

Chemical Analysis Report

NE-DIST-2017-06-23-02

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

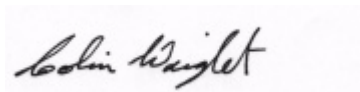
Event Description: **LSJR North 2**
Request ID: **RQ-2017-06-19-13**
Customer: **NE-DIST**
Project ID: **SMP**

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: Colin Wright, Program Administrator

Date Certified: 20-JUL-2017 09:42

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

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: Trout River above I-295

Collection Date/Time: 06/22/2017 08:55

Field ID: G2NE1138 06222017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1908626	EPA 180.1 Rev. 2.0	Turbidity	11	A	NTU	P327420	
	SM 2320 B-97	Total Alkalinity	62		mg CaCO3/L	P327618	
	SM 2540 D-97	TSS	14		mg/L	P327879	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P327621	RPD
1908628	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P327672	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P327558	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.062		mg N/L	P327524	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P327473	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P327943	
1908630	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P327427	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Ribault R above Trout River

Collection Date/Time: 06/22/2017 09:20

Field ID: G2NE0132 06222017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1908620	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P327419	
	SM 2320 B-97	Total Alkalinity	79	A	mg CaCO3/L	P327619	
	SM 2540 D-97	TSS	11		mg/L	P327880	
	SM 4500 F-C-97	Fluoride	0.44		mg F/L	P327623	
1908622	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P327672	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P327558	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P327524	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P327473	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P327945	
1908624	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P327427	
1908677	EPA 8321B	Sucralose**	0.75		ug/L	P327309	
	USGS O-2060-01	2,4-D	0.024		ug/L	P327564	
		Diuron	0.062		ug/L	P327564	
		Fenuron	0.0080	U	ug/L	P327564	MS, RPD
		Imidacloprid	0.028		ug/L	P327564	
		Bentazon	0.0054		ug/L	P327564	
		Linuron	0.0040	U	ug/L	P327564	
		Acetaminophen**	0.0080	U	ug/L	P327564	
		MCP	0.0020	U	ug/L	P327564	
		Carbamazepine**	0.0022		ug/L	P327564	
		Triclopyr**	0.0040	U	ug/L	P327564	
		Primidone**	0.0040	U	ug/L	P327564	RPD
		Fluridone**	0.0039		ug/L	P327564	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: Accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Trout R Mouth - N of Sand Fly Pt.

Collection Date/Time: 06/22/2017 10:05

Field ID: G2NE0131 06222017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1908627	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P327420	
	SM 2320 B-97	Total Alkalinity	78		mg CaCO3/L	P327619	
	SM 2540 D-97	TSS	5	I	mg/L	P327880	
	SM 4500 F-C-97	Fluoride	0.46		mg F/L	P327623	
1908629	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P327672	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P327558	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P327524	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P327473	
	SM 5310 B-00	Organic Carbon	9.6		mg C/L	P327945	
1908631	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.099		mg P/L	P327427	
	dissolved						

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Dunn Creek @ Heckscher Dr.

Collection Date/Time: 06/22/2017 10:20

Field ID: G2NE0154 06222017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1908621	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P327419	
	SM 2320 B-97	Total Alkalinity	83		mg CaCO3/L	P327619	
	SM 2540 D-97	TSS	8	I	mg/L	P327880	
	SM 4500 F-C-97	Fluoride	0.58		mg F/L	P327623	
1908623	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P327672	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P327558	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P327524	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P327473	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P327945	
1908625	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.086		mg P/L	P327427	
	dissolved						
1908678	EPA 8321B	Sucralose**	0.86		ug/L	P327309	
	USGS O-2060-01	2,4-D	0.010		ug/L	P327564	
		Diuron	0.094		ug/L	P327564	
		Fenuron	0.0080	U	ug/L	P327564	MS, RPD
		Imidacloprid	0.022		ug/L	P327564	
		Bentazon	0.0050		ug/L	P327564	
		Linuron	0.0040	U	ug/L	P327564	
		Acetaminophen**	0.0080	U	ug/L	P327564	
		MCP	0.0020	U	ug/L	P327564	
		Carbamazepine**	0.0025		ug/L	P327564	
		Triclopyr**	0.0040	U	ug/L	P327564	
		Primidone**	0.0040	U	ug/L	P327564	RPD
		Fluridone**	0.0038		ug/L	P327564	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: Accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Moncrief Near Mouth

Collection Date/Time: 06/22/2017 09:35

Field ID: G2NE0122 06222017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1908614	EPA 180.1 Rev. 2.0	Turbidity	4.9		NTU	P327419	
	SM 2320 B-97	Total Alkalinity	80		mg CaCO3/L	P327619	
	SM 2540 D-97	TSS	9	I	mg/L	P327880	
	SM 4500 F-C-97	Fluoride	0.48		mg F/L	P327623	
1908616	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P327430	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P327438	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P327524	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P327473	
	SM 5310 B-00	Organic Carbon	9.6		mg C/L	P327945	
1908618	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P327427	
1908679	EPA 200.7 Rev. 4.4	Iron	230	I	ug/L	P327547	
	EPA 200.8 Rev. 5.4	Arsenic	2.45		ug/L	P327547	
		Cadmium	0.060	U	ug/L	P327547	
		Chromium	1.2	U	ug/L	P327547	
		Copper	1.4	I	ug/L	P327547	
		Lead	0.53	I	ug/L	P327547	
		Nickel	0.60	U	ug/L	P327547	
		Silver	0.030	U	ug/L	P327547	
		Zinc	3.0	U	ug/L	P327547	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Moncrief Near Mouth DUPLICATE

Collection Date/Time: 06/22/2017 09:40

Field ID: G2NE0122 06222017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1908615	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P327419	
	SM 2320 B-97	Total Alkalinity	79		mg CaCO3/L	P327619	
	SM 2540 D-97	TSS	8	IA	mg/L	P327880	
	SM 4500 F-C-97	Fluoride	0.47		mg F/L	P327623	
1908617	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P327430	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P327558	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P327524	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P327473	
	SM 5310 B-00	Organic Carbon	9.5		mg C/L	P327945	
1908619	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.099		mg P/L	P327427	
1908680	EPA 200.7 Rev. 4.4	Iron	190	I	ug/L	P327547	
	EPA 200.8 Rev. 5.4	Arsenic	2.59		ug/L	P327547	
		Cadmium	0.060	U	ug/L	P327547	
		Chromium	1.2	U	ug/L	P327547	
		Copper	1.4	I	ug/L	P327547	
		Lead	0.49	I	ug/L	P327547	
		Nickel	0.80	U	ug/L	P327547	
		Silver	0.040	U	ug/L	P327547	
		Zinc	4.0	U	ug/L	P327547	

Field ID: G2NE0122 06222017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P327419

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P327420

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P327547

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P327547

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L
Zinc	1.0	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P327430

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P327672

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P327438

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327558

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327524

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327473

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327427

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

Reference Method: EPA 8321B
Batch ID: P327309

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-97
Batch ID: P327618

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

Reference Method: SM 2320 B-97
Batch ID: P327619

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

Reference Method: SM 2540 D-97
Batch ID: P327879

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P327880

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P327621

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P327623

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P327943

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

Reference Method: SM 5310 B-00
Batch ID: P327945

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

Reference Method: USGS O-2060-01
Batch ID: P327564

Component	Result	Code	Units
2,4-D	8.0E-04	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327547

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cadmium	94.6		P	70 - 130
Chromium	96.3		P	85 - 115
Copper	98.4		P	85 - 115
Lead	93.0		P	70 - 130
Nickel	99.7		P	85 - 115
Silver	102		P	85 - 115
Zinc	98.7		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327430

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327672

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327438

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: P327558

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327524

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327473

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327427

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.7		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P327309

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	83.0		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P327618

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P327619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P327621

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.8		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P327623

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.8		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P327943

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P327945

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

Reference Method: USGS O-2060-01
Batch ID: P327564

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	78.8		P	40 - 150
Acetaminophen	49.8		P	30 - 150
Bentazon	88.2		P	40 - 150
Carbamazepine	92.4		P	40 - 150
Diuron	95.2		P	40 - 150
Fenuron	82.0		P	40 - 150
Fluridone	96.0		P	40 - 150
Imidacloprid	77.8		P	40 - 160
Linuron	78.4		P	40 - 150
MCPP	84.6		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P327564

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Primidone	51.8		P	40 - 150
Triclopyr	79.0		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908679	Iron	104	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908679	Arsenic	116	114	P/P	70 - 130
1908679	Cadmium	94.5	90.1	P/P	70 - 130
1908679	Chromium	86.0	79.2	P/P	70 - 130
1908679	Copper	103	100	P/P	70 - 130
1908679	Lead	102	101	P/P	70 - 130
1908679	Nickel	105	101	P/P	70 - 130
1908679	Silver	100	98.1	P/P	70 - 130
1908679	Zinc	102	99.0	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908428	Ammonia-N	99.8	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908622	Ammonia-N	97.2	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908543	Kjeldahl Nitrogen	98.3	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908985	Kjeldahl Nitrogen	99.9	95.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908546	NO2NO3-N	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908548	Total-P	94.6	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327427

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908618	O-Phosphate-P	98.5	99.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P327621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908570	Fluoride	96.4	100	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P327623

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908620	Fluoride	97.4	98.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P327943

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1909559	Organic Carbon	95.4	97.4	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P327945

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908548	Organic Carbon	91.9	95.2	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P327564

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908555	2,4-D	113	106	P/P	40 - 150
1908555	Acetaminophen	84.8	84.8	P/P	30 - 150
1908555	Bentazon	43.8	48.2	P/P	40 - 150
1908555	Carbamazepine	99.2	103	P/P	40 - 150
1908555	Diuron	60.4	68.4	P/P	40 - 150
1908555	Fenuron	159	87.6	F/P	40 - 150
1908555	Fluridone	50.6	57.4	P/P	40 - 150
1908555	Imidacloprid	68.4	107	P/P	40 - 160
1908555	Linuron	61.4	63.6	P/P	40 - 150
1908555	MCP	79.0	74.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P327564

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908555	Primidone	58.6	89.8	P/P	40 - 150
1908555	Triclopyr	95.8	79.4	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P327419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908522	Turbidity	1.56	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P327420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908626	Turbidity	0.873	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908679	Iron	2.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908679	Arsenic	1.72	Spike	P	0 - 20
1908679	Cadmium	4.80	Spike	P	0 - 20
1908679	Chromium	8.23	Spike	P	0 - 20
1908679	Copper	2.55	Spike	P	0 - 20
1908679	Lead	0.401	Spike	P	0 - 20
1908679	Nickel	3.40	Spike	P	0 - 20
1908679	Silver	2.21	Spike	P	0 - 20
1908679	Zinc	2.67	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908428	Ammonia-N	0.259	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908622	Ammonia-N	0.479	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908543	Kjeldahl Nitrogen	3.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908985	Kjeldahl Nitrogen	4.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908546	NO2NO3-N	0.477	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908548	Total-P	1.91	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327427

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908618	O-Phosphate-P	0.598	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P327309

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908246	Sucralose	4.67	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P327618

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908570	Total Alkalinity	0.482	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P327619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908620	Total Alkalinity	0.128	Sample	P	0 - 4.8

Reference Method: SM 4500 F-C-97
Batch ID: P327621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908570	Fluoride	3.23	Spike	F	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P327623

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908620	Fluoride	0.915	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P327943

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1909559	Organic Carbon	1.29	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P327945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908548	Organic Carbon	3.18	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P327564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908555	2,4-D	5.29	Spike	P	0 - 30
1908555	Acetaminophen	0.0	Spike	P	0 - 30
1908555	Bentazon	2.18	Spike	P	0 - 30
1908555	Carbamazepine	3.76	Spike	P	0 - 30
1908555	Diuron	9.50	Spike	P	0 - 30
1908555	Fenuron	46.9	Spike	F	0 - 30
1908555	Fluridone	8.74	Spike	P	0 - 30
1908555	Imidacloprid	7.29	Spike	P	0 - 30
1908555	Linuron	3.52	Spike	P	0 - 30
1908555	MCP	5.73	Spike	P	0 - 30
1908555	Primidone	42.0	Spike	F	0 - 30
1908555	Triclopyr	18.7	Spike	P	0 - 30

* 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 Surrogates

Lab Sample ID: 1908677
Field Sample ID: G2NE0132 06222017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	93.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	94.6	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	96.3	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	118	P	30 - 160
USGS O-2060-01	Diuron-d6	81.8	P	30 - 160
USGS O-2060-01	Primidone-d5	65.4	P	30 - 150

Lab Sample ID: 1908678
Field Sample ID: G2NE0154 06222017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	96.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	86.8	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	76.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	136	P	30 - 160
USGS O-2060-01	Diuron-d6	86.1	P	30 - 160
USGS O-2060-01	Primidone-d5	101	P	30 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A77312
Included Lab Sample IDs: 1908614, 1908615, 1908620, 1908621, 1908626, 1908627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.0	P/P	95 - 105
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A77317
Included Lab Sample IDs: 1908618, 1908619, 1908624, 1908625, 1908630, 1908631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	99.6	P/P	90 - 110
O-Phosphate-P	99.2	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A77320
Included Lab Sample IDs: 1908616, 1908617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.7	96.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A77359
Included Lab Sample IDs: 1908616, 1908617, 1908622, 1908623, 1908628, 1908629

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77363

Included Lab Sample IDs: 1908616, 1908617, 1908622, 1908623, 1908628, 1908629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	102	P/P	90 - 110
Total-P	99.8	99.5	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A77390

Included Lab Sample IDs: 1908614, 1908615, 1908620, 1908621, 1908626, 1908627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110
Total Alkalinity	100	104	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A77390

Included Lab Sample IDs: 1908614, 1908615, 1908620, 1908621, 1908626, 1908627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.3	98.4	P/P	90 - 110
Fluoride	97.7	98.9	P/P	90 - 110
Fluoride	98.4	97.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A77407

Included Lab Sample IDs: 1908679, 1908680

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77410

Included Lab Sample IDs: 1908622, 1908623, 1908628, 1908629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.4	P/P	90 - 110
Ammonia-N	98.4	96.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A77414

Included Lab Sample IDs: 1908677, 1908678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	79.0	105	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77447

Included Lab Sample IDs: 1908616

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	107	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77472

Included Lab Sample IDs: 1908617, 1908622, 1908623, 1908628, 1908629

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

Reference Method: SM 5310 B-00

Run ID: A77524

Included Lab Sample IDs: 1908616, 1908617, 1908622, 1908623, 1908628, 1908629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.4	95.5	P/P	90 - 110
Organic Carbon	97.6	98.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A77600

Included Lab Sample IDs: 1908679, 1908680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	95.6	96.0	P/P	90 - 110
Lead	94.2	94.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A77627

Included Lab Sample IDs: 1908679, 1908680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	102	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Nickel	99.7	100	P/P	90 - 110
Silver	97.7	97.0	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A77652

Included Lab Sample IDs: 1908679, 1908680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	96.1	93.4	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A77687

Included Lab Sample IDs: 1908677, 1908678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.0	94.0	P/P	50 - 150
Acetaminophen	82.0	72.4	P/P	60 - 150
Bentazon	86.4	102	P/P	50 - 150
Carbamazepine	94.4	94.8	P/P	60 - 150
Diuron	98.0	95.2	P/P	60 - 150
Fenuron	80.8	82.0	P/P	60 - 150
Fluridone	122	107	P/P	60 - 160
Imidacloprid	85.6	76.0	P/P	60 - 150
Linuron	88.0	86.0	P/P	60 - 150
MCPP	74.8	78.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A77687

Included Lab Sample IDs: 1908677, 1908678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	81.2	74.0	P/P	60 - 150
Triclopyr	80.4	74.8	P/P	50 - 150

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.56	
	Turbidity				0.873	
EPA 200.7 Rev. 4.4	Iron	104	104 101			2.47
EPA 200.8 Rev. 5.4	Arsenic	101	116 114			1.72
	Cadmium	94.6	94.5 90.1			4.80
	Chromium	96.3	86.0 79.2			8.23
	Copper	98.4	103 100			2.55
	Lead	93.0	102 101			0.401
	Nickel	99.7	105 101			3.40
	Silver	102	100 98.1			2.21
	Zinc	98.7	102 99.0			2.67
EPA 350.1 Rev. 2.0	Ammonia-N	101	99.8 99.6			0.259
	Ammonia-N	102	97.2 97.8			0.479
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	98.3 102			3.35
	Kjeldahl Nitrogen	105	99.9 95.0			4.06
EPA 353.2 Rev. 2.0	NO2NO3-N	104	105 104			0.477
EPA 365.1 Rev. 2.0	Total-P	97.8	94.6 96.4			1.91
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7	98.5 99.7			0.598
EPA 8321B	Sucralose	83.0				4.67
SM 2320 B-97	Total Alkalinity	104			0.482	
	Total Alkalinity	103			0.128	
SM 4500 F-C-97	Fluoride	95.8	96.4 100			3.23
	Fluoride	95.8	97.4 98.8			0.915
SM 5310 B-00	Organic Carbon	98.8	95.4 97.4			1.29
	Organic Carbon	97.2	91.9 95.2			3.18
USGS O-2060-01	2,4-D	78.8	113 106			5.29
	Acetaminophen	49.8	84.8 84.8			0.0
	Bentazon	88.2	43.8 48.2			2.18
	Carbamazepine	92.4	99.2 103			3.76
	Diuron	95.2	60.4 68.4			9.50
	Fenuron	82.0	159 87.6			46.9
	Fluridone	96.0	50.6 57.4			8.74
	Imidacloprid	77.8	68.4 107			7.29
	Linuron	78.4	61.4 63.6			3.52
	MCP	84.6	79.0 74.6			5.73
	Primidone	51.8	58.6 89.8			42.0
	Triclopyr	79.0	95.8 79.4			18.7

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1908679, 1908680
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1908679, 1908680
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1908616, 1908617, 1908622, 1908623, 1908628, 1908629
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1908616, 1908617, 1908622, 1908623, 1908628, 1908629
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1908616, 1908617, 1908622, 1908623, 1908628, 1908629
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1908616, 1908617, 1908622, 1908623, 1908628, 1908629
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1908618, 1908619, 1908624, 1908625, 1908630, 1908631
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1908677, 1908678
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1908616, 1908617, 1908622, 1908623, 1908628, 1908629
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1908677, 1908678
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1908677, 1908678

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	06/23/2017			06/23/2017 15:11	DeAsia Armster	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
EPA 200.7 Rev. 4.4	06/23/2017	06/27/2017	Elliott D. Healy	06/28/2017	Betina Topolski	1908679, 1908680
EPA 200.8 Rev. 5.4	06/23/2017	06/27/2017	Elliott D. Healy	07/07/2017	Robert K Palmer	1908679, 1908680
	06/23/2017	06/27/2017	Elliott D. Healy	07/10/2017	Nadine Brooks	1908679, 1908680
	06/23/2017	06/27/2017	Elliott D. Healy	07/11/2017	Nadine Brooks	1908679, 1908680
EPA 350.1 Rev. 2.0	06/23/2017			06/23/2017	Sofia Elnemr	1908616, 1908617
	06/23/2017			06/28/2017	Sofia Elnemr	1908622, 1908623, 1908628, 1908629
EPA 351.2 Rev. 2.0	06/23/2017	06/26/2017	Adrian Shelby	06/30/2017	Joseph Suarez	1908616
	06/23/2017	06/28/2017	Adrian Shelby	06/30/2017	Joseph Suarez	1908617, 1908622, 1908623, 1908628, 1908629
EPA 353.2 Rev. 2.0	06/23/2017			06/27/2017	Beverly Y. Sanders	1908616, 1908617, 1908622, 1908623, 1908628, 1908629
EPA 365.1 Rev. 2.0	06/23/2017	06/26/2017	Vijayalakshmi Reddy	06/27/2017	Lipi Saha	1908616, 1908617, 1908622, 1908623, 1908628, 1908629
EPA 365.1 Rev. 2.0 dissolved	06/23/2017			06/23/2017 15:21	Anthony C. Onicha	1908618
	06/23/2017			06/23/2017 15:54	Anthony C. Onicha	1908619
	06/23/2017			06/23/2017 15:55	Anthony C. Onicha	1908624, 1908625
	06/23/2017			06/23/2017 15:56	Anthony C. Onicha	1908630
	06/23/2017			06/23/2017 15:57	Anthony C. Onicha	1908631
EPA 8321B	06/23/2017	06/28/2017	Mohammad Ghaffari	06/28/2017	Mohammad Ghaffari	1908677, 1908678
SM 2320 B-97	06/23/2017			06/28/2017	Dale L. Simmons	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
SM 2540 D-97	06/23/2017			06/28/2017	Yijie Li	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
SM 4500 F-C-97	06/23/2017			06/28/2017	Dale L. Simmons	1908614, 1908615, 1908620, 1908621, 1908626, 1908627
SM 5310 B-00	06/23/2017			07/03/2017	Sofia Elnemr	1908628
	06/23/2017			07/04/2017	Sofia Elnemr	1908616, 1908617, 1908622, 1908623, 1908629
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