

Chemical Analysis Report

SO-DIST-2020-11-05-01

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

Event Description: **Big Slough + Bobcat**
Request ID: **RQ-2020-11-02-40**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 30-NOV-2020 12:27

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Bobcat Creek in Preserve East

Collection Date/Time: 11/04/2020 11:30

Field ID: G3SD0131

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2206519	EPA 180.1 Rev. 2.0	Turbidity	4.7	A	NTU	P389827	
	EPA 300.0 Rev. 2.1	Bromide	0.11		mg Br/L	P390091	
	SM 2320 B-2011	Total Alkalinity	69	A	mg CaCO3/L	P389921	
	SM 2540 D-2011	TSS	2	UA	mg/L	P389986	
	SM 4500 F-C-2011	Fluoride	0.31		mg F/L	P390099	
2206520	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P389894	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P389866	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29		mg N/L	P389862	
	EPA 365.1 Rev. 2.0	Total-P	0.73		mg P/L	P389875	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P389908	
2206521	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.65		mg P/L	P389841	
2206526	EPA 8321B	2,4-D	0.016		ug/L	P389732	
		Acesulfame K**	0.12	I	ug/L	P389918	
		AMPA**	0.31	I	ug/L	P389918	
		Sucralose**	0.11		ug/L	P389918	
		Acetaminophen**	0.0080	U	ug/L	P389732	
		Acetamiprid**	0.0020	U	ug/L	P389732	
		Endothall**	0.25	U	ug/L	P389918	
		Glufosinate**	0.10	U	ug/L	P389918	
		Glyphosate**	1.1		ug/L	P389918	
		Afidopyropen**	0.0020	U	ug/L	P389732	
		Bentazon	9.6E-04	I	ug/L	P389732	
		Benzovindiflupyr**	0.0020	U	ug/L	P389732	
		Carbamazepine**	0.0010	I	ug/L	P389732	
		Clothianidin**	0.0020	U	ug/L	P389732	
		Dinotefuran**	0.0020	U	ug/L	P389732	
		Diuron	0.0020	U	ug/L	P389732	
		Fenuron	0.016	U	ug/L	P389732	
		Fluridone**	8.0E-04	U	ug/L	P389732	
		Imazapyr**	0.0040	U	ug/L	P389732	
		Hydrocodone**	0.0020	U	ug/L	P389732	
		Ibuprofen**	0.020	U	ug/L	P389732	
		Imidacloprid	0.0020	U	ug/L	P389732	
		Linuron	0.0040	U	ug/L	P389732	
		Mandestrobin**	0.0020	U	ug/L	P389732	
		MCP	0.0020	U	ug/L	P389732	
		Naproxen**	0.0080	U	ug/L	P389732	
		Primidone**	0.0044	I	ug/L	P389732	
		Pyraclostrobin**	0.0020	U	ug/L	P389732	
		Thiamethoxam**	0.0020	U	ug/L	P389732	
		Tolfenpyrad**	0.0020	UJ	ug/L	P389732	CCV
		Triclopyr**	0.0040	U	ug/L	P389732	
2206528	EPA 200.7 Rev. 4.4	Barium	5.8		ug/L	P389819	

Field ID: G3SD0131

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2206528	EPA 200.7 Rev. 4.4	Calcium	25.0		mg/L	P389819	
		Iron	2.03E+03		ug/L	P389819	
		Magnesium	7.02		mg/L	P389819	
		Potassium	0.87	I	mg/L	P389819	
		Sodium	16.3		mg/L	P389819	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P389819	
		Aluminum	114		ug/L	P389819	
		Antimony	0.062	I	ug/L	P389819	
		Arsenic	1.14		ug/L	P389819	
		Beryllium	0.023	I	ug/L	P389819	
		Boron**	35.2		ug/L	P389819	
		Cadmium	0.020	U	ug/L	P389819	
		Chromium	1.9		ug/L	P389819	
		Copper	0.41	I	ug/L	P389819	
		Lead	0.21	I	ug/L	P389819	
		Nickel	0.67	I	ug/L	P389819	
		Selenium	0.24	I	ug/L	P389819	
		Silver	0.010	U	ug/L	P389819	
		Thallium	0.10	U	ug/L	P389819	
	SM 2340B	Hardness	91.3		mg/L	P389819	

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 and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Field Blank

Collection Date/Time: 11/04/2020 11:45

Field ID: FB110420

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2206527	EPA 8321B	2,4-D	0.0020	U	ug/L	P389732	
		Acesulfame K**	0.10	U	ug/L	P389918	
		AMPA**	0.10	U	ug/L	P389918	
		Sucralose**	0.010	U	ug/L	P389918	
		Acetaminophen**	0.0080	U	ug/L	P389732	
		Acetamiprid**	0.0020	U	ug/L	P389732	
		Endothall**	0.25	U	ug/L	P389918	
		Glufosinate**	0.10	U	ug/L	P389918	
		Glyphosate**	0.10	U	ug/L	P389918	
		Afidopyropen**	0.0020	U	ug/L	P389732	
		Bentazon	8.0E-04	U	ug/L	P389732	
		Benzovindiflupyr**	0.0020	U	ug/L	P389732	
		Carbamazepine**	8.0E-04	U	ug/L	P389732	
		Clothianidin**	0.0020	U	ug/L	P389732	
		Dinotefuran**	0.0020	U	ug/L	P389732	
		Diuron	0.0020	U	ug/L	P389732	
		Fenuron	0.016	U	ug/L	P389732	
		Fluridone**	8.0E-04	U	ug/L	P389732	
		Imazapyr**	0.0040	U	ug/L	P389732	
		Hydrocodone**	0.0020	U	ug/L	P389732	
		Ibuprofen**	0.020	U	ug/L	P389732	
		Imidacloprid	0.0020	U	ug/L	P389732	
		Linuron	0.0040	U	ug/L	P389732	
		Mandestrobin**	0.0020	U	ug/L	P389732	
		MCPP	0.0020	U	ug/L	P389732	
		Naproxen**	0.0080	U	ug/L	P389732	
		Primidone**	0.0040	U	ug/L	P389732	
		Pyraclostrobin**	0.0020	U	ug/L	P389732	
		Thiamethoxam**	0.0020	U	ug/L	P389732	
		Tolfenpyrad**	0.0020	UJ	ug/L	P389732	CCV
		Triclopyr**	0.0040	U	ug/L	P389732	

Ref. Method and Comment:

EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. 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: P389827

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P389819

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
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: P389819

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: P390091

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389894

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389866

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389862

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389875

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389841

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

Reference Method: EPA 8321B
Batch ID: P389732

Component	Result	Code	Units
2,4-D	0.0020	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: EPA 8321B
Batch ID: P389918

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: P389918

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

Reference Method: SM 2320 B-2011
Batch ID: P389921

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

Reference Method: SM 2540 D-2011
Batch ID: P389986

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P390099

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P389908

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: P389819

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	100		P	85 - 115
Calcium	105		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	102		P	85 - 115
Sodium	101		P	85 - 115
Zinc	96.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P389819

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	103		P	85 - 115
Beryllium	101		P	85 - 115
Boron	102		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	102		P	85 - 115
Copper	101		P	85 - 115
Lead	105		P	85 - 115
Nickel	101		P	85 - 115
Selenium	100		P	85 - 115
Silver	108		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390091

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389894

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389866

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389862

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P389875

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P389841

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

Reference Method: EPA 8321B
 Batch ID: P389732

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	60.8		P	30 - 160
Acetaminophen	54.2		P	30 - 160
Acetamiprid	71.9		P	30 - 160
Afidopyropen	51.4		P	30 - 160
Bentazon	41.8		P	30 - 160
Benzovindiflupyr	56.7		P	30 - 160
Carbamazepine	62.2		P	30 - 160
Clothianidin	88.4		P	30 - 160
Dinotefuran	82.3		P	30 - 160
Diuron	53.8		P	30 - 160
Fenuron	112		P	30 - 160
Fluridone	66.7		P	30 - 160
Hydrocodone	64.6		P	30 - 160
Ibuprofen	81.1		P	30 - 160
Imazapyr	78.6		P	30 - 160
Imidacloprid	86.5		P	30 - 160
Linuron	68.9		P	30 - 160
Mandestrobin	64.2		P	30 - 160
MCPP	65.9		P	30 - 160
Naproxen	48.6		P	30 - 160
Primidone	85.8		P	30 - 160
Pyraclostrobin	47.3		P	30 - 160
Thiamethoxam	83.2		P	30 - 160
Tolfenpyrad	33.7		P	30 - 160
Triclopyr	64.1		P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P389918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	136		P	40 - 150
AMPA	100		P	40 - 150
Endothall	94.0		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	103		P	40 - 140
Sucralose	129		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P389921

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.9		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P390099

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.4		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P389908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	103		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P389819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206435	Barium	98.1	103	P/P	80 - 120
2206435	Calcium	102	107	P/P	80 - 120
2206435	Iron	103	108	P/P	80 - 120
2206435	Magnesium	104	108	P/P	80 - 120
2206435	Potassium	102	106	P/P	80 - 120
2206435	Sodium	102	104	P/P	80 - 120
2206435	Zinc	95.6	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P389819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206435	Aluminum	101	98.8	P/P	80 - 120
2206435	Antimony	101	100	P/P	80 - 120
2206435	Arsenic	103	101	P/P	80 - 120
2206435	Beryllium	99.2	97.9	P/P	80 - 120
2206435	Boron	98.3	98.1	P/P	80 - 120
2206435	Cadmium	100	98.9	P/P	80 - 120
2206435	Chromium	101	99.2	P/P	80 - 120
2206435	Copper	103	100	P/P	80 - 120
2206435	Lead	104	102	P/P	80 - 120
2206435	Nickel	103	101	P/P	80 - 120
2206435	Selenium	100	98.8	P/P	80 - 120
2206435	Silver	109	107	P/P	80 - 120
2206435	Thallium	103	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206644	Bromide	102	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206642	Ammonia-N	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389866

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206490	Kjeldahl Nitrogen	105	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389862

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206444	NO2NO3-N	98.0	97.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206420	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206643	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P389732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206319	2,4-D	55.3	55.1	P/P	30 - 160
2206319	Acetaminophen	34.5	40.1	P/P	30 - 160
2206319	Acetamiprid	56.1	47.3	P/P	30 - 160
2206319	Afidopyropen	43.5	35.2	P/P	30 - 160
2206319	Benzovindiflupyr	54.1	53.0	P/P	30 - 160
2206319	Carbamazepine	54.0	47.3	P/P	30 - 160
2206319	Clothianidin	56.5	59.6	P/P	30 - 160
2206319	Dinotefuran	47.2	53.9	P/P	30 - 160
2206319	Diuron	36.5	35.9	P/P	30 - 160
2206319	Fenuron	60.4	57.8	P/P	30 - 160
2206319	Fluridone	61.3	56.5	P/P	30 - 160
2206319	Hydrocodone	55.6	62.6	P/P	30 - 160
2206319	Ibuprofen	68.0	55.2	P/P	30 - 160
2206319	Imazapyr	78.7	72.7	P/P	30 - 160
2206319	Linuron	65.8	63.1	P/P	30 - 160
2206319	Mandestrobin	59.1	58.4	P/P	30 - 160
2206319	MCP	59.4	56.3	P/P	30 - 160
2206319	Naproxen	45.4	50.3	P/P	30 - 160
2206319	Primidone	66.7	72.9	P/P	30 - 160
2206319	Pyraclostrobin	48.5	47.3	P/P	30 - 160
2206319	Thiamethoxam	75.7	72.9	P/P	30 - 160
2206319	Tolfenpyrad	47.7	41.2	P/P	30 - 160
2206319	Triclopyr	47.7	51.8	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P389918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206526	Acesulfame K	51.2	45.8	P/P	40 - 150
2206526	AMPA	70.6	66.2	P/P	40 - 150
2206526	Endothall	115	121	P/P	40 - 150
2206526	Glufosinate	101	94.6	P/P	40 - 150
2206526	Glyphosate	100	91.2	P/P	40 - 140
2206526	Sucralose	57.0	55.6	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P390099

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206538	Fluoride	97.6	98.8	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P389908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206539	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206519	Turbidity	1.27	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P389819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206435	Barium	5.03	Spike	P	0 - 20
2206435	Calcium	3.91	Spike	P	0 - 20
2206435	Iron	4.37	Spike	P	0 - 20
2206435	Magnesium	3.67	Spike	P	0 - 20
2206435	Potassium	3.66	Spike	P	0 - 20
2206435	Sodium	1.44	Spike	P	0 - 20
2206435	Zinc	6.12	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P389819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206435	Aluminum	2.57	Spike	P	0 - 20
2206435	Antimony	1.22	Spike	P	0 - 20
2206435	Arsenic	1.93	Spike	P	0 - 20
2206435	Beryllium	1.15	Spike	P	0 - 20
2206435	Boron	0.178	Spike	P	0 - 20
2206435	Cadmium	1.10	Spike	P	0 - 20
2206435	Chromium	2.28	Spike	P	0 - 20
2206435	Copper	1.77	Spike	P	0 - 20
2206435	Lead	1.99	Spike	P	0 - 20
2206435	Nickel	1.80	Spike	P	0 - 20
2206435	Selenium	1.68	Spike	P	0 - 20
2206435	Silver	1.60	Spike	P	0 - 20
2206435	Thallium	1.28	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206644	Bromide	1.78	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206642	Ammonia-N	1.14	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206490	Kjeldahl Nitrogen	1.59	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389862

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206444	NO2NO3-N	1.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206420	Total-P	0.193	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206643	O-Phosphate-P	0.987	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P389732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206319	2,4-D	0.336	Spike	P	0 - 30
2206319	Acetaminophen	15.0	Spike	P	0 - 30
2206319	Acetamiprid	17.1	Spike	P	0 - 30
2206319	Afidopyropen	21.2	Spike	P	0 - 30
2206319	Benzovindiflupyr	2.13	Spike	P	0 - 30
2206319	Carbamazepine	9.73	Spike	P	0 - 30
2206319	Clothianidin	5.22	Spike	P	0 - 30
2206319	Dinotefuran	10.7	Spike	P	0 - 30
2206319	Diuron	1.69	Spike	P	0 - 30
2206319	Fenuron	4.43	Spike	P	0 - 30
2206319	Fluridone	6.37	Spike	P	0 - 30
2206319	Hydrocodone	11.9	Spike	P	0 - 30
2206319	Ibuprofen	20.7	Spike	P	0 - 30
2206319	Imazapyr	4.46	Spike	P	0 - 30
2206319	Imidacloprid	7.08	Spike	P	0 - 30
2206319	Linuron	4.08	Spike	P	0 - 30
2206319	Mandestrobin	1.23	Spike	P	0 - 30
2206319	MCCP	5.42	Spike	P	0 - 30
2206319	Naproxen	10.2	Spike	P	0 - 30
2206319	Primidone	6.47	Spike	P	0 - 30
2206319	Pyraclostrobin	2.60	Spike	P	0 - 30
2206319	Thiamethoxam	3.86	Spike	P	0 - 30
2206319	Tolfenpyrad	14.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P389732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206319	Triclopyr	8.26	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P389918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206526	Acesulfame K	10.1	Spike	P	0 - 30
2206526	AMPA	4.46	Spike	P	0 - 30
2206526	Endothall	5.06	Spike	P	0 - 30
2206526	Glufosinate	6.41	Spike	P	0 - 30
2206526	Glyphosate	4.26	Spike	P	0 - 30
2206526	Sucralose	2.27	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P389921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206519	Total Alkalinity	0.478	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P390099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206538	Fluoride	0.984	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P389908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206539	Organic Carbon	0.272	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2206526
Field Sample ID: G3SD0131

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	45.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.9	P	30 - 160
EPA 8321B	Diuron-d6	34.3	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.3	P	30 - 160
EPA 8321B	Primidone-d5	56.0	P	30 - 160
EPA 8321B	Sucralose-d6	48.6	P	30 - 160
EPA 8321B	Sucralose-d6	48.6	P	30 - 160

Lab Sample ID: 2206527
Field Sample ID: FB110420

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	63.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	50.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.0	P	30 - 160
EPA 8321B	Diuron-d6	64.9	P	30 - 160
EPA 8321B	Endothall-d6	98.6	P	30 - 160
EPA 8321B	Endothall-d6	98.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	99.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	99.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.4	P	30 - 160
EPA 8321B	Primidone-d5	77.8	P	30 - 160
EPA 8321B	Sucralose-d6	96.3	P	30 - 160
EPA 8321B	Sucralose-d6	96.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102000

Included Lab Sample IDs: 2206519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	97.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102001

Included Lab Sample IDs: 2206521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.6	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102010

Included Lab Sample IDs: 2206520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102027

Included Lab Sample IDs: 2206520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A102033

Included Lab Sample IDs: 2206528

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.6	99.4	P/P	90 - 110
Calcium	102	102	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	103	102	P/P	90 - 110
Potassium	103	100	P/P	90 - 110
Sodium	103	102	P/P	90 - 110
Zinc	100	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A102035

Included Lab Sample IDs: 2206520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102036

Included Lab Sample IDs: 2206526, 2206527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	104	P/P	50 - 150
Acetaminophen	109	109	P/P	60 - 160
Acetamiprid	107	114	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A102036

Included Lab Sample IDs: 2206526, 2206527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	88.1	81.5	P/P	50 - 150
Bentazon	78.9	85.4	P/P	50 - 160
Benzovindiflupyr	105	108	P/P	50 - 150
Carbamazepine	92.1	93.0	P/P	60 - 150
Clothianidin	102	114	P/P	60 - 150
Dinotefuran	101	99.5	P/P	50 - 150
Diuron	80.8	87.0	P/P	60 - 160
Fenuron	111	113	P/P	60 - 150
Fluridone	96.1	99.1	P/P	60 - 160
Hydrocodone	109	109	P/P	60 - 150
Ibuprofen	87.2	97.9	P/P	50 - 160
Imazapyr	106	103	P/P	50 - 160
Imidacloprid	101	85.2	P/P	60 - 150
Linuron	89.6	100	P/P	60 - 150
Mandestrobin	95.5	97.2	P/P	50 - 150
MCPP	98.2	90.7	P/P	50 - 150
Naproxen	90.9	130	P/P	50 - 160
Primidone	102	109	P/P	60 - 150
Pyraclostrobin	105	111	P/P	60 - 150
Thiamethoxam	108	104	P/P	50 - 150
Tolfenpyrad	150	151*	P/F	60 - 150
Triclopyr	86.7	93.3	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A102039

Included Lab Sample IDs: 2206520

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

Reference Method: SM 2320 B-2011

Run ID: A102049

Included Lab Sample IDs: 2206519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102057

Included Lab Sample IDs: 2206520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	104	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102067

Included Lab Sample IDs: 2206519

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A102076

Included Lab Sample IDs: 2206526, 2206527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	159	130	P/P	50 - 160
Endothall	95.2	100	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A102077

Included Lab Sample IDs: 2206526, 2206527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	64.6	68.2	P/P	50 - 160
Glufosinate	80.7	90.2	P/P	50 - 160
Glyphosate	104	109	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A102123

Included Lab Sample IDs: 2206526, 2206527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.2	102	P/P	60 - 160

Reference Method: SM 4500 F-C-2011

Run ID: A102147

Included Lab Sample IDs: 2206519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	96.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102248

Included Lab Sample IDs: 2206528

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	99.2	98.5	P/P	90 - 110
Arsenic	101	99.9	P/P	90 - 110
Beryllium	98.0	95.1	P/P	90 - 110
Boron	103	101	P/P	90 - 110
Cadmium	98.7	99.2	P/P	90 - 110
Chromium	98.6	98.2	P/P	90 - 110
Copper	99.8	98.2	P/P	90 - 110
Lead	101	101	P/P	90 - 110
Nickel	100	98.8	P/P	90 - 110
Selenium	98.3	99.9	P/P	90 - 110
Thallium	98.3	97.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102273

Included Lab Sample IDs: 2206528

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	101	P/P	90 - 110
Silver	106	104	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.27	
EPA 200.7 Rev. 4.4	Barium	100	98.1	103		5.03
	Calcium	105	102	107		3.91
	Iron	104	103	108		4.37
	Magnesium	104	104	108		3.67
	Potassium	102	102	106		3.66
	Sodium	101	102	104		1.44
	Zinc	96.7	95.6	102		6.12
EPA 200.8 Rev. 5.4	Aluminum	104	101	98.8		2.57
	Antimony	102	101	100		1.22
	Arsenic	103	103	101		1.93
	Beryllium	101	99.2	97.9		1.15
	Boron	102	98.3	98.1		0.178
	Cadmium	100	100	98.9		1.10
	Chromium	102	101	99.2		2.28
	Copper	101	103	100		1.77
	Lead	105	104	102		1.99
	Nickel	101	103	101		1.80
	Selenium	100	100	98.8		1.68
	Silver	108	109	107		1.60
	Thallium	104	103	102		1.28
EPA 300.0 Rev. 2.1	Bromide	102	102	100		1.78
EPA 350.1 Rev. 2.0	Ammonia-N	98.9	103	104		1.14
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	105	102		1.59
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	97.5	98.0	97.0		1.03
EPA 365.1 Rev. 2.0	Total-P	103	104	104		0.193
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	101	102		0.987
EPA 8321B	2,4-D	60.8	55.3	55.1		0.336
	Acesulfame K	136	51.2	45.8		10.1
	Acetaminophen	54.2	40.1	34.5		15.0
	Acetamiprid	71.9	47.3	56.1		17.1
	Afidopyropen	51.4	43.5	35.2		21.2
	AMPA	100	70.6	66.2		4.46
	Bentazon	41.8				
	Benzovindiflupyr	56.7	54.1	53.0		2.13
	Carbamazepine	62.2	47.3	54.0		9.73
	Clothianidin	88.4	59.6	56.5		5.22
	Dinotefuran	82.3	53.9	47.2		10.7
	Diuron	53.8	36.5	35.9		1.69
	Endothall	94.0	115	121		5.06
	Fenuron	112	57.8	60.4		4.43
	Fluridone	66.7	61.3	56.5		6.37
	Glufosinate	100	101	94.6		6.41
	Glyphosate	103	100	91.2		4.26
	Hydrocodone	64.6	62.6	55.6		11.9
	Ibuprofen	81.1	68.0	55.2		20.7
	Imazapyr	78.6	78.7	72.7		4.46
	Imidacloprid	86.5				7.08
	Linuron	68.9	65.8	63.1		4.08
	Mandestrobin	64.2	59.1	58.4		1.23
	MCPP	65.9	59.4	56.3		5.42
	Naproxen	48.6	45.4	50.3		10.2
	Primidone	85.8	72.9	66.7		6.47
	Pyraclostrobin	47.3	48.5	47.3		2.60

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 8321B	Sucralose	129	57.0	55.6			2.27
	Thiamethoxam	83.2	72.9	75.7			3.86
	Tolfenpyrad	33.7	47.7	41.2			14.6
	Triclopyr	64.1	47.7	51.8			8.26
SM 2320 B-2011	Total Alkalinity	99.9				0.478	
SM 4500 F-C-2011	Fluoride	94.4	97.6	98.8			0.984
SM 5310 B-2011	Organic Carbon	103	102	102			0.272

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2206519
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2206528
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2206528
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2206519
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2206520
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2206520
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2206520
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2206520
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2206521
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2206526, 2206527
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2206526, 2206527
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2206519
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2206528
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2206519
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2206519
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2206520

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	11/05/2020			11/05/2020 15:01	Yen Ta	2206519
EPA 200.7 Rev. 4.4	11/05/2020	11/05/2020 15:30	Elliott D. Healy	11/06/2020 14:58	Betina Topolski	2206528
EPA 200.8 Rev. 5.4	11/05/2020	11/05/2020 15:30	Elliott D. Healy	11/21/2020 19:12	Alexander Thompson	2206528
	11/05/2020	11/05/2020 15:30	Elliott D. Healy	11/23/2020 19:24	Alexander Thompson	2206528
EPA 300.0 Rev. 2.1	11/05/2020			11/13/2020 16:38	Lipi Saha	2206519
EPA 350.1 Rev. 2.0	11/05/2020			11/07/2020 12:35	Ping Hua	2206520
EPA 351.2 Rev. 2.0	11/05/2020	11/06/2020 12:50	David Boose	11/09/2020 14:05	Elliott Rodriguez	2206520
EPA 353.2 Rev. 2.0	11/05/2020			11/06/2020 11:00	Beverly Y. Sanders	2206520
EPA 365.1 Rev. 2.0	11/05/2020	11/06/2020 13:18	Yen Ta	11/09/2020 09:08	Benjamin T. Nordmann	2206520
EPA 365.1 Rev. 2.0 dissolved	11/05/2020			11/05/2020 15:54	Blanca Fach	2206521
EPA 8321B	11/05/2020	11/05/2020 12:15	Hoor Shaik	11/06/2020 15:09	Juyoung Kim	2206526
	11/05/2020	11/05/2020 12:15	Hoor Shaik	11/06/2020 15:44	Juyoung Kim	2206527
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/09/2020 13:01	Rebecca Ware	2206526
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/09/2020 13:11	Rebecca Ware	2206527
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/10/2020 10:42	Rebecca Ware	2206526
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/10/2020 10:56	Rebecca Ware	2206527
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/12/2020 13:21	Rebecca Ware	2206526
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/12/2020 13:33	Rebecca Ware	2206527
SM 2320 B-2011	11/05/2020			11/07/2020 01:23	Dale L. Simmons	2206519
SM 2340B	11/05/2020			11/06/2020 14:58	Betina Topolski	2206528
SM 2540 D-2011	11/05/2020			11/06/2020 19:56	Madeline Gruver	2206519
SM 4500 F-C-2011	11/05/2020			11/13/2020 18:16	Dale L. Simmons	2206519
SM 5310 B-2011	11/05/2020			11/06/2020 22:32	Touraj Touran	2206520