Chemical Analysis Report

NW-DIST-2023-04-27-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Lake Powell Continuous Monitoring Recovery**
Request ID: **RQ-2023-04-24-23**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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160 W Government Street
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Certified by: Colin Wright, Program Administrator

Date Certified: 18-MAY-2023 09:02

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 group are included in this report: 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: POWELL LAKE CENTER N OF CAIN RD AREA **Collection Date/Time: 04/26/2023 12:05**

Field ID: G3NW0012 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2403599	DEP SOP: NU-094-1	Color (true)	9.2		PCU	P429092	
	EPA 180.1 Rev. 2.0	Turbidity	0.85	I	NTU	P429114	
	EPA 300.0 Rev. 2.1	Chloride	1.2E+04		mg Cl/L	P429484	
		Sulfate	1.7E+03		mg SO4/L	P429487	
	SM 2320 B-2011	Total Alkalinity	80		mg CaCO3/L	P429392	
	SM 2540 C-2015	TDS	2.10E+04		mg/L	P429710	
	SM 2540 D-2015	TSS	3	UQ	mg/L	P429768	
	SM 4500-F- C-2011	Fluoride	0.80		mg F/L	P429444	
2403601	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P429254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23	I	mg N/L	P429398	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P429549	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P429308	
	SM 5310 B-2011	Organic Carbon	3.7	I	mg C/L	P429307	

Ref. Method and Comment:
SM 2540 D-2015: The sample was analyzed out of holding time because of analytical difficulties.

Sample Location: LAKE POWELL DRAIN EAST ARM **Collection Date/Time: 04/26/2023 11:30**

Field ID: G3NW0009 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2403600	DEP SOP: NU-094-1	Color (true)	13		PCU	P429092	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P429114	
	EPA 300.0 Rev. 2.1	Chloride	1.2E+04		mg Cl/L	P429484	
		Sulfate	1.7E+03		mg SO4/L	P429487	
	SM 2320 B-2011	Total Alkalinity	76		mg CaCO3/L	P429392	
	SM 2540 C-2015	TDS	1.86E+04		mg/L	P429710	
	SM 2540 D-2015	TSS	3	UQ	mg/L	P429768	
	SM 4500-F- C-2011	Fluoride	0.75		mg F/L	P429444	
2403602	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P429254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22	I	mg N/L	P429398	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P429549	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P429308	
	SM 5310 B-2011	Organic Carbon	3.7	I	mg C/L	P429307	

Ref. Method and Comment:
SM 2540 D-2015: The sample was analyzed out of holding time because of analytical difficulties.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P429092

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429114

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429484

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429487

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429254

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429398

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429549

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429308

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

Reference Method: SM 2320 B-2011
Batch ID: P429392

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P429710

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P429768

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P429444

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P429307

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: P429092

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	93.0		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429114

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429484

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429487

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429254

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429549

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429308

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

Reference Method: SM 2320 B-2011
Batch ID: P429392

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	94 - 106

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P429710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.4		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P429768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.9		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P429444

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

Reference Method: SM 5310 B-2011
Batch ID: P429307

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	105		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429484

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403447	Chloride	100		P	90 - 110
2403612	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403447	Sulfate	97.8		P	90 - 110
2403612	Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429254

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402635	Ammonia-N	98.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403602	Kjeldahl Nitrogen	104	94.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429549

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403139	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403601	Total-P	99.1	99.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P429444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403664	Fluoride	101	98.6	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P429307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2401935	Organic Carbon	95.9	96.0	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P429092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403546	Color (true)	0.0340	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403353	Turbidity	10.5	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403447	Chloride	0.302	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403447	Sulfate	0.426	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429254

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402635	Ammonia-N	1.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403602	Kjeldahl Nitrogen	8.89	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403139	NO2NO3-N	0.473	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403601	Total-P	0.629	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P429392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403543	Total Alkalinity	0.925	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P429710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403853	TDS	0.692	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P429768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2405536	TSS	6.19	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P429444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403664	Fluoride	1.49	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P429307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2401935	Organic Carbon	0.0809	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: A118826
Included Lab Sample IDs: 2403599, 2403600

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.2	96.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A118832
Included Lab Sample IDs: 2403599, 2403600

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A118900
Included Lab Sample IDs: 2403601, 2403602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	99.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A118919
Included Lab Sample IDs: 2403599, 2403600

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

Reference Method: SM 5310 B-2011
Run ID: A118925
Included Lab Sample IDs: 2403601, 2403602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	99.8	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A118951
Included Lab Sample IDs: 2403599, 2403600

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A118957
Included Lab Sample IDs: 2403601, 2403602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.8	P/P	90 - 110
Total-P	101	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A118968
Included Lab Sample IDs: 2403599, 2403600

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500-F- C-2011
Run ID: A118968
Included Lab Sample IDs: 2403599, 2403600

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A118983
Included Lab Sample IDs: 2403601, 2403602

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A119011
Included Lab Sample IDs: 2403601, 2403602

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

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	93.0				0.0340	
EPA 180.1 Rev. 2.0	Turbidity	100				10.5	
EPA 300.0 Rev. 2.1	Chloride	102	100	101		0.302	
	Sulfate	102	97.8	98.8		0.426	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	98.8	101			1.84
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.9	104	94.0			8.89
EPA 353.2 Rev. 2.0	NO2NO3-N	106	106	106			0.473
EPA 365.1 Rev. 2.0	Total-P	102	99.1	99.7			0.629
SM 2320 B-2011	Total Alkalinity	100				0.925	
SM 2540 C-2015	TDS	97.4				0.692	
SM 2540 D-2015	TSS	96.9				6.19	
SM 4500-F- C-2011	Fluoride	100	101	98.6			1.49
SM 5310 B-2011	Organic Carbon	105	95.9	96.0			0.0809

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2403599, 2403600
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2403599, 2403600
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2403599, 2403600
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2403599, 2403600
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2403601, 2403602
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2403601, 2403602
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2403601, 2403602
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2403601, 2403602
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2403599, 2403600
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2403599, 2403600
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2403599, 2403600
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2403599, 2403600
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2403601, 2403602

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	04/27/2023			04/27/2023 13:22	Samantha L Bates	2403599, 2403600
EPA 180.1 Rev. 2.0	04/27/2023			04/27/2023 13:59	Anna M. Plaviak	2403599
	04/27/2023			04/27/2023 14:01	Anna M. Plaviak	2403600
EPA 300.0 Rev. 2.1	04/27/2023			05/04/2023 03:36	James L Waggerby	2403599
	04/27/2023			05/04/2023 03:51	James L Waggerby	2403600
EPA 350.1 Rev. 2.0	04/27/2023			05/02/2023 12:24	Ping Hua	2403601
	04/27/2023			05/02/2023 12:26	Ping Hua	2403602
EPA 351.2 Rev. 2.0	04/27/2023	05/04/2023 13:37	Dana G. Hughes	05/05/2023 11:09	Ping Hua	2403601
	04/27/2023	05/04/2023 13:37	Dana G. Hughes	05/05/2023 11:10	Ping Hua	2403602
EPA 353.2 Rev. 2.0	04/27/2023			05/04/2023 15:30	Anna M. Plaviak	2403601
	04/27/2023			05/04/2023 15:31	Anna M. Plaviak	2403602
EPA 365.1 Rev. 2.0	04/27/2023	05/03/2023 12:11	Adam P Silver	05/04/2023 13:45	James L Waggerby	2403601
	04/27/2023	05/03/2023 12:11	Adam P Silver	05/04/2023 13:54	James L Waggerby	2403602
SM 2320 B-2011	04/27/2023			05/04/2023 06:16	Dale L. Simmons	2403599
	04/27/2023			05/04/2023 06:25	Dale L. Simmons	2403600
SM 2540 C-2015	04/27/2023			04/28/2023 13:45	Dana G. Hughes	2403599, 2403600
SM 2540 D-2015	04/27/2023			05/05/2023 16:02	Yijie Li	2403599, 2403600
SM 4500-F- C-2011	04/27/2023			05/05/2023 04:00	Adam P Silver	2403599
	04/27/2023			05/05/2023 04:05	Adam P Silver	2403600
SM 5310 B-2011	04/27/2023			05/03/2023 04:13	Elise M. Gillis	2403601
	04/27/2023			05/03/2023 04:26	Elise M. Gillis	2403602