

Chemical Analysis Report

NE-DIST-2021-09-28-01

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

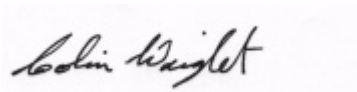
Event Description: **LSJR South West Boat**
Request ID: **RQ-2021-09-27-12**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 21-OCT-2021 11:12

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

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 and Nutrients.

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: Swimming Pen CR @ SR 220

Collection Date/Time: 09/27/2021 13:55

Field ID: 20030191

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2278697	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P404329	
	EPA 300.0 Rev. 2.1	Chloride	280		mg Cl/L	P404490	
		Sulfate	53		mg SO ₄ /L	P404495	
	SM 2120 B-2011	Color (true)	100		PCU	P404282	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO ₃ /L	P404536	
	SM 2540 C-2011	TDS	616		mg/L	P404765	
	SM 2540 D-2011	TSS	3	I	mg/L	P404757	
2278698	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P404540	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P404477	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P404394	
	EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	0.004	U	mg N/L	P404445	
	EPA 365.1 Rev. 2.0	Total-P	0.056		mg P/L	P404562	
2278699	SM 5310 B-2011	Organic Carbon	17		mg C/L	P404841	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.01	I	mg P/L	P404293	
2278711	EPA 200.7 Rev. 4.4	Barium	11.4		ug/L	P404421	
		Calcium	31.2		mg/L	P404421	
		Iron	88	I	ug/L	P404421	
		Magnesium	22.6		mg/L	P404421	
		Manganese	12.3		ug/L	P404421	
		Potassium	7.1		mg/L	P404421	
		Sodium	157		mg/L	P404421	
		Zinc	5.0	U	ug/L	P404421	
	EPA 200.8 Rev. 5.4	Aluminum	45		ug/L	P404421	
		Antimony	0.12	I	ug/L	P404421	
		Arsenic	2.15		ug/L	P404421	
		Beryllium	0.014	I	ug/L	P404421	
		Boron**	91.7		ug/L	P404421	
		Cadmium	0.020	U	ug/L	P404421	
		Chromium	0.40	U	ug/L	P404421	
		Copper	0.84		ug/L	P404421	
		Lead	0.26	I	ug/L	P404421	
		Nickel	0.50	U	ug/L	P404421	
		Selenium	0.20	I	ug/L	P404421	
		Silver	0.010	U	ug/L	P404421	
		Thallium	0.10	U	ug/L	P404421	
	SM 2340B	Hardness	171		mg/L	P404421	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: FB

Collection Date/Time: 09/27/2021 14:05

Field ID: FB_09272021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2278703	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P404329	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P404490	
		Sulfate	0.20	U	mg SO4/L	P404495	
		Color (true)	2.5	U	PCU	P404282	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P404536	
	SM 2540 C-2011	TDS	15	U	mg/L	P404764	
	SM 2540 D-2011	TSS	2	U	mg/L	P404756	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P404540	
2278704	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P404477	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P404450	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P404336	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P404562	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P404491	
2278705	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P404293	
2278713	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P404421	
		Calcium	0.075	U	mg/L	P404421	
		Iron	30	U	ug/L	P404421	
		Magnesium	0.040	U	mg/L	P404421	
		Manganese	1.0	U	ug/L	P404421	
		Potassium	0.30	U	mg/L	P404421	
		Sodium	0.50	U	mg/L	P404421	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P404421	
		Aluminum	5.0	U	ug/L	P404421	
		Antimony	0.050	U	ug/L	P404421	
		Arsenic	0.050	U	ug/L	P404421	
		Beryllium	0.010	U	ug/L	P404421	
		Boron**	2.0	U	ug/L	P404421	
		Cadmium	0.020	U	ug/L	P404421	
		Chromium	0.40	U	ug/L	P404421	
		Copper	0.40	U	ug/L	P404421	
		Lead	0.20	U	ug/L	P404421	
		Nickel	0.50	U	ug/L	P404421	
		Selenium	0.20	U	ug/L	P404421	
		Silver	0.010	U	ug/L	P404421	
		Thallium	0.10	U	ug/L	P404421	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Black CR @ RR Bridge Below Millog CR

Collection Date/Time: 09/27/2021 15:05

Field ID: 20030204

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2278700	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P404329	
	EPA 300.0 Rev. 2.1	Chloride	8.1		mg Cl/L	P404490	
		Sulfate	2.7		mg SO4/L	P404495	
		Color (true)	370		PCU	P404282	
	SM 2320 B-2011	Total Alkalinity	6.0		mg CaCO3/L	P404536	
	SM 2540 C-2011	TDS	99		mg/L	P404765	
	SM 2540 D-2011	TSS	4	I	mg/L	P404757	
	SM 4500 F-C-2011	Fluoride	0.052	I	mg F/L	P404540	
2278701	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P404477	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89	I	mg N/L	P404800	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P404336	
	EPA 365.1 Rev. 2.0	Total-P	0.098		mg P/L	P404562	
	SM 5310 B-2011	Organic Carbon	30		mg C/L	P404491	
2278702	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.057		mg P/L	P404293	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: The PQL was elevated because of sample matrix interference.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Swimming Pen Creek at Eagles Creek Dr.

Collection Date/Time: 09/27/2021 14:20

Field ID: G2NE1188

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2278712	EPA 200.7 Rev. 4.4	Barium	23.3		ug/L	P404421	
		Calcium	20.3		mg/L	P404421	
		Iron	1.60E+03		ug/L	P404421	
		Magnesium	2.62		mg/L	P404421	
		Manganese	39.1		ug/L	P404421	
		Potassium	2.4		mg/L	P404421	
		Sodium	12.3		mg/L	P404421	
	EPA 200.8 Rev. 5.4	Zinc	5.7	I	ug/L	P404421	
		Aluminum	204		ug/L	P404421	
		Antimony	0.11	I	ug/L	P404421	
		Arsenic	1.49		ug/L	P404421	
		Beryllium	0.039	I	ug/L	P404421	
		Boron**	32.3		ug/L	P404421	
		Cadmium	0.020	U	ug/L	P404421	
		Chromium	0.40	U	ug/L	P404421	
		Copper	4.32		ug/L	P404421	
		Lead	0.65		ug/L	P404421	
		Nickel	0.52	I	ug/L	P404421	
		Selenium	0.20	U	ug/L	P404421	
		Silver	0.010	U	ug/L	P404421	
		Thallium	0.10	U	ug/L	P404421	
	SM 2340B	Hardness	61.5		mg/L	P404421	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P404329

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P404421

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P404421

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404490

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404495

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404477

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404394

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404450

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404800

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404336

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404445

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P404562

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404293

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

Reference Method: SM 2120 B-2011
Batch ID: P404282

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P404536

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P404764

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P404765

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P404756

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P404757

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P404540

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P404491

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

Reference Method: SM 5310 B-2011
Batch ID: P404841

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: P404421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	100		P	85 - 115
Calcium	104		P	85 - 115
Iron	106		P	85 - 115
Magnesium	106		P	85 - 115
Manganese	99.7		P	85 - 115
Potassium	99.9		P	85 - 115
Sodium	102		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P404421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.4		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	93.4		P	85 - 115
Beryllium	93.1		P	85 - 115
Boron	96.8		P	85 - 115
Cadmium	94.9		P	85 - 115
Chromium	93.2		P	85 - 115
Copper	94.2		P	85 - 115
Lead	97.0		P	85 - 115
Nickel	94.5		P	85 - 115
Selenium	96.6		P	85 - 115
Silver	100		P	85 - 115
Thallium	97.2		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404490

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404495

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404477

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404394

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404450

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404800

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: P404336

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404445

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P404562

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404293

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

Reference Method: SM 2120 B-2011
Batch ID: P404282

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P404536

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.5		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P404540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P404491

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P404841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P404421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278649	Barium	101	102	P/P	80 - 120
2278649	Calcium	101	103	P/P	80 - 120
2278649	Iron	105	107	P/P	80 - 120
2278649	Magnesium	104	107	P/P	80 - 120
2278649	Manganese	99.9	100	P/P	80 - 120
2278649	Potassium	98.0	99.9	P/P	80 - 120
2278649	Sodium	96.1	101	P/P	80 - 120
2278649	Zinc	101	102	P/P	80 - 120
2278895	Barium	100		P	80 - 120
2278895	Calcium	101		P	80 - 120
2278895	Iron	105		P	80 - 120
2278895	Magnesium	99.8		P	80 - 120
2278895	Manganese	98.6		P	80 - 120
2278895	Potassium	98.7		P	80 - 120
2278895	Sodium	99.0		P	80 - 120
2278895	Zinc	99.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P404421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278649	Aluminum	98.3	101	P/P	80 - 120
2278649	Antimony	99.5	101	P/P	80 - 120
2278649	Arsenic	93.2	95.4	P/P	80 - 120
2278649	Beryllium	93.4	93.7	P/P	80 - 120
2278649	Boron	94.6	97.0	P/P	80 - 120
2278649	Cadmium	94.5	95.1	P/P	80 - 120
2278649	Chromium	94.7	96.8	P/P	80 - 120
2278649	Copper	96.2	97.8	P/P	80 - 120
2278649	Lead	98.0	98.6	P/P	80 - 120
2278649	Nickel	96.1	97.9	P/P	80 - 120
2278649	Selenium	97.2	98.6	P/P	80 - 120
2278649	Silver	98.7	101	P/P	80 - 120
2278649	Thallium	99.1	102	P/P	80 - 120
2278895	Aluminum	92.8		P	80 - 120
2278895	Antimony	97.8		P	80 - 120
2278895	Arsenic	92.1		P	80 - 120
2278895	Beryllium	94.6		P	80 - 120
2278895	Boron	95.7		P	80 - 120
2278895	Cadmium	93.2		P	80 - 120
2278895	Chromium	93.1		P	80 - 120
2278895	Copper	93.0		P	80 - 120
2278895	Lead	96.4		P	80 - 120
2278895	Nickel	93.6		P	80 - 120
2278895	Selenium	95.6		P	80 - 120
2278895	Silver	99.4		P	80 - 120
2278895	Thallium	99.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P404490

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404490

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2277567	Chloride	103		P	90 - 110
2278659	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P404495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2277567	Sulfate	105		P	90 - 110
2278659	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404477

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278632	Ammonia-N	94.2	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278632	Kjeldahl Nitrogen	94.9	98.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278903	Kjeldahl Nitrogen	96.6	94.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2280068	Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278632	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278879	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278633	O-Phosphate-P	95.8	97.2	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P404540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278721	Fluoride	101	100	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P404491

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2279013	Organic Carbon	95.3	94.4	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P404841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2278606	Organic Carbon	94.6	95.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P404329

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278659	Turbidity	8.88	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P404421

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278649	Barium	0.188	Spike	P	0 - 20
2278649	Calcium	1.36	Spike	P	0 - 20
2278649	Iron	1.78	Spike	P	0 - 20
2278649	Magnesium	1.80	Spike	P	0 - 20
2278649	Manganese	0.321	Spike	P	0 - 20
2278649	Potassium	1.76	Spike	P	0 - 20
2278649	Sodium	3.28	Spike	P	0 - 20
2278649	Zinc	0.763	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P404421

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278649	Aluminum	2.56	Spike	P	0 - 20
2278649	Antimony	1.42	Spike	P	0 - 20
2278649	Arsenic	2.25	Spike	P	0 - 20
2278649	Beryllium	0.352	Spike	P	0 - 20
2278649	Boron	2.22	Spike	P	0 - 20
2278649	Cadmium	0.672	Spike	P	0 - 20
2278649	Chromium	2.20	Spike	P	0 - 20
2278649	Copper	1.56	Spike	P	0 - 20
2278649	Lead	0.542	Spike	P	0 - 20
2278649	Nickel	1.90	Spike	P	0 - 20
2278649	Selenium	1.35	Spike	P	0 - 20
2278649	Silver	2.07	Spike	P	0 - 20
2278649	Thallium	2.58	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P404490

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278659	Chloride	0.527	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P404495

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278659	Sulfate	0.542	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P404477

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278632	Ammonia-N	0.760	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278632	Kjeldahl Nitrogen	2.51	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278903	Kjeldahl Nitrogen	1.87	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P404800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2280068	Kjeldahl Nitrogen	0.479	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278632	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P404445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278879	NO2NO3-N	0.263	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P404562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278722	Total-P	1.72	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P404293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278633	O-Phosphate-P	1.45	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P404282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278789	Color (true)	3.91	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P404536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278721	Total Alkalinity	1.27	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P404764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278718	TDS	3.17	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P404765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278721	TDS	4.44	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P404540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278721	Fluoride	0.460	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P404491

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2279013	Organic Carbon	0.599	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P404841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2278606	Organic Carbon	0.499	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A108034

Included Lab Sample IDs: 2278697, 2278700, 2278703

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115
Color (true)	103	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A108036

Included Lab Sample IDs: 2278699, 2278702, 2278705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.5	99.1	P/P	90 - 110
O-Phosphate-P	99.1	97.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A108050

Included Lab Sample IDs: 2278697, 2278700, 2278703

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A108052

Included Lab Sample IDs: 2278701, 2278704

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A108099

Included Lab Sample IDs: 2278698

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: A108103

Included Lab Sample IDs: 2278698

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A108109

Included Lab Sample IDs: 2278698, 2278701, 2278704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.5	97.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A108115

Included Lab Sample IDs: 2278711, 2278712, 2278713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A108115

Included Lab Sample IDs: 2278711, 2278712, 2278713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	97.4	97.7	P/P	90 - 110
Barium	99.6	97.4	P/P	95 - 105
Calcium	101	102	P/P	95 - 105
Calcium	102	102	P/P	90 - 110
Iron	102	102	P/P	95 - 105
Iron	102	102	P/P	90 - 110
Magnesium	101	101	P/P	95 - 105
Magnesium	101	101	P/P	90 - 110
Manganese	101	101	P/P	95 - 105
Manganese	101	102	P/P	90 - 110
Potassium	98.4	98.5	P/P	90 - 110
Potassium	99.1	98.4	P/P	95 - 105
Sodium	100	99.6	P/P	95 - 105
Sodium	99.6	99.4	P/P	90 - 110
Zinc	100	102	P/P	95 - 105
Zinc	102	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A108118

Included Lab Sample IDs: 2278697, 2278700, 2278703

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

Reference Method: SM 5310 B-2011

Run ID: A108119

Included Lab Sample IDs: 2278701, 2278704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.1	95.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A108124

Included Lab Sample IDs: 2278711, 2278712, 2278713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.1	94.9	P/P	90 - 110
Aluminum	98.7	97.1	P/P	90 - 110
Antimony	101	99.6	P/P	90 - 110
Antimony	102	101	P/P	90 - 110
Arsenic	95.1	93.2	P/P	90 - 110
Arsenic	95.5	95.1	P/P	90 - 110
Beryllium	94.0	94.3	P/P	90 - 110
Beryllium	94.3	92.8	P/P	90 - 110
Boron	96.4	97.5	P/P	90 - 110
Boron	97.5	95.4	P/P	90 - 110
Cadmium	95.4	94.2	P/P	90 - 110
Cadmium	95.5	95.4	P/P	90 - 110
Chromium	93.9	94.1	P/P	90 - 110
Chromium	94.1	92.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A108124

Included Lab Sample IDs: 2278711, 2278712, 2278713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	94.0	92.8	P/P	90 - 110
Copper	96.0	94.0	P/P	90 - 110
Lead	95.3	95.5	P/P	90 - 110
Lead	95.5	93.3	P/P	90 - 110
Nickel	94.6	92.8	P/P	90 - 110
Nickel	96.4	94.6	P/P	90 - 110
Selenium	96.1	94.5	P/P	90 - 110
Selenium	96.2	96.1	P/P	90 - 110
Silver	101	99.4	P/P	90 - 110
Silver	99.4	98.8	P/P	90 - 110
Thallium	98.4	98.7	P/P	90 - 110
Thallium	98.7	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A108126

Included Lab Sample IDs: 2278704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.4	99.1	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A108136

Included Lab Sample IDs: 2278697, 2278700, 2278703

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	95.5	P/P	90 - 110
Total Alkalinity	95.5	95.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A108136

Included Lab Sample IDs: 2278697, 2278700, 2278703

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A108172

Included Lab Sample IDs: 2278698, 2278701

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A108173

Included Lab Sample IDs: 2278704

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A108260

Included Lab Sample IDs: 2278698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.7	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A108263

Included Lab Sample IDs: 2278701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	99.4	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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					8.88	
EPA 200.7 Rev. 4.4	Barium	100	101	102	100		0.188
	Calcium	104	101	103	101		1.36
	Iron	106	105	107	105		1.78
	Magnesium	106	104	107	99.8		1.80
	Manganese	99.7	99.9	100	98.6		0.321
	Potassium	99.9	98.0	99.9	98.7		1.76
	Sodium	102	96.1	101	99.0		3.28
	Zinc	100	101	102	99.1		0.763
EPA 200.8 Rev. 5.4	Aluminum	97.4	98.3	101	92.8		2.56
	Antimony	100	99.5	101	97.8		1.42
	Arsenic	93.4	93.2	95.4	92.1		2.25
	Beryllium	93.1	93.4	93.7	94.6		0.352
	Boron	96.8	94.6	97.0	95.7		2.22
	Cadmium	94.9	94.5	95.1	93.2		0.672
	Chromium	93.2	94.7	96.8	93.1		2.20
	Copper	94.2	96.2	97.8	93.0		1.56
	Lead	97.0	98.0	98.6	96.4		0.542
	Nickel	94.5	93.6	96.1	97.9		1.90
	Selenium	96.6	97.2	98.6	95.6		1.35
	Silver	100	98.7	101	99.4		2.07
	Thallium	97.2	99.1	102	99.6		2.58
EPA 300.0 Rev. 2.1	Chloride	101	103	103		0.527	
	Sulfate	104	106	105		0.542	
EPA 350.1 Rev. 2.0	Ammonia-N	95.2	94.2	95.0			0.760
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	94.9	98.3			2.51
	Kjeldahl Nitrogen	97.6	96.6	94.3			1.87
	Kjeldahl Nitrogen	101	105	104			0.479
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	102	102			0.0
	NO ₂ NO ₃ -N	101	101	100			0.263
EPA 365.1 Rev. 2.0	Total-P	103					1.72
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	95.8	97.2			1.45
SM 2120 B-2011	Color (true)	99.6				3.91	
SM 2320 B-2011	Total Alkalinity	98.5				1.27	
SM 2540 C-2011	TDS					3.17	
	TDS					4.44	
SM 4500 F-C-2011	Fluoride	101	101	100			0.460
SM 5310 B-2011	Organic Carbon	97.2	95.3	94.4			0.599
	Organic Carbon	97.0	94.6	95.2			0.499

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2278697, 2278700, 2278703
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2278711, 2278712, 2278713
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2278711, 2278712, 2278713
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2278697, 2278700, 2278703
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2278697, 2278700, 2278703
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2278698, 2278701, 2278704
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2278698, 2278701, 2278704
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2278698, 2278701, 2278704

Reference Method Descriptions

Method	Description	Associated Samples
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2278698, 2278701, 2278704
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2278699, 2278702, 2278705
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2278697, 2278700, 2278703
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2278697, 2278700, 2278703
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2278711, 2278712
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2278697, 2278700, 2278703
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2278697, 2278700, 2278703
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2278697, 2278700, 2278703
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2278698, 2278701, 2278704

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	09/28/2021			09/28/2021 16:48	Khloe J Berg	2278697, 2278700, 2278703
EPA 200.7 Rev. 4.4	09/28/2021	10/01/2021 10:00	Emily M Philpot	10/01/2021 15:48	Josef B Mick	2278713
	09/28/2021	10/01/2021 10:00	Emily M Philpot	10/01/2021 17:45	Josef B Mick	2278711
	09/28/2021	10/01/2021 10:00	Emily M Philpot	10/01/2021 17:53	Josef B Mick	2278712
EPA 200.8 Rev. 5.4	09/28/2021	10/01/2021 10:00	Emily M Philpot	10/01/2021 21:24	McKinley C Carter	2278713
	09/28/2021	10/01/2021 10:00	Emily M Philpot	10/01/2021 23:29	McKinley C Carter	2278711
	09/28/2021	10/01/2021 10:00	Emily M Philpot	10/01/2021 23:38	McKinley C Carter	2278712
EPA 300.0 Rev. 2.1	09/28/2021			10/01/2021 18:28	Lipi Saha	2278697
	09/28/2021			10/01/2021 18:40	Lipi Saha	2278700
	09/28/2021			10/01/2021 18:52	Lipi Saha	2278703
EPA 350.1 Rev. 2.0	09/28/2021			10/01/2021 13:50	Ping Hua	2278698
	09/28/2021			10/01/2021 13:51	Ping Hua	2278701
	09/28/2021			10/01/2021 13:55	Ping Hua	2278704
EPA 351.2 Rev. 2.0	09/28/2021	09/30/2021 12:55	Benjamin T. Nordmann	10/01/2021 12:51	Alexandra J Mattheus	2278698
	09/28/2021	10/01/2021 12:37	Benjamin T. Nordmann	10/04/2021 10:45	Alexandra J Mattheus	2278704
	09/28/2021	10/08/2021 16:34	Benjamin T. Nordmann	10/11/2021 10:30	Alexandra J Mattheus	2278701
EPA 353.2 Rev. 2.0	09/28/2021			09/29/2021 10:21	Beverly Y. Sanders	2278701
	09/28/2021			09/29/2021 10:22	Beverly Y. Sanders	2278704
	09/28/2021			10/01/2021 09:56	Beverly Y. Sanders	2278698
EPA 365.1 Rev. 2.0	09/28/2021	10/05/2021 13:20	Simonne.V. Calhoun	10/06/2021 11:16	Lipi Saha	2278698
	09/28/2021	10/05/2021 13:20	Simonne.V. Calhoun	10/06/2021 11:17	Lipi Saha	2278701
	09/28/2021	10/05/2021 13:20	Simonne.V. Calhoun	10/06/2021 12:22	Lipi Saha	2278704
EPA 365.1 Rev. 2.0 dissolved	09/28/2021			09/28/2021 15:05	James L Waggeberby	2278699
	09/28/2021			09/28/2021 15:11	James L Waggeberby	2278702, 2278705
SM 2120 B-2011	09/28/2021			09/28/2021 14:52	Benjamin T. Nordmann	2278697
	09/28/2021			09/28/2021 14:54	Benjamin T. Nordmann	2278703
	09/28/2021			09/28/2021 15:14	Benjamin T. Nordmann	2278700
SM 2320 B-2011	09/28/2021			10/01/2021 02:38	Dale L. Simmons	2278700
	09/28/2021			10/01/2021 03:22	Dale L. Simmons	2278703
	09/28/2021			10/01/2021 03:53	Dale L. Simmons	2278697
SM 2340B	09/28/2021			10/01/2021 17:45	Josef B Mick	2278711
	09/28/2021			10/01/2021 17:53	Josef B Mick	2278712
SM 2540 C-2011	09/28/2021			09/30/2021 15:26	Yijie Li	2278697, 2278700, 2278703
SM 2540 D-2011	09/28/2021			09/30/2021 15:26	Yijie Li	2278697, 2278700, 2278703
SM 4500 F-C-2011	09/28/2021			10/01/2021 02:38	Dale L. Simmons	2278700
	09/28/2021			10/01/2021 03:22	Dale L. Simmons	2278703
	09/28/2021			10/01/2021 03:53	Dale L. Simmons	2278697
SM 5310 B-2011	09/28/2021			10/01/2021 23:16	Madeline Gruver	2278701
	09/28/2021			10/01/2021 23:26	Madeline Gruver	2278704
	09/28/2021			10/06/2021 18:54	Khloe J Berg	2278698