Chemical Analysis Report

SO-DIST-2019-06-06-01

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

Event Description: **SMP: Canals**
Request ID: **RQ-2019-05-27-09**
Customer: **SO-DIST**
Project ID: **SMP**

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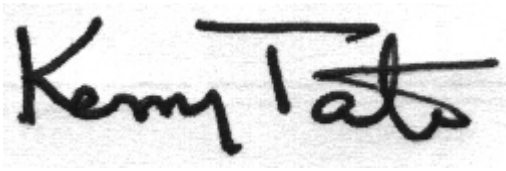
Date Certified: 02-JUL-2019 09:39



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: Myakka(Tidal) @US41 **Collection Date/Time: 06/05/2019 10:25**

Field ID: G3SD0068 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2092588	EPA 8321B	2,4-D	0.0020	U	ug/L	P365263	
		Acesulfame K**	0.10	UJ	ug/L	P365267	SUR
		AMPA**	0.10	UJ	ug/L	P365267	SUR
		Sucralose**	0.32		ug/L	P365267	
		Acetaminophen**	0.0080	U	ug/L	P365263	
		Endothall**	0.25	UJ	ug/L	P365267	SUR
		Glufosinate**	0.10	UJ	ug/L	P365267	SUR
		Glyphosate**	0.10	UJ	ug/L	P365267	SUR
		Bentazon	0.0031	I	ug/L	P365263	RPD
		Carbamazepine**	8.0E-04	U	ug/L	P365263	
		Diuron	0.0020	U	ug/L	P365263	
		Fenuron	0.016	U	ug/L	P365263	
		Fluridone**	0.059		ug/L	P365263	
		Imazapyr**	0.014	I	ug/L	P365263	
		Hydrocodone**	0.0020	U	ug/L	P365263	
		Ibuprofen**	0.020	U	ug/L	P365263	
		Imidacloprid	0.0041	I	ug/L	P365263	
		Linuron	0.0040	U	ug/L	P365263	
		MCPP	0.0020	U	ug/L	P365263	MS
		Naproxen**	0.0080	U	ug/L	P365263	
		Primidone**	0.0040	U	ug/L	P365263	
		Pyraclostrobin**	0.0020	U	ug/L	P365263	
		Triclopyr**	0.0040	U	ug/L	P365263	

Ref. Method and Comment:
EPA 8321B: Refer to the narrative for an explanation of QC Codes. Surrogate spike recovery exceeding the control limits. Results confirmed in sample duplicate.

Sample Location: PhillippeCreek@Proctor **Collection Date/Time: 06/05/2019 12:05**

Field ID: G3SD0091 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2092569	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P365230	
	EPA 300.0 Rev. 2.1	Chloride	88		mg Cl/L	P365638	
		Sulfate	130		mg SO4/L	P365639	
	SM 2120 B	Color (true)	44	A	PCU	P365223	
	SM 2320 B-97	Total Alkalinity	218		mg CaCO3/L	P365796	
	SM 2540 C-97	TDS	592	A	mg/L	P365535	
	SM 2540 D-97	TSS	2	IA	mg/L	P365373	
	SM 4500 F-C-97	Fluoride	0.54		mg F/L	P365670	
2092571	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P365731	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P365813	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.37		mg N/L	P365652	
	EPA 365.1 Rev. 2.0	Total-P	0.096		mg P/L	P365592	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P365505	
2092573	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P365248	

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

Sample Location: PhillippeCreek@Proctor **Collection Date/Time: 06/05/2019 12:25**

Field ID: FB_06052019 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2092570	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P365230	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P365638	
		Sulfate	0.20	U	mg SO4/L	P365639	
	SM 2120 B	Color (true)	2.5	U	PCU	P365223	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P365796	
	SM 2540 C-97	TDS	15	U	mg/L	P365535	
	SM 2540 D-97	TSS	2	U	mg/L	P365373	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P365670	
2092572	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P365731	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P365813	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P365652	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P365592	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P365505	
2092574	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P365248	

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

Sample Location: NorthCreek(Tidal)@41 **Collection Date/Time: 06/05/2019 13:10**

Field ID: G3SD0089 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2092589	EPA 8321B	2,4-D	0.34		ug/L	P365263	
		Acesulfame K**	0.13	IJ	ug/L	P365330	SUR
		AMPA**	1.0	U	ug/L	P365330	MS
		Sucralose**	0.77		ug/L	P365330	
		Acetaminophen**	0.0080	U	ug/L	P365263	
		Endothall**	0.25	UJ	ug/L	P365330	SUR
		Glufosinate**	1.0	U	ug/L	P365330	
		Glyphosate**	1.0	U	ug/L	P365330	
		Bentazon	0.0062		ug/L	P365263	RPD
		Carbamazepine**	0.0016	I	ug/L	P365263	
		Diuron	0.0026	I	ug/L	P365263	
		Fenuron	0.016	U	ug/L	P365263	
		Fluridone**	0.13		ug/L	P365263	
		Imazapyr**	0.12		ug/L	P365263	
		Hydrocodone**	0.0020	U	ug/L	P365263	
		Ibuprofen**	0.020	U	ug/L	P365263	
		Imidacloprid	0.0097		ug/L	P365263	
		Linuron	0.0040	U	ug/L	P365263	
		MCPP	0.0020	U	ug/L	P365263	MS
		Naproxen**	0.0080	U	ug/L	P365263	
		Primidone**	0.0072	I	ug/L	P365263	
		Pyraclostrobin**	0.0020	U	ug/L	P365263	
		Triclopyr**	0.0040	U	ug/L	P365263	

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

Sample Location: NorthCreek(Tidal)@41 **Collection Date/Time: 06/05/2019 13:15**

Field ID: G3SD0089_DUP Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2092590	EPA 8321B	2,4-D	0.38		ug/L	P365263	
		Acesulfame K**	0.12	IJ	ug/L	P365330	SUR
		AMPA**	1.0	U	ug/L	P365330	MS
		Sucralose**	0.67		ug/L	P365330	
		Acetaminophen**	0.0080	U	ug/L	P365263	
		Endothall**	0.25	UJ	ug/L	P365330	SUR
		Glufosinate**	1.0	U	ug/L	P365330	
		Glyphosate**	1.0	U	ug/L	P365330	
		Bentazon	0.0061		ug/L	P365263	RPD
		Carbamazepine**	0.0020	I	ug/L	P365263	
		Diuron	0.0032	I	ug/L	P365263	
		Fenuron	0.016	U	ug/L	P365263	
		Fluridone**	0.14		ug/L	P365263	
		Imazapyr**	0.13		ug/L	P365263	
		Hydrocodone**	0.0020	U	ug/L	P365263	
		Ibuprofen**	0.020	U	ug/L	P365263	
		Imidacloprid	0.010		ug/L	P365263	
		Linuron	0.0040	U	ug/L	P365263	
		MCPP	0.0020	U	ug/L	P365263	MS
		Naproxen**	0.0080	U	ug/L	P365263	
		Primidone**	0.0082	I	ug/L	P365263	
		Pyraclostrobin**	0.0020	U	ug/L	P365263	
		Triclopyr**	0.0040	U	ug/L	P365263	

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365230

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365638

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365639

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365731

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365813

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365652

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365592

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365248

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

Reference Method: EPA 8321B
Batch ID: P365263

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P365263

Component	Result	Code	Units
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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P365267

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

Reference Method: EPA 8321B
Batch ID: P365330

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: P365223

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P365796

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

Reference Method: SM 2540 C-97
Batch ID: P365535

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P365535

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P365373

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P365670

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P365505

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: P365638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365639

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365731

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365813

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365652

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365592

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365248

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

Reference Method: EPA 8321B
Batch ID: P365263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	106		P	40 - 150
Acetaminophen	102		P	30 - 150
Bentazon	119		P	30 - 150
Carbamazepine	91.4		P	40 - 150
Diuron	88.8		P	40 - 150
Fenuron	94.0		P	40 - 150
Fluridone	75.9		P	40 - 150
Hydrocodone	88.8		P	40 - 150
Ibuprofen	58.3		P	30 - 150
Imazapyr	86.7		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P365263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	97.3		P	40 - 150
Linuron	84.2		P	40 - 150
MCPP	129		P	40 - 150
Naproxen	94.4		P	40 - 150
Primidone	94.8		P	40 - 150
Pyraclostrobin	56.0		P	30 - 150
Triclopyr	84.1		P	30 - 150

Reference Method: EPA 8321B
Batch ID: P365267

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 150
AMPA	84.6		P	40 - 150
Endothall	109		P	40 - 150
Glufosinate	79.8		P	40 - 150
Glyphosate	86.8		P	40 - 140
Sucralose	98.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P365330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.3		P	40 - 150
AMPA	110		P	40 - 150
Endothall	125		P	40 - 150
Glufosinate	117		P	40 - 150
Glyphosate	114		P	40 - 140
Sucralose	98.0		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P365223

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

Reference Method: SM 2320 B-97
Batch ID: P365796

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

Reference Method: SM 4500 F-C-97
Batch ID: P365670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P365505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P365505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092480	Chloride	98.6		P	90 - 110
2092785	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365639

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092480	Sulfate	101		P	90 - 110
2092785	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365731

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092793	Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092549	Kjeldahl Nitrogen	91.5	90.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092571	NO2NO3-N	95.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092793	Total-P	99.2	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365248

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092550	O-Phosphate-P	97.5	98.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P365263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092436	2,4-D	128	112	P/P	40 - 150
2092436	Acetaminophen	95.1	109	P/P	30 - 150
2092436	Bentazon	84.2	114	P/P	30 - 150
2092436	Carbamazepine	100	103	P/P	40 - 150
2092436	Diuron	86.7	90.3	P/P	40 - 150
2092436	Fenuron	97.1	102	P/P	40 - 150
2092436	Fluridone	75.3	76.4	P/P	40 - 150
2092436	Hydrocodone	103	122	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P365263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092436	Ibuprofen	54.6	60.7	P/P	30 - 150
2092436	Imazapyr	120	132	P/P	40 - 150
2092436	Imidacloprid	131	145	P/P	40 - 150
2092436	Linuron	76.2	83.6	P/P	40 - 150
2092436	MCPP	148	153	P/F	40 - 150
2092436	Naproxen	105	116	P/P	40 - 150
2092436	Primidone	98.5	105	P/P	40 - 150
2092436	Pyraclostrobin	62.0	69.2	P/P	30 - 150
2092436	Triclopyr	130	112	P/P	30 - 150

Reference Method: EPA 8321B
Batch ID: P365267

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092448	Acesulfame K	102	102	P/P	40 - 150
2092448	AMPA	84.6	89.7	P/P	40 - 150
2092448	Endothall	101	105	P/P	40 - 150
2092448	Glufosinate	84.0	86.6	P/P	40 - 150
2092448	Glyphosate	89.8	93.3	P/P	40 - 140
2092448	Sucralose	102	102	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P365330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2093139	Acesulfame K	71.1	69.3	P/P	40 - 150
2093139	AMPA	31.9	32.5	F/F	40 - 150
2093139	Endothall	75.3	76.9	P/P	40 - 150
2093139	Glufosinate	40.7	41.4	P/P	40 - 150
2093139	Glyphosate	41.6	50.0	P/P	40 - 140
2093139	Sucralose	77.1	63.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P365670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092789	Fluoride	98.9	98.3	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P365505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092553	Organic Carbon	95.6	96.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092551	Turbidity	13.4	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092480	Chloride	0.155	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365639

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092480	Sulfate	0.886	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365731

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092793	Ammonia-N	0.00191	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092549	Kjeldahl Nitrogen	0.486	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092571	NO2NO3-N	0.354	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092793	Total-P	1.88	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092550	O-Phosphate-P	0.394	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P365263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092436	2,4-D	13.6	Spike	P	0 - 30
2092436	Acetaminophen	14.0	Spike	P	0 - 30
2092436	Bentazon	30.1	Spike	F	0 - 30
2092436	Carbamazepine	3.00	Spike	P	0 - 30
2092436	Diuron	4.03	Spike	P	0 - 30
2092436	Fenuron	4.75	Spike	P	0 - 30
2092436	Fluridone	1.39	Spike	P	0 - 30
2092436	Hydrocodone	17.4	Spike	P	0 - 30
2092436	Ibuprofen	10.6	Spike	P	0 - 30
2092436	Imazapyr	10.1	Spike	P	0 - 30
2092436	Imidacloprid	9.56	Spike	P	0 - 30
2092436	Linuron	9.19	Spike	P	0 - 30
2092436	MCPP	3.02	Spike	P	0 - 30
2092436	Naproxen	10.6	Spike	P	0 - 30
2092436	Primidone	6.06	Spike	P	0 - 30
2092436	Pyraclostrobin	10.9	Spike	P	0 - 30
2092436	Triclopyr	15.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P365267

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092448	Acesulfame K	0.0469	Spike	P	0 - 30
2092448	AMPA	5.84	Spike	P	0 - 30
2092448	Endothall	4.61	Spike	P	0 - 30
2092448	Glufosinate	2.98	Spike	P	0 - 30
2092448	Glyphosate	3.82	Spike	P	0 - 30
2092448	Sucralose	0.540	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P365330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2093139	Acesulfame K	2.56	Spike	P	0 - 30
2093139	AMPA	1.72	Spike	P	0 - 30
2093139	Endothall	2.06	Spike	P	0 - 30
2093139	Glufosinate	1.74	Spike	P	0 - 30
2093139	Glyphosate	13.4	Spike	P	0 - 30
2093139	Sucralose	18.8	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P365223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092569	Color (true)	1.35	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-97
Batch ID: P365796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092789	Total Alkalinity	0.831	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P365535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092569	TDS	0.844	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P365670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092789	Fluoride	0.473	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P365505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092553	Organic Carbon	0.812	Spike	P	0 - 20

* 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: 2092588
Field Sample ID: G3SD0068

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.6	P	30 - 160
EPA 8321B	Diuron-d6	74.2	P	30 - 160
EPA 8321B	Endothall-d6	823	F	30 - 160
EPA 8321B	Endothall-d6	823	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	30 - 160
EPA 8321B	Ibuprofen-d3	58.1	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	143	P	30 - 160
EPA 8321B	Sucralose-d6	143	P	30 - 160

Lab Sample ID: 2092589
Field Sample ID: G3SD0089

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	79.5	P	30 - 160
EPA 8321B	Diuron-d6	71.1	P	30 - 160
EPA 8321B	Endothall-d6	774	F	30 - 160
EPA 8321B	Endothall-d6	774	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.2	P	30 - 160
EPA 8321B	Primidone-d5	98.4	P	30 - 160
EPA 8321B	Sucralose-d6	95.6	P	30 - 160
EPA 8321B	Sucralose-d6	95.6	P	30 - 160

Lab Sample ID: 2092590
Field Sample ID: G3SD0089_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.1	P	30 - 160
EPA 8321B	Diuron-d6	76.3	P	30 - 160
EPA 8321B	Endothall-d6	830	F	30 - 160
EPA 8321B	Endothall-d6	830	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	43.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	43.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.9	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	98.1	P	30 - 160
EPA 8321B	Sucralose-d6	98.1	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A91919
Included Lab Sample IDs: 2092569, 2092570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.7	100	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A91921
Included Lab Sample IDs: 2092569, 2092570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A91928
Included Lab Sample IDs: 2092573, 2092574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	98.1	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A91987
Included Lab Sample IDs: 2092588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	70.5	85.0	P/P	60 - 160
Glufosinate	82.0	90.5	P/P	60 - 160
Glyphosate	83.1	90.7	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A91988
Included Lab Sample IDs: 2092588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	79.5	81.5	P/P	60 - 160
Endothall	117	112	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A92026
Included Lab Sample IDs: 2092569, 2092570

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

Reference Method: EPA 8321B
Run ID: A92029
Included Lab Sample IDs: 2092589, 2092590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	96.1	90.5	P/P	60 - 160
Endothall	127	129	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A92031
Included Lab Sample IDs: 2092589, 2092590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	68.3	93.0	P/P	60 - 160
Glufosinate	93.4	104	P/P	60 - 160
Glyphosate	88.8	109	P/P	60 - 160

Reference Method: SM 5310 B-00
Run ID: A92051
Included Lab Sample IDs: 2092571, 2092572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.3	95.6	P/P	90 - 110
Organic Carbon	95.6	95.3	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A92067
Included Lab Sample IDs: 2092588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	88.4	95.4	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A92070
Included Lab Sample IDs: 2092589, 2092590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	95.4	103	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A92109
Included Lab Sample IDs: 2092571, 2092572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	97.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A92113
Included Lab Sample IDs: 2092569, 2092570

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A92119
Included Lab Sample IDs: 2092571

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A92132
Included Lab Sample IDs: 2092571, 2092572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	108	108	P/P	90 - 110
Ammonia-N	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A92147
Included Lab Sample IDs: 2092572

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

Reference Method: SM 2320 B-97
Run ID: A92164
Included Lab Sample IDs: 2092569, 2092570

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A92208
Included Lab Sample IDs: 2092571, 2092572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	96.0	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A92226
Included Lab Sample IDs: 2092588, 2092589, 2092590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	110	116	P/P	50 - 150
Acetaminophen	117	105	P/P	60 - 160
Bentazon	105	95.6	P/P	50 - 160
Carbamazepine	112	110	P/P	60 - 150
Diuron	114	108	P/P	60 - 150
Fenuron	106	102	P/P	60 - 150
Fluridone	70.5	65.5	P/P	60 - 160
Hydrocodone	119	124	P/P	60 - 150
Ibuprofen	69.0	66.1	P/P	50 - 160
Imazapyr	118	108	P/P	50 - 150
Imidacloprid	102	103	P/P	60 - 150
Linuron	61.8	62.7	P/P	60 - 150
MCPP	104	101	P/P	50 - 150
Naproxen	109	79.4	P/P	50 - 160
Primidone	113	98.8	P/P	60 - 150
Pyraclostrobin	89.7	84.3	P/P	60 - 150
Triclopyr	118	103	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A92463
Included Lab Sample IDs: 2092589, 2092590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	82.8	78.5	P/P	50 - 150
Bentazon	91.4	91.7	P/P	50 - 160
Imazapyr	53.6	58.9	P/P	50 - 150
MCPP	78.6	87.1	P/P	50 - 150
Triclopyr	79.7	91.4	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		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					13.4	
EPA 300.0 Rev. 2.1	Chloride	99.1	98.6	99.7		0.155	
	Sulfate	100	101	101		0.886	
EPA 350.1 Rev. 2.0	Ammonia-N	103	104	104			0.0019
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.2	91.5	90.9			0.486
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	95.2				0.354
EPA 365.1 Rev. 2.0	Total-P	100	99.2	97.2			1.88
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	97.5	98.0			0.394
EPA 8321B	2,4-D	106	128	112			13.6
	Acesulfame K	102	102	102			0.0469
	Acesulfame K	92.3	71.1	69.3			2.56
	Acetaminophen	102	95.1	109			14.0
	AMPA	84.6	84.6	89.7			5.84
	AMPA	110	31.9	32.5			1.72
	Bentazon	119	84.2	114			30.1
	Carbamazepine	91.4	100	103			3.00
	Diuron	88.8	86.7	90.3			4.03
	Endothall	109	101	105			4.61
	Endothall	125	75.3	76.9			2.06
	Fenuron	94.0	97.1	102			4.75
	Fluridone	75.9	75.3	76.4			1.39
	Glufosinate	79.8	84.0	86.6			2.98
	Glufosinate	117	40.7	41.4			1.74
	Glyphosate	86.8	89.8	93.3			3.82
	Glyphosate	114	41.6	50.0			13.4
	Hydrocodone	88.8	103	122			17.4
	Ibuprofen	58.3	54.6	60.7			10.6
	Imazapyr	86.7	120	132			10.1
	Imidacloprid	97.3	131	145			9.56
	Linuron	84.2	76.2	83.6			9.19
	MCPP	129	148	153			3.02
	Naproxen	94.4	105	116			10.6
	Primidone	94.8	98.5	105			6.06
	Pyraclostrobin	56.0	62.0	69.2			10.9
	Sucralose	98.3	102	102			0.540
	Sucralose	98.0	77.1	63.9			18.8
	Triclopyr	84.1	130	112			15.1
SM 2120 B	Color (true)	100				1.35	
SM 2320 B-97	Total Alkalinity	104				0.831	
SM 2540 C-97	TDS					0.844	
SM 4500 F-C-97	Fluoride	97.5	98.9	98.3			0.473
SM 5310 B-00	Organic Carbon	95.6	95.6	96.6			0.812

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2092569, 2092570
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2092569, 2092570
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2092569, 2092570
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2092571, 2092572

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2092571, 2092572
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2092571, 2092572
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2092571, 2092572
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2092573, 2092574
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2092588, 2092589, 2092590
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2092588, 2092589, 2092590
SM 2120 B / E31780	True Color measured at 450 nm	2092569, 2092570
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2092569, 2092570
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2092569, 2092570
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2092569, 2092570
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2092569, 2092570
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2092571, 2092572

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	06/06/2019			06/06/2019 18:53	Julia Storbeck	2092569, 2092570
EPA 300.0 Rev. 2.1	06/06/2019			06/13/2019 16:30	Lipi Saha	2092569
	06/06/2019			06/13/2019 16:42	Lipi Saha	2092570
EPA 350.1 Rev. 2.0	06/06/2019			06/13/2019 15:14	Ping Hua	2092571
	06/06/2019			06/13/2019 15:28	Ping Hua	2092572
EPA 351.2 Rev. 2.0	06/06/2019	06/18/2019 13:00	Adrian Shelby	06/19/2019 11:30	Joseph Suarez	2092571
	06/06/2019	06/18/2019 13:00	Adrian Shelby	06/19/2019 11:32	Joseph Suarez	2092572
EPA 353.2 Rev. 2.0	06/06/2019			06/14/2019 10:00	Beverly Y. Sanders	2092571
	06/06/2019			06/14/2019 10:06	Beverly Y. Sanders	2092572
EPA 365.1 Rev. 2.0	06/06/2019	06/13/2019 13:10	Sima Feizi	06/14/2019 18:05	Julia Storbeck	2092571
	06/06/2019	06/13/2019 13:10	Sima Feizi	06/17/2019 14:07	Julia Storbeck	2092572
EPA 365.1 Rev. 2.0 dissolved	06/06/2019			06/06/2019 15:41	Jhamieka S. Greenwood	2092574
	06/06/2019			06/06/2019 15:44	Jhamieka S. Greenwood	2092573
EPA 8321B	06/06/2019	06/07/2019 13:30	Rebecca Ware	06/07/2019 19:16	Rebecca Ware	2092588
	06/06/2019	06/07/2019 13:30	Rebecca Ware	06/08/2019 20:33	Rebecca Ware	2092588
	06/06/2019	06/07/2019 13:30	Rebecca Ware	06/12/2019 07:00	Rebecca Ware	2092588
	06/06/2019	06/10/2019 11:00	Hoor Shaik	06/13/2019 17:54	Juyoung Kim	2092588
	06/06/2019	06/10/2019 11:00	Hoor Shaik	06/13/2019 18:29	Juyoung Kim	2092589
	06/06/2019	06/10/2019 11:00	Hoor Shaik	06/13/2019 19:03	Juyoung Kim	2092590
	06/06/2019	06/10/2019 11:00	Hoor Shaik	06/22/2019 18:08	Juyoung Kim	2092589
	06/06/2019	06/10/2019 11:00	Hoor Shaik	06/22/2019 18:43	Juyoung Kim	2092590
	06/06/2019	06/10/2019 14:00	Rebecca Ware	06/10/2019 16:48	Rebecca Ware	2092589
	06/06/2019	06/10/2019 14:00	Rebecca Ware	06/10/2019 17:02	Rebecca Ware	2092590
	06/06/2019	06/10/2019 14:00	Rebecca Ware	06/11/2019 12:21	Rebecca Ware	2092589
	06/06/2019	06/10/2019 14:00	Rebecca Ware	06/11/2019 12:31	Rebecca Ware	2092590
	06/06/2019	06/10/2019 14:00	Rebecca Ware	06/12/2019 08:34	Rebecca Ware	2092589
	06/06/2019	06/10/2019 14:00	Rebecca Ware	06/12/2019 08:46	Rebecca Ware	2092590
SM 2120 B	06/06/2019			06/06/2019 16:19	Madeline Funaro	2092569
	06/06/2019			06/06/2019 16:20	Madeline Funaro	2092570
SM 2320 B-97	06/06/2019			06/18/2019 00:56	Dale L. Simmons	2092569
	06/06/2019			06/18/2019 01:04	Dale L. Simmons	2092570
SM 2540 C-97	06/06/2019			06/07/2019 16:20	Mariam Hanna	2092569, 2092570
SM 2540 D-97	06/06/2019			06/07/2019 16:27	Mariam Hanna	2092569, 2092570
SM 4500 F-C-97	06/06/2019			06/13/2019 23:17	Dale L. Simmons	2092569
	06/06/2019			06/13/2019 23:32	Dale L. Simmons	2092570
SM 5310 B-00	06/06/2019			06/11/2019 08:35	Madeline Funaro	2092571
	06/06/2019			06/11/2019 11:51	Madeline Funaro	2092572