

Chemical Analysis Report

NE-DIST-2016-03-15-01

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

Event Description: **SUWANNEE 2**
Request ID: **RQ-2016-03-14-32**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way
Jacksonville, FL 32256
Attn: J. Gruentzel

For additional information please contact
Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
Colin Wright, Ph.D.
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 08-APR-2016 10:30

A handwritten signature in black ink, appearing to read "Liang Lin", is written on a light-colored, textured 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: 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: Olustee Cr. @ CR 238

Collection Date/Time: 03/14/2016 10:10

Field ID: 21020009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779713	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P300401	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P300558	
		Sulfate	0.49	I	mg SO4/L	P300560	
	SM 2120 B	Color (true)	410		PCU	P300393	
	SM 2320 B-97	Total Alkalinity	6.0		mg CaCO3/L	P300686	
	SM 2540 C-97	TDS	104		mg/L	P301126	
	SM 2540 D-97	TSS	3	I	mg/L	P300901	
	SM 4500 F-C-97	Fluoride	0.096	I	mg F/L	P300689	
1779714	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P300855	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P300870	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P300706	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P300770	
	SM 5310 B-00	Organic Carbon	39		mg C/L	P300652	
1779715	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.15		mg P/L	P300390	
1779736	EPA 8321B	Glyphosate**	10	U	ug/L	P300598	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P300242	
		Diuron	0.0020	U	ug/L	P300242	
		2,4-DB	0.0020	U	ug/L	P300242	
		Fenuron	0.0080	U	ug/L	P300242	
		2,4,5-T	0.0020	U	ug/L	P300242	
		Acifluorfen	0.0020	U	ug/L	P300242	
		Imidacloprid	0.0040	U	ug/L	P300242	
		Bentazon	0.0020	U	ug/L	P300242	
		Linuron	0.0040	U	ug/L	P300242	
		Dichlorprop	0.0020	U	ug/L	P300242	
		Dinoseb	0.020	U	ug/L	P300242	
		MCPA	0.0040	U	ug/L	P300242	
		Acetaminophen**	0.0040	U	ug/L	P300242	
		MCPD	0.0040	U	ug/L	P300242	
		Carbamazepine**	4.0E-04	U	ug/L	P300242	
		Silvex	0.0020	U	ug/L	P300242	
		Primidone**	0.0080	U	ug/L	P300242	
		Fluridone**	4.0E-04	U	ug/L	P300242	
	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0020	U	ug/L	P300420	
		Alpha-BHC	0.0020	U	ug/L	P300420	
		Beta-BHC	0.0020	U	ug/L	P300420	
		Delta-BHC	0.0020	U	ug/L	P300420	
		Carbophenothion	0.0060	U	ug/L	P300420	
		Chlorothalonil	0.0080	U	ug/L	P300420	
		Cypermethrin	0.012	U	ug/L	P300420	
		DDD-p,p'	0.0040	U	ug/L	P300420	
		DDE-p,p'	0.0040	U	ug/L	P300420	

Field ID: 21020009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779737	DEP SOP: GC-011-5 (based on EPA 608 and 617)	DDT-p,p'	0.0040	U	ug/L	P300420	
		Dicofol	0.024	U	ug/L	P300420	
		Dieldrin	0.0020	U	ug/L	P300420	
		Endosulfan I	0.0020	U	ug/L	P300420	
		Endosulfan II	0.0020	U	ug/L	P300420	
		Endosulfan Sulfate	0.0040	U	ug/L	P300420	
		Endrin	0.0040	U	ug/L	P300420	
		Endrin Aldehyde	0.0040	U	ug/L	P300420	
		Heptachlor	0.0020	U	ug/L	P300420	
		Heptachlor Epoxide	0.0020	U	ug/L	P300420	
		Methoxychlor	0.010	U	ug/L	P300420	
		Mirex	0.0040	U	ug/L	P300420	
		Permethrin	0.010	U	ug/L	P300420	
		Trifluralin	0.0080	U	ug/L	P300420	
1779738	EPA 8270D	Ametryn**	0.31	U	ng/L	P300634	
		Atrazine**	0.39	I	ng/L	P300634	
		Chlorpyrifos Ethyl**	0.095	U	ng/L	P300634	
		Chlorpyrifos Methyl**	0.095	U	ng/L	P300634	
		Disulfoton**	0.31	UJ	ng/L	P300634	RPD
		Ethion**	0.14	U	ng/L	P300634	
		Ethoprop**	0.095	U	ng/L	P300634	
		Hexazinone**	0.56	I	ng/L	P300634	
		Malathion**	0.33	U	ng/L	P300634	
		Metribuzin**	0.19	U	ng/L	P300634	
		Mevinphos**	0.47	U	ng/L	P300634	
		Norflurazon**	0.47	U	ng/L	P300634	
		Phorate**	0.24	U	ng/L	P300634	
		Prometryn**	0.19	U	ng/L	P300634	
		Simazine**	0.47	U	ng/L	P300634	
		Atrazine Desethyl**	1.4	U	ng/L	P300634	
		Prometon**	0.85	U	ng/L	P300634	
		Fipronil**	0.24	U	ng/L	P300634	
		Molinate**	0.28	U	ng/L	P300634	
		Pendimethalin**	1.9	U	ng/L	P300634	
		Terbufos**	0.095	U	ng/L	P300634	
		EPTC**	1.2	U	ng/L	P300634	
		Terbuthylazine**	0.40	U	ng/L	P300634	
		Bromacil**	0.47	U	ng/L	P300634	
		Fipronil Sulfide**	0.14	U	ng/L	P300634	
		Fipronil Sulfone**	0.14	U	ng/L	P300634	
		Alachlor**	0.24	U	ng/L	P300634	
		Azinphos Methyl**	2.1	U	ng/L	P300634	
		Butylate**	0.38	U	ng/L	P300634	
		Demeton**	0.95	UJ	ng/L	P300634	LCS

Field ID: 21020009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779738	EPA 8270D	Diazinon**	0.12	U	ng/L	P300634	
		Fenamiphos**	0.24	U	ng/L	P300634	MS
		Fonofos**	0.19	U	ng/L	P300634	
		Metalaxyl**	0.19	U	ng/L	P300634	
		Metolachlor**	0.35	I	ng/L	P300634	
		Acetochlor**	0.24	U	ng/L	P300634	
		Cyanazine**	0.47	U	ng/L	P300634	
		Parathion Ethyl**	0.24	U	ng/L	P300634	
		Parathion Methyl**	0.24	UJ	ng/L	P300634	LCS

Ref. Method and Comment:

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

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

USGS O-2060-01: Results confirmed in re-extraction.

EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Mill Cr. @ Bellamy Rd

Collection Date/Time: 03/14/2016 11:10

Field ID: 21030126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779716	EPA 180.1 Rev. 2.0	Turbidity	8.5		NTU	P300401	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P300558	
		Sulfate	6.4		mg SO4/L	P300560	
	SM 2120 B	Color (true)	160		PCU	P300393	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P300686	
	SM 2540 C-97	TDS	98		mg/L	P301126	
	SM 2540 D-97	TSS	10		mg/L	P300901	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P300689	
1779719	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P300855	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P300870	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.064		mg N/L	P300706	
	EPA 365.1 Rev. 2.0	Total-P	0.85		mg P/L	P300770	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P300652	
1779722	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.54		mg P/L	P300391	

Ref. Method and Comment:

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

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

Sample Location: Rocky Cr @ 235

Collection Date/Time: 03/14/2016 12:10

Field ID: Rocky Cr @ 235

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779717	EPA 180.1 Rev. 2.0	Turbidity	1.9	A	NTU	P300402	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P300558	
		Sulfate	4.6		mg SO4/L	P300560	
	SM 2120 B	Color (true)	230		PCU	P300393	
	SM 2320 B-97	Total Alkalinity	31		mg CaCO3/L	P300686	
	SM 2540 C-97	TDS	121		mg/L	P301126	

Field ID: Rocky Cr @ 235

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779717	SM 2540 D-97	TSS	4	I	mg/L	P300901	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P300689	
1779720	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P300856	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P300870	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.067		mg N/L	P300706	
	EPA 365.1 Rev. 2.0	Total-P	0.33		mg P/L	P300770	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P300652	
1779723	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.25		mg P/L	P300391	

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: Five mile Cr @ 231A

Collection Date/Time: 03/14/2016 12:50

Field ID: 21030130

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779718	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P300402	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P300558	
		Sulfate	0.31	I	mg SO4/L	P300560	
	SM 2120 B	Color (true)	750		PCU	P300393	
	SM 2320 B-97	Total Alkalinity	5.4		mg CaCO3/L	P300686	
	SM 2540 C-97	TDS	170		mg/L	P301126	
	SM 2540 D-97	TSS	3	I	mg/L	P300901	
	SM 4500 F-C-97	Fluoride	0.068	I	mg F/L	P300689	
1779721	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P300856	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P300870	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P300706	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P300770	
	SM 5310 B-00	Organic Carbon	77		mg C/L	P300652	
1779724	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P300391	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Batch ID: P300420

Component	Result	Code	Units
Aldrin	0.0020	U	ug/L
Alpha-BHC	0.0020	U	ug/L
Beta-BHC	0.0020	U	ug/L
Carbophenothion	0.0060	U	ug/L
Chlorothalonil	0.0080	U	ug/L
Cypermethrin	0.012	U	ug/L
DDD-p,p'	0.0040	U	ug/L
DDE-p,p'	0.0040	U	ug/L
DDT-p,p'	0.0040	U	ug/L
Delta-BHC	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Batch ID: P300420

Component	Result	Code	Units
Dicofol	0.024	U	ug/L
Dieldrin	0.0020	U	ug/L
Endosulfan I	0.0020	U	ug/L
Endosulfan II	0.0020	U	ug/L
Endosulfan Sulfate	0.0040	U	ug/L
Endrin	0.0040	U	ug/L
Endrin Aldehyde	0.0040	U	ug/L
Heptachlor	0.0020	U	ug/L
Heptachlor Epoxide	0.0020	U	ug/L
Methoxychlor	0.010	U	ug/L
Mirex	0.0040	U	ug/L
Permethrin	0.010	U	ug/L
Trifluralin	0.0080	U	ug/L

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P300401

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P300402

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P300558

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P300560

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P300855

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P300856

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300870

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300706

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: P300770

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300390

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300391

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

Reference Method: EPA 8270D
Batch ID: P300634

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.10	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	1.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P300634

Component	Result	Code	Units
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	2.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B
Batch ID: P300598

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P300393

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P300686

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

Reference Method: SM 2540 C-97
Batch ID: P301126

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P300901

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P300689

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
 Batch ID: P300689

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
 Batch ID: P300652

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

Reference Method: USGS O-2060-01
 Batch ID: P300242

Component	Result	Code	Units
2,4,5-T	0.0020	U	ug/L
2,4-D	0.0020	U	ug/L
2,4-DB	0.0020	U	ug/L
Acetaminophen	0.0040	U	ug/L
Acifluorfen	0.0020	U	ug/L
Bentazon	0.0020	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Dichlorprop	0.0020	U	ug/L
Dinoseb	0.020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCPA	0.0040	U	ug/L
MCP	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Silvex	0.0020	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
 Batch ID: P300420

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbophenothion	103	109	P/P	70 - 130
Chlorothalonil	81.5	83.9	P/P	70 - 130
Cypermethrin	87.6	92.3	P/P	71 - 142
Dicofol	41.4	37.2	P/P	36 - 188
Mirex	80.8	81.2	P/P	70 - 130
Permethrin	85.0	92.4	P/P	80 - 142
Trifluralin	85.2	85.9	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P300558

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P300560

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P300855

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: P300856

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P300870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P300706

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: P300770

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P300390

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: P300391

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

Reference Method: EPA 8270D
 Batch ID: P300634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	86.3	88.4	P/P	84 - 119
Alachlor	86.6	88.2	P/P	84 - 121
Ametryn	97.0	108	P/P	66 - 127
Atrazine	90.5	89.8	P/P	72 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P300634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Atrazine Desethyl	91.1	98.0	P/P	21 - 111
Azinphos Methyl	136	130	P/P	79 - 185
Bromacil	92.8	93.5	P/P	39 - 122
Butylate	56.0	57.6	P/P	36 - 94.0
Chlorpyrifos Ethyl	92.4	88.7	P/P	54 - 101
Chlorpyrifos Methyl	85.4	80.8	P/P	28 - 114
Cyanazine	107	144	P/P	58 - 201
Demeton	64.8	54.9	P/F	57 - 130
Diazinon	83.8	81.3	P/P	79 - 124
Disulfoton	96.2	66.3	P/P	45 - 140
EPTC	52.0	57.1	P/P	43 - 95.0
Ethion	103	103	P/P	65 - 125
Ethoprop	77.9	72.9	P/P	69 - 107
Fenamiphos	109	105	P/P	78 - 129
Fipronil	90.9	92.5	P/P	62 - 125
Fipronil Sulfide	92.3	92.9	P/P	65 - 119
Fipronil Sulfone	102	102	P/P	64 - 122
Fonofos	79.4	76.6	P/P	70 - 112
Hexazinone	124	119	P/P	44 - 147
Malathion	113	111	P/P	72 - 125
Metalaxyl	88.1	94.5	P/P	83 - 113
Metolachlor	88.1	90.5	P/P	85 - 120
Metribuzin	90.8	101	P/P	68 - 129
Mevinphos	85.6	72.9	P/P	35 - 125
Molinate	55.9	59.7	P/P	51 - 100
Norflurazon	99.6	104	P/P	66 - 127
Parathion Ethyl	92.1	87.7	P/P	86 - 108
Parathion Methyl	86.4	87.9	F/P	87 - 125
Pendimethalin	79.8	79.6	P/P	53 - 136
Phorate	82.1	76.0	P/P	52 - 113
Prometon	92.6	100	P/P	67 - 125
Prometryn	94.3	102	P/P	73 - 114
Simazine	86.5	86.0	P/P	66 - 123
Terbufos	79.7	74.5	P/P	58 - 116
Terbuthylazine	89.4	95.0	P/P	77 - 113

Reference Method: EPA 8321B
Batch ID: P300598

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	104		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P300686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P300689

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

Reference Method: SM 4500 F-C-97
 Batch ID: P300689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	94 - 108

Reference Method: SM 5310 B-00
 Batch ID: P300652

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

Reference Method: USGS O-2060-01
 Batch ID: P300242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	99.2		P	40 - 140
2,4-D	106		P	40 - 140
2,4-DB	94.4		P	40 - 140
Acetaminophen	49.2		P	40 - 140
Acifluorfen	93.2		P	40 - 140
Bentazon	86.0		P	40 - 140
Carbamazepine	129		P	40 - 140
Dichlorprop	96.4		P	40 - 140
Dinoseb	70.8		P	40 - 140
Diuron	128		P	40 - 140
Fenuron	116		P	40 - 140
Fluridone	120		P	40 - 140
Imidacloprid	110		P	40 - 160
Linuron	124		P	40 - 140
MCPA	111		P	40 - 140
MCPP	104		P	40 - 140
Primidone	84.4		P	40 - 140
Silvex	114		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
 Batch ID: P300420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779737	Carbophenothion	110		P	70 - 130
1779737	Chlorothalonil	80.5		P	70 - 130
1779737	Cypermethrin	95.1		P	71 - 142
1779737	Dicofol	41.6		P	36 - 188
1779737	Mirex	78.0		P	70 - 130
1779737	Permethrin	82.9		P	80 - 142
1779737	Trifluralin	84.4		P	70 - 130
1780036	Carbophenothion	94.8	109	P/P	70 - 130
1780036	Chlorothalonil	79.4	93.4	P/P	70 - 130
1780036	Cypermethrin	87.8	97.7	P/P	71 - 142
1780036	Dicofol	36.7	37.6	P/P	36 - 188
1780036	Mirex	77.0	87.8	P/P	70 - 130
1780036	Permethrin	81.6	86.7	P/P	80 - 142

Quality Assurance Report Matrix Spike Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P300420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1780036	Trifluralin	82.9	92.4	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779587	Chloride	104		P	90 - 110
1779659	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779587	Sulfate	101		P	90 - 110
1779659	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300856

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779720	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779711	Kjeldahl Nitrogen	86.9	99.2	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779711	NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300770

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779688	Total-P	101	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300390

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779690	O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779751	O-Phosphate-P	99.2	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P300634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781341	Acetochlor	102	106	P/P	84 - 119
1781341	Alachlor	110	110	P/P	84 - 121
1781341	Ametryn	118	125	P/P	66 - 127
1781341	Atrazine Desethyl	67.9	72.3	P/P	21 - 111
1781341	Azinphos Methyl	167	169	P/P	79 - 185
1781341	Bromacil	109	109	P/P	39 - 122
1781341	Butylate	44.3	53.4	P/P	36 - 94.0
1781341	Chlorpyrifos Ethyl	96.1	95.3	P/P	54 - 101
1781341	Chlorpyrifos Methyl	98.1	96.8	P/P	28 - 114
1781341	Cyanazine	165	179	P/P	58 - 201
1781341	Demeton	62.3	67.7	P/P	57 - 130
1781341	Diazinon	99.8	101	P/P	79 - 124
1781341	Disulfoton	105	100	P/P	45 - 140
1781341	EPTC	46.7	53.9	P/P	43 - 95.0
1781341	Ethion	104	106	P/P	65 - 125
1781341	Ethoprop	82.0	83.2	P/P	69 - 107
1781341	Fenamiphos	129	128	F/P	78 - 129
1781341	Fipronil	111	109	P/P	62 - 125
1781341	Fipronil Sulfide	102	103	P/P	65 - 119
1781341	Fipronil Sulfone	110	110	P/P	64 - 122
1781341	Fonofos	90.3	90.6	P/P	70 - 112
1781341	Hexazinone	115	113	P/P	44 - 147
1781341	Malathion	124	122	P/P	72 - 125
1781341	Metalaxyl	95.4	97.8	P/P	83 - 113
1781341	Metolachlor	101	103	P/P	85 - 120
1781341	Metribuzin	110	113	P/P	68 - 129
1781341	Mevinphos	90.5	93.7	P/P	35 - 125
1781341	Molinate	55.0	62.9	P/P	51 - 100
1781341	Norflurazon	109	108	P/P	66 - 127
1781341	Parathion Ethyl	95.0	99.8	P/P	86 - 108
1781341	Parathion Methyl	104	99.5	P/P	87 - 125
1781341	Pendimethalin	58.1	60.5	P/P	53 - 136
1781341	Phorate	80.8	81.2	P/P	52 - 113
1781341	Prometon	109	97.8	P/P	67 - 125
1781341	Prometryn	104	108	P/P	73 - 114
1781341	Simazine	116	111	P/P	66 - 123
1781341	Terbufos	87.5	91.1	P/P	58 - 116
1781341	Terbuthylazine	99.5	101	P/P	77 - 113

Reference Method: EPA 8321B
Batch ID: P300598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779736	Glyphosate	68.4	81.2	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P300689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1780482	Fluoride	98.7	98.7	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P300652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779648	Organic Carbon	102		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P300242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778508	2,4,5-T	96.4	88.8	P/P	40 - 140
1778508	2,4-D	132	129	P/P	40 - 140
1778508	2,4-DB	76.8	86.0	P/P	40 - 140
1778508	Acetaminophen	50.8	48.8	P/P	40 - 140
1778508	Acifluorfen	89.6	78.0	P/P	40 - 140
1778508	Bentazon	131	133	P/P	40 - 140
1778508	Carbamazepine	68.8	75.6	P/P	40 - 140
1778508	Dichlorprop	103	109	P/P	40 - 140
1778508	Dinoseb	74.4	71.6	P/P	40 - 140
1778508	Diuron	50.0	56.8	P/P	40 - 140
1778508	Fenuron	52.4	54.8	P/P	40 - 140
1778508	Fluridone	73.4	80.6	P/P	40 - 140
1778508	Imidacloprid	112	104	P/P	40 - 160
1778508	Linuron	77.6	90.8	P/P	40 - 140
1778508	MCPA	106	105	P/P	40 - 140
1778508	MCPP	118	113	P/P	40 - 140
1778508	Primidone	61.2	67.6	P/P	40 - 140
1778508	Silvex	130	130	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P300420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780036	Carbophenothion	14.1	Spike	P	0 - 30
1780036	Chlorothalonil	16.2	Spike	P	0 - 30
1780036	Cypermethrin	10.6	Spike	P	0 - 30
1780036	Dicofol	2.21	Spike	P	0 - 30
1780036	Mirex	13.1	Spike	P	0 - 30
1780036	Permethrin	6.03	Spike	P	0 - 30
1780036	Trifluralin	10.8	Spike	P	0 - 30
LFB	Carbophenothion	6.17	LCS	P	0 - 30
LFB	Chlorothalonil	2.89	LCS	P	0 - 30
LFB	Cypermethrin	5.23	LCS	P	0 - 30
LFB	Dicofol	10.7	LCS	P	0 - 30
LFB	Mirex	0.464	LCS	P	0 - 30
LFB	Permethrin	8.31	LCS	P	0 - 30
LFB	Trifluralin	0.837	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779685	Turbidity	1.75	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779717	Turbidity	4.80	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779587	Chloride	0.0664	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779587	Sulfate	1.80	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300855

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779687	Ammonia-N	1.55	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300856

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779720	Ammonia-N	0.398	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779711	Kjeldahl Nitrogen	8.08	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779711	NO2NO3-N	1.45	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P300770

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779688	Total-P	2.19	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P300390

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779690	O-Phosphate-P	0.256	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P300391

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779751	O-Phosphate-P	1.30	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P300634

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781341	Acetochlor	3.14	Spike	P	0 - 30
1781341	Alachlor	0.422	Spike	P	0 - 30
1781341	Ametryn	5.35	Spike	P	0 - 30
1781341	Atrazine	2.39	Spike	P	0 - 30
1781341	Atrazine Desethyl	5.05	Spike	P	0 - 30
1781341	Azinphos Methyl	1.51	Spike	P	0 - 30
1781341	Bromacil	0.120	Spike	P	0 - 30
1781341	Butylate	18.7	Spike	P	0 - 30
1781341	Chlorpyrifos Ethyl	0.737	Spike	P	0 - 30
1781341	Chlorpyrifos Methyl	1.30	Spike	P	0 - 30
1781341	Cyanazine	8.07	Spike	P	0 - 30
1781341	Demeton	8.44	Spike	P	0 - 30
1781341	Diazinon	1.29	Spike	P	0 - 30
1781341	Disulfoton	4.45	Spike	P	0 - 30
1781341	EPTC	14.3	Spike	P	0 - 30
1781341	Ethion	1.63	Spike	P	0 - 30
1781341	Ethoprop	1.38	Spike	P	0 - 30
1781341	Fenamiphos	0.767	Spike	P	0 - 30
1781341	Fipronil	1.86	Spike	P	0 - 30
1781341	Fipronil Sulfide	1.00	Spike	P	0 - 30
1781341	Fipronil Sulfone	0.451	Spike	P	0 - 30
1781341	Fonofos	0.383	Spike	P	0 - 30
1781341	Hexazinone	1.25	Spike	P	0 - 30
1781341	Malathion	1.61	Spike	P	0 - 30
1781341	Metalaxyl	2.45	Spike	P	0 - 30
1781341	Metolachlor	1.38	Spike	P	0 - 30
1781341	Metribuzin	2.97	Spike	P	0 - 30
1781341	Mevinphos	3.44	Spike	P	0 - 30
1781341	Molinate	13.3	Spike	P	0 - 30
1781341	Norflurazon	0.887	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P300634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781341	Parathion Ethyl	4.92	Spike	P	0 - 30
1781341	Parathion Methyl	4.70	Spike	P	0 - 30
1781341	Pendimethalin	2.93	Spike	P	0 - 30
1781341	Phorate	0.533	Spike	P	0 - 30
1781341	Prometon	10.7	Spike	P	0 - 30
1781341	Prometryn	3.49	Spike	P	0 - 30
1781341	Simazine	4.28	Spike	P	0 - 30
1781341	Terbufos	4.06	Spike	P	0 - 30
1781341	Terbuthylazine	1.13	Spike	P	0 - 30
LFB	Acetochlor	2.37	LCS	P	0 - 30
LFB	Alachlor	1.82	LCS	P	0 - 30
LFB	Ametryn	10.6	LCS	P	0 - 30
LFB	Atrazine	0.813	LCS	P	0 - 30
LFB	Atrazine Desethyl	7.34	LCS	P	0 - 30
LFB	Azinphos Methyl	4.49	LCS	P	0 - 30
LFB	Bromacil	0.710	LCS	P	0 - 30
LFB	Butylate	2.72	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.99	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.61	LCS	P	0 - 30
LFB	Cyanazine	29.3	LCS	P	0 - 30
LFB	Demeton	16.5	LCS	P	0 - 30
LFB	Diazinon	3.03	LCS	P	0 - 30
LFB	Disulfoton	36.7	LCS	F	0 - 30
LFB	EPTC	9.32	LCS	P	0 - 30
LFB	Ethion	0.0112	LCS	P	0 - 30
LFB	Ethoprop	6.70	LCS	P	0 - 30
LFB	Fenamiphos	3.73	LCS	P	0 - 30
LFB	Fipronil	1.69	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.644	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.402	LCS	P	0 - 30
LFB	Fonofos	3.62	LCS	P	0 - 30
LFB	Hexazinone	3.98	LCS	P	0 - 30
LFB	Malathion	1.34	LCS	P	0 - 30
LFB	Metaxyl	7.05	LCS	P	0 - 30
LFB	Metolachlor	2.72	LCS	P	0 - 30
LFB	Metribuzin	10.5	LCS	P	0 - 30
LFB	Mevinphos	16.1	LCS	P	0 - 30
LFB	Molinate	6.72	LCS	P	0 - 30
LFB	Norflurazon	3.85	LCS	P	0 - 30
LFB	Parathion Ethyl	4.90	LCS	P	0 - 30
LFB	Parathion Methyl	1.72	LCS	P	0 - 30
LFB	Pendimethalin	0.284	LCS	P	0 - 30
LFB	Phorate	7.74	LCS	P	0 - 30
LFB	Prometon	8.04	LCS	P	0 - 30
LFB	Prometryn	8.14	LCS	P	0 - 30
LFB	Simazine	0.546	LCS	P	0 - 30
LFB	Terbufos	6.66	LCS	P	0 - 30
LFB	Terbuthylazine	6.08	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P300598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779736	Glyphosate	17.1	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P300393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779767	Color (true)	0.257	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P300686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780482	Total Alkalinity	0.0473	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P301126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780045	TDS	2.76	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P300689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780482	Fluoride	0.0	Spike	P	0 - 3.7

Reference Method: SM 5310 B-00
Batch ID: P300652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779648	Organic Carbon	0.677	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P300242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778508	2,4,5-T	8.21	Spike	P	0 - 30
1778508	2,4-D	2.45	Spike	P	0 - 30
1778508	2,4-DB	11.3	Spike	P	0 - 30
1778508	Acetaminophen	4.02	Spike	P	0 - 30
1778508	Acifluorfen	13.8	Spike	P	0 - 30
1778508	Bentazon	1.05	Spike	P	0 - 30
1778508	Carbamazepine	9.42	Spike	P	0 - 30
1778508	Dichlorprop	5.65	Spike	P	0 - 30
1778508	Dinoseb	3.84	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P300242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778508	Diuron	12.7	Spike	P	0 - 30
1778508	Fenuron	4.48	Spike	P	0 - 30
1778508	Fluridone	9.05	Spike	P	0 - 30
1778508	Imidacloprid	7.43	Spike	P	0 - 30
1778508	Linuron	15.7	Spike	P	0 - 30
1778508	MCPA	0.758	Spike	P	0 - 30
1778508	MCPP	4.84	Spike	P	0 - 30
1778508	Primidone	9.94	Spike	P	0 - 30
1778508	Silvex	0.0	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: 1779736
Field Sample ID: 21020009

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	70.8	P	50 - 150
USGS O-2060-01	2,4-D-d3	76.2	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	78.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	66.4	P	40 - 160
USGS O-2060-01	Diuron-d6	41.0	P	40 - 150
USGS O-2060-01	Primidone-d5	61.8	P	40 - 150

Lab Sample ID: 1779737
Field Sample ID: 21020009

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Tetrachloro-m-xylene	68.4	P	42 - 120

Lab Sample ID: 1779738
Field Sample ID: 21020009

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	119	P	67 - 131
EPA 8270D	Simazine-d10	84.5	P	75 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A68233
Included Lab Sample IDs: 1779715, 1779722, 1779723, 1779724

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	97.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A68233

Included Lab Sample IDs: 1779715, 1779722, 1779723, 1779724

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	98.8	P/P	90 - 110
O-Phosphate-P	98.8	98.0	P/P	90 - 110
O-Phosphate-P	99.2	98.0	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A68234

Included Lab Sample IDs: 1779713, 1779716, 1779717, 1779718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.5	99.1	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A68237

Included Lab Sample IDs: 1779713, 1779716, 1779717, 1779718

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A68261

Included Lab Sample IDs: 1779713, 1779716, 1779717, 1779718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	100	P/P	90 - 110
Sulfate	98.9	96.2	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A68299

Included Lab Sample IDs: 1779736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	99.2	111	P/P	60 - 150
Carbamazepine	106	108	P/P	60 - 150
Diuron	91.2	82.4	P/P	60 - 150
Fenuron	96.0	96.8	P/P	60 - 150
Fluridone	94.4	86.4	P/P	60 - 150
Imidacloprid	94.0	83.6	P/P	60 - 150
Linuron	107	115	P/P	60 - 150
Primidone	87.6	94.8	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A68315

Included Lab Sample IDs: 1779714, 1779719, 1779720, 1779721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A68317
Included Lab Sample IDs: 1779736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	82.8	111	P/P	70 - 130

Reference Method: USGS O-2060-01
Run ID: A68329
Included Lab Sample IDs: 1779736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	98.8	98.2	P/P	50 - 150
2,4-D	106	109	P/P	50 - 150
2,4-DB	117	116	P/P	50 - 150
Acifluorfen	115	116	P/P	50 - 150
Bentazon	102	95.6	P/P	50 - 150
Dichlorprop	109	109	P/P	50 - 150
Dinoseb	99.8		P	50 - 150
MCPA	112	108	P/P	50 - 150
MCPP	108	114	P/P	50 - 150
Silvex	122	119	P/P	50 - 150

Reference Method: SM 2320 B-97
Run ID: A68331
Included Lab Sample IDs: 1779713, 1779716, 1779717, 1779718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A68331
Included Lab Sample IDs: 1779713, 1779716, 1779717, 1779718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A68335
Included Lab Sample IDs: 1779714, 1779719, 1779720, 1779721

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A68389
Included Lab Sample IDs: 1779714, 1779719, 1779720, 1779721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.6	P/P	90 - 110
Ammonia-N	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A68422

Included Lab Sample IDs: 1779714, 1779719, 1779720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.3	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A68428

Included Lab Sample IDs: 1779714, 1779719, 1779720, 1779721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A68486

Included Lab Sample IDs: 1779721

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

Reference Method: EPA 8270D

Run ID: A68571

Included Lab Sample IDs: 1779738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.0		P	80 - 120
Alachlor	98.6		P	80 - 120
Ametryn	94.1		P	80 - 120
Atrazine	95.5		P	80 - 120
Atrazine Desethyl	95.7		P	80 - 120
Azinphos Methyl	90.4		P	80 - 120
Bromacil	99.6		P	80 - 120
Butylate	95.9		P	80 - 120
Chlorpyrifos Ethyl	98.6		P	80 - 120
Chlorpyrifos Methyl	94.6		P	80 - 120
Cyanazine	117		P	80 - 120
Demeton	103		P	80 - 120
Diazinon	103		P	80 - 120
Disulfoton	99.1		P	80 - 120
EPTC	99.1		P	80 - 120
Ethion	99.0		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	98.8		P	80 - 120
Fipronil	97.1		P	80 - 120
Fipronil Sulfide	101		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	98.8		P	80 - 120
Hexazinone	102		P	80 - 120
Malathion	96.5		P	80 - 120
Metalaxyl	95.3		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	97.0		P	80 - 120
Mevinphos	93.9		P	80 - 120
Molinate	99.6		P	80 - 120
Norflurazon	97.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A68571
 Included Lab Sample IDs: 1779738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Parathion Ethyl	96.3		P	80 - 120
Parathion Methyl	91.0		P	80 - 120
Pendimethalin	89.6		P	80 - 120
Phorate	98.8		P	80 - 120
Prometon	96.4		P	80 - 120
Prometryn	98.6		P	80 - 120
Simazine	95.5		P	80 - 120
Terbufos	97.9		P	80 - 120
Terbuthylazine	94.7		P	80 - 120

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
 Run ID: A68643
 Included Lab Sample IDs: 1779737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.7	101	P/P	85 - 115
Alpha-BHC	96.1	98.1	P/P	85 - 115
Beta-BHC	101	100	P/P	85 - 115
Carbophenothion	103	96.9	P/P	90 - 110
Chlorothalonil	96.8	93.8	P/P	90 - 110
Cypermethrin	97.9	98.0	P/P	85 - 115
DDD-p,p'	101	101	P/P	85 - 115
DDE-p,p'	99.4	102	P/P	85 - 115
DDT-p,p'	100	99.8	P/P	85 - 115
Delta-BHC	96.6	96.3	P/P	85 - 115
Dicofol	95.9	102	P/P	90 - 110
Dieldrin	99.9	102	P/P	85 - 115
Endosulfan I	101	103	P/P	85 - 115
Endosulfan II	101	102	P/P	85 - 115
Endosulfan Sulfate	101	102	P/P	85 - 115
Endrin	101	102	P/P	85 - 115
Endrin Aldehyde	101	102	P/P	85 - 115
Heptachlor	99.4	99.5	P/P	85 - 115
Heptachlor Epoxide	101	102	P/P	85 - 115
Methoxychlor	103	103	P/P	90 - 110
Mirex	105	104	P/P	90 - 110
Permethrin	105	101	P/P	90 - 110
Trifluralin	103	101	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
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Carbophenothion	103	109	94.8	109	110	6.17		14.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		MS
						LCS	SMP	
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Chlorothalonil	81.5	83.9	79.4	93.4	80.5	2.89	16.2
	Cypermethrin	87.6	92.3	87.8	97.7	95.1	5.23	10.6
	Dicofol	41.4	37.2	36.7	37.6	41.6	10.7	2.21
	Mirex	80.8	81.2	77.0	87.8	78.0	0.464	13.1
	Permethrin	85.0	92.4	81.6	86.7	82.9	8.31	6.03
	Trifluralin	85.2	85.9	82.9	92.4	84.4	0.837	10.8
EPA 180.1 Rev. 2.0	Turbidity						1.75	
	Turbidity						4.80	
EPA 300.0 Rev. 2.1	Chloride	104		104	103		0.0664	
	Sulfate	100		101	101		1.80	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2						1.55
	Ammonia-N	101		101	101			0.398
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.4		86.9	99.2			8.08
EPA 353.2 Rev. 2.0	NO2NO3-N	102		104	102			1.45
EPA 365.1 Rev. 2.0	Total-P	97.9		101	98.2			2.19
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103		99.9	100			0.256
	O-Phosphate-P	101		99.2	101			1.30
EPA 8270D	Acetochlor	86.3	88.4	102	106	2.37		3.14
	Alachlor	86.6	88.2	110	110	1.82		0.422
	Ametryn	97.0	108	118	125	10.6		5.35
	Atrazine	90.5	89.8			0.813		2.39
	Atrazine Desethyl	91.1	98.0	67.9	72.3	7.34		5.05
	Azinphos Methyl	136	130	167	169	4.49		1.51
	Bromacil	92.8	93.5	109	109	0.710		0.120
	Butylate	56.0	57.6	44.3	53.4	2.72		18.7
	Chlorpyrifos Ethyl	92.4	88.7	96.1	95.3	3.99		0.737
	Chlorpyrifos Methyl	85.4	80.8	98.1	96.8	5.61		1.30
	Cyanazine	107	144	165	179	29.3		8.07
	Demeton	64.8	54.9	62.3	67.7	16.5		8.44
	Diazinon	83.8	81.3	99.8	101	3.03		1.29
	Disulfoton	96.2	66.3	105	100	36.7		4.45
	EPTC	52.0	57.1	46.7	53.9	9.32		14.3
	Ethion	103	103	104	106	0.0112		1.63
	Ethoprop	77.9	72.9	82.0	83.2	6.70		1.38
	Fenamiphos	109	105	129	128	3.73		0.767
	Fipronil	90.9	92.5	111	109	1.69		1.86
	Fipronil Sulfide	92.3	92.9	102	103	0.644		1.00
	Fipronil Sulfone	102	102	110	110	0.402		0.451
	Fonofos	79.4	76.6	90.3	90.6	3.62		0.383
	Hexazinone	124	119	115	113	3.98		1.25
	Malathion	113	111	124	122	1.34		1.61
	Metalaxyl	88.1	94.5	95.4	97.8	7.05		2.45
	Metolachlor	88.1	90.5	101	103	2.72		1.38
	Metribuzin	90.8	101	110	113	10.5		2.97
	Mevinphos	85.6	72.9	90.5	93.7	16.1		3.44
	Molinate	55.9	59.7	55.0	62.9	6.72		13.3
	Norflurazon	99.6	104	109	108	3.85		0.887
	Parathion Ethyl	92.1	87.7	95.0	99.8	4.90		4.92
	Parathion Methyl	86.4	87.9	104	99.5	1.72		4.70
	Pendimethalin	79.8	79.6	58.1	60.5	0.284		2.93
	Phorate	82.1	76.0	80.8	81.2	7.74		0.533
	Prometon	92.6	100	109	97.8	8.04		10.7
	Prometryn	94.3	102	104	108	8.14		3.49

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8270D	Simazine	86.5	86.0	116	111	0.546	4.28
	Terbufos	79.7	74.5	87.5	91.1	6.66	4.06
	Terbutylazine	89.4	95.0	99.5	101	6.08	1.13
EPA 8321B	Glyphosate	104		68.4	81.2		17.1
SM 2120 B	Color (true)					0.257	
SM 2320 B-97	Total Alkalinity	102				0.0473	
SM 2540 C-97	TDS					2.76	
SM 4500 F-C-97	Fluoride	98.3		98.7	98.7		0.0
SM 5310 B-00	Organic Carbon	101		102			0.677
USGS O-2060-01	2,4,5-T	99.2		96.4	88.8		8.21
	2,4-D	106		132	129		2.45
	2,4-DB	94.4		76.8	86.0		11.3
	Acetaminophen	49.2		50.8	48.8		4.02
	Acifluorfen	93.2		89.6	78.0		13.8
	Bentazon	86.0		131	133		1.05
	Carbamazepine	129		68.8	75.6		9.42
	Dichlorprop	96.4		103	109		5.65
	Dinoseb	70.8		74.4	71.6		3.84
	Diuron	128		50.0	56.8		12.7
	Fenuron	116		52.4	54.8		4.48
	Fluridone	120		73.4	80.6		9.05
	Imidacloprid	110		112	104		7.43
	Linuron	124		77.6	90.8		15.7
	MCPA	111		106	105		0.758
	MCPP	104		118	113		4.84
	Primidone	84.4		61.2	67.6		9.94
	Silvex	114		130	130		0.0

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617) / E31780	Organochlorine pesticides (low levels) in water matrices by GC/ECD.	1779737
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1779713, 1779716, 1779717, 1779718
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1779713, 1779716, 1779717, 1779718
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1779713, 1779716, 1779717, 1779718
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1779714, 1779719, 1779720, 1779721
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1779714, 1779719, 1779720, 1779721
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1779714, 1779719, 1779720, 1779721
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1779714, 1779719, 1779720, 1779721
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1779715, 1779722, 1779723, 1779724
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1779738
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1779736
SM 2120 B / E31780	True Color measured at 450 nm	1779713, 1779716, 1779717, 1779718
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1779713, 1779716, 1779717, 1779718

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1779713, 1779716, 1779717, 1779718
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1779713, 1779716, 1779717, 1779718
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1779713, 1779716, 1779717, 1779718
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1779714, 1779719, 1779720, 1779721
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1779736
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1779736

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617)	03/15/2016	03/17/2016	Fe-Val Siddell	03/22/2016	Vandana T. Nagar	1779737
EPA 180.1 Rev. 2.0	03/15/2016			03/15/2016 17:40	Ping Hua	1779713, 1779716, 1779717, 1779718
EPA 300.0 Rev. 2.1	03/15/2016			03/16/2016	Ping Hua	1779713, 1779716, 1779717, 1779718
EPA 350.1 Rev. 2.0	03/15/2016			03/22/2016	Diana M. Turner	1779714, 1779719, 1779720, 1779721
EPA 351.2 Rev. 2.0	03/15/2016	03/23/2016	Sofia Elnemr	03/24/2016	Rochelle Y Jackson	1779714, 1779719, 1779720, 1779721
EPA 353.2 Rev. 2.0	03/15/2016			03/18/2016	Diana M. Turner	1779714, 1779719, 1779720, 1779721
EPA 365.1 Rev. 2.0	03/15/2016	03/22/2016	Christopher Armour	03/23/2016	Lipi Saha	1779714, 1779719, 1779720
	03/15/2016	03/22/2016	Christopher Armour	03/24/2016	Lipi Saha	1779721
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	03/15/2016			03/15/2016 15:35	Julia Storbeck	1779715
	03/15/2016			03/15/2016 15:51	Julia Storbeck	1779722
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EPA 8270D	03/15/2016	03/18/2016	Rasheda Ghaffari	03/23/2016	Irina Carbone	1779738
EPA 8321B	03/15/2016	03/18/2016	Mohammad Ghaffari	03/18/2016	Mohammad Ghaffari	1779736
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SM 2320 B-97	03/15/2016			03/17/2016	Dale L. Simmons	1779713, 1779716, 1779717, 1779718
SM 2540 C-97	03/15/2016			03/18/2016	Yijie Li	1779713, 1779716, 1779717, 1779718
SM 2540 D-97	03/15/2016			03/18/2016	Yijie Li	1779713, 1779716, 1779717, 1779718
SM 4500 F-C-97	03/15/2016			03/17/2016	Dale L. Simmons	1779713, 1779716, 1779717, 1779718
SM 5310 B-00	03/15/2016			03/18/2016	Sofia Elnemr	1779714, 1779719, 1779720, 1779721
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