

Chemical Analysis Report

NE-DIST-2022-12-06-01

Florida DEP Laboratory
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DOH Accreditation E31780

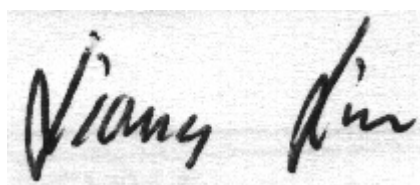
Event Description: **LSJR East**
Request ID: **RQ-2022-11-14-21**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 11-JAN-2023 11:20

A handwritten signature in black ink, appearing to read "Liang Lin", 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: RED BAY BRANCH AT LONE STAR ROAD

Collection Date/Time: 12/05/2022 10:20

Field ID: 20030674

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2373058	DEP SOP: NU-094-1	Color (true)	11		PCU	P423173	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P423177	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P423671	
		Sulfate	50		mg SO4/L	P423675	
	SM 2320 B-2011	Total Alkalinity	58		mg CaCO3/L	P423496	
	SM 2540 C-2015	TDS	219		mg/L	P423650	
	SM 2540 D-2015	TSS	4	I	mg/L	P423454	
	SM 4500-F- C-2011	Fluoride	0.033	I	mg F/L	P423500	
2373060	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P423607	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32		mg N/L	P423342	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P423207	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P423219	
	SM 5310 B-2011	Organic Carbon	3.0		mg C/L	P423478	

Sample Location: Greenfield CR Trib. @ Princess Kelly Dr.

Collection Date/Time: 12/05/2022 11:20

Field ID: 20030810

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2373080	EPA 200.7 Rev. 4.4	Calcium	174		mg/L	P423337	
		Iron	320	I	ug/L	P423337	
		Magnesium	471		mg/L	P423337	
		Strontium	2.99E+03		ug/L	P423337	
		Tin	9.0	U	ug/L	P423337	
		Titanium	6.6	I	ug/L	P423337	
		Vanadium	6.0	U	ug/L	P423337	
	EPA 200.8 Rev. 5.4	Zinc	15	U	ug/L	P423337	
		Aluminum	142		ug/L	P423337	
		Antimony	0.20	U	ug/L	P423337	
		Arsenic	1.75		ug/L	P423337	
		Beryllium	0.040	U	ug/L	P423337	
		Cadmium	0.080	U	ug/L	P423337	
		Chromium	1.6	U	ug/L	P423337	
		Cobalt	0.11	I	ug/L	P423337	
		Copper	1.6	U	ug/L	P423337	
		Lead	0.80	U	ug/L	P423337	
		Manganese	19.7		ug/L	P423337	
		Molybdenum	4.4		ug/L	P423337	
		Nickel	2.0	U	ug/L	P423337	
		Selenium	0.80	U	ug/L	P423337	
		Silver	0.040	U	ug/L	P423337	
		Thallium	0.40	U	ug/L	P423337	

Ref. Method and Comment:

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

Sample Location: GREENFIELD CREEK AT ATLANTIC BLVD

Collection Date/Time: 12/05/2022 11:40

Field ID: 20030657

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2373059	DEP SOP: NU-094-1	Color (true)	51	A	PCU	P423173	
	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P423177	
	EPA 300.0 Rev. 2.1	Chloride	47		mg Cl/L	P423671	
		Sulfate	53		mg SO4/L	P423675	
	SM 2320 B-2011	Total Alkalinity	91		mg CaCO3/L	P423496	
	SM 2540 C-2015	TDS	296		mg/L	P423650	
	SM 2540 D-2015	TSS	6	I	mg/L	P423454	
	SM 4500-F- C-2011	Fluoride	0.073	I	mg F/L	P423500	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.077		mg N/L	P423607	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P423348	
2373061	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P423207	
	EPA 365.1 Rev. 2.0	Total-P	0.085		mg P/L	P423219	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P423478	

Sample Location: GREENFIELD CREEK @ QUEENS HARBOUR BLVD.

Collection Date/Time: 12/05/2022 11:00

Field ID: 20030809

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2373056	DEP SOP: NU-094-1	Color (true)	80		PCU	P423171	
	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P423177	
	SM 2320 B-2011	Total Alkalinity	88		mg CaCO3/L	P423575	
	SM 2540 D-2015	TSS	5	I	mg/L	P423457	
	SM 4500-F- C-2011	Fluoride	0.46		mg F/L	P423584	
2373057	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P423860	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P423347	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.076		mg N/L	P423277	
	EPA 365.1 Rev. 2.0	Total-P	0.063		mg P/L	P423352	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P423262	
2373079	EPA 200.7 Rev. 4.4	Calcium	165		mg/L	P423337	
		Iron	250	I	ug/L	P423337	
		Magnesium	389		mg/L	P423337	
		Strontium	2.77E+03		ug/L	P423337	
		Tin	9.0	U	ug/L	P423337	
		Titanium	5.2	I	ug/L	P423337	
		Vanadium	6.0	U	ug/L	P423337	
	EPA 200.8 Rev. 5.4	Zinc	15	U	ug/L	P423337	
		Aluminum	206		ug/L	P423337	
		Antimony	0.20	U	ug/L	P423337	
		Arsenic	1.71		ug/L	P423337	
		Beryllium	0.040	U	ug/L	P423337	
		Cadmium	0.080	U	ug/L	P423337	
		Chromium	1.6	U	ug/L	P423337	
		Cobalt	0.11	I	ug/L	P423337	
		Copper	2.0	I	ug/L	P423337	
		Lead	0.80	U	ug/L	P423337	
		Manganese	17.6		ug/L	P423337	
		Molybdenum	4.3		ug/L	P423337	
		Nickel	2.0	U	ug/L	P423337	
		Selenium	0.80	U	ug/L	P423337	
		Silver	0.058	I	ug/L	P423337	
		Thallium	0.40	U	ug/L	P423337	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P423171

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P423173

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423177

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P423337

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423337

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
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	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: P423671

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423675

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423607

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423860

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423342

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423347

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423348

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423207

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423277

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423219

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: P423352

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

Reference Method: SM 2320 B-2011
Batch ID: P423496

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

Reference Method: SM 2320 B-2011
Batch ID: P423575

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

Reference Method: SM 2540 C-2015
Batch ID: P423650

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P423454

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P423457

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P423500

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P423584

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P423262

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P423478

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P423171

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P423173

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.3		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423177

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P423337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	99.9		P	85 - 115
Magnesium	102		P	85 - 115
Strontium	95.2		P	85 - 115
Tin	95.3		P	85 - 115
Titanium	98.5		P	85 - 115
Vanadium	96.8		P	85 - 115
Zinc	99.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	104		P	85 - 115
Beryllium	91.6		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	96.8		P	85 - 115
Cobalt	99.0		P	85 - 115
Copper	91.8		P	85 - 115
Lead	96.4		P	85 - 115
Manganese	99.8		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	100		P	85 - 115
Selenium	98.3		P	85 - 115
Silver	103		P	85 - 115
Thallium	98.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423671

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423675

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423607

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423342

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: P423347

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423348

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423207

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: P423277

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423219

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423352

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

Reference Method: SM 2320 B-2011
Batch ID: P423496

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.2		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P423575

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.3		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P423650

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

Reference Method: SM 2540 D-2015
Batch ID: P423454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.5		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P423457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	101		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P423500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P423584

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P423262

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P423478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P423337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373079	Iron	97.5	102	P/P	70 - 130
2373079	Tin	87.1	92.0	P/P	70 - 130
2373079	Titanium	105	100	P/P	70 - 130
2373079	Vanadium	97.0	102	P/P	70 - 130
2373079	Zinc	96.8	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P423337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373079	Aluminum	110	111	P/P	70 - 130
2373079	Antimony	110	108	P/P	70 - 130
2373079	Arsenic	117	116	P/P	70 - 130
2373079	Beryllium	104	99.2	P/P	70 - 130
2373079	Cadmium	106	103	P/P	70 - 130
2373079	Chromium	91.8	90.1	P/P	70 - 130
2373079	Cobalt	115	114	P/P	70 - 130
2373079	Copper	101	99.1	P/P	70 - 130
2373079	Lead	108	106	P/P	70 - 130
2373079	Manganese	92.5	90.2	P/P	70 - 130
2373079	Molybdenum	118	117	P/P	70 - 130
2373079	Nickel	115	114	P/P	70 - 130
2373079	Selenium	103	103	P/P	70 - 130
2373079	Silver	97.8	97.0	P/P	70 - 130
2373079	Thallium	114	112	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P423671

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372982	Chloride	96.5		P	90 - 110
2373042	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P423675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372982	Sulfate	94.3		P	90 - 110
2373042	Sulfate	93.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P423607

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373001	Ammonia-N	98.6	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P423860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372792	Ammonia-N	101	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423342

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373000	Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423347

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372946	Kjeldahl Nitrogen	93.0	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373065	Kjeldahl Nitrogen	104	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372983	NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372948	NO2NO3-N	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373061	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373654	Total-P	97.8	97.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P423500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373693	Fluoride	101	100	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P423584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374814	Fluoride	103	104	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P423262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373057	Organic Carbon	90.4	93.0	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P423478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373371	Organic Carbon	101		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P423171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372923	Color (true)	1.03	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P423173

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373059	Color (true)	3.39	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372927	Turbidity	7.65	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P423337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373079	Calcium	4.00	Spike	P	0 - 20
2373079	Iron	3.93	Spike	P	0 - 20
2373079	Magnesium	2.28	Spike	P	0 - 20
2373079	Strontium	4.16	Spike	P	0 - 20
2373079	Tin	5.45	Spike	P	0 - 20
2373079	Titanium	4.25	Spike	P	0 - 20
2373079	Vanadium	4.92	Spike	P	0 - 20
2373079	Zinc	4.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373079	Aluminum	0.914	Spike	P	0 - 20
2373079	Antimony	1.69	Spike	P	0 - 20
2373079	Arsenic	1.20	Spike	P	0 - 20
2373079	Beryllium	4.29	Spike	P	0 - 20
2373079	Cadmium	2.92	Spike	P	0 - 20
2373079	Chromium	1.88	Spike	P	0 - 20
2373079	Cobalt	0.665	Spike	P	0 - 20
2373079	Copper	2.19	Spike	P	0 - 20
2373079	Lead	1.29	Spike	P	0 - 20
2373079	Manganese	2.02	Spike	P	0 - 20
2373079	Molybdenum	0.643	Spike	P	0 - 20
2373079	Nickel	0.737	Spike	P	0 - 20
2373079	Selenium	0.172	Spike	P	0 - 20
2373079	Silver	0.771	Spike	P	0 - 20
2373079	Thallium	1.75	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423671

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372982	Chloride	2.10	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372982	Sulfate	1.95	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373001	Ammonia-N	0.536	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372792	Ammonia-N	3.65	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373000	Kjeldahl Nitrogen	0.518	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423347

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372946	Kjeldahl Nitrogen	5.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373065	Kjeldahl Nitrogen	1.52	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372983	NO2NO3-N	0.541	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372948	NO2NO3-N	0.837	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373061	Total-P	0.675	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373654	Total-P	0.461	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P423496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373693	Total Alkalinity	0.983	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P423575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374814	Total Alkalinity	3.45	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P423650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372999	TDS	5.08	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P423454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372999	TSS	8.85	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P423500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373693	Fluoride	1.01	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P423584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374814	Fluoride	0.470	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P423262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373057	Organic Carbon	2.14	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P423478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2373371	Organic Carbon	0.0729	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A116283

Included Lab Sample IDs: 2373056

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	101	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A116284

Included Lab Sample IDs: 2373058, 2373059

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	97.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116285

Included Lab Sample IDs: 2373056, 2373058, 2373059

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116302

Included Lab Sample IDs: 2373060, 2373061

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116319

Included Lab Sample IDs: 2373061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.7	98.2	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116322

Included Lab Sample IDs: 2373057

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116324

Included Lab Sample IDs: 2373057

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116365

Included Lab Sample IDs: 2373060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116391

Included Lab Sample IDs: 2373057

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A116398

Included Lab Sample IDs: 2373058, 2373059

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116403

Included Lab Sample IDs: 2373057, 2373060, 2373061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	93.3	P/P	90 - 110
Kjeldahl Nitrogen	93.3	99.6	P/P	90 - 110
Kjeldahl Nitrogen	99.6	96.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116413

Included Lab Sample IDs: 2373060, 2373061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.6	99.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116421

Included Lab Sample IDs: 2373058, 2373059

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.8	95.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116421

Included Lab Sample IDs: 2373058, 2373059

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

Reference Method: SM 2320 B-2011

Run ID: A116456

Included Lab Sample IDs: 2373056

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.7	96.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A116456

Included Lab Sample IDs: 2373056

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116469

Included Lab Sample IDs: 2373060, 2373061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	98.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A116556

Included Lab Sample IDs: 2373079, 2373080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	99.7	P/P	90 - 110
Calcium	99.7	100	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	98.3	99.3	P/P	90 - 110
Strontium	101	99.3	P/P	90 - 110
Strontium	100	101	P/P	90 - 110
Tin	95.3	97.7	P/P	90 - 110
Tin	97.7	97.0	P/P	90 - 110
Titanium	96.7	98.7	P/P	90 - 110
Titanium	98.7	98.3	P/P	90 - 110
Vanadium	95.2	98.1	P/P	90 - 110
Vanadium	98.1	97.5	P/P	90 - 110
Zinc	97.1	98.5	P/P	90 - 110
Zinc	98.5	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116610

Included Lab Sample IDs: 2373057

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.3	97.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116793

Included Lab Sample IDs: 2373079, 2373080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	105	P/P	90 - 110
Antimony	102	100	P/P	90 - 110
Arsenic	105	107	P/P	90 - 110
Beryllium	99.1	100	P/P	90 - 110
Cadmium	103	101	P/P	90 - 110
Chromium	96.5	93.9	P/P	90 - 110
Cobalt	100	103	P/P	90 - 110
Lead	95.7	97.0	P/P	90 - 110
Manganese	99.8	98.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116793

Included Lab Sample IDs: 2373079, 2373080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Molybdenum	99.9	101	P/P	90 - 110
Nickel	102	105	P/P	90 - 110
Silver	101	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116822

Included Lab Sample IDs: 2373079, 2373080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	97.3	101	P/P	90 - 110
Selenium	104	103	P/P	90 - 110
Thallium	99.5	98.5	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		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	102				1.03	
	Color (true)	97.3				3.39	
EPA 180.1 Rev. 2.0	Turbidity	101				7.65	
EPA 200.7 Rev. 4.4	Calcium	106					4.00
	Iron	99.9	97.5	102			3.93
	Magnesium	102					2.28
	Strontium	95.2					4.16
	Tin	95.3	87.1	92.0			5.45
	Titanium	98.5	105	100			4.25
	Vanadium	96.8	97.0	102			4.92
	Zinc	99.5	96.8	101			4.47
	Aluminum	101	110	111			0.914
	Antimony	103	110	108			1.69
EPA 200.8 Rev. 5.4	Arsenic	104	117	116			1.20
	Beryllium	91.6	104	99.2			4.29
	Cadmium	104	106	103			2.92
	Chromium	96.8	91.8	90.1			1.88
	Cobalt	99.0	115	114			0.665
	Copper	91.8	101	99.1			2.19
	Lead	96.4	108	106			1.29
	Manganese	99.8	92.5	90.2			2.02
	Molybdenum	100	118	117			0.643
	Nickel	100	115	114			0.737
	Selenium	98.3	103	103			0.172
	Silver	103	97.8	97.0			0.771
	Thallium	98.6	114	112			1.75
	Chloride	100	96.5	96.3		2.10	
	Sulfate	99.3	94.3	93.0		1.95	
EPA 300.0 Rev. 2.1	Ammonia-N	96.0	98.6	97.8			0.536
	Ammonia-N	95.8	101	105			3.65
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.6	103	104			0.518
	Kjeldahl Nitrogen	103	93.0	99.2			5.12
	Kjeldahl Nitrogen	97.2	104	107			1.52
EPA 353.2 Rev. 2.0	NO2NO3-N	102	100	99.0			0.541
	NO2NO3-N	105	106	105			0.837
EPA 365.1 Rev. 2.0	Total-P	104	104	105			0.675
	Total-P	104	97.8	97.3			0.461
SM 2320 B-2011	Total Alkalinity	97.2				0.983	
	Total Alkalinity	94.3				3.45	
SM 2540 C-2015	TDS	102				5.08	
SM 2540 D-2015	TSS	91.5				8.85	
	TSS	101					
SM 4500-F- C-2011	Fluoride	100	101	100			1.01
	Fluoride	103	103	104			0.470
SM 5310 B-2011	Organic Carbon	96.0	90.4	93.0			2.14
	Organic Carbon	96.8	101				0.0729

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2373056, 2373058, 2373059
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2373056, 2373058, 2373059

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	2373079, 2373080
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2373079, 2373080
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2373058, 2373059
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2373058, 2373059
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2373057, 2373060, 2373061
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2373057, 2373060, 2373061
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2373057, 2373060, 2373061
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2373057, 2373060, 2373061
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2373056, 2373058, 2373059
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2373058, 2373059
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2373056, 2373058, 2373059
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2373056, 2373058, 2373059
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2373057, 2373060, 2373061

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	12/06/2022			12/06/2022 14:44	Chandler E Cox	2373056
	12/06/2022			12/06/2022 14:45	Chandler E Cox	2373058
	12/06/2022			12/06/2022 14:46	Chandler E Cox	2373059
EPA 180.1 Rev. 2.0	12/06/2022			12/06/2022 14:45	Anna M. Plaviak	2373056
	12/06/2022			12/06/2022 14:46	Anna M. Plaviak	2373058
	12/06/2022			12/06/2022 14:48	Anna M. Plaviak	2373059
EPA 200.7 Rev. 4.4	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	12/19/2022 23:15	Betina Topolski	2373079
	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	12/20/2022 00:15	Betina Topolski	2373079
	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	12/20/2022 00:47	Betina Topolski	2373080
EPA 200.8 Rev. 5.4	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	12/20/2022 00:59	Betina Topolski	2373080
	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	01/06/2023 21:13	Emily M Philpot	2373080
	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	01/06/2023 21:52	Emily M Philpot	2373079
EPA 300.0 Rev. 2.1	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	01/09/2023 17:07	Emily M Philpot	2373080
	12/06/2022	12/09/2022 12:00	Vijayalakshmi Reddy	01/09/2023 17:37	Emily M Philpot	2373079
	12/06/2022			12/14/2022 16:41	Anna M. Plaviak	2373058
EPA 350.1 Rev. 2.0	12/06/2022			12/14/2022 16:56	Anna M. Plaviak	2373059
	12/06/2022			12/15/2022 12:30	Ping Hua	2373060
	12/06/2022			12/15/2022 12:31	Ping Hua	2373061
EPA 351.2 Rev. 2.0	12/06/2022			12/21/2022 13:25	Judith K. Clark	2373057
	12/06/2022	12/12/2022 08:10	Judith K. Clark	12/13/2022 11:12	Judith K. Clark	2373060
	12/06/2022	12/12/2022 08:10	Judith K. Clark	12/13/2022 11:36	Judith K. Clark	2373057
EPA 353.2 Rev. 2.0	12/06/2022	12/12/2022 08:10	Judith K. Clark	12/13/2022 11:59	Judith K. Clark	2373061
	12/06/2022			12/07/2022 11:04	Beverly Y. Sanders	2373060
	12/06/2022			12/07/2022 11:09	Beverly Y. Sanders	2373061
EPA 365.1 Rev. 2.0	12/06/2022			12/08/2022 11:27	Beverly Y. Sanders	2373057
	12/06/2022	12/07/2022 13:30	Adam P Silver	12/08/2022 10:39	James L Waggeberby	2373061
	12/06/2022	12/07/2022 13:30	Adam P Silver	12/09/2022 15:35	James L Waggeberby	2373060
SM 2320 B-2011	12/06/2022	12/09/2022 15:40	Adam P Silver	12/12/2022 13:37	Simonne.V. Calhoun	2373057
	12/06/2022			12/14/2022 05:46	Dale L. Simmons	2373058
	12/06/2022			12/14/2022 05:58	Dale L. Simmons	2373059
SM 2540 C-2015	12/06/2022			12/15/2022 05:45	Dale L. Simmons	2373056
	12/06/2022			12/08/2022 15:34	Yijie Li	2373058, 2373059
	12/06/2022			12/08/2022 15:34	Yijie Li	2373056, 2373058, 2373059
SM 4500-F- C-2011	12/06/2022			12/14/2022 05:46	Dale L. Simmons	2373058
	12/06/2022			12/14/2022 05:58	Dale L. Simmons	2373059
	12/06/2022			12/15/2022 04:01	Dale L. Simmons	2373056
SM 5310 B-2011	12/06/2022			12/08/2022 00:26	Elise M. Gillis	2373057
	12/06/2022			12/13/2022 17:18	Khloe J Berg	2373060
	12/06/2022			12/13/2022 17:34	Khloe J Berg	2373061