

Chemical Analysis Report

SE-DIST-2019-10-01-02

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

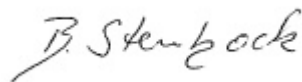
Event Description: **SMP-SLE Boat**
Request ID: **RQ-2019-09-30-71**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Drew Liddick

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 24-OCT-2019 18:43



NON-CONFORMANCE REPORT INCLUDED

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: South Fork SLR @ Leighton Park

Collection Date/Time: 09/30/2019 13:30

Field ID: FB_09302019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123759	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P371668	
	EPA 300.0	Bromide	0.013	U	mg Br/L	P372082	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P371986	
	SM 2540 D-97	TSS	2	U	mg/L	P372071	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P371989	
2123760	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P372057	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P371812	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P371710	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P371825	
	SM 5310 B-00	Organic Carbon	0.79	I	mg C/L	P371895	
2123761	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P371687	
2123774	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P371653	
		Manganese	1.0	U	ug/L	P371653	
		Zinc	5.0	U	ug/L	P371653	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P371653	
		Antimony	0.050	U	ug/L	P371653	
		Arsenic	0.050	U	ug/L	P371653	
		Cadmium	0.020	U	ug/L	P371653	
		Chromium	0.40	U	ug/L	P371653	
		Copper	0.40	U	ug/L	P371653	
		Lead	0.20	U	ug/L	P371653	
		Nickel	0.50	U	ug/L	P371653	
		Selenium	0.20	U	ug/L	P371653	
		Silver	0.010	U	ug/L	P371653	
		Thallium	0.10	U	ug/L	P371653	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
SM 5310 B-00: The result was confirmed on 10/07/2019.

Sample Location: South Fork SLR @ Gaines Ave

Collection Date/Time: 09/30/2019 14:25

Field ID: G2SE0039

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123747	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P371668	
	EPA 300.0	Bromide	1.8		mg Br/L	P372082	
	SM 2320 B-97	Total Alkalinity	172		mg CaCO3/L	P371986	
	SM 2540 D-97	TSS	4	I	mg/L	P372071	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P371989	
2123748	EPA 350.1 Rev. 2.0	Ammonia-N	0.067		mg N/L	P372057	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P371811	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P372440	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P371689	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P371895	
2123749	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.097		mg P/L	P371686	
2123773	EPA 200.7 Rev. 4.4	Iron	520		ug/L	P371653	
		Manganese	22.5		ug/L	P371653	
		Zinc	5.0	U	ug/L	P371653	
	EPA 200.8 Rev. 5.4	Aluminum	96		ug/L	P371653	
		Antimony	0.084	I	ug/L	P371653	
		Arsenic	2.54		ug/L	P371653	
		Cadmium	0.020	U	ug/L	P371653	
		Chromium	0.47	I	ug/L	P371653	
		Copper	2.30		ug/L	P371653	
		Lead	0.25	I	ug/L	P371653	
		Nickel	0.50	U	ug/L	P371653	
		Selenium	0.21	I	ug/L	P371653	
		Silver	0.010	U	ug/L	P371653	
		Thallium	0.10	U	ug/L	P371653	

Ref. Method and Comment:

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

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: North Fork SLR @ Veteran Memorial Park

Collection Date/Time: 09/30/2019 11:00

Field ID: G2SE0007

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123744	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P371668	
	EPA 300.0	Bromide	11		mg Br/L	P372082	
	SM 2320 B-97	Total Alkalinity	158		mg CaCO3/L	P371986	
	SM 2540 D-97	TSS	12		mg/L	P372071	
	SM 4500 F-C-97	Fluoride	0.38		mg F/L	P371989	
2123745	EPA 350.1 Rev. 2.0	Ammonia-N	0.057		mg N/L	P371970	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P371698	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.080		mg N/L	P372084	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P371689	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P371895	
2123746	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P371686	
2123771	EPA 8321B	2,4-D	0.050		ug/L	P371702	
		Acesulfame K**	0.10	UJ	ug/L	P371761	SUR
		AMPA**	1.4	I	ug/L	P371761	
		Sucralose**	0.39		ug/L	P371761	
		Acetaminophen**	0.0080	U	ug/L	P371702	
		Acetamiprid**	0.0020	U	ug/L	P371702	
		Endothall**	0.25	UJ	ug/L	P371761	SUR
		Glufosinate**	1.0	U	ug/L	P371761	
		Glyphosate**	1.0	U	ug/L	P371761	
		Afidopyropen**	0.0020	UJ	ug/L	P371702	
		Bentazon	0.015		ug/L	P371702	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P371702	
		Carbamazepine**	0.0012	I	ug/L	P371702	
		Clothianidin**	0.0063	I	ug/L	P371702	
		Dinotefuran**	0.0020	U	ug/L	P371702	
		Diuron	0.011		ug/L	P371702	
		Fenuron	0.016	U	ug/L	P371702	
		Fluridone**	0.0083		ug/L	P371702	
		Imazapyr**	0.18		ug/L	P371702	
		Hydrocodone**	0.0020	U	ug/L	P371702	
		Ibuprofen**	0.020	U	ug/L	P371702	
		Imidacloprid	0.029		ug/L	P371702	
		Linuron	0.0040	U	ug/L	P371702	
		Mandestrobin**	0.0020	UJ	ug/L	P371702	
		MCP	0.0020	U	ug/L	P371702	
		Naproxen**	0.0080	U	ug/L	P371702	
		Primidone**	0.0040	U	ug/L	P371702	
		Pyraclostrobin**	0.0020	U	ug/L	P371702	
		Thiamethoxam**	0.0020	U	ug/L	P371702	
		Tolfenpyrad**	0.0020	U	ug/L	P371702	
		Triclopyr**	0.0040	U	ug/L	P371702	
2123772	EPA 200.7 Rev. 4.4	Iron	310		ug/L	P371653	

Field ID: G2SE0007

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123772	EPA 200.7 Rev. 4.4	Manganese	17.6		ug/L	P371653	
		Zinc	5.0	U	ug/L	P371653	
	EPA 200.8 Rev. 5.4	Aluminum	248		ug/L	P371653	
		Antimony	0.13	I	ug/L	P371653	
		Arsenic	2.34		ug/L	P371653	
		Cadmium	0.020	U	ug/L	P371653	
		Chromium	0.43	I	ug/L	P371653	
		Copper	2.20		ug/L	P371653	
		Lead	0.28	I	ug/L	P371653	
		Nickel	0.50	U	ug/L	P371653	
		Selenium	0.20	U	ug/L	P371653	
		Silver	0.010	U	ug/L	P371653	
		Thallium	0.10	U	ug/L	P371653	

Ref. Method and Comment:

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

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for bentazon, fluridone and imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Refer to the narrative for an explanation of QC Codes. Surrogate spike recovery exceeding the control limits. Results confirmed in sample duplicate.

Sample Location: North Fork SLR @ Marker 14

Collection Date/Time: 09/30/2019 11:30

Field ID: G2SE0042

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123750	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P371668	
	EPA 300.0	Bromide	12		mg Br/L	P372082	
	SM 2320 B-97	Total Alkalinity	153		mg CaCO3/L	P371987	
	SM 2540 D-97	TSS	9	IA	mg/L	P372072	
	SM 4500 F-C-97	Fluoride	0.40		mg F/L	P371990	
2123751	EPA 350.1 Rev. 2.0	Ammonia-N	0.069	Y	mg N/L	P372055	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96	Y	mg N/L	P371698	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.085	Y	mg N/L	P372084	
	EPA 365.1 Rev. 2.0	Total-P	0.15	Y	mg P/L	P371689	
	SM 5310 B-00	Organic Carbon	15	Y	mg C/L	P371895	
2123752	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P371686	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 351.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 353.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 365.1 Rev. 2.0: Total-P: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

SM 5310 B-00: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

Sample Location: South Fork Saint Lucie @ Martin Hwy

Collection Date/Time: 09/30/2019 13:15

Field ID: G2SE0044

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123753	EPA 180.1 Rev. 2.0	Turbidity	8.5		NTU	P371668	
	EPA 300.0	Bromide	18		mg Br/L	P372082	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P371987	
	SM 2540 D-97	TSS	12	A	mg/L	P372074	
	SM 4500 F-C-97	Fluoride	0.46		mg F/L	P371990	
2123755	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P372055	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P371698	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P372084	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P371689	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P371897	
2123757	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.097		mg P/L	P371686	

Ref. Method and Comment:

EPA 353.2 Rev. 2.0: The result was confirmed on 10/08/2019.

Sample Location: South Fork Saint Lucie @ Martin Hwy

Collection Date/Time: 09/30/2019 13:20

Field ID: G2SE0044_DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123754	EPA 180.1 Rev. 2.0	Turbidity	8.3		NTU	P371668	
	EPA 300.0	Bromide	19		mg Br/L	P372082	
	SM 2320 B-97	Total Alkalinity	152	A	mg CaCO3/L	P371987	
	SM 2540 D-97	TSS	12		mg/L	P372074	
	SM 4500 F-C-97	Fluoride	0.46		mg F/L	P371990	
2123756	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P372055	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P371698	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P372084	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P371689	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P371897	
2123758	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.097		mg P/L	P371686	

Ref. Method and Comment:

EPA 353.2 Rev. 2.0: The result was confirmed on 10/08/2019.

Non-Conformance Report

NCR ID: 7936

Event(s)

SE-DIST-2019-10-01-02

Job(s)

TLH-2019-10-01-49

Sample(s)

2123751

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved to pH < 2.

Resolution: Sample preserved in the laboratory with sulfuric acid.
H2SO4 Lot#8274050 | Expiration Date: 10/01/2019
Data will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 10/7/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371668

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371653

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371653

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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
Batch ID: P372082

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371970

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372055

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372057

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: P371698

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371811

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371812

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371710

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372084

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372440

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371689

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371825

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371686

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371687

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

Reference Method: EPA 8321B
Batch ID: P371702

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: P371761

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: SM 2320 B-97
Batch ID: P371986

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P371987

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

Reference Method: SM 2540 D-97
Batch ID: P372071

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P372072

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P372074

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P371989

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371990

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P371895

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

Reference Method: SM 5310 B-00
Batch ID: P371897

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: P371653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	100		P	85 - 115
Manganese	94.6		P	85 - 115
Zinc	93.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371653

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

Reference Method: EPA 300.0
Batch ID: P372082

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372055

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372057

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371698

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371811

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371812

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371710

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372084

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372440

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371689

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371825

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371686

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371687

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.8		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P371702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	40 - 160
Acetaminophen	77.9		P	30 - 160
Acetamiprid	94.7		P	40 - 160
Afidopyropen	75.4		P	40 - 160
Bentazon	107		P	30 - 160
Benzovindiflupyr	88.8		P	40 - 160
Carbamazepine	101		P	40 - 160
Clothianidin	90.3		P	40 - 160
Dinotefuran	80.1		P	40 - 160
Diuron	107		P	40 - 160
Fenuron	93.8		P	40 - 160
Fluridone	89.2		P	40 - 160
Hydrocodone	88.7		P	40 - 160
Ibuprofen	75.2		P	30 - 160
Imazapyr	94.9		P	40 - 160
Imidacloprid	96.9		P	40 - 160
Linuron	70.9		P	40 - 160
Mandestrobin	76.8		P	40 - 160
MCPP	131		P	40 - 160
Naproxen	68.9		P	40 - 160
Primidone	91.7		P	40 - 160
Pyraclostrobin	88.7		P	30 - 160
Thiamethoxam	97.2		P	40 - 160
Tolfenpyrad	46.7		P	40 - 160
Triclopyr	108		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P371761

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	115		P	40 - 150
AMPA	112		P	40 - 150
Endothall	86.8		P	40 - 150
Glufosinate	103		P	40 - 150
Glyphosate	97.9		P	40 - 140
Sucralose	74.3		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P371986

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P371987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P371989

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P371990

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P371895

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

Reference Method: SM 5310 B-00
Batch ID: P371897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123551	Iron	105	106	P/P	80 - 120
2123551	Manganese	95.4	96.1	P/P	80 - 120
2123551	Zinc	97.0	97.6	P/P	80 - 120
2123615	Iron	104		P	80 - 120
2123615	Manganese	95.5		P	80 - 120
2123615	Zinc	95.6		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123551	Aluminum	107	106	P/P	80 - 120
2123551	Antimony	104	103	P/P	80 - 120
2123551	Arsenic	103	103	P/P	80 - 120
2123551	Cadmium	99.9	99.1	P/P	80 - 120
2123551	Chromium	95.4	96.1	P/P	80 - 120
2123551	Copper	103	102	P/P	80 - 120
2123551	Lead	106	104	P/P	80 - 120
2123551	Nickel	100	100	P/P	80 - 120
2123551	Selenium	104	101	P/P	80 - 120
2123551	Silver	103	100	P/P	80 - 120
2123551	Thallium	110	109	P/P	80 - 120
2123615	Aluminum	101		P	80 - 120
2123615	Antimony	105		P	80 - 120
2123615	Arsenic	103		P	80 - 120
2123615	Cadmium	101		P	80 - 120
2123615	Chromium	99.2		P	80 - 120
2123615	Copper	100		P	80 - 120
2123615	Lead	103		P	80 - 120
2123615	Nickel	98.2		P	80 - 120
2123615	Selenium	99.0		P	80 - 120
2123615	Silver	101		P	80 - 120
2123615	Thallium	109		P	80 - 120

Reference Method: EPA 300.0
Batch ID: P372082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123747	Bromide	95.0	94.8	P/P	90 - 110
2124140	Bromide	93.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123153	Ammonia-N	101	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2124496	Ammonia-N	102	99.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123677	Ammonia-N	101	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371698

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123154	Kjeldahl Nitrogen	96.1	93.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123715	Kjeldahl Nitrogen	106	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123914	Kjeldahl Nitrogen	105	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123675	NO2NO3-N	97.5	96.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123734	NO2NO3-N	97.2	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372440

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2126645	NO2NO3-N	97.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123627	Total-P	94.7	92.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123856	Total-P	95.7	96.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123628	O-Phosphate-P	95.7	96.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123631	O-Phosphate-P	94.2	93.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P371702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123652	2,4-D	113	116	P/P	40 - 160
2123652	Acetaminophen	63.6	64.7	P/P	30 - 160
2123652	Acetamiprid	103	98.0	P/P	40 - 160
2123652	Afidopyropen	80.4	80.1	P/P	40 - 160
2123652	Benzovindiflupyr	86.1	84.6	P/P	40 - 160
2123652	Carbamazepine	84.2	88.5	P/P	40 - 160
2123652	Clothianidin	83.6	83.0	P/P	40 - 160
2123652	Dinotefuran	84.5	94.8	P/P	40 - 160
2123652	Diuron	88.4	99.1	P/P	40 - 160
2123652	Fenuron	88.9	89.4	P/P	40 - 160
2123652	Hydrocodone	92.6	92.5	P/P	40 - 160
2123652	Ibuprofen	69.9	64.3	P/P	30 - 160
2123652	Imidacloprid	156	132	P/P	40 - 160
2123652	Linuron	63.1	61.2	P/P	40 - 160
2123652	Mandestrobin	73.6	76.5	P/P	40 - 160
2123652	MCP	127	115	P/P	40 - 160
2123652	Naproxen	60.4	63.6	P/P	40 - 160
2123652	Primidone	84.1	97.8	P/P	40 - 160
2123652	Pyraclostrobin	88.0	95.8	P/P	30 - 160
2123652	Thiamethoxam	103	129	P/P	40 - 160
2123652	Tolfenpyrad	61.1	62.1	P/P	40 - 160
2123652	Triclopyr	78.4	101	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P371761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123614	Acesulfame K	68.3	69.1	P/P	40 - 150
2123614	AMPA	56.2	57.1	P/P	40 - 150
2123614	Endothall	55.1	63.4	P/P	40 - 150
2123614	Glufosinate	67.8	80.6	P/P	40 - 150
2123614	Glyphosate	95.8	78.2	P/P	40 - 140
2123614	Sucralose	74.0	72.1	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P371990

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123754	Fluoride	95.9	95.2	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P371895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123745	Organic Carbon	100	98.3	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P371897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123733	Organic Carbon	96.0	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371668

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123626	Turbidity	6.19	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123551	Iron	1.55	Spike	P	0 - 20
2123551	Manganese	0.733	Spike	P	0 - 20
2123551	Zinc	0.601	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123551	Aluminum	0.531	Spike	P	0 - 20
2123551	Antimony	1.10	Spike	P	0 - 20
2123551	Arsenic	0.110	Spike	P	0 - 20
2123551	Cadmium	0.790	Spike	P	0 - 20
2123551	Chromium	0.718	Spike	P	0 - 20
2123551	Copper	0.202	Spike	P	0 - 20
2123551	Lead	1.05	Spike	P	0 - 20
2123551	Nickel	0.0299	Spike	P	0 - 20
2123551	Selenium	3.51	Spike	P	0 - 20
2123551	Silver	2.32	Spike	P	0 - 20
2123551	Thallium	0.471	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P372082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123747	Bromide	0.184	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123153	Ammonia-N	2.41	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2124496	Ammonia-N	1.79	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P372057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123677	Ammonia-N	0.792	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123154	Kjeldahl Nitrogen	2.96	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123715	Kjeldahl Nitrogen	2.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123914	Kjeldahl Nitrogen	2.38	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123675	NO2NO3-N	0.645	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123734	NO2NO3-N	1.00	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P372440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2126645	NO2NO3-N	0.178	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123627	Total-P	1.99	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123856	Total-P	0.385	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123628	O-Phosphate-P	0.816	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123631	O-Phosphate-P	0.426	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P371702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123652	2,4-D	1.56	Spike	P	0 - 30
2123652	Acetaminophen	1.63	Spike	P	0 - 30
2123652	Acetamiprid	5.41	Spike	P	0 - 30
2123652	Afidopyropen	0.362	Spike	P	0 - 30
2123652	Bentazon	1.32	Spike	P	0 - 30
2123652	Benzovindiflupyr	1.83	Spike	P	0 - 30
2123652	Carbamazepine	4.15	Spike	P	0 - 30
2123652	Clothianidin	0.789	Spike	P	0 - 30
2123652	Dinotefuran	11.2	Spike	P	0 - 30
2123652	Diuron	10.4	Spike	P	0 - 30
2123652	Fenuron	0.542	Spike	P	0 - 30
2123652	Fluridone	6.02	Spike	P	0 - 30
2123652	Hydrocodone	0.133	Spike	P	0 - 30
2123652	Ibuprofen	8.21	Spike	P	0 - 30
2123652	Imazapyr	2.96	Spike	P	0 - 30
2123652	Imidacloprid	14.4	Spike	P	0 - 30
2123652	Linuron	3.11	Spike	P	0 - 30
2123652	Mandestrobin	3.76	Spike	P	0 - 30
2123652	MCPP	9.50	Spike	P	0 - 30
2123652	Naproxen	5.28	Spike	P	0 - 30
2123652	Primidone	15.0	Spike	P	0 - 30
2123652	Pyraclostrobin	8.51	Spike	P	0 - 30
2123652	Thiamethoxam	22.3	Spike	P	0 - 30
2123652	Tolfenpyrad	1.66	Spike	P	0 - 30
2123652	Triclopyr	25.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P371761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123614	Acesulfame K	1.13	Spike	P	0 - 30
2123614	AMPA	1.37	Spike	P	0 - 30
2123614	Endothall	14.1	Spike	P	0 - 30
2123614	Glufosinate	17.3	Spike	P	0 - 30
2123614	Glyphosate	20.3	Spike	P	0 - 30
2123614	Sucralose	2.54	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P371986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123854	Total Alkalinity	0.407	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P371987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123754	Total Alkalinity	0.467	Sample	P	0 - 2.8

Reference Method: SM 2540 D-97
Batch ID: P372074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123753	TSS	6.90	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P371989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123854	Fluoride	0.480	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P371990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123754	Fluoride	0.480	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P371895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123745	Organic Carbon	0.932	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P371897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123733	Organic Carbon	3.28	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2123771
Field Sample ID: G2SE0007

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	63.2	P	30 - 160
EPA 8321B	Bentazon-d7	50.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.3	P	30 - 160
EPA 8321B	Diuron-d6	76.6	P	30 - 160
EPA 8321B	Endothall-d6	223	F	30 - 160
EPA 8321B	Endothall-d6	223	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	41.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	41.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.1	P	30 - 160
EPA 8321B	Primidone-d5	75.0	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94639

Included Lab Sample IDs: 2123744, 2123747, 2123750, 2123753, 2123754, 2123759

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A94645

Included Lab Sample IDs: 2123746, 2123749, 2123752, 2123757, 2123758, 2123761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.6	95.4	P/P	90 - 110
O-Phosphate-P	99.6	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94650

Included Lab Sample IDs: 2123760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94690

Included Lab Sample IDs: 2123772, 2123773, 2123774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	101	P/P	95 - 105
Iron	101	101	P/P	90 - 110
Manganese	99.0	99.6	P/P	95 - 105
Manganese	99.7	100	P/P	90 - 110
Zinc	97.2	98.1	P/P	95 - 105
Zinc	97.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94699

Included Lab Sample IDs: 2123745, 2123748, 2123751, 2123755, 2123756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94711

Included Lab Sample IDs: 2123745, 2123751, 2123755, 2123756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.4	99.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94716

Included Lab Sample IDs: 2123771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.2	97.8	P/P	50 - 150
Acetaminophen	93.5	92.9	P/P	60 - 160
Acetamiprid	102	103	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94716

Included Lab Sample IDs: 2123771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	87.0	77.5	P/P	50 - 150
Bentazon	120	112	P/P	50 - 160
Benzovindiflupyr	89.0	95.5	P/P	50 - 150
Carbamazepine	99.6	99.5	P/P	60 - 150
Clothianidin	97.6	95.0	P/P	60 - 150
Dinotefuran	82.8	83.4	P/P	50 - 150
Diuron	111	112	P/P	60 - 150
Fenuron	99.6	99.4	P/P	60 - 150
Fluridone	97.2	96.9	P/P	60 - 160
Hydrocodone	87.4	86.6	P/P	60 - 150
Ibuprofen	80.6	69.0	P/P	50 - 160
Imazapyr	89.0	90.7	P/P	50 - 150
Imidacloprid	91.4	78.5	P/P	60 - 150
Linuron	87.9	91.1	P/P	60 - 150
Mandestrobin	78.3	87.0	P/P	50 - 150
MCPP	91.4	90.1	P/P	50 - 150
Naproxen	109	72.7	P/P	50 - 160
Primidone	89.7	86.8	P/P	60 - 150
Pyraclostrobin	97.1	103	P/P	60 - 150
Thiamethoxam	88.6	85.1	P/P	50 - 150
Tolfenpyrad	98.7	98.1	P/P	60 - 150
Triclopyr	102	99.6	P/P	50 - 150

Reference Method: SM 5310 B-00

Run ID: A94723

Included Lab Sample IDs: 2123745, 2123748, 2123751, 2123755, 2123756, 2123760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	97.4	P/P	90 - 110
Organic Carbon	104	99.2	P/P	90 - 110
Organic Carbon	94.0	93.8	P/P	90 - 110
Organic Carbon	97.4	94.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94726

Included Lab Sample IDs: 2123760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94729

Included Lab Sample IDs: 2123771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.6	98.1	P/P	60 - 160
Glufosinate	92.0	81.2	P/P	60 - 160
Glyphosate	90.3	87.7	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94730

Included Lab Sample IDs: 2123771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	142	101	P/P	60 - 160
Endothall	89.5	96.0	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94749

Included Lab Sample IDs: 2123748, 2123760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.9	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94750

Included Lab Sample IDs: 2123745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	98.0	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A94754

Included Lab Sample IDs: 2123744, 2123747, 2123750, 2123753, 2123754, 2123759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	103	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110
Total Alkalinity	103	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94754

Included Lab Sample IDs: 2123744, 2123747, 2123750, 2123753, 2123754, 2123759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	P/P	90 - 110
Fluoride	101	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94775

Included Lab Sample IDs: 2123748, 2123751, 2123755, 2123756, 2123760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.4	P/P	90 - 110
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	99.4	100	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A94790

Included Lab Sample IDs: 2123744, 2123747, 2123750, 2123753, 2123754, 2123759

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94791

Included Lab Sample IDs: 2123745, 2123751, 2123755, 2123756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94848

Included Lab Sample IDs: 2123771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	80.8	76.2	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94918

Included Lab Sample IDs: 2123748

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94947

Included Lab Sample IDs: 2123772, 2123773, 2123774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	108	P/P	90 - 110
Aluminum	108	108	P/P	90 - 110
Antimony	102	102	P/P	90 - 110
Antimony	102	102	P/P	90 - 110
Arsenic	104	104	P/P	90 - 110
Arsenic	104	105	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	103	98.4	P/P	90 - 110
Chromium	98.4	96.9	P/P	90 - 110
Copper	104	105	P/P	90 - 110
Copper	105	104	P/P	90 - 110
Lead	106	106	P/P	90 - 110
Lead	106	106	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Silver	99.8	99.9	P/P	90 - 110
Silver	99.9	100	P/P	90 - 110
Thallium	102	98.6	P/P	90 - 110
Thallium	97.9	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94978

Included Lab Sample IDs: 2123772, 2123773, 2123774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	101	101	P/P	90 - 110
Selenium	102	101	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						6.19	
EPA 200.7 Rev. 4.4	Iron	100	105	106	104			1.55
	Manganese	94.6	95.4	96.1	95.5			0.733
	Zinc	93.5	97.0	97.6	95.6			0.601
EPA 200.8 Rev. 5.4	Aluminum	102	107	106	101			0.531
	Antimony	105	104	103	105			1.10
	Arsenic	103	103	103	103			0.110
	Cadmium	101	99.9	99.1	101			0.790
	Chromium	101	95.4	96.1	99.2			0.718
	Copper	101	103	102	100			0.202
	Lead	104	106	104	103			1.05
	Nickel	101	100	100	98.2			0.0299
	Selenium	102	104	101	99.0			3.51
	Silver	102	103	100	101			2.32
	Thallium	105	110	109	109			0.471
EPA 300.0	Bromide	98.9	95.0	94.8	93.9			0.184
EPA 350.1 Rev. 2.0	Ammonia-N	97.3	101	104				2.41
	Ammonia-N	100	102	99.9				1.79
	Ammonia-N	98.3	101	99.5				0.792
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	96.1	93.1				2.96
	Kjeldahl Nitrogen	101	106	103				2.22
	Kjeldahl Nitrogen	101	105	101				2.38
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	97.5	96.5				0.645
	NO2NO3-N	100	97.2	98.2				1.00
	NO2NO3-N	100	97.8					0.178
EPA 365.1 Rev. 2.0	Total-P	102	94.7	92.8				1.99
	Total-P	101	95.7	96.4				0.385
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	95.7	96.6				0.816
	O-Phosphate-P	99.8	94.2	93.8				0.426
EPA 8321B	2,4-D	133	113	116				1.56
	Acesulfame K	115	68.3	69.1				1.13
	Acetaminophen	77.9	63.6	64.7				1.63
	Acetamiprid	94.7	103	98.0				5.41
	Afidopyropen	75.4	80.4	80.1				0.362
	AMPA	112	56.2	57.1				1.37
	Bentazon	107						1.32
	Benzovindiflupyr	88.8	86.1	84.6				1.83
	Carbamazepine	101	84.2	88.5				4.15
	Clothianidin	90.3	83.6	83.0				0.789
	Dinotefuran	80.1	84.5	94.8				11.2
	Diuron	107	88.4	99.1				10.4
	Endothall	86.8	55.1	63.4				14.1
	Fenuron	93.8	88.9	89.4				0.542
	Fluridone	89.2						6.02
	Glufosinate	103	67.8	80.6				17.3
	Glyphosate	97.9	95.8	78.2				20.3
	Hydrocodone	88.7	92.6	92.5				0.133
	Ibuprofen	75.2	69.9	64.3				8.21
	Imazapyr	94.9						2.96
	Imidacloprid	96.9	156	132				14.4
	Linuron	70.9	63.1	61.2				3.11
	Mandestrobin	76.8	73.6	76.5				3.76
	MCPP	131	127	115				9.50
	Naproxen	68.9	60.4	63.6				5.28

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Primidone	91.7	84.1	97.8		15.0
	Pyraclostrobin	88.7	88.0	95.8		8.51
	Sucralose	74.3	74.0	72.1		2.54
	Thiamethoxam	97.2	103	129		22.3
	Tolfenpyrad	46.7	61.1	62.1		1.66
	Triclopyr	108	78.4	101		25.6
SM 2320 B-97	Total Alkalinity	103			0.407	
	Total Alkalinity	104			0.467	
SM 2540 D-97	TSS				6.90	
SM 4500 F-C-97	Fluoride	98.2				0.480
	Fluoride	97.3	95.9	95.2		0.480
SM 5310 B-00	Organic Carbon	103	100	98.3		0.932
	Organic Carbon	98.4	96.0	100		3.28

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2123744, 2123747, 2123750, 2123753, 2123754, 2123759
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2123772, 2123773, 2123774
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2123772, 2123773, 2123774
EPA 300.0 / E31780	Bromide in aqueous matrices	2123744, 2123747, 2123750, 2123753, 2123754, 2123759
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2123745, 2123748, 2123751, 2123755, 2123756, 2123760
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2123745, 2123748, 2123751, 2123755, 2123756, 2123760
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2123745, 2123748, 2123751, 2123755, 2123756, 2123760
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2123745, 2123748, 2123751, 2123755, 2123756, 2123760
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2123746, 2123749, 2123752, 2123757, 2123758, 2123761
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2123771
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2123771
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2123744, 2123747, 2123750, 2123753, 2123754, 2123759
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2123744, 2123747, 2123750, 2123753, 2123754, 2123759
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2123744, 2123747, 2123750, 2123753, 2123754, 2123759
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2123745, 2123748, 2123751, 2123755, 2123756, 2123760

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	10/01/2019			10/01/2019 16:44	Rosalyn Ballman	2123744, 2123747, 2123750, 2123753, 2123754, 2123759
EPA 200.7 Rev. 4.4	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/03/2019 08:57	Betina Topolski	2123774
	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/03/2019 10:51	Betina Topolski	2123772
	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/03/2019 11:01	Betina Topolski	2123773
EPA 200.8 Rev. 5.4	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/15/2019 03:13	Robert K Palmer	2123774
	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/15/2019 06:09	Robert K Palmer	2123772
	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/15/2019 06:19	Robert K Palmer	2123773
	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/16/2019 02:43	Robert K Palmer	2123774
	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/16/2019 04:22	Robert K Palmer	2123772
	10/01/2019	10/01/2019 16:50	Elliott D. Healy	10/16/2019 04:28	Robert K Palmer	2123773
EPA 300.0	10/01/2019			10/08/2019 03:03	Jhamieka S. Greenwood	2123747
	10/01/2019			10/08/2019 06:45	Jhamieka S. Greenwood	2123744
	10/01/2019			10/08/2019 07:02	Jhamieka S. Greenwood	2123750
	10/01/2019			10/08/2019 07:19	Jhamieka S. Greenwood	2123753
	10/01/2019			10/08/2019 07:36	Jhamieka S. Greenwood	2123754
	10/01/2019			10/08/2019 07:53	Jhamieka S. Greenwood	2123759
EPA 350.1 Rev. 2.0	10/01/2019			10/04/2019 13:11	Ping Hua	2123745
	10/01/2019			10/07/2019 12:25	Ping Hua	2123751
	10/01/2019			10/07/2019 12:29	Ping Hua	2123755
	10/01/2019			10/07/2019 12:37	Ping Hua	2123756
	10/01/2019			10/07/2019 13:38	Ping Hua	2123748
	10/01/2019			10/07/2019 13:44	Ping Hua	2123760
EPA 351.2 Rev. 2.0	10/01/2019	10/02/2019 11:25	Sima Feizi	10/03/2019 16:39	Julia Storbeck	2123745
	10/01/2019	10/02/2019 11:25	Sima Feizi	10/03/2019 16:41	Julia Storbeck	2123751
	10/01/2019	10/02/2019 11:25	Sima Feizi	10/03/2019 16:42	Julia Storbeck	2123755
	10/01/2019	10/02/2019 11:25	Sima Feizi	10/03/2019 16:44	Julia Storbeck	2123756
	10/01/2019	10/03/2019 11:34	Sima Feizi	10/04/2019 21:31	Julia Storbeck	2123748
	10/01/2019	10/03/2019 11:34	Sima Feizi	10/04/2019 21:41	Julia Storbeck	2123760
EPA 353.2 Rev. 2.0	10/01/2019			10/02/2019 10:18	Beverly Y. Sanders	2123760
	10/01/2019			10/08/2019 10:20	Beverly Y. Sanders	2123745
	10/01/2019			10/08/2019 10:21	Beverly Y. Sanders	2123751
	10/01/2019			10/08/2019 10:23	Beverly Y. Sanders	2123755
	10/01/2019			10/08/2019 10:24	Beverly Y. Sanders	2123756
	10/01/2019			10/14/2019 09:28	Beverly Y. Sanders	2123748
EPA 365.1 Rev. 2.0	10/01/2019	10/02/2019 12:14	Vijayalakshmi Reddy	10/03/2019 11:11	Lipi Saha	2123745
	10/01/2019	10/02/2019 12:14	Vijayalakshmi Reddy	10/03/2019 11:12	Lipi Saha	2123748
	10/01/2019	10/02/2019 12:14	Vijayalakshmi Reddy	10/03/2019 11:14	Lipi Saha	2123751
	10/01/2019	10/02/2019 12:14	Vijayalakshmi Reddy	10/03/2019 11:15	Lipi Saha	2123755
	10/01/2019	10/02/2019 12:14	Vijayalakshmi Reddy	10/03/2019 11:16	Lipi Saha	2123756

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	10/01/2019	10/03/2019 12:34	Vijayalakshmi Reddy	10/04/2019 11:46	Lipi Saha	2123760
EPA 365.1 Rev. 2.0 dissolved	10/01/2019			10/01/2019 15:59	Virginia P. Brown	2123746
	10/01/2019			10/01/2019 16:00	Virginia P. Brown	2123749
	10/01/2019			10/01/2019 16:02	Virginia P. Brown	2123757, 2123758
	10/01/2019			10/01/2019 16:03	Virginia P. Brown	2123761
	10/01/2019			10/01/2019 16:12	Virginia P. Brown	2123752
EPA 8321B	10/01/2019	10/02/2019 14:00	Hoor Shaik	10/04/2019 04:57	Juyoung Kim	2123771
	10/01/2019	10/03/2019 10:00	Rebecca Ware	10/03/2019 12:39	Rebecca Ware	2123771
	10/01/2019	10/03/2019 10:00	Rebecca Ware	10/04/2019 14:10	Rebecca Ware	2123771
	10/01/2019	10/03/2019 10:00	Rebecca Ware	10/09/2019 18:24	Rebecca Ware	2123771
SM 2320 B-97	10/01/2019			10/03/2019 21:02	Dale L. Simmons	2123759
	10/01/2019			10/03/2019 23:02	Dale L. Simmons	2123747
	10/01/2019			10/03/2019 23:45	Dale L. Simmons	2123744
	10/01/2019			10/04/2019 02:39	Dale L. Simmons	2123754
	10/01/2019			10/04/2019 02:52	Dale L. Simmons	2123750
	10/01/2019			10/04/2019 03:05	Dale L. Simmons	2123753
SM 2540 D-97	10/01/2019			10/02/2019 15:09	Yijie Li	2123744, 2123747, 2123750, 2123753, 2123754, 2123759
SM 4500 F-C-97	10/01/2019			10/03/2019 21:02	Dale L. Simmons	2123759
	10/01/2019			10/03/2019 23:02	Dale L. Simmons	2123747
	10/01/2019			10/03/2019 23:45	Dale L. Simmons	2123744
	10/01/2019			10/04/2019 00:48	Dale L. Simmons	2123754
	10/01/2019			10/04/2019 01:00	Dale L. Simmons	2123750
	10/01/2019			10/04/2019 01:04	Dale L. Simmons	2123753
SM 5310 B-00	10/01/2019			10/03/2019 14:39	Madeline Funaro	2123745
	10/01/2019			10/03/2019 15:28	Madeline Funaro	2123751
	10/01/2019			10/03/2019 18:47	Madeline Funaro	2123748
	10/01/2019			10/03/2019 19:26	Madeline Funaro	2123760
	10/01/2019			10/04/2019 04:55	Madeline Funaro	2123755
	10/01/2019			10/04/2019 05:09	Madeline Funaro	2123756