

Chemical Analysis Report

SO-DIST-2019-04-23-01

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

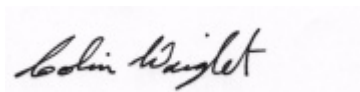
Event Description: **Sara Tidal**
Request ID: **RQ-2019-04-22-16**
Customer: **SO-DIST**
Project ID: **SMP**

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

Date Certified: 16-MAY-2019 16:44

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

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, 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 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: Curry(Tidal)@AlbeeFarm

Collection Date/Time: 04/22/2019 10:00

Field ID: G3SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079953	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P362737	
	EPA 300.0	Bromide	10		mg Br/L	P362742	
	SM 2320 B-97	Total Alkalinity	128		mg CaCO3/L	P363242	
	SM 2540 D-97	TSS	4	I	mg/L	P363054	
	SM 4500 F-C-97	Fluoride	0.42		mg F/L	P363249	
2079954	EPA 350.1 Rev. 2.0	Ammonia-N	0.074		mg N/L	P363029	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P362928	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.061		mg N/L	P363154	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P362794	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P362920	
2079955	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P362733	
2079971	EPA 200.7 Rev. 4.4	Iron	160	I	ug/L	P362810	
		Manganese	15		ug/L	P362810	
		Zinc	15	U	ug/L	P362810	
	EPA 200.8 Rev. 5.4	Aluminum	42	I	ug/L	P362810	
		Antimony	0.21	I	ug/L	P362810	
		Arsenic	2.57		ug/L	P362810	
		Cadmium	0.080	U	ug/L	P362810	
		Chromium	4.0	U	ug/L	P362810	
		Copper	1.6	U	ug/L	P362810	
		Lead	0.80	U	ug/L	P362810	
		Nickel	2.0	U	ug/L	P362810	
		Selenium	0.80	U	ug/L	P362810	
		Silver	0.040	U	ug/L	P362810	
		Thallium	0.40	U	ug/L	P362810	

Ref. Method and Comment:

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

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Alligator @ Jacaranda

Collection Date/Time: 04/22/2019 10:30

Field ID: G2SD0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079956	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P362737	
	EPA 300.0 Rev. 2.1	Chloride	100		mg Cl/L	P362962	
		Sulfate	85		mg SO4/L	P362966	
		Color (true)	57		PCU	P362700	
	SM 2320 B-97	Total Alkalinity	240		mg CaCO3/L	P363242	
	SM 2540 C-97	TDS	585		mg/L	P363102	
	SM 2540 D-97	TSS	6	I	mg/L	P363051	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P363249	
2079957	EPA 350.1 Rev. 2.0	Ammonia-N	0.27		mg N/L	P363028	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P363095	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.049		mg N/L	P362980	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P362792	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P362920	
2079958	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P362732	

Ref. Method and Comment:

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

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: WoodmereCreek@HeronRd

Collection Date/Time: 04/22/2019 11:00

Field ID: G2SD0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079969	EPA 8321B	2,4-D	0.0047	I	ug/L	P362672	
		Acesulfame K**	0.48		ug/L	P362741	
		AMPA**	1.3		ug/L	P362741	
		Sucralose**	2.2		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	U	ug/L	P362741	
		Glufosinate**	0.10	U	ug/L	P362741	
		Bentazon	0.014		ug/L	P362672	
		Glyphosate**	1.1		ug/L	P362741	
		Carbamazepine**	0.026		ug/L	P362672	
		Diuron	0.0020	U	ug/L	P362672	
		Fenuron	0.016	U	ug/L	P362672	
		Fluridone**	0.0014	I	ug/L	P362672	
		Imazapyr**	0.22		ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.021		ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCPP	0.0034	I	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.013	I	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

Sample Location: Gottfried@DeerCkMobile

Collection Date/Time: 04/22/2019 11:40

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079970	EPA 8321B	2,4-D	0.0020	U	ug/L	P362672	
		Acesulfame K**	0.10	UJ	ug/L	P362741	SUR
		AMPA**	1.0	U	ug/L	P362741	
		Sucralose**	0.10		ug/L	P362741	
		Acetaminophen**	0.0080	U	ug/L	P362672	
		Endothall**	0.25	UJ	ug/L	P362741	SUR
		Glufosinate**	1.0	U	ug/L	P362741	
		Glyphosate**	1.0	U	ug/L	P362741	
		Bentazon	8.0E-04	U	ug/L	P362672	
		Carbamazepine**	8.0E-04	U	ug/L	P362672	
		Diuron	0.0020	U	ug/L	P362672	
		Fenuron	0.016	U	ug/L	P362672	
		Fluridone**	0.0047		ug/L	P362672	
		Imazapyr**	0.0072	I	ug/L	P362672	
		Hydrocodone**	0.0020	U	ug/L	P362672	
		Ibuprofen**	0.020	U	ug/L	P362672	
		Imidacloprid	0.0020	U	ug/L	P362672	MS
		Linuron	0.0040	U	ug/L	P362672	
		MCP	0.0020	U	ug/L	P362672	
		Naproxen**	0.0080	U	ug/L	P362672	
		Primidone**	0.0040	U	ug/L	P362672	
		Pyraclostrobin**	0.0020	U	ug/L	P362672	
		Triclopyr**	0.0040	U	ug/L	P362672	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Surrogate spike recovery exceeding the control limits. Results confirmed in sample duplicate. Some MDLs are elevated due to required dilution of sample matrix.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362737

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362810

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

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

Reference Method: EPA 300.0
Batch ID: P362742

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362962

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363029

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362928

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P363095

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362980

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363154

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: P362792

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362794

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362732

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362733

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P362672

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P362741

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P362700

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P363242

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

Reference Method: SM 2540 C-97
Batch ID: P363102

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P363051

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P363054

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P363249

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P362920

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: P362810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115
Manganese	102		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.7		P	85 - 115
Antimony	98.4		P	85 - 115
Arsenic	101		P	85 - 115
Cadmium	99.9		P	85 - 115
Chromium	90.5		P	85 - 115
Copper	98.4		P	85 - 115
Lead	91.9		P	85 - 115
Nickel	99.5		P	85 - 115
Selenium	101		P	85 - 115
Silver	95.4		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P362742

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362962

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363029

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P362928

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P363095

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P362980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P363154

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P362792

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P362794

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P362732

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P362733

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

Reference Method: EPA 8321B
 Batch ID: P362672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	74.3		P	40 - 150
Acetaminophen	94.9		P	30 - 150
Bentazon	87.5		P	30 - 150
Carbamazepine	98.4		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P362672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	88.9		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	107		P	40 - 150
Hydrocodone	107		P	40 - 150
Ibuprofen	64.7		P	40 - 150
Imazapyr	103		P	40 - 150
Imidacloprid	106		P	40 - 150
Linuron	78.2		P	40 - 150
MCPP	81.4		P	40 - 150
Naproxen	80.1		P	40 - 150
Primidone	63.3		P	40 - 150
Pyraclostrobin	69.5		P	40 - 150
Triclopyr	51.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	131		P	40 - 150
Endothall	107		P	40 - 150
Glufosinate	125		P	40 - 150
Glyphosate	121		P	40 - 140
Sucralose	95.3		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P362700

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P363242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P363249

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P362920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	90.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079824	Iron	104		P	70 - 130
2079824	Manganese	96.5		P	70 - 130
2079824	Zinc	102		P	70 - 130
2080086	Iron	104	105	P/P	80 - 120
2080086	Manganese	97.6	97.9	P/P	80 - 120
2080086	Zinc	100	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079824	Aluminum	94.9		P	70 - 130
2079824	Antimony	101		P	70 - 130
2079824	Arsenic	109		P	70 - 130
2079824	Cadmium	96.9		P	70 - 130
2079824	Chromium	88.5		P	70 - 130
2079824	Copper	95.5		P	70 - 130
2079824	Lead	96.8		P	70 - 130
2079824	Nickel	99.4		P	70 - 130
2079824	Selenium	103		P	70 - 130
2079824	Silver	90.3		P	70 - 130
2079824	Thallium	106		P	70 - 130
2080086	Aluminum	96.6	94.5	P/P	70 - 130
2080086	Antimony	105	103	P/P	70 - 130
2080086	Arsenic	112	110	P/P	70 - 130
2080086	Cadmium	101	97.9	P/P	70 - 130
2080086	Chromium	88.6	91.4	P/P	70 - 130
2080086	Copper	97.0	96.3	P/P	70 - 130
2080086	Lead	98.0	97.2	P/P	70 - 130
2080086	Nickel	98.9	97.0	P/P	70 - 130
2080086	Selenium	103	104	P/P	70 - 130
2080086	Silver	90.0	89.1	P/P	70 - 130
2080086	Thallium	106	106	P/P	70 - 130

Reference Method: EPA 300.0
Batch ID: P362742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079290	Bromide	98.4		P	90 - 110
2079303	Bromide	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079904	Chloride	100		P	90 - 110
2080052	Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079904	Sulfate	103		P	90 - 110
2080052	Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079856	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080011	Ammonia-N	99.7	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079954	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P363095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080016	Kjeldahl Nitrogen	99.9	99.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079907	NO2NO3-N	98.1	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079954	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079906	Total-P	106	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079987	Total-P	96.6	98.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079932	O-Phosphate-P	97.1	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079955	O-Phosphate-P	98.3	98.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P362672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079939	2,4-D	73.8	77.8	P/P	40 - 150
2079939	Acetaminophen	102	114	P/P	30 - 150
2079939	Bentazon	69.3	74.6	P/P	30 - 150
2079939	Carbamazepine	92.9	98.8	P/P	40 - 150
2079939	Diuron	68.7	68.0	P/P	40 - 150
2079939	Fenuron	121	142	P/P	40 - 150
2079939	Fluridone	137	147	P/P	40 - 150
2079939	Hydrocodone	94.6	102	P/P	40 - 150
2079939	Ibuprofen	55.1	66.7	P/P	40 - 150
2079939	Imazapyr	75.8	101	P/P	40 - 150
2079939	Imidacloprid	143	155	P/F	40 - 150
2079939	Linuron	61.6	59.2	P/P	40 - 150
2079939	MCPP	75.3	89.0	P/P	40 - 150
2079939	Naproxen	48.7	55.6	P/P	40 - 150
2079939	Primidone	88.5	81.7	P/P	40 - 150
2079939	Pyraclostrobin	75.5	81.7	P/P	40 - 150
2079939	Triclopyr	43.4	46.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080156	Acesulfame K	102	79.1	P/P	40 - 150
2080156	AMPA	61.2	66.5	P/P	40 - 150
2080156	Endothall	87.0	114	P/P	40 - 150
2080156	Glufosinate	95.6	97.2	P/P	40 - 150
2080156	Glyphosate	124	123	P/P	40 - 140
2080156	Sucralose	103	105	P/P	40 - 150

Reference Method: SM 5310 B-00
Batch ID: P362920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079856	Organic Carbon	88.8	87.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079928	Turbidity	5.27	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080086	Iron	0.149	Spike	P	0 - 20
2080086	Manganese	0.321	Spike	P	0 - 20
2080086	Zinc	0.0135	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080086	Aluminum	2.06	Spike	P	0 - 20
2080086	Antimony	1.42	Spike	P	0 - 20
2080086	Arsenic	1.09	Spike	P	0 - 20
2080086	Cadmium	2.65	Spike	P	0 - 20
2080086	Chromium	3.10	Spike	P	0 - 20
2080086	Copper	0.732	Spike	P	0 - 20
2080086	Lead	0.799	Spike	P	0 - 20
2080086	Nickel	1.92	Spike	P	0 - 20
2080086	Selenium	1.48	Spike	P	0 - 20
2080086	Silver	1.02	Spike	P	0 - 20
2080086	Thallium	0.296	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P362742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079290	Bromide	0.988	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080052	Chloride	0.0676	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P362966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080052	Sulfate	0.544	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079856	Ammonia-N	0.606	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P363029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080011	Ammonia-N	0.676	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P362928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079954	Kjeldahl Nitrogen	0.481	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P363095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080016	Kjeldahl Nitrogen	0.102	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079907	NO2NO3-N	0.849	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P363154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079954	NO2NO3-N	0.753	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079906	Total-P	8.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079987	Total-P	1.32	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079932	O-Phosphate-P	0.750	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079955	O-Phosphate-P	0.446	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P362672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079939	2,4-D	5.20	Spike	P	0 - 30
2079939	Acetaminophen	11.2	Spike	P	0 - 30
2079939	Bentazon	7.39	Spike	P	0 - 30
2079939	Carbamazepine	6.15	Spike	P	0 - 30
2079939	Diuron	0.993	Spike	P	0 - 30
2079939	Fenuron	16.2	Spike	P	0 - 30
2079939	Fluridone	7.34	Spike	P	0 - 30
2079939	Hydrocodone	7.27	Spike	P	0 - 30
2079939	Ibuprofen	18.0	Spike	P	0 - 30
2079939	Imazapyr	26.6	Spike	P	0 - 30
2079939	Imidacloprid	8.02	Spike	P	0 - 30
2079939	Linuron	3.96	Spike	P	0 - 30
2079939	MCPP	16.6	Spike	P	0 - 30
2079939	Naproxen	13.3	Spike	P	0 - 30
2079939	Primidone	7.98	Spike	P	0 - 30
2079939	Pyraclostrobin	7.90	Spike	P	0 - 30
2079939	Triclopyr	7.05	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P362741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080156	Acesulfame K	25.0	Spike	P	0 - 30
2080156	AMPA	2.96	Spike	P	0 - 30
2080156	Endothall	26.8	Spike	P	0 - 30
2080156	Glufosinate	1.60	Spike	P	0 - 30
2080156	Glyphosate	0.186	Spike	P	0 - 30
2080156	Sucralose	2.19	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P362700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079929	Color (true)	3.10	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P363242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080172	Total Alkalinity	0.187	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P363102

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079855	TDS	0.962	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P363249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080172	Fluoride	0.507	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P362920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079856	Organic Carbon	0.899	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 Surrogates

Lab Sample ID: 2079969
Field Sample ID: G2SD0027

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.4	P	30 - 160
EPA 8321B	Diuron-d6	76.3	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.6	P	30 - 160
EPA 8321B	Primidone-d5	61.0	P	30 - 160
EPA 8321B	Sucralose-d6	94.8	P	30 - 160
EPA 8321B	Sucralose-d6	94.8	P	30 - 160

Lab Sample ID: 2079970
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	32.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	45.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	40.8	P	30 - 160
EPA 8321B	Diuron-d6	37.4	P	30 - 160
EPA 8321B	Endothall-d6	1320	F	30 - 160
EPA 8321B	Endothall-d6	1320	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	37.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	37.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	30.4	P	30 - 160
EPA 8321B	Primidone-d5	39.6	P	30 - 160
EPA 8321B	Sucralose-d6	91.4	P	30 - 160
EPA 8321B	Sucralose-d6	91.4	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0
Run ID: A90903
Included Lab Sample IDs: 2079953

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

Reference Method: SM 2120 B
Run ID: A90941
Included Lab Sample IDs: 2079956

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	102	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A90950
Included Lab Sample IDs: 2079955, 2079958

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	97.7	P/P	90 - 110
O-Phosphate-P	99.2	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A90951
Included Lab Sample IDs: 2079953, 2079956

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

Reference Method: EPA 8321B
Run ID: A90991
Included Lab Sample IDs: 2079970

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	97.9	99.4	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A91009
Included Lab Sample IDs: 2079971

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A91019
Included Lab Sample IDs: 2079971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	93.1	93.3	P/P	90 - 110
Antimony	99.9	100	P/P	90 - 110
Arsenic	99.7	100	P/P	90 - 110
Cadmium	97.2	97.5	P/P	90 - 110
Copper	98.1	97.9	P/P	90 - 110
Lead	91.4	91.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A91019

Included Lab Sample IDs: 2079971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	98.4	98.6	P/P	90 - 110
Selenium	99.8	99.9	P/P	90 - 110
Silver	95.7	96.0	P/P	90 - 110
Thallium	96.4	96.3	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A91030

Included Lab Sample IDs: 2079954, 2079957

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	91.8	90.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91034

Included Lab Sample IDs: 2079954, 2079957

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	102	P/P	90 - 110
Total-P	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91039

Included Lab Sample IDs: 2079957

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A91050

Included Lab Sample IDs: 2079956

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91064

Included Lab Sample IDs: 2079954

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.9	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A91070

Included Lab Sample IDs: 2079954, 2079957

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A91087

Included Lab Sample IDs: 2079969, 2079970

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	87.5	102	P/P	60 - 160
Endothall	72.7	92.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A91091

Included Lab Sample IDs: 2079969, 2079970

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	120	118	P/P	60 - 160
AMPA	134	82.9	P/P	60 - 160
Glufosinate	122	129	P/P	60 - 160
Glufosinate	126	101	P/P	60 - 160
Glyphosate	108	83.6	P/P	60 - 160
Glyphosate	127	134	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91123

Included Lab Sample IDs: 2079954

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A91145

Included Lab Sample IDs: 2079971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	94.0	94.5	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A91158

Included Lab Sample IDs: 2079953, 2079956

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A91158

Included Lab Sample IDs: 2079953, 2079956

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91214

Included Lab Sample IDs: 2079957

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	97.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A91231

Included Lab Sample IDs: 2079969, 2079970

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.5	88.7	P/P	50 - 150
Acetaminophen	101	131	P/P	60 - 160
Bentazon	112	112	P/P	50 - 160
Carbamazepine	98.2	92.6	P/P	60 - 150
Diuron	113	111	P/P	60 - 150
Fenuron	94.6	105	P/P	60 - 150
Fluridone	117	82.4	P/P	60 - 160
Hydrocodone	103	101	P/P	60 - 150
Ibuprofen	95.5	76.0	P/P	50 - 160
Imazapyr	128	97.1	P/P	50 - 150
Imidacloprid	82.3	99.1	P/P	60 - 150
Linuron	92.3	90.2	P/P	60 - 150
MCPP	102	94.9	P/P	50 - 150
Naproxen	80.1	63.5	P/P	50 - 160
Primidone	94.7	82.6	P/P	60 - 150
Pyraclostrobin	85.9	85.8	P/P	60 - 150
Triclopyr	107	95.7	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A91381

Included Lab Sample IDs: 2079969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	97.5	108	P/P	60 - 160

* 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						5.27	
EPA 200.7 Rev. 4.4	Iron	105	104	104	105			0.149
	Manganese	102	96.5	97.6	97.9			0.321
	Zinc	102	102	100	100			0.0135
EPA 200.8 Rev. 5.4	Aluminum	95.7	94.9	96.6	94.5			2.06
	Antimony	98.4	101	105	103			1.42
	Arsenic	101	109	112	110			1.09
	Cadmium	99.9	96.9	101	97.9			2.65
	Chromium	90.5	88.6	91.4	88.5			3.10
	Copper	98.4	95.5	97.0	96.3			0.732
	Lead	91.9	96.8	98.0	97.2			0.799
	Nickel	99.5	99.4	98.9	97.0			1.92
	Selenium	101	103	103	104			1.48
	Silver	95.4	90.3	90.0	89.1			1.02
	Thallium	102	106	106	106			0.296
EPA 300.0	Bromide	101	98.4	99.0			0.988	
EPA 300.0 Rev. 2.1	Chloride	100	98.6	100			0.0676	
	Sulfate	103	98.2	103			0.544	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	101	101				0.606
	Ammonia-N	101	99.7	98.6				0.676
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	106	106				0.481
	Kjeldahl Nitrogen	102	99.9	99.8				0.102
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	98.1	99.6				0.849
	NO2NO3-N	100	103	102				0.753
EPA 365.1 Rev. 2.0	Total-P	108	106	96.5				8.44
	Total-P	104	96.6	98.0				1.32
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.2	97.1	98.0				0.750
	O-Phosphate-P	101	98.3	98.8				0.446
EPA 8321B	2,4-D	74.3	73.8	77.8				5.20
	Acesulfame K	104	102	79.1				25.0
	Acetaminophen	94.9	102	114				11.2
	AMPA	131	61.2	66.5				2.96
	Bentazon	87.5	69.3	74.6				7.39
	Carbamazepine	98.4	92.9	98.8				6.15
	Diuron	88.9	68.7	68.0				0.993
	Endothall	107	87.0	114				26.8
	Fenuron	114	121	142				16.2
	Fluridone	107	137	147				7.34
	Glufosinate	125	95.6	97.2				1.60
	Glyphosate	121	124	123				0.186
	Hydrocodone	107	94.6	102				7.27
	Ibuprofen	64.7	55.1	66.7				18.0
	Imazapyr	103	75.8	101				26.6
	Imidacloprid	106	143	155				8.02
	Linuron	78.2	61.6	59.2				3.96
	MCPP	81.4	75.3	89.0				16.6
	Naproxen	80.1	48.7	55.6				13.3
	Primidone	63.3	88.5	81.7				7.98
	Pyraclostrobin	69.5	75.5	81.7				7.90
	Sucralose	95.3	103	105				2.19
	Triclopyr	51.5	43.4	46.5				7.05
SM 2120 B	Color (true)	102					3.10	
SM 2320 B-97	Total Alkalinity	101					0.187	
SM 2540 C-97	TDS						0.962	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
SM 4500 F-C-97	Fluoride	97.7				0.507
SM 5310 B-00	Organic Carbon	90.8	88.8 87.6			0.899

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2079953, 2079956
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2079971
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2079971
EPA 300.0 / E31780	Bromide in aqueous matrices	2079953
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2079956
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2079956
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2079954, 2079957
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2079954, 2079957
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2079954, 2079957
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2079954, 2079957
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2079955, 2079958
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2079969, 2079970
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2079969, 2079970
SM 2120 B / E31780	True Color measured at 450 nm	2079956
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2079953, 2079956
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2079956
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2079953, 2079956
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2079953, 2079956
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2079954, 2079957

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	04/23/2019			04/23/2019 17:05	Adrian Shelby	2079953, 2079956
EPA 200.7 Rev. 4.4	04/23/2019	04/24/2019 17:30	Elliott D. Healy	04/25/2019 16:50	Betina Topolski	2079971
EPA 200.8 Rev. 5.4	04/23/2019	04/24/2019 17:30	Elliott D. Healy	04/26/2019 07:49	Martin Acosta	2079971
	04/23/2019	04/24/2019 17:30	Elliott D. Healy	05/01/2019 19:07	Martin Acosta	2079971
EPA 300.0	04/23/2019			04/23/2019 21:39	Lipi Saha	2079953
EPA 300.0 Rev. 2.1	04/23/2019			04/26/2019 20:09	Lipi Saha	2079956
EPA 350.1 Rev. 2.0	04/23/2019			04/26/2019 11:28	Ping Hua	2079954
	04/23/2019			04/26/2019 13:36	Ping Hua	2079957
EPA 351.2 Rev. 2.0	04/23/2019	04/26/2019 12:15	Adrian Shelby	04/29/2019 13:33	Joseph Suarez	2079954
	04/23/2019	04/30/2019 12:15	Adrian Shelby	05/06/2019 09:03	Joseph Suarez	2079957
EPA 353.2 Rev. 2.0	04/23/2019			04/26/2019 13:43	Beverly Y. Sanders	2079957
	04/23/2019			05/01/2019 09:15	Beverly Y. Sanders	2079954
EPA 365.1 Rev. 2.0	04/23/2019	04/24/2019 13:50	Sima Feizi	04/26/2019 12:42	Rosalyn Ballman	2079957
	04/23/2019	04/24/2019 13:50	Sima Feizi	04/26/2019 13:19	Rosalyn Ballman	2079954
EPA 365.1 Rev. 2.0 dissolved	04/23/2019			04/23/2019 15:55	Jhamieka S. Greenwood	2079955
	04/23/2019			04/23/2019 16:28	Jhamieka S. Greenwood	2079958
EPA 8321B	04/23/2019	04/24/2019 14:30	Rebecca Ware	05/12/2019 18:15	Rebecca Ware	2079969
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/25/2019 07:15	Rebecca Ware	2079970
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 12:09	Rebecca Ware	2079969
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 12:23	Rebecca Ware	2079970
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 18:08	Rebecca Ware	2079969
	04/23/2019	04/24/2019 14:45	Rebecca Ware	04/26/2019 21:01	Rebecca Ware	2079970
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/02/2019 04:40	Juyoung Kim	2079969
	04/23/2019	04/29/2019 10:00	Hoor Shaik	05/02/2019 05:14	Juyoung Kim	2079970
SM 2120 B	04/23/2019			04/23/2019 15:58	Mariam Hanna	2079956
SM 2320 B-97	04/23/2019			05/01/2019 20:14	Dale L. Simmons	2079953
	04/23/2019			05/01/2019 21:11	Dale L. Simmons	2079956
SM 2540 C-97	04/23/2019			04/24/2019 15:30	Yijie Li	2079956
SM 2540 D-97	04/23/2019			04/24/2019 15:30	Yijie Li	2079953, 2079956
SM 4500 F-C-97	04/23/2019			05/01/2019 20:14	Dale L. Simmons	2079953
	04/23/2019			05/01/2019 21:11	Dale L. Simmons	2079956
SM 5310 B-00	04/23/2019			04/25/2019 11:41	Julia Storbeck	2079954
	04/23/2019			04/25/2019 11:53	Julia Storbeck	2079957