

Chemical Analysis Report

SO-DIST-2020-08-27-02

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

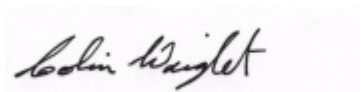
Event Description: **charlotte harb combo blank**
Request ID: **RQ-2020-08-24-32**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
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Certified by: Colin Wright, Program Administrator

Date Certified: 21-SEP-2020 11:13

A handwritten signature in black ink, appearing to read "Colin Wright", is shown on a light-colored 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: Trailer Park Canal

Collection Date/Time: 08/26/2020 09:55

Field ID: G3SD0072

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2192824	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P386640	
	EPA 300.0 Rev. 2.1	Bromide	21		mg Br/L	P387262	MS
	SM 2320 B-2011	Total Alkalinity	97	A	mg CaCO3/L	P386790	
	SM 2540 D-2011	TSS	3	U	mg/L	P386815	
	SM 4500 F-C-2011	Fluoride	0.66	J	mg F/L	P386794	RPD
2192825	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P387022	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P386807	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P386747	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P386854	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P386727	
2192826	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.21		mg P/L	P386650	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Coral Creek (east) Upstream of Golf Course

Collection Date/Time: 08/26/2020 11:45

Field ID: G2SD0039

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2192827	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P386640	
	EPA 300.0 Rev. 2.1	Bromide	31		mg Br/L	P387262	MS
	SM 2320 B-2011	Total Alkalinity	129		mg CaCO3/L	P386790	
	SM 2540 D-2011	TSS	6	I	mg/L	P387005	
	SM 4500 F-C-2011	Fluoride	0.79		mg F/L	P386794	RPD
2192828	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P387022	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P386807	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P386747	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P386754	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P386727	
2192829	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P386650	
2192851	EPA 200.7 Rev. 4.4	Chromium	3.4	I	ug/L	P386652	
		Iron	130	I	ug/L	P386652	
		Magnesium	575		mg/L	P386652	
		Zinc	15	U	ug/L	P386652	
	EPA 200.8 Rev. 5.4	Aluminum	121		ug/L	P386652	
		Antimony	0.20	U	ug/L	P386652	
		Arsenic	2.70		ug/L	P386652	
		Cadmium	0.080	U	ug/L	P386652	
		Copper	1.6	U	ug/L	P386652	
		Lead	0.80	U	ug/L	P386652	
		Nickel	2.0	U	ug/L	P386652	
		Selenium	0.80	U	ug/L	P386652	
		Silver	0.040	U	ug/L	P386652	
		Thallium	0.40	U	ug/L	P386652	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Filed Blank

Collection Date/Time: 08/26/2020 12:10

Field ID: FB082620

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2192830	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P386640	
	EPA 300.0 Rev. 2.1	Bromide	0.013	U	mg Br/L	P387262	MS
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P386788	
	SM 2540 D-2011	TSS	2	U	mg/L	P386814	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P386792	
2192831	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P387020	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P386863	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P386778	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P386757	MS
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P386726	
2192832	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P386651	
2192852	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P386749	
		Magnesium	0.040	U	mg/L	P386749	
		Zinc	5.0	U	ug/L	P386749	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P386749	
		Antimony	0.050	U	ug/L	P386749	
		Arsenic	0.050	U	ug/L	P386749	
		Cadmium	0.020	U	ug/L	P386749	
		Chromium	0.40	U	ug/L	P386749	
		Copper	0.40	U	ug/L	P386749	
		Lead	0.20	U	ug/L	P386749	
		Nickel	0.50	U	ug/L	P386749	
		Selenium	0.20	U	ug/L	P386749	
		Silver	0.010	U	ug/L	P386749	
		Thallium	0.10	U	ug/L	P386749	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386640

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386652

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386749

Component	Result	Code	Units
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386652

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
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 200.8 Rev. 5.4
Batch ID: P386749

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387022

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386807

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386863

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386747

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386754

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386757

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386854

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386650

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

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

Reference Method: SM 2320 B-2011
Batch ID: P386788

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

Reference Method: SM 2320 B-2011
Batch ID: P386790

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

Reference Method: SM 2540 D-2011
Batch ID: P386814

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P386815

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387005

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P386794

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P386726

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

Reference Method: SM 5310 B-2011
Batch ID: P386727

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: P386652

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	97.9		P	85 - 115
Iron	105		P	85 - 115
Magnesium	99.2		P	85 - 115
Zinc	99.7		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Zinc	99.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386652

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.7		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	102		P	85 - 115
Cadmium	100		P	85 - 115
Copper	95.6		P	85 - 115
Lead	104		P	85 - 115
Nickel	94.7		P	85 - 115
Selenium	101		P	85 - 115
Silver	104		P	85 - 115
Thallium	108		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.4		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	99.5		P	85 - 115
Cadmium	96.1		P	85 - 115
Chromium	103		P	85 - 115
Copper	96.8		P	85 - 115
Lead	98.1		P	85 - 115
Nickel	95.6		P	85 - 115
Selenium	97.6		P	85 - 115
Silver	107		P	85 - 115
Thallium	99.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	96.7		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387022

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386807

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386863

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386747

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

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: P386754

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386757

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386854

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.9		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P386788

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	93 - 104

Reference Method: SM 2320 B-2011
Batch ID: P386790

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

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P386794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P386726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P386727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192703	Chromium	98.9	99.7	P/P	70 - 130
2192703	Iron	102	97.9	P/P	70 - 130
2192703	Zinc	101	101	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P386749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192874	Iron	108	110	P/P	80 - 120
2192874	Magnesium	109	110	P/P	80 - 120
2192874	Zinc	108	106	P/P	80 - 120
2192988	Iron	105		P	80 - 120
2192988	Magnesium	98.9		P	80 - 120
2192988	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192703	Aluminum	104	102	P/P	70 - 130
2192703	Antimony	107	104	P/P	70 - 130
2192703	Arsenic	118	117	P/P	70 - 130
2192703	Cadmium	105	106	P/P	70 - 130
2192703	Copper	108	107	P/P	70 - 130
2192703	Lead	108	115	P/P	70 - 130
2192703	Nickel	106	109	P/P	70 - 130
2192703	Selenium	118	115	P/P	70 - 130
2192703	Silver	99.0	98.0	P/P	70 - 130
2192703	Thallium	114	118	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192874	Aluminum	94.7	93.5	P/P	80 - 120
2192874	Antimony	100	98.9	P/P	80 - 120
2192874	Arsenic	100	97.9	P/P	80 - 120
2192874	Cadmium	98.1	97.3	P/P	80 - 120
2192874	Chromium	103	102	P/P	80 - 120
2192874	Copper	97.5	95.7	P/P	80 - 120
2192874	Lead	101	101	P/P	80 - 120
2192874	Nickel	97.2	95.7	P/P	80 - 120
2192874	Selenium	98.0	96.1	P/P	80 - 120
2192874	Silver	106	107	P/P	80 - 120
2192874	Thallium	101	103	P/P	80 - 120
2192988	Aluminum	93.2		P	80 - 120
2192988	Antimony	105		P	80 - 120
2192988	Arsenic	107		P	80 - 120
2192988	Cadmium	101		P	80 - 120
2192988	Chromium	105		P	80 - 120
2192988	Copper	99.0		P	80 - 120
2192988	Lead	102		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192988	Nickel	99.2		P	80 - 120
2192988	Selenium	104		P	80 - 120
2192988	Silver	106		P	80 - 120
2192988	Thallium	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192715	Bromide	91.5	89.4	P/F	90 - 110
2192716	Bromide	87.1		F	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192843	Ammonia-N	99.4	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193097	Ammonia-N	103	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386807

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2193097	Kjeldahl Nitrogen	94.7	96.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386863

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192836	Kjeldahl Nitrogen	95.0	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192743	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192748	NO2NO3-N	96.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386754

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386754

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192828	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192836	Total-P	108	111	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386854

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192611	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192829	O-Phosphate-P	101	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192837	O-Phosphate-P	99.4	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192663	Fluoride	98.9	97.1	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P386794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192824	Fluoride	100	105	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P386726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192444	Organic Carbon	95.2	94.5	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P386727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2191540	Organic Carbon	94.9	95.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P386640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192791	Turbidity	1.60	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P386652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192703	Chromium	0.761	Spike	P	0 - 20
2192703	Iron	3.75	Spike	P	0 - 20
2192703	Magnesium	1.12	Spike	P	0 - 20
2192703	Zinc	0.340	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P386749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192874	Iron	1.61	Spike	P	0 - 20
2192874	Magnesium	0.587	Spike	P	0 - 20
2192874	Zinc	1.50	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P386652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192703	Aluminum	2.04	Spike	P	0 - 20
2192703	Antimony	2.43	Spike	P	0 - 20
2192703	Arsenic	0.516	Spike	P	0 - 20
2192703	Cadmium	1.67	Spike	P	0 - 20
2192703	Copper	1.07	Spike	P	0 - 20
2192703	Lead	5.50	Spike	P	0 - 20
2192703	Nickel	3.29	Spike	P	0 - 20
2192703	Selenium	3.13	Spike	P	0 - 20
2192703	Silver	0.988	Spike	P	0 - 20
2192703	Thallium	4.15	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P386749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192874	Aluminum	1.03	Spike	P	0 - 20
2192874	Antimony	1.49	Spike	P	0 - 20
2192874	Arsenic	2.51	Spike	P	0 - 20
2192874	Cadmium	0.872	Spike	P	0 - 20
2192874	Chromium	0.742	Spike	P	0 - 20
2192874	Copper	1.88	Spike	P	0 - 20
2192874	Lead	0.404	Spike	P	0 - 20
2192874	Nickel	1.48	Spike	P	0 - 20
2192874	Selenium	1.97	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P386749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192874	Silver	0.701	Spike	P	0 - 20
2192874	Thallium	2.03	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192715	Bromide	1.76	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192843	Ammonia-N	0.804	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193097	Ammonia-N	1.62	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193097	Kjeldahl Nitrogen	1.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386863

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192836	Kjeldahl Nitrogen	3.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192743	NO2NO3-N	0.482	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192748	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386754

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192828	Total-P	0.341	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192836	Total-P	2.36	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386854

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192611	Total-P	0.621	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192829	O-Phosphate-P	2.72	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192837	O-Phosphate-P	0.145	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P386788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192663	Total Alkalinity	0.197	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P386790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192824	Total Alkalinity	0.0363	Sample	P	0 - 8.1

Reference Method: SM 2540 D-2011
Batch ID: P387005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192623	TSS	3.64	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192663	Fluoride	1.43	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P386794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192824	Fluoride	2.82	Spike	F	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P386726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192444	Organic Carbon	0.640	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P386727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2191540	Organic Carbon	0.278	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100685

Included Lab Sample IDs: 2192824, 2192827, 2192830

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100687

Included Lab Sample IDs: 2192826, 2192829, 2192832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	99.4	P/P	90 - 110
O-Phosphate-P	99.3	98.2	P/P	90 - 110
O-Phosphate-P	99.4	98.3	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100718

Included Lab Sample IDs: 2192825, 2192828, 2192831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	92.2	92.2	P/P	90 - 110
Organic Carbon	95.0	92.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100725

Included Lab Sample IDs: 2192825, 2192828

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100733

Included Lab Sample IDs: 2192851

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	96.6	95.4	P/P	90 - 110
Iron	97.4	97.0	P/P	90 - 110
Magnesium	95.9	94.6	P/P	90 - 110
Zinc	98.8	96.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100742

Included Lab Sample IDs: 2192831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100747

Included Lab Sample IDs: 2192824, 2192827, 2192830

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	101	P/P	90 - 110
Total Alkalinity	99.1	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A100747

Included Lab Sample IDs: 2192824, 2192827, 2192830

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	P/P	90 - 110
Fluoride	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100778

Included Lab Sample IDs: 2192828, 2192831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100780

Included Lab Sample IDs: 2192825, 2192828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	95.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100789

Included Lab Sample IDs: 2192852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	103	103	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Zinc	99.4	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100809

Included Lab Sample IDs: 2192831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.9	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100832

Included Lab Sample IDs: 2192831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100833

Included Lab Sample IDs: 2192825, 2192828

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100864

Included Lab Sample IDs: 2192851

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	104	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Cadmium	98.7	100	P/P	90 - 110
Copper	95.4	99.2	P/P	90 - 110
Lead	102	98.8	P/P	90 - 110
Nickel	96.0	98.3	P/P	90 - 110
Selenium	103	104	P/P	90 - 110
Silver	98.6	102	P/P	90 - 110
Thallium	107	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100907

Included Lab Sample IDs: 2192851

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100913

Included Lab Sample IDs: 2192852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	94.8	96.0	P/P	90 - 110
Antimony	102	103	P/P	90 - 110
Arsenic	96.1	98.2	P/P	90 - 110
Cadmium	94.5	95.4	P/P	90 - 110
Chromium	98.2	99.8	P/P	90 - 110
Copper	96.7	94.5	P/P	90 - 110
Lead	96.7	95.6	P/P	90 - 110
Nickel	95.9	95.6	P/P	90 - 110
Selenium	94.0	99.6	P/P	90 - 110
Thallium	95.4	94.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100925

Included Lab Sample IDs: 2192824, 2192827, 2192830

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	95.4	98.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100945

Included Lab Sample IDs: 2192852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	106	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101043

Included Lab Sample IDs: 2192825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	105	P/P	85 - 115

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.60	
EPA 200.7 Rev. 4.4	Chromium	97.9	98.9	99.7				0.761
	Iron	105	102	97.9				3.75
	Iron	104	108	110	105			1.61
	Magnesium	99.2						1.12
	Magnesium	104	109	110	98.9			0.587
	Zinc	99.7	101	101				0.340
	Zinc	99.8	108	106	103			1.50
EPA 200.8 Rev. 5.4	Aluminum	99.7	104	102				2.04
	Aluminum	93.4	93.2	94.7	93.5			1.03
	Antimony	101	107	104				2.43
	Antimony	100	105	100	98.9			1.49
	Arsenic	102	118	117				0.516
	Arsenic	99.5	107	100	97.9			2.51
	Cadmium	100	105	106				1.67
	Cadmium	96.1	101	98.1	97.3			0.872
	Chromium	103	105	103	102			0.742
	Copper	95.6	108	107				1.07
	Copper	96.8	99.0	97.5	95.7			1.88
	Lead	104	108	115				5.50
	Lead	98.1	101	102	101			0.404
	Nickel	94.7	106	109				3.29
	Nickel	95.6	99.2	97.2	95.7			1.48
	Selenium	101	118	115				3.13
	Selenium	97.6	104	98.0	96.1			1.97
	Silver	104	99.0	98.0				0.988
	Silver	107	106	106	107			0.701
	Thallium	108	114	118				4.15
	Thallium	99.4	107	101	103			2.03
EPA 300.0 Rev. 2.1	Bromide	96.7	91.5	89.4	87.1			1.76
EPA 350.1 Rev. 2.0	Ammonia-N	101	99.4	101				0.804
	Ammonia-N	101	103	101				1.62
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.1	94.7	96.7				1.81
	Kjeldahl Nitrogen	96.1	95.0	99.5				3.45
EPA 353.2 Rev. 2.0	NO2NO3-N	101	101	102				0.482
	NO2NO3-N	101	96.8					0.0
EPA 365.1 Rev. 2.0	Total-P	107	104	104				0.341
	Total-P	107	108	111				2.36
	Total-P	108	103	102				0.621
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	101	98.0				2.72
	O-Phosphate-P	99.9	99.4	99.2				0.145
SM 2320 B-2011	Total Alkalinity	102					0.197	
	Total Alkalinity	101					0.0363	
SM 2540 D-2011	TSS						3.64	
SM 4500 F-C-2011	Fluoride	98.7	98.9	97.1				1.43
	Fluoride	101	100	105				2.82
SM 5310 B-2011	Organic Carbon	94.2	95.2	94.5				0.640
	Organic Carbon	95.0	94.9	95.2				0.278

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2192824, 2192827, 2192830

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2192851, 2192852
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2192851, 2192852
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2192824, 2192827, 2192830
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2192825, 2192828, 2192831
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2192825, 2192828, 2192831
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2192825, 2192828, 2192831
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2192825, 2192828, 2192831
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2192826, 2192829, 2192832
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2192824, 2192827, 2192830
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2192824, 2192827, 2192830
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2192824, 2192827, 2192830
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2192825, 2192828, 2192831

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	08/27/2020			08/27/2020 15:06	Yen Ta	2192824, 2192827, 2192830
EPA 200.7 Rev. 4.4	08/27/2020	08/27/2020 17:15	Elliott D. Healy	08/31/2020 21:06	Betina Topolski	2192851
	08/27/2020	08/27/2020 17:15	Elliott D. Healy	08/31/2020 21:14	Betina Topolski	2192851
	08/27/2020	08/31/2020 13:30	Elliott D. Healy	09/02/2020 15:22	Betina Topolski	2192852
EPA 200.8 Rev. 5.4	08/27/2020	08/27/2020 17:15	Elliott D. Healy	09/08/2020 21:43	Alexander Thompson	2192851
	08/27/2020	08/27/2020 17:15	Elliott D. Healy	09/10/2020 13:12	Alexander Thompson	2192851
	08/27/2020	08/31/2020 13:30	Elliott D. Healy	09/10/2020 17:55	Alexander Thompson	2192852
	08/27/2020	08/31/2020 13:30	Elliott D. Healy	09/11/2020 12:51	Alexander Thompson	2192852
EPA 300.0 Rev. 2.1	08/27/2020			09/10/2020 00:21	Lipi Saha	2192824
	08/27/2020			09/10/2020 00:39	Lipi Saha	2192827
	08/27/2020			09/10/2020 00:56	Lipi Saha	2192830
EPA 350.1 Rev. 2.0	08/27/2020			09/05/2020 13:45	Ping Hua	2192831
	08/27/2020			09/05/2020 17:18	Ping Hua	2192825
	08/27/2020			09/05/2020 17:19	Ping Hua	2192828
EPA 351.2 Rev. 2.0	08/27/2020	09/01/2020 11:35	Sima Feizi	09/02/2020 11:24	Virginia P. Brown	2192825
	08/27/2020	09/01/2020 11:35	Sima Feizi	09/02/2020 11:26	Virginia P. Brown	2192828
	08/27/2020	09/02/2020 12:20	David Boose	09/03/2020 15:38	Virginia P. Brown	2192831
EPA 353.2 Rev. 2.0	08/27/2020			08/31/2020 10:28	Beverly Y. Sanders	2192825
	08/27/2020			08/31/2020 10:29	Beverly Y. Sanders	2192828
	08/27/2020			09/01/2020 10:29	Beverly Y. Sanders	2192831
EPA 365.1 Rev. 2.0	08/27/2020	08/31/2020 15:00	Yen Ta	09/02/2020 11:55	Lipi Saha	2192828
	08/27/2020	08/31/2020 15:00	Yen Ta	09/02/2020 12:02	Lipi Saha	2192831
	08/27/2020	09/02/2020 13:46	Yen Ta	09/17/2020 10:36	Lipi Saha	2192825
EPA 365.1 Rev. 2.0 dissolved	08/27/2020			08/27/2020 16:14	Virginia P. Brown	2192829
	08/27/2020			08/27/2020 16:32	Virginia P. Brown	2192832
	08/27/2020			08/27/2020 16:52	Virginia P. Brown	2192826
SM 2320 B-2011	08/27/2020			08/28/2020 19:20	Dale L. Simmons	2192830
	08/27/2020			08/29/2020 02:26	Dale L. Simmons	2192824
	08/27/2020			08/29/2020 03:20	Dale L. Simmons	2192827
SM 2540 D-2011	08/27/2020			08/28/2020 19:46	Madeline Gruver	2192824, 2192830
	08/27/2020			08/31/2020 14:39	Yijie Li	2192827
SM 4500 F-C-2011	08/27/2020			08/28/2020 19:20	Dale L. Simmons	2192830
	08/27/2020			08/29/2020 00:23	Dale L. Simmons	2192824
	08/27/2020			08/29/2020 01:12	Dale L. Simmons	2192827
SM 5310 B-2011	08/27/2020			08/30/2020 11:11	Ping Hua	2192831
	08/27/2020			08/30/2020 14:41	Ping Hua	2192825
	08/27/2020			08/30/2020 14:53	Ping Hua	2192828