Chemical Analysis Report

SO-DIST-2021-09-30-01

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

Event Description: **2021 SMP : Lakes Park at Center**
Request ID: **RQ-2021-09-27-43**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
2295 Victoria Ave. Suite 364
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 25-OCT-2021 10:49

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: Lakes Park @ Center **Collection Date/Time: 09/29/2021 09:10**

Field ID: G1SD0115 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2279548	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P404422	
	EPA 300.0 Rev. 2.1	Chloride	96		mg Cl/L	P404663	
		Sulfate	23		mg SO4/L	P404666	
	SM 2120 B-2011	Color (true)	19	A	PCU	P404413	
	SM 2320 B-2011	Total Alkalinity	160		mg CaCO3/L	P404824	
	SM 2540 C-2011	TDS	380		mg/L	P404939	
	SM 2540 D-2011	TSS	12	I	mg/L	P404897	
	SM 4500 F-C-2011	Fluoride	0.22		mg F/L	P404695	
2279549	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P404888	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1	J	mg N/L	P404515	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P404574	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P404621	
	SM 5310 B-2011	Organic Carbon	9.0		mg C/L	P404603	
2279550	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P404409	
2279552	EPA 8321B	2,4-D	0.014		ug/L	P404499	
		Acesulfame K	0.10	U	ug/L	P404276	
		2,4,5-T	0.0040	U	ug/L	P404499	
		AMPA	0.10	U	ug/L	P404276	
		Acetaminophen	0.029	I	ug/L	P404499	RPD
		Acetamiprid	0.0020	U	ug/L	P404499	
		Endothall	0.25	U	ug/L	P404276	
		Glufosinate	0.10	U	ug/L	P404276	
		Glyphosate	0.10	U	ug/L	P404276	
		Afidopyropen	0.0020	U	ug/L	P404499	
		Bentazon	0.021		ug/L	P404499	
		Sucralose	0.098		ug/L	P404276	
		Benzovindiflupyr	0.0020	U	ug/L	P404499	
		Carbamazepine	8.0E-04	U	ug/L	P404499	
		Clothianidin	0.0021	I	ug/L	P404499	
		Dinotefuran	0.0020	U	ug/L	P404499	
		Diuron	0.0020	U	ug/L	P404499	
		Fenuron	0.016	U	ug/L	P404499	
		Fluridone	0.020		ug/L	P404499	
		Imazapyr	0.030		ug/L	P404499	
		Hydrocodone	0.0020	U	ug/L	P404499	
		Ibuprofen	0.020	U	ug/L	P404499	
		Imidacloprid	0.0051	I	ug/L	P404499	
		Linuron	0.0040	U	ug/L	P404499	
		Mandestrobin	0.0020	U	ug/L	P404499	
		MCPP	0.0027	I	ug/L	P404499	
		Naproxen	0.0080	U	ug/L	P404499	
		Primidone	0.0040	U	ug/L	P404499	
		Pyraclostrobin	0.0020	U	ug/L	P404499	

Field ID: G1SD0115 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2279552	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P404499	
		Tolfenpyrad	0.0020	U	ug/L	P404499	
		Triclopyr	0.0040	U	ug/L	P404499	
2279553	EPA 200.7 Rev. 4.4	Calcium	62.7		mg/L	P404746	
		Iron	30	U	ug/L	P404746	
		Magnesium	13.2		mg/L	P404746	
		Manganese	9.6		ug/L	P404746	
		Zinc	6.1	I	ug/L	P404746	
	EPA 200.8 Rev. 5.4	Aluminum	8.0	I	ug/L	P404746	
		Antimony	0.14	I	ug/L	P404746	
		Arsenic	1.93		ug/L	P404746	
		Beryllium	0.010	U	ug/L	P404746	
		Cadmium	0.020	U	ug/L	P404746	
		Chromium	0.40	U	ug/L	P404746	
		Copper	0.40	U	ug/L	P404746	
		Lead	0.20	U	ug/L	P404746	
		Nickel	0.50	U	ug/L	P404746	
		Selenium	0.20	U	ug/L	P404746	
		Silver	0.010	U	ug/L	P404746	
		Thallium	0.10	U	ug/L	P404746	
	SM 2340B	Hardness	211		mg/L	P404746	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated because of sample matrix interference.
EPA 351.2 Rev. 2.0: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P404422

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P404746

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P404746

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404663

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404666

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404888

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404515

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404574

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P404621

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404409

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

Reference Method: EPA 8321B
Batch ID: P404276

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: P404499

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P404499

Component	Result	Code	Units
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P404413

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P404824

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

Reference Method: SM 2540 C-2011
Batch ID: P404939

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P404897

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P404695

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P404603

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: P404746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Manganese	99.3		P	85 - 115
Zinc	98.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P404746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	109		P	85 - 115
Arsenic	104		P	85 - 115
Beryllium	103		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	106		P	85 - 115
Copper	101		P	85 - 115
Lead	102		P	85 - 115
Nickel	101		P	85 - 115
Selenium	103		P	85 - 115
Silver	101		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404663

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404666

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404888

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404515

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: P404574

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P404621

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404409

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

Reference Method: EPA 8321B
Batch ID: P404276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	79.8		P	40 - 150
AMPA	92.7		P	40 - 160
Endothall	69.3		P	40 - 150
Glufosinate	97.9		P	40 - 160
Glyphosate	88.3		P	40 - 160
Sucralose	66.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P404499

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.5		P	40 - 150
2,4,5-T	75.3		P	40 - 150
Acetaminophen	83.4		P	30 - 150
Acetamiprid	77.5		P	40 - 150
Afidopyropen	68.7		P	40 - 150
Bentazon	103		P	30 - 150
Benzovindiflupyr	69.2		P	40 - 150
Carbamazepine	85.9		P	40 - 150
Clothianidin	86.5		P	40 - 150
Dinotefuran	88.8		P	40 - 150
Diuron	95.8		P	40 - 150
Fenuron	86.4		P	40 - 150
Fluridone	77.0		P	40 - 150
Hydrocodone	92.7		P	40 - 150
Ibuprofen	70.3		P	40 - 150
Imazapyr	78.3		P	40 - 150
Imidacloprid	85.3		P	40 - 150
Linuron	79.7		P	40 - 150
Mandestrobin	74.0		P	40 - 150
MCPP	79.4		P	40 - 150
Naproxen	83.1		P	40 - 150
Primidone	72.6		P	40 - 150
Pyraclostrobin	62.7		P	40 - 150
Thiamethoxam	87.3		P	40 - 150
Tolfenpyrad	40.6		P	30 - 150
Triclopyr	81.8		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P404413

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.5		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P404824

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P404695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P404603

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P404746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2280415	Calcium	99.8		P	80 - 120
2280415	Iron	106	106	P/P	80 - 120
2280415	Magnesium	106	105	P/P	80 - 120
2280415	Manganese	100	99.1	P/P	80 - 120
2280415	Zinc	103	102	P/P	80 - 120
2280756	Calcium	106		P	80 - 120
2280756	Iron	110		P	80 - 120
2280756	Magnesium	108		P	80 - 120
2280756	Manganese	101		P	80 - 120
2280756	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P404746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2280415	Aluminum	101	105	P/P	80 - 120
2280415	Antimony	105	109	P/P	80 - 120
2280415	Arsenic	103	106	P/P	80 - 120
2280415	Beryllium	99.3	104	P/P	80 - 120
2280415	Cadmium	100	107	P/P	80 - 120
2280415	Chromium	98.7	103	P/P	80 - 120
2280415	Copper	99.9	104	P/P	80 - 120
2280415	Lead	97.8	102	P/P	80 - 120
2280415	Nickel	97.4	102	P/P	80 - 120
2280415	Selenium	102	104	P/P	80 - 120
2280415	Silver	97.5	101	P/P	80 - 120
2280415	Thallium	103	108	P/P	80 - 120
2280756	Aluminum	103		P	80 - 120
2280756	Antimony	106		P	80 - 120
2280756	Arsenic	100		P	80 - 120
2280756	Beryllium	94.8		P	80 - 120
2280756	Cadmium	104		P	80 - 120
2280756	Chromium	99.2		P	80 - 120
2280756	Copper	97.3		P	80 - 120
2280756	Lead	99.5		P	80 - 120
2280756	Nickel	97.3		P	80 - 120
2280756	Selenium	99.8		P	80 - 120
2280756	Silver	96.8		P	80 - 120
2280756	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279363	Chloride	101		P	90 - 110
2279431	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279363	Sulfate	103		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279431	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279544	Ammonia-N	98.4	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279549	Kjeldahl Nitrogen	89.1	91.6	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279544	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P404621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279544	Total-P	107	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279446	O-Phosphate-P	96.0	95.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P404276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278459	Acesulfame K	105	112	P/P	40 - 150
2278459	AMPA	96.6	94.8	P/P	40 - 160
2278459	Endothall	94.8	96.1	P/P	40 - 150
2278459	Glufosinate	101	103	P/P	40 - 160
2278459	Glyphosate	80.4	79.9	P/P	40 - 160
2278459	Sucralose	77.1	76.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P404499

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278894	2,4-D	114	118	P/P	40 - 150
2278894	2,4,5-T	114	125	P/P	40 - 150
2278894	Acetaminophen	93.9	137	P/P	30 - 150
2278894	Acetamiprid	83.5	97.2	P/P	40 - 150
2278894	Afidopyropen	66.7	82.2	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P404499

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278894	Bentazon	104	116	P/P	30 - 150
2278894	Benzovindiflupyr	89.2	97.7	P/P	40 - 150
2278894	Carbamazepine	98.4	118	P/P	40 - 150
2278894	Clothianidin	108	126	P/P	40 - 150
2278894	Dinotefuran	101	120	P/P	40 - 150
2278894	Diuron	94.0	116	P/P	40 - 150
2278894	Fenuron	97.4	107	P/P	40 - 150
2278894	Fluridone	88.3	97.4	P/P	40 - 150
2278894	Hydrocodone	84.2	111	P/P	40 - 150
2278894	Ibuprofen	98.8	113	P/P	40 - 150
2278894	Imazapyr	104	137	P/P	40 - 150
2278894	Imidacloprid	106	135	P/P	40 - 150
2278894	Linuron	75.3	85.4	P/P	40 - 150
2278894	Mandestrobin	90.0	104	P/P	40 - 150
2278894	MCPP	119	128	P/P	40 - 150
2278894	Naproxen	115	115	P/P	40 - 150
2278894	Primidone	96.1	109	P/P	40 - 150
2278894	Pyraclostrobin	78.2	91.4	P/P	40 - 150
2278894	Thiamethoxam	109	121	P/P	40 - 150
2278894	Tolfenpyrad	51.1	51.2	P/P	30 - 150
2278894	Triclopyr	91.5	113	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P404695

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2280397	Fluoride	100	99.3	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P404603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279440	Organic Carbon	94.3	94.3	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P404422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279417	Turbidity	19.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P404746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2280415	Calcium	0.496	Spike	P	0 - 20
2280415	Iron	0.154	Spike	P	0 - 20
2280415	Magnesium	0.233	Spike	P	0 - 20
2280415	Manganese	0.816	Spike	P	0 - 20
2280415	Zinc	0.656	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P404746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2280415	Aluminum	3.96	Spike	P	0 - 20
2280415	Antimony	3.85	Spike	P	0 - 20
2280415	Arsenic	3.01	Spike	P	0 - 20
2280415	Beryllium	4.41	Spike	P	0 - 20
2280415	Cadmium	5.72	Spike	P	0 - 20
2280415	Chromium	4.04	Spike	P	0 - 20
2280415	Copper	4.14	Spike	P	0 - 20
2280415	Lead	4.11	Spike	P	0 - 20
2280415	Nickel	4.36	Spike	P	0 - 20
2280415	Selenium	1.58	Spike	P	0 - 20
2280415	Silver	3.11	Spike	P	0 - 20
2280415	Thallium	4.38	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279363	Chloride	0.829	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279363	Sulfate	0.471	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279544	Ammonia-N	0.173	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279549	Kjeldahl Nitrogen	1.36	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279544	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P404621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279544	Total-P	2.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279446	O-Phosphate-P	0.826	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P404276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278459	Acesulfame K	6.01	Spike	P	0 - 30
2278459	AMPA	1.90	Spike	P	0 - 30
2278459	Endothall	1.35	Spike	P	0 - 30
2278459	Glufosinate	1.93	Spike	P	0 - 30
2278459	Glyphosate	0.672	Spike	P	0 - 30
2278459	Sucralose	0.911	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P404499

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278894	2,4-D	3.34	Spike	P	0 - 30
2278894	2,4,5-T	9.33	Spike	P	0 - 30
2278894	Acetaminophen	37.3	Spike	F	0 - 30
2278894	Acetamiprid	15.2	Spike	P	0 - 30
2278894	Afidopyropen	20.9	Spike	P	0 - 30
2278894	Bentazon	11.2	Spike	P	0 - 30
2278894	Benzovindiflupyr	9.08	Spike	P	0 - 30
2278894	Carbamazepine	17.9	Spike	P	0 - 30
2278894	Clothianidin	15.1	Spike	P	0 - 30
2278894	Dinotefuran	17.4	Spike	P	0 - 30
2278894	Diuron	20.6	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P404499

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278894	Fenuron	9.73	Spike	P	0 - 30
2278894	Fluridone	9.81	Spike	P	0 - 30
2278894	Hydrocodone	27.2	Spike	P	0 - 30
2278894	Ibuprofen	13.3	Spike	P	0 - 30
2278894	Imazapyr	24.8	Spike	P	0 - 30
2278894	Imidacloprid	23.8	Spike	P	0 - 30
2278894	Linuron	12.6	Spike	P	0 - 30
2278894	Mandestrobin	14.5	Spike	P	0 - 30
2278894	MCPP	7.54	Spike	P	0 - 30
2278894	Naproxen	0.256	Spike	P	0 - 30
2278894	Primidone	12.9	Spike	P	0 - 30
2278894	Pyraclostrobin	15.5	Spike	P	0 - 30
2278894	Thiamethoxam	10.7	Spike	P	0 - 30
2278894	Tolfenpyrad	0.144	Spike	P	0 - 30
2278894	Triclopyr	21.4	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P404413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279548	Color (true)	5.22	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P404824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279434	Total Alkalinity	1.17	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P404939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279435	TDS	0.482	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P404695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2280397	Fluoride	0.480	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P404603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279440	Organic Carbon	0.0	Spike	P	0 - 20

Quality Assurance Report
Precision

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2279552
Field Sample ID: G1SD0115

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Diuron-d6	87.4	P	30 - 160
EPA 8321B	Endothall-d6	93.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.8	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	85.2	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A108080
Included Lab Sample IDs: 2279550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.5	98.5	P/P	90 - 110

Reference Method: SM 2120 B-2011
Run ID: A108081
Included Lab Sample IDs: 2279548

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A108088
Included Lab Sample IDs: 2279548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 8321B
Run ID: A108094
Included Lab Sample IDs: 2279552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.7	100	P/P	60 - 160
Glufosinate	111	104	P/P	60 - 160
Glyphosate	102	96.5	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A108117
Included Lab Sample IDs: 2279552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	80.3	118	P/P	60 - 160
Endothall	86.5	78.3	P/P	60 - 160
Sucralose	82.6	83.4	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A108146
Included Lab Sample IDs: 2279549

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A108154
Included Lab Sample IDs: 2279549

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.5	95.4	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A108176
Included Lab Sample IDs: 2279549

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	99.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A108179
Included Lab Sample IDs: 2279548

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

Reference Method: SM 4500 F-C-2011
Run ID: A108185
Included Lab Sample IDs: 2279548

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A108230
Included Lab Sample IDs: 2279549

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	98.2	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A108253
Included Lab Sample IDs: 2279548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.3	99.6	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A108255
Included Lab Sample IDs: 2279552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.9	83.1	P/P	50 - 150
2,4,5-T	82.9	87.1	P/P	50 - 150
Acetaminophen	89.0	89.2	P/P	60 - 160
Acetamiprid	95.0	89.0	P/P	50 - 150
Afidopyropen	101	101	P/P	50 - 150
Bentazon	97.9	116	P/P	50 - 160
Benzovindiflupyr	82.2	71.1	P/P	50 - 150
Carbamazepine	100	104	P/P	60 - 150
Clothianidin	108	108	P/P	60 - 150
Dinotefuran	108	107	P/P	50 - 150
Diuron	107	121	P/P	60 - 160
Fenuron	92.1	98.9	P/P	60 - 150
Fluridone	91.9	95.5	P/P	60 - 160
Hydrocodone	98.7	101	P/P	60 - 150
Ibuprofen	87.3	61.5	P/P	50 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A108255
Included Lab Sample IDs: 2279552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	88.1	99.5	P/P	50 - 150
Imidacloprid	84.7	104	P/P	60 - 150
Linuron	79.2	108	P/P	60 - 150
Mandestrobin	90.4	87.2	P/P	50 - 150
MCPP	81.8	89.4	P/P	50 - 150
Naproxen	104	80.1	P/P	50 - 160
Primidone	93.9	92.1	P/P	60 - 150
Pyraclostrobin	82.7	84.0	P/P	60 - 150
Thiamethoxam	106	95.1	P/P	50 - 150
Tolfenpyrad	89.7	85.5	P/P	60 - 150
Triclopyr	85.6	95.3	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A108269
Included Lab Sample IDs: 2279553

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	105	104	P/P	90 - 110
Antimony	108	107	P/P	90 - 110
Arsenic	103	101	P/P	90 - 110
Beryllium	103	99.5	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	103	101	P/P	90 - 110
Copper	99.5	97.5	P/P	90 - 110
Lead	98.1	96.7	P/P	90 - 110
Nickel	99.1	96.9	P/P	90 - 110
Selenium	104	103	P/P	90 - 110
Silver	98.7	97.9	P/P	90 - 110
Thallium	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A108272
Included Lab Sample IDs: 2279549

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	97.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A108274
Included Lab Sample IDs: 2279553

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	103	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Magnesium	103	105	P/P	90 - 110
Manganese	100	101	P/P	90 - 110
Zinc	101	105	P/P	90 - 110

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision		
						LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						19.0	
EPA 200.7 Rev. 4.4	Calcium	102	99.8	106				0.496
	Iron	105	106	106	110			0.154
	Magnesium	105	106	105	108			0.233
	Manganese	99.3	100	99.1	101			0.816
	Zinc	98.1	103	102	104			0.656
EPA 200.8 Rev. 5.4	Aluminum	105	101	105	103			3.96
	Antimony	109	105	109	106			3.85
	Arsenic	104	103	106	100			3.01
	Beryllium	103	99.3	104	94.8			4.41
	Cadmium	105	100	107	104			5.72
	Chromium	106	98.7	103	99.2			4.04
	Copper	101	99.9	104	97.3			4.14
	Lead	102	97.8	102	99.5			4.11
	Nickel	101	97.4	102	97.3			4.36
	Selenium	103	102	104	99.8			1.58
	Silver	101	97.5	101	96.8			3.11
	Thallium	106	103	108	105			4.38
EPA 300.0 Rev. 2.1	Chloride	100	101	101			0.829	
	Sulfate	103	103	102			0.471	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	98.4	98.2				0.173
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	89.1	91.6				1.36
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	102				0.0
EPA 365.1 Rev. 2.0	Total-P	104	107	104				2.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	96.0	95.0				0.826
EPA 8321B	2,4-D	79.5	114	118				3.34
	2,4,5-T	75.3	114	125				9.33
	Acesulfame K	79.8	105	112				6.01
	Acetaminophen	83.4	93.9	137				37.3
	Acetamiprid	77.5	83.5	97.2				15.2
	Afidopyropen	68.7	66.7	82.2				20.9
	AMPA	92.7	96.6	94.8				1.90
	Bentazon	103	104	116				11.2
	Benzovindiflupyr	69.2	89.2	97.7				9.08
	Carbamazepine	85.9	98.4	118				17.9
	Clothianidin	86.5	108	126				15.1
	Dinotefuran	88.8	101	120				17.4
	Diuron	95.8	94.0	116				20.6
	Endothall	69.3	94.8	96.1				1.35
	Fenuron	86.4	97.4	107				9.73
	Fluridone	77.0	88.3	97.4				9.81
	Glufosinate	97.9	101	103				1.93
	Glyphosate	88.3	80.4	79.9				0.672
	Hydrocodone	92.7	84.2	111				27.2
	Ibuprofen	70.3	98.8	113				13.3
	Imazapyr	78.3	104	137				24.8
	Imidacloprid	85.3	106	135				23.8
	Linuron	79.7	75.3	85.4				12.6
	Mandestrobin	74.0	90.0	104				14.5
	MCPP	79.4	119	128				7.54
	Naproxen	83.1	115	115				0.256
	Primidone	72.6	96.1	109				12.9
	Pyraclostrobin	62.7	78.2	91.4				15.5
	Sucralose	66.8	77.1	76.4				0.911

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Thiamethoxam	87.3	109	121			10.7
	Tolfenpyrad	40.6	51.1	51.2			0.144
	Triclopyr	81.8	91.5	113			21.4
SM 2120 B-2011	Color (true)	98.5				5.22	
SM 2320 B-2011	Total Alkalinity	104				1.17	
SM 2540 C-2011	TDS					0.482	
SM 4500 F-C-2011	Fluoride	100	100	99.3			0.480
SM 5310 B-2011	Organic Carbon	96.0	94.3	94.3			0.0

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2279548
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2279553
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2279553
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2279548
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2279548
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2279549
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2279549
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2279549
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2279549
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2279550
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2279552
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2279548
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2279548
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2279553
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2279548
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2279548
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2279548
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2279549

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	09/30/2021			09/30/2021 15:46	Khloe J Berg	2279548
EPA 200.7 Rev. 4.4	09/30/2021	10/08/2021 10:00	Emily M Philpot	10/11/2021 13:19	Josef B Mick	2279553
EPA 200.8 Rev. 5.4	09/30/2021	10/08/2021 10:00	Emily M Philpot	10/11/2021 19:19	Alexander Thompson	2279553
EPA 300.0 Rev. 2.1	09/30/2021			10/05/2021 23:00	Roberta Tatti	2279548
EPA 350.1 Rev. 2.0	09/30/2021			10/08/2021 12:51	Ping Hua	2279549
EPA 351.2 Rev. 2.0	09/30/2021	10/04/2021 17:50	Benjamin T. Nordmann	10/06/2021 11:25	Alexandra J Mattheus	2279549
EPA 353.2 Rev. 2.0	09/30/2021			10/05/2021 09:47	Beverly Y. Sanders	2279549
EPA 365.1 Rev. 2.0	09/30/2021	10/06/2021 12:50	Simonne.V. Calhoun	10/07/2021 14:02	Lipi Saha	2279549
EPA 365.1 Rev. 2.0 dissolved	09/30/2021			09/30/2021 14:37	James L Waggerby	2279550
EPA 8321B	09/30/2021	09/30/2021 13:00	Juyoung Kim	09/30/2021 18:50	Juyoung Kim	2279552
	09/30/2021	09/30/2021 13:00	Juyoung Kim	10/01/2021 15:03	Manjita Shrestha	2279552
	09/30/2021	10/05/2021 09:00	Hoor Shaik	10/09/2021 16:39	Juyoung Kim	2279552
SM 2120 B-2011	09/30/2021			09/30/2021 15:36	Benjamin T. Nordmann	2279548
SM 2320 B-2011	09/30/2021			10/08/2021 21:33	Dale L. Simmons	2279548
SM 2340B	09/30/2021			10/11/2021 13:19	Josef B Mick	2279553
SM 2540 C-2011	09/30/2021			10/04/2021 14:45	Yijie Li	2279548
SM 2540 D-2011	09/30/2021			10/04/2021 14:45	Yijie Li	2279548
SM 4500 F-C-2011	09/30/2021			10/06/2021 18:09	Dale L. Simmons	2279548
SM 5310 B-2011	09/30/2021			10/05/2021 00:31	Khloe J Berg	2279549