

Chemical Analysis Report

SO-DIST-2019-08-27-01

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

Event Description: **Canals**
Request ID: **RQ-2019-08-19-20**
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
Attn: Nicole Reistad

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
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Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 16-SEP-2019 12:44



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: 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: C-19 @ US 27

Collection Date/Time: 08/26/2019 10:10

Field ID: G3SD0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2114780	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P369773	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P369925	
		Sulfate	7.4		mg SO4/L	P369928	
	SM 2120 B	Color (true)	750		PCU	P369768	
	SM 2320 B-97	Total Alkalinity	57		mg CaCO3/L	P370026	
	SM 2540 C-97	TDS	203		mg/L	P370069	
	SM 2540 D-97	TSS	4	I	mg/L	P370074	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P370030	
2114781	EPA 350.1 Rev. 2.0	Ammonia-N	0.34		mg N/L	P370235	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.7		mg N/L	P370086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P369939	
	EPA 365.1 Rev. 2.0	Total-P	0.36		mg P/L	P369874	
	SM 5310 B-00	Organic Carbon	49		mg C/L	P370222	
2114782	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.27		mg P/L	P369798	
2114790	EPA 8321B	2,4-D	0.012		ug/L	P369653	
		Acesulfame K**	0.10	U	ug/L	P369883	
		AMPA**	0.32	I	ug/L	P369883	
		Sucralose**	0.010	U	ug/L	P369883	
		Acetaminophen**	0.0080	U	ug/L	P369653	
		Endothall**	0.25	U	ug/L	P369883	
		Acetamiprid**	0.0020	U	ug/L	P369653	
		Glufosinate**	0.10	U	ug/L	P369883	
		Glyphosate**	0.57		ug/L	P369883	
		Afidopyropen**	0.0020	UJ	ug/L	P369653	
		Bentazon	8.0E-04	U	ug/L	P369653	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P369653	
		Carbamazepine**	8.0E-04	U	ug/L	P369653	
		Clothianidin**	0.0020	U	ug/L	P369653	
		Dinotefuran**	0.0020	U	ug/L	P369653	
		Diuron	0.0020	U	ug/L	P369653	
		Fenuron	0.016	U	ug/L	P369653	
		Fluridone**	8.0E-04	U	ug/L	P369653	
		Imazapyr**	0.022		ug/L	P369653	
		Hydrocodone**	0.0020	U	ug/L	P369653	
		Ibuprofen**	0.020	U	ug/L	P369653	
		Imidacloprid	0.0020	U	ug/L	P369653	
		Linuron	0.0040	U	ug/L	P369653	
		Mandestrobin**	0.0020	UJ	ug/L	P369653	
		MCP	0.0020	U	ug/L	P369653	MS
		Naproxen**	0.0080	U	ug/L	P369653	
		Primidone**	0.0040	U	ug/L	P369653	
		Pyraclostrobin**	0.0020	U	ug/L	P369653	
		Thiamethoxam**	0.0020	U	ug/L	P369653	

Field ID: G3SD0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2114790	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P369653	
		Triclopyr**	0.0040	U	ug/L	P369653	

Ref. Method and Comment:

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

Sample Location: Lake Hicpochee Canal

Collection Date/Time: 08/26/2019 10:50

Field ID: G3SD0102

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2114774	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P369773	
	EPA 300.0 Rev. 2.1	Chloride	54		mg Cl/L	P369925	
		Sulfate	36		mg SO4/L	P369928	
		Color (true)	230		PCU	P369768	
	SM 2320 B-97	Total Alkalinity	189		mg CaCO3/L	P370025	
	SM 2540 C-97	TDS	371		mg/L	P370069	
	SM 2540 D-97	TSS	6	I	mg/L	P370074	
	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P370029	
2114776	EPA 350.1 Rev. 2.0	Ammonia-N	0.21		mg N/L	P370235	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.1		mg N/L	P369830	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P369939	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P369870	
	SM 5310 B-00	Organic Carbon	28		mg C/L	P370222	
2114778	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.20		mg P/L	P369798	

Sample Location: Nine Mile Canal @SR80

Collection Date/Time: 08/26/2019 11:25

Field ID: G3SD0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2114775	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P369773	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P369925	
		Sulfate	37		mg SO4/L	P369928	
	SM 2120 B	Color (true)	91		PCU	P369768	
	SM 2320 B-97	Total Alkalinity	204		mg CaCO3/L	P370025	
	SM 2540 C-97	TDS	358	A	mg/L	P370069	
	SM 2540 D-97	TSS	24	A	mg/L	P370074	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P370029	
2114777	EPA 350.1 Rev. 2.0	Ammonia-N	0.070	Y	mg N/L	P370235	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4	Y	mg N/L	P369830	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38	Y	mg N/L	P369939	
	EPA 365.1 Rev. 2.0	Total-P	0.18	Y	mg P/L	P369874	
	SM 5310 B-00	Organic Carbon	17	Y	mg C/L	P370222	
2114779	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.052		mg P/L	P369798	

Ref. Method and Comment:

SM 2540 D-97: Sample contains high density particulates with sandy appearance that settle out quickly.

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.

Non-Conformance Report

NCR ID: 7878

Event(s)

SO-DIST-2019-08-27-01

Job(s)

TLH-2019-08-27-08

Sample(s)

2114777

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: Peter D. Kaus 9/11/2019

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: P369773

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369925

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369928

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370235

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369830

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370086

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369939

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369870

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369874

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369798

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

Reference Method: EPA 8321B
Batch ID: P369653

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: P369883

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 2120 B
Batch ID: P369768

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P370025

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

Reference Method: SM 2320 B-97
Batch ID: P370026

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

Reference Method: SM 2540 C-97
Batch ID: P370069

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P370074

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P370029

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P370030

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P370222

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369925

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369928

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370235

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369830

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370086

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369874

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369798

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P369653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	119		P	40 - 160
Acetaminophen	74.9		P	30 - 160
Acetamiprid	82.1		P	40 - 160
Afidopyropen	87.0		P	40 - 160
Bentazon	91.2		P	30 - 160
Benzovindiflupyr	75.2		P	40 - 160
Carbamazepine	78.4		P	40 - 160
Clothianidin	78.0		P	40 - 160
Dinotefuran	82.9		P	40 - 160
Diuron	79.1		P	40 - 160
Fenuron	90.5		P	40 - 160
Fluridone	90.2		P	40 - 160
Hydrocodone	79.3		P	40 - 160
Ibuprofen	86.5		P	30 - 160
Imazapyr	95.6		P	40 - 160
Imidacloprid	86.8		P	40 - 160
Linuron	64.9		P	40 - 160
Mandestrobin	77.1		P	40 - 160
MCPP	144		P	40 - 160
Naproxen	84.0		P	40 - 160
Primidone	78.5		P	40 - 160
Pyraclostrobin	74.5		P	30 - 160
Thiamethoxam	90.7		P	40 - 160
Tolfenpyrad	49.7		P	40 - 160
Triclopyr	102		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P369883

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	137		P	40 - 150
AMPA	132		P	40 - 150
Endothall	95.6		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	110		P	40 - 140
Sucralose	93.0		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P369768

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

Reference Method: SM 2320 B-97
Batch ID: P370025

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 2320 B-97
Batch ID: P370026

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

Reference Method: SM 4500 F-C-97
Batch ID: P370029

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P370030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P370222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369925

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114406	Chloride	104		P	90 - 110
2114812	Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114406	Sulfate	104		P	90 - 110
2114812	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114819	Ammonia-N	95.0	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114768	Kjeldahl Nitrogen	97.8	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370086

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2115541	Kjeldahl Nitrogen	97.6	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114544	NO2NO3-N	98.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114208	Total-P	98.2	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114777	Total-P	92.6	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114814	O-Phosphate-P	94.8	95.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P369653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2113573	2,4-D	148	157	P/P	40 - 160
2113573	Acetaminophen	79.6	81.7	P/P	30 - 160
2113573	Acetamiprid	88.9	93.5	P/P	40 - 160
2113573	Afidopyropen	99.8	106	P/P	40 - 160
2113573	Benzovindiflupyr	85.5	86.8	P/P	40 - 160
2113573	Carbamazepine	80.2	82.7	P/P	40 - 160
2113573	Clothianidin	92.6	101	P/P	40 - 160
2113573	Dinotefuran	113	108	P/P	40 - 160
2113573	Diuron	71.9	76.8	P/P	40 - 160
2113573	Fenuron	82.3	85.6	P/P	40 - 160
2113573	Fluridone	80.3	86.2	P/P	40 - 160
2113573	Hydrocodone	82.4	92.5	P/P	40 - 160
2113573	Ibuprofen	105	103	P/P	30 - 160
2113573	Imidacloprid	159	159	P/P	40 - 160
2113573	Linuron	55.5	61.0	P/P	40 - 160
2113573	Mandestrobin	73.0	76.1	P/P	40 - 160
2113573	MCCP	189	201	F/F	40 - 160
2113573	Naproxen	86.4	108	P/P	40 - 160
2113573	Primidone	91.8	96.7	P/P	40 - 160
2113573	Pyraclostrobin	81.6	81.7	P/P	30 - 160
2113573	Thiamethoxam	141	135	P/P	40 - 160
2113573	Tolfenpyrad	67.7	69.6	P/P	40 - 160
2113573	Triclopyr	127	117	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P369883

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114790	Acesulfame K	97.6	81.2	P/P	40 - 150
2114790	AMPA	61.6	64.5	P/P	40 - 150
2114790	Endothall	82.6	92.6	P/P	40 - 150
2114790	Glufosinate	72.5	72.4	P/P	40 - 150
2114790	Glyphosate	94.7	107	P/P	40 - 140
2114790	Sucralose	78.5	91.0	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P370029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114341	Fluoride	95.6	96.1	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P370030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2115036	Fluoride	99.3	98.6	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P370222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2114394	Organic Carbon	100	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P369773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114799	Turbidity	5.03	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114406	Chloride	0.288	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114406	Sulfate	0.0425	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370235

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114819	Ammonia-N	4.14	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114768	Kjeldahl Nitrogen	0.645	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115541	Kjeldahl Nitrogen	0.348	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114544	NO2NO3-N	0.512	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114208	Total-P	0.894	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114777	Total-P	4.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114814	O-Phosphate-P	1.05	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P369653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2113573	2,4-D	3.76	Spike	P	0 - 30
2113573	Acetaminophen	2.11	Spike	P	0 - 30
2113573	Acetamiprid	5.05	Spike	P	0 - 30
2113573	Afidopyropen	6.02	Spike	P	0 - 30
2113573	Bentazon	1.34	Spike	P	0 - 30
2113573	Benzovindiflupyr	1.58	Spike	P	0 - 30
2113573	Carbamazepine	3.04	Spike	P	0 - 30
2113573	Clothianidin	8.89	Spike	P	0 - 30
2113573	Dinotefuran	3.94	Spike	P	0 - 30
2113573	Diuron	6.21	Spike	P	0 - 30
2113573	Fenuron	3.92	Spike	P	0 - 30
2113573	Fluridone	5.15	Spike	P	0 - 30
2113573	Hydrocodone	11.5	Spike	P	0 - 30
2113573	Ibuprofen	2.29	Spike	P	0 - 30
2113573	Imazapyr	2.15	Spike	P	0 - 30
2113573	Imidacloprid	0.140	Spike	P	0 - 30
2113573	Linuron	9.49	Spike	P	0 - 30
2113573	Mandestrobin	4.10	Spike	P	0 - 30
2113573	MCP	5.70	Spike	P	0 - 30
2113573	Naproxen	22.5	Spike	P	0 - 30
2113573	Primidone	5.21	Spike	P	0 - 30
2113573	Pyraclostrobin	0.111	Spike	P	0 - 30
2113573	Thiamethoxam	4.53	Spike	P	0 - 30
2113573	Tolfenpyrad	2.84	Spike	P	0 - 30
2113573	Triclopyr	7.97	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P369883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114790	Acesulfame K	18.3	Spike	P	0 - 30
2114790	AMPA	3.04	Spike	P	0 - 30
2114790	Endothall	11.4	Spike	P	0 - 30
2114790	Glufosinate	0.171	Spike	P	0 - 30
2114790	Glyphosate	7.91	Spike	P	0 - 30
2114790	Sucralose	14.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P369768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114815	Color (true)	1.05	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P370025

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114341	Total Alkalinity	0.390	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P370026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115036	Total Alkalinity	0.144	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P370069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114775	TDS	0.280	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P370074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114775	TSS	6.78	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P370029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114341	Fluoride	0.516	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P370030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115036	Fluoride	0.477	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P370222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2114394	Organic Carbon	0.415	Spike	P	0 - 20

Quality Assurance Report

Precision

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2114790
Field Sample ID: G3SD0087

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	141	P	30 - 160
EPA 8321B	Acetaminophen-d4	67.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	65.1	P	30 - 160
EPA 8321B	Diuron-d6	66.3	P	30 - 160
EPA 8321B	Endothall-d6	92.7	P	30 - 160
EPA 8321B	Endothall-d6	92.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	108	P	30 - 160
EPA 8321B	Primidone-d5	65.1	P	30 - 160
EPA 8321B	Sucralose-d6	76.3	P	30 - 160
EPA 8321B	Sucralose-d6	76.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A93819

Included Lab Sample IDs: 2114774, 2114775, 2114780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	104	P/P	90 - 110
Sulfate	104	106	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A93820

Included Lab Sample IDs: 2114774, 2114775, 2114780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115
Color (true)	99.3	99.6	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A93821

Included Lab Sample IDs: 2114774, 2114775, 2114780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A93828

Included Lab Sample IDs: 2114778, 2114779, 2114782

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A93888

Included Lab Sample IDs: 2114776, 2114777, 2114781

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A93889

Included Lab Sample IDs: 2114776, 2114777

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A93921

Included Lab Sample IDs: 2114776, 2114777, 2114781

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A93928

Included Lab Sample IDs: 2114774, 2114775, 2114780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	106	P/P	90 - 110
Total Alkalinity	104	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A93928

Included Lab Sample IDs: 2114774, 2114775, 2114780

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

Reference Method: EPA 8321B

Run ID: A93944

Included Lab Sample IDs: 2114790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	128	117	P/P	60 - 160
Glufosinate	103	104	P/P	60 - 160
Glyphosate	115	109	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A93946

Included Lab Sample IDs: 2114790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	114	115	P/P	60 - 160
Endothall	97.7	98.9	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A93984

Included Lab Sample IDs: 2114781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	90.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A93996

Included Lab Sample IDs: 2114790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	91.8	86.2	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A94014

Included Lab Sample IDs: 2114776, 2114777, 2114781

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94019

Included Lab Sample IDs: 2114776, 2114777, 2114781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	95.5	97.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94124

Included Lab Sample IDs: 2114790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	114	107	P/P	50 - 150
Acetaminophen	96.3	88.4	P/P	60 - 160
Acetamiprid	106	111	P/P	50 - 150
Afidopyropen	114	108	P/P	50 - 150
Bentazon	102	108	P/P	50 - 160
Benzovindiflupyr	107	101	P/P	50 - 150
Carbamazepine	113	109	P/P	60 - 150
Clothianidin	103	105	P/P	60 - 150
Dinotefuran	96.7	99.9	P/P	50 - 150
Diuron	103	105	P/P	60 - 150
Fenuron	110	91.7	P/P	60 - 150
Fluridone	128	125	P/P	60 - 160
Hydrocodone	111	112	P/P	60 - 150
Ibuprofen	89.2	88.8	P/P	50 - 160
Imazapyr	84.1	89.5	P/P	50 - 150
Imidacloprid	96.7	102	P/P	60 - 150
Linuron	96.0	102	P/P	60 - 150
Mandestrobin	114	112	P/P	50 - 150
MCPP	106	108	P/P	50 - 150
Naproxen	93.8	105	P/P	50 - 160
Primidone	98.5	106	P/P	60 - 150
Pyraclostrobin	117	115	P/P	60 - 150
Thiamethoxam	107	107	P/P	50 - 150
Tolfenpyrad	124	121	P/P	60 - 150
Triclopyr	103	116	P/P	50 - 150

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					5.03	
EPA 300.0 Rev. 2.1	Chloride	103	104	107		0.288	
	Sulfate	103	104	106		0.0425	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	95.0	101			4.14
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	97.8	99.0			0.645
	Kjeldahl Nitrogen	94.8	97.6	97.0			0.348
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	98.0	97.5			0.512
EPA 365.1 Rev. 2.0	Total-P	96.3	98.2	97.2			0.894
	Total-P	96.6	92.6	98.4			4.16
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0	94.8	95.8			1.05
EPA 8321B	2,4-D	119	148	157			3.76
	Acesulfame K	137	97.6	81.2			18.3
	Acetaminophen	74.9	79.6	81.7			2.11
	Acetamiprid	82.1	88.9	93.5			5.05
	Afidopyropen	87.0	99.8	106			6.02
	AMPA	132	61.6	64.5			3.04
	Bentazon	91.2					1.34
	Benzovindiflupyr	75.2	85.5	86.8			1.58
	Carbamazepine	78.4	80.2	82.7			3.04
	Clothianidin	78.0	92.6	101			8.89
	Dinotefuran	82.9	113	108			3.94
	Diuron	79.1	71.9	76.8			6.21
	Endothall	95.6	82.6	92.6			11.4
	Fenuron	90.5	82.3	85.6			3.92
	Fluridone	90.2	80.3	86.2			5.15
	Glufosinate	108	72.5	72.4			0.171
	Glyphosate	110	94.7	107			7.91
	Hydrocodone	79.3	82.4	92.5			11.5
	Ibuprofen	86.5	105	103			2.29
	Imazapyr	95.6					2.15
	Imidacloprid	86.8	159	159			0.140
	Linuron	64.9	55.5	61.0			9.49
	Mandestrobin	77.1	73.0	76.1			4.10
	MCPP	144	189	201			5.70
	Naproxen	84.0	86.4	108			22.5
	Primidone	78.5	91.8	96.7			5.21
	Pyraclostrobin	74.5	81.6	81.7			0.111
	Sucralose	93.0	78.5	91.0			14.7
	Thiamethoxam	90.7	141	135			4.53
	Tolfenpyrad	49.7	67.7	69.6			2.84
	Triclopyr	102	127	117			7.97
SM 2120 B	Color (true)	101				1.05	
SM 2320 B-97	Total Alkalinity	104				0.390	
	Total Alkalinity	104				0.144	
SM 2540 C-97	TDS					0.280	
SM 2540 D-97	TSS					6.78	
SM 4500 F-C-97	Fluoride	97.1	95.6	96.1			0.516
	Fluoride	97.6	99.3	98.6			0.477
SM 5310 B-00	Organic Carbon	99.7	100	101			0.415

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
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Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2114774, 2114775, 2114780
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2114774, 2114775, 2114780
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2114774, 2114775, 2114780
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2114776, 2114777, 2114781
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2114776, 2114777, 2114781
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2114776, 2114777, 2114781
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2114776, 2114777, 2114781
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2114778, 2114779, 2114782
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2114790
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2114790
SM 2120 B / E31780	True Color measured at 450 nm	2114774, 2114775, 2114780
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2114774, 2114775, 2114780
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2114774, 2114775, 2114780
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2114774, 2114775, 2114780
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2114774, 2114775, 2114780
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2114776, 2114777, 2114781

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	08/27/2019			08/27/2019 16:17	Rosalyn Ballman	2114774, 2114775, 2114780
EPA 300.0 Rev. 2.1	08/27/2019			08/29/2019 03:55	Jhamieka S. Greenwood	2114774
	08/27/2019			08/29/2019 04:07	Jhamieka S. Greenwood	2114775
	08/27/2019			08/29/2019 04:19	Jhamieka S. Greenwood	2114780
EPA 350.1 Rev. 2.0	08/27/2019			09/05/2019 12:05	Ping Hua	2114776
	08/27/2019			09/05/2019 12:07	Ping Hua	2114777
	08/27/2019			09/05/2019 12:08	Ping Hua	2114781
EPA 351.2 Rev. 2.0	08/27/2019	08/28/2019 12:55	Sima Feizi	08/29/2019 13:11	Julia Storbeck	2114776
	08/27/2019	08/28/2019 12:55	Sima Feizi	08/29/2019 13:13	Julia Storbeck	2114777
	08/27/2019	09/03/2019 16:50	Jhamieka S. Greenwood	09/04/2019 15:45	Julia Storbeck	2114781
EPA 353.2 Rev. 2.0	08/27/2019			08/29/2019 13:47	Beverly Y. Sanders	2114776
	08/27/2019			08/29/2019 13:48	Beverly Y. Sanders	2114777
	08/27/2019			08/29/2019 13:50	Beverly Y. Sanders	2114781
EPA 365.1 Rev. 2.0	08/27/2019	08/29/2019 07:30	Joseph Suarez	08/30/2019 10:05	Lipi Saha	2114776
	08/27/2019	08/29/2019 07:30	Joseph Suarez	08/30/2019 11:00	Lipi Saha	2114777
	08/27/2019	08/29/2019 07:30	Joseph Suarez	08/30/2019 11:03	Lipi Saha	2114781
EPA 365.1 Rev. 2.0 dissolved	08/27/2019			08/27/2019 15:41	Jhamieka S. Greenwood	2114778
	08/27/2019			08/27/2019 15:48	Jhamieka S. Greenwood	2114779
	08/27/2019			08/27/2019 15:49	Jhamieka S. Greenwood	2114782
EPA 8321B	08/27/2019	08/27/2019 13:30	Hoor Shaik	08/30/2019 20:38	Juyoung Kim	2114790
	08/27/2019	08/29/2019 09:45	Rebecca Ware	08/29/2019 14:14	Rebecca Ware	2114790
	08/27/2019	08/29/2019 09:45	Rebecca Ware	08/30/2019 09:51	Rebecca Ware	2114790
	08/27/2019	08/29/2019 09:45	Rebecca Ware	09/04/2019 21:02	Rebecca Ware	2114790
SM 2120 B	08/27/2019			08/27/2019 16:07	Madeline Funaro	2114775
	08/27/2019			08/27/2019 16:28	Madeline Funaro	2114774
	08/27/2019			08/27/2019 16:29	Madeline Funaro	2114780
SM 2320 B-97	08/27/2019			08/30/2019 09:20	Dale L. Simmons	2114774
	08/27/2019			08/30/2019 09:34	Dale L. Simmons	2114775
	08/27/2019			08/30/2019 13:01	Dale L. Simmons	2114780
SM 2540 C-97	08/27/2019			08/28/2019 14:52	Yijie Li	2114774, 2114775, 2114780
SM 2540 D-97	08/27/2019			08/28/2019 14:52	Yijie Li	2114774, 2114775, 2114780
SM 4500 F-C-97	08/27/2019			08/30/2019 09:20	Dale L. Simmons	2114774
	08/27/2019			08/30/2019 09:34	Dale L. Simmons	2114775
	08/27/2019			08/30/2019 13:01	Dale L. Simmons	2114780
SM 5310 B-00	08/27/2019			09/04/2019 17:42	Madeline Funaro	2114776
	08/27/2019			09/04/2019 17:56	Madeline Funaro	2114777
	08/27/2019			09/04/2019 18:10	Madeline Funaro	2114781