

Chemical Analysis Report

NE-DIST-2016-04-20-03

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

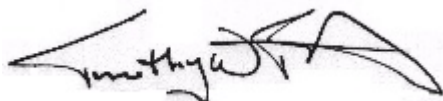
Event Description: **UEC South**
Request ID: **RQ-2016-04-18-08**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

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Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 17-MAY-2016 09:07

A handwritten signature in black ink, appearing to read "Timothy Fitzpatrick", with a stylized flourish at the end.

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 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: 27010189 WildwoodCr@WildwoodRd

Collection Date/Time: 04/19/2016 09:30

Field ID: 27010189

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790738	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P302624	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P303123	
		Sulfate	9.0		mg SO4/L	P303125	
	SM 2120 B	Color (true)	130		PCU	P302594	
	SM 2320 B-97	Total Alkalinity	83		mg CaCO3/L	P302875	
	SM 2540 C-97	TDS	223		mg/L	P303353	
	SM 2540 D-97	TSS	2	I	mg/L	P303213	
	SM 4500 F-C-97	Fluoride	0.085	I	mg F/L	P302878	
1790741	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P303370	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P303458	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.057		mg N/L	P303002	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P303170	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P303344	
1790744	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.092		mg P/L	P302617	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: 27010060 Cracker Br.@ CR 204

Collection Date/Time: 04/19/2016 10:10

Field ID: 27010060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790739	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P302624	
	EPA 300.0 Rev. 2.1	Chloride	1.5E+03		mg Cl/L	P303123	
		Sulfate	220		mg SO4/L	P303125	
	SM 2120 B	Color (true)	71		PCU	P302594	
	SM 2320 B-97	Total Alkalinity	76		mg CaCO3/L	P302875	
	SM 2540 C-97	TDS	2.97E+03		mg/L	P303354	
	SM 2540 D-97	TSS	2	I	mg/L	P303214	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P302878	
1790742	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P303371	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P303729	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P303059	
	EPA 365.1 Rev. 2.0	Total-P	0.073		mg P/L	P303066	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P303344	
1790745	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P302622	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: G5NE0005 PalmCoastCanal@OKRd

Collection Date/Time: 04/19/2016 12:00

Field ID: G5NE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790740	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P302624	

Field ID: G5NE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790740	EPA 300.0 Rev. 2.1	Chloride	50		mg Cl/L	P303123	
		Sulfate	23		mg SO4/L	P303125	
	SM 2120 B	Color (true)	51		PCU	P302594	
	SM 2320 B-97	Total Alkalinity	140		mg CaCO3/L	P302875	
	SM 2540 C-97	TDS	311	A	mg/L	P303354	
	SM 2540 D-97	TSS	9	I	mg/L	P303214	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P302878	
1790743	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P303370	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P303458	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P303159	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P303170	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P303344	
1790746	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P302617	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: G5NE0016 ICW@St.JoeWalkwayPCBr

Collection Date/Time: 04/19/2016 11:00

Field ID: G5NE0016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790747	EPA 180.1 Rev. 2.0	Turbidity	7.9		NTU	P302624	
	SM 2320 B-97	Total Alkalinity	114		mg CaCO3/L	P302992	
	SM 2540 D-97	TSS	15		mg/L	P303221	RPD
	SM 4500 F-C-97	Fluoride	1.2		mg F/L	P302995	
1790748	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P303372	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P303729	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P303059	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P303066	
	SM 5310 B-00	Organic Carbon	3.0		mg C/L	P304297	
1790749	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P302622	
1790756	EPA 200.7 Rev. 4.4	Iron	400	I	ug/L	P302981	
		Zinc	20	U	ug/L	P302981	
	EPA 200.8 Rev. 5.4	Arsenic	2.13		ug/L	P302981	
		Cadmium	0.060	U	ug/L	P302981	
		Chromium	0.78		ug/L	P302981	
		Copper	0.88	I	ug/L	P302981	
		Lead	0.36	I	ug/L	P302981	
		Nickel	1.0	U	ug/L	P302981	
		Silver	0.015	U	ug/L	P302981	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: Field Blank

Collection Date/Time: 04/19/2016 14:00

Field ID: Field Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790750	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P303370	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P303458	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P303159	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P303344	
1790751	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302617	
1790757	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P302981	
		Zinc	5.0	U	ug/L	P302981	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P302981	
		Cadmium	0.020	U	ug/L	P302981	
		Chromium	0.050	U	ug/L	P302981	
		Copper	0.10	U	ug/L	P302981	
		Lead	0.050	U	ug/L	P302981	
		Nickel	0.25	U	ug/L	P302981	
		Silver	0.0050	U	ug/L	P302981	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P302624

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P302981

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

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P302981

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.050	U	ug/L
Copper	0.10	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.25	U	ug/L
Silver	0.0050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P303123

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: P303125

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303370

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303371

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303372

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303458

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303729

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303002

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303059

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303159

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303066

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303170

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302617

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302622

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

Reference Method: SM 2120 B
Batch ID: P302594

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P302875

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

Reference Method: SM 2320 B-97
Batch ID: P302992

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

Reference Method: SM 2540 C-97
Batch ID: P303353

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P303354

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P303213

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P303214

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P303221

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P302878

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P302995

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P303344

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

Reference Method: SM 5310 B-00
Batch ID: P304297

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: P302981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	109		P	85 - 115
Zinc	103		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.3		P	85 - 115
Cadmium	98.5		P	85 - 115
Chromium	101		P	85 - 115
Copper	96.7		P	85 - 115
Lead	97.6		P	85 - 115
Nickel	98.1		P	80 - 120
Silver	94.1		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303123

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303370

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303372

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303458

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303729

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303002

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303059

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: P303159

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303066

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302617

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302622

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

Reference Method: SM 2320 B-97
Batch ID: P302875

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.8		P	95 - 105

Reference Method: SM 2320 B-97
Batch ID: P302992

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P302878

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P302995

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P303344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.4		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P304297

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P302981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791097	Iron	107	110	P/P	70 - 130
1791097	Zinc	103	104	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791097	Arsenic	103	103	P/P	80 - 120
1791097	Cadmium	101	103	P/P	80 - 120
1791097	Chromium	100	99.3	P/P	80 - 120
1791097	Copper	94.4	93.9	P/P	80 - 120
1791097	Lead	103	104	P/P	80 - 120
1791097	Nickel	101	99.5	P/P	70 - 130
1791097	Silver	93.7	93.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303123

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790694	Chloride	93.4		P	90 - 110
1790709	Chloride	95.6		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790694	Sulfate	93.7		P	90 - 110
1790709	Sulfate	92.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790766	Ammonia-N	98.9	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790742	Ammonia-N	99.7	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790536	Kjeldahl Nitrogen	93.0	97.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790698	NO2NO3-N	99.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303059

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790543	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303159

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790743	NO2NO3-N	98.7	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790742	Total-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790744	O-Phosphate-P	99.8	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791229	O-Phosphate-P	99.3	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P302878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790709	Fluoride	94.6	96.1	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P302995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791589	Fluoride	97.8	97.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P303344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790741	Organic Carbon	96.2	94.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P304297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790748	Organic Carbon	91.6	93.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302624

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790697	Turbidity	7.72	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P302981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791097	Iron	2.32	Spike	P	0 - 20
1791097	Zinc	0.443	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791097	Arsenic	0.406	Spike	P	0 - 20
1791097	Cadmium	1.87	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791097	Chromium	1.11	Spike	P	0 - 20
1791097	Copper	0.511	Spike	P	0 - 20
1791097	Lead	0.640	Spike	P	0 - 20
1791097	Nickel	1.74	Spike	P	0 - 20
1791097	Silver	0.0134	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303123

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790694	Chloride	0.161	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790694	Sulfate	0.597	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790766	Ammonia-N	0.209	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790742	Ammonia-N	0.243	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790540	Ammonia-N	0.510	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790743	Kjeldahl Nitrogen	1.81	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790536	Kjeldahl Nitrogen	3.93	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790698	NO2NO3-N	1.50	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790543	NO2NO3-N	1.09	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790743	NO2NO3-N	1.39	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790742	Total-P	0.635	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790713	Total-P	2.53	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790744	O-Phosphate-P	0.677	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791229	O-Phosphate-P	1.90	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P302594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790709	Color (true)	4.81	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P302875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790709	Total Alkalinity	0.0277	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P302992

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791589	Total Alkalinity	0.357	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P303353

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790685	TDS	8.22	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P303354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790740	TDS	3.86	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P303221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790520	TSS	10.9	Sample	F	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P302878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790709	Fluoride	0.979	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P302995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791589	Fluoride	0.0	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P303344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790741	Organic Carbon	0.791	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P304297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790748	Organic Carbon	1.50	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A68985
Included Lab Sample IDs: 1790738, 1790739, 1790740

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.6	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A68990
Included Lab Sample IDs: 1790744, 1790745, 1790746, 1790749, 1790751

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.3	P/P	90 - 110
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	98.3	100	P/P	90 - 110
O-Phosphate-P	99.4	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68992
Included Lab Sample IDs: 1790738, 1790739, 1790740, 1790747

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

Reference Method: SM 2320 B-97
Run ID: A69069
Included Lab Sample IDs: 1790738, 1790739, 1790740

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	99.7	P/P	90 - 110
Total Alkalinity	99.7	96.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A69069

Included Lab Sample IDs: 1790738, 1790739, 1790740

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.7	98.0	P/P	90 - 110
Fluoride	98.0	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69105

Included Lab Sample IDs: 1790741

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	104	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A69110

Included Lab Sample IDs: 1790747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.3	99.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A69110

Included Lab Sample IDs: 1790747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69129

Included Lab Sample IDs: 1790742, 1790748

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A69144

Included Lab Sample IDs: 1790738, 1790739, 1790740

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	97.9	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69154

Included Lab Sample IDs: 1790743, 1790750

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69158

Included Lab Sample IDs: 1790741, 1790743

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69158

Included Lab Sample IDs: 1790741, 1790743

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A69191

Included Lab Sample IDs: 1790756, 1790757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	102	P/P	90 - 110
Iron	102	99.9	P/P	90 - 110
Zinc	101	98.9	P/P	90 - 110
Zinc	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69203

Included Lab Sample IDs: 1790742, 1790748

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69207

Included Lab Sample IDs: 1790741, 1790742, 1790743, 1790748, 1790750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.5	96.9	P/P	90 - 110
Ammonia-N	98.3	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A69209

Included Lab Sample IDs: 1790741, 1790742, 1790743, 1790750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	96.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A69214

Included Lab Sample IDs: 1790756, 1790757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	99.8	P/P	90 - 110
Arsenic	98.3	98.3	P/P	90 - 110
Cadmium	95.5	94.7	P/P	90 - 110
Cadmium	97.9	97.6	P/P	90 - 110
Chromium	100	100	P/P	90 - 110
Chromium	96.6	92.8	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Copper	97.9	97.2	P/P	90 - 110
Lead	96.0	95.4	P/P	90 - 110
Silver	95.3	94.5	P/P	90 - 110
Silver	95.9	95.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A69248
 Included Lab Sample IDs: 1790756, 1790757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	106	97.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A69295
 Included Lab Sample IDs: 1790756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	94.7	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A69327
 Included Lab Sample IDs: 1790741, 1790743, 1790750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	101	P/P	90 - 110
Kjeldahl Nitrogen	97.4	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A69329
 Included Lab Sample IDs: 1790742, 1790748

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.2	94.3	P/P	90 - 110

Reference Method: SM 5310 B-00
 Run ID: A69473
 Included Lab Sample IDs: 1790748

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.9	92.4	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				7.72	
EPA 200.7 Rev. 4.4	Iron	109	107	110		2.32
	Zinc	103	103	104		0.443
EPA 200.8 Rev. 5.4	Arsenic	98.3	103	103		0.406
	Cadmium	98.5	101	103		1.87
	Chromium	101	100	99.3		1.11
	Copper	96.7	94.4	93.9		0.511
	Lead	97.6	103	104		0.640
	Nickel	98.1	101	99.5		1.74
	Silver	94.1	93.7	93.7		0.0134

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 300.0 Rev. 2.1	Chloride	96.2	93.4	95.6	0.161	
	Sulfate	95.7	93.7	92.8	0.597	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	98.9	98.6		0.209
	Ammonia-N	99.5	99.7	100		0.243
	Ammonia-N	98.4				0.510
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102				1.81
	Kjeldahl Nitrogen	100	93.0	97.7		3.93
EPA 353.2 Rev. 2.0	NO2NO3-N	104	99.5	101		1.50
	NO2NO3-N	102	100	102		1.09
	NO2NO3-N	102	98.7	97.2		1.39
EPA 365.1 Rev. 2.0	Total-P	101	101	102		0.635
	Total-P	98.1				2.53
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	99.8	101		0.677
	O-Phosphate-P	101	99.3	101		1.90
SM 2120 B	Color (true)				4.81	
SM 2320 B-97	Total Alkalinity	98.8			0.0277	
	Total Alkalinity	101			0.357	
SM 2540 C-97	TDS				8.22	
	TDS				3.86	
SM 2540 D-97	TSS				10.9	
SM 4500 F-C-97	Fluoride	94.9	94.6	96.1		0.979
	Fluoride	97.7	97.8	97.8		0.0
SM 5310 B-00	Organic Carbon	99.4	96.2	94.8		0.791
	Organic Carbon	97.6	91.6	93.1		1.50

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1790738, 1790739, 1790740, 1790747
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1790756, 1790757
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1790756, 1790757
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1790738, 1790739, 1790740
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1790738, 1790739, 1790740
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1790741, 1790742, 1790743, 1790748, 1790750
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1790741, 1790742, 1790743, 1790748, 1790750
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1790741, 1790742, 1790743, 1790748, 1790750
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1790741, 1790742, 1790743, 1790748
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1790744, 1790745, 1790746, 1790749, 1790751
SM 2120 B / E31780	True Color measured at 450 nm	1790738, 1790739, 1790740
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1790738, 1790739, 1790740, 1790747
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1790738, 1790739, 1790740
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1790738, 1790739, 1790740, 1790747
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1790738, 1790739, 1790740, 1790747
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1790741, 1790742, 1790743, 1790748, 1790750

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	04/20/2016			04/20/2016 14:20	Sima Feizi	1790738, 1790739, 1790740, 1790747
EPA 200.7 Rev. 4.4	04/20/2016	04/26/2016	Elliott D. Healy	04/29/2016	Joshua Ayres	1790756, 1790757
EPA 200.8 Rev. 5.4	04/20/2016	04/26/2016	Elliott D. Healy	05/02/2016	Charles J. Peterson	1790756, 1790757
	04/20/2016	04/26/2016	Elliott D. Healy	05/03/2016	Robert K Palmer	1790756, 1790757
	04/20/2016	04/26/2016	Elliott D. Healy	05/04/2016	Charles J. Peterson	1790756
EPA 300.0 Rev. 2.1	04/20/2016			04/28/2016	Elisa J Lutz	1790738, 1790739, 1790740
EPA 350.1 Rev. 2.0	04/20/2016			05/02/2016	Diana M. Turner	1790741, 1790742, 1790743, 1790748, 1790750
EPA 351.2 Rev. 2.0	04/20/2016	05/04/2016	Sofia Elnemr	05/06/2016	Christopher Armour	1790741, 1790743, 1790750
	04/20/2016	05/06/2016	Sofia Elnemr	05/09/2016	Christopher Armour	1790742, 1790748
EPA 353.2 Rev. 2.0	04/20/2016			04/26/2016	Peter D. Kaus	1790741
	04/20/2016			04/27/2016	Peter D. Kaus	1790742, 1790748
	04/20/2016			04/28/2016	Diana M. Turner	1790743, 1790750
EPA 365.1 Rev. 2.0	04/20/2016	04/27/2016	Lipi Saha	04/28/2016	Lipi Saha	1790742, 1790748
	04/20/2016	04/28/2016	Lipi Saha	04/28/2016	Lipi Saha	1790741, 1790743
EPA 365.1 Rev. 2.0 dissolved	04/20/2016			04/20/2016 13:39	Ping Hua	1790744
	04/20/2016			04/20/2016 14:31	Ping Hua	1790746, 1790751
	04/20/2016			04/20/2016 15:24	Ping Hua	1790745
	04/20/2016			04/20/2016 15:29	Ping Hua	1790749
SM 2120 B	04/20/2016			04/20/2016 13:06	Rochelle Y Jackson	1790738
	04/20/2016			04/20/2016 13:07	Rochelle Y Jackson	1790739
	04/20/2016			04/20/2016 13:08	Rochelle Y Jackson	1790740
SM 2320 B-97	04/20/2016			04/22/2016	Dale L. Simmons	1790738, 1790739, 1790740
	04/20/2016			04/27/2016	Dale L. Simmons	1790747
SM 2540 C-97	04/20/2016			04/22/2016	Yijie Li	1790738, 1790739, 1790740
SM 2540 D-97	04/20/2016			04/22/2016	Yijie Li	1790738, 1790739, 1790740, 1790747
SM 4500 F-C-97	04/20/2016			04/22/2016	Dale L. Simmons	1790738, 1790739, 1790740
	04/20/2016			04/27/2016	Dale L. Simmons	1790747
SM 5310 B-00	04/20/2016			04/30/2016	Sofia Elnemr	1790741, 1790742, 1790743, 1790750
	04/20/2016			05/13/2016	Diana M. Turner	1790748