2011	Color (true)	100				0.468	
SM 2320 B-2011	Total Alkalinity	102				1.22	
SM 2540 C-2011	TDS					3.98	
SM 4500 F-C-2011	Fluoride	98.5	99.8	99.8			0.0
SM 5310 B-2011	Organic Carbon	94.3	96.4	96.6			0.114

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2269833
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2269833
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2269833
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2269834

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2269834
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2269834
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2269834
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2269835
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2269839
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2269833
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2269833
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2269833
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2269833
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2269833
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2269834

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	08/17/2021			08/17/2021 15:11	Sarah A Nixon	2269833
EPA 300.0 Rev. 2.1	08/17/2021			08/25/2021 18:47	Lipi Saha	2269833
EPA 350.1 Rev. 2.0	08/17/2021			08/20/2021 13:34	Roberta Tatti	2269834
EPA 351.2 Rev. 2.0	08/17/2021	08/26/2021 18:26	Benjamin T. Nordmann	08/27/2021 13:48	Virginia P. Brown	2269834
EPA 353.2 Rev. 2.0	08/17/2021			08/23/2021 09:34	Beverly Y. Sanders	2269834
EPA 365.1 Rev. 2.0	08/17/2021	08/26/2021 14:30	Simonne.V. Calhoun	08/27/2021 13:27	Shengyu Ding	2269834
EPA 365.1 Rev. 2.0 dissolved	08/17/2021			08/17/2021 15:09	James L Waggerby	2269835
EPA 8321B	08/17/2021	08/18/2021 09:00	Hoor Shaik	08/25/2021 13:30	Juyoung Kim	2269839
	08/17/2021	08/19/2021 09:00	Juyoung Kim	08/19/2021 12:31	Juyoung Kim	2269839
	08/17/2021	08/19/2021 09:00	Juyoung Kim	08/20/2021 13:57	Pramila Ghimire	2269839
SM 2120 B-2011	08/17/2021			08/17/2021 15:39	Sarah A Nixon	2269833
SM 2320 B-2011	08/17/2021			08/19/2021 17:55	Dale L. Simmons	2269833
SM 2540 C-2011	08/17/2021			08/18/2021 11:05	Yijie Li	2269833
SM 2540 D-2011	08/17/2021			08/18/2021 11:05	Yijie Li	2269833
SM 4500 F-C-2011	08/17/2021			08/19/2021 17:55	Dale L. Simmons	2269833
SM 5310 B-2011	08/17/2021			08/27/2021 23:28	Madeline Gruver	2269834