

Chemical Analysis Report

SW-DIST-2022-10-06-01

Florida DEP Laboratory
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Tallahassee, FL 32399-2400
DOH Accreditation E31780

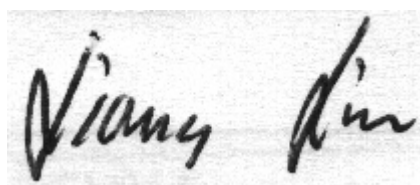
Event Description: **Run 7: Gilly Gamble Buffalo Manatee**
Request ID: **RQ-2022-10-03-21**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 26-OCT-2022 14:58

A handwritten signature in black ink, appearing to read "Liang Lin", 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: 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: Buffalo Creek Canal @115th Ave

Collection Date/Time: 10/05/2022 09:50

Field ID: G1SW0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2360807	EPA 8321B	2,4-D	0.011		ug/L	P420565	
		Acesulfame K	0.10	U	ug/L	P420486	
		2,4,5-T	0.0040	U	ug/L	P420565	
		AMPA	1.1		ug/L	P420486	
		Acetaminophen	0.010	I	ug/L	P420565	
		Acetamiprid	0.0020	U	ug/L	P420565	
		Endothall	0.25	U	ug/L	P420486	MS
		Glufosinate	0.10	U	ug/L	P420486	
		Glyphosate	2.0		ug/L	P420486	
		Afidopyropen	0.0020	U	ug/L	P420565	
		Bentazon	0.080		ug/L	P420565	
		Sucralose	1.4		ug/L	P420486	
		Benzovindiflupyr	0.0020	U	ug/L	P420565	
		Carbamazepine	0.0016	I	ug/L	P420565	
		Clothianidin	0.0025	I	ug/L	P420565	
		Dinotefuran	0.0021	I	ug/L	P420565	
		Diuron	0.0097		ug/L	P420565	
		Fenuron	0.032	U	ug/L	P420565	
		Fluridone	0.17		ug/L	P420565	
		Imazapyr	0.070		ug/L	P420565	
		Hydrocodone	0.0020	U	ug/L	P420565	
		Ibuprofen	0.080	U	ug/L	P420565	
		Imidacloprid	0.023		ug/L	P420565	
		Linuron	0.0040	U	ug/L	P420565	
		Mandestrobin	0.0020	U	ug/L	P420565	
		MCPP	0.0040	U	ug/L	P420565	
		Naproxen	0.0080	U	ug/L	P420565	
		Primidone	0.0040	U	ug/L	P420565	
		Pyraclostrobin	0.0020	U	ug/L	P420565	
		Silvex	0.0040	U	ug/L	P420565	
		Thiamethoxam	0.0040	I	ug/L	P420565	
		Tolfenpyrad	0.0020	U	ug/L	P420565	
		Triclopyr	0.0040	U	ug/L	P420565	

Sample Location: Gamble Creek West Branch @ CR 675

Collection Date/Time: 10/05/2022 10:15

Field ID: G2SW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2360786	DEP SOP: NU-094-1	Color (true)	360		PCU	P420579	
	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P420584	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P421101	
		Sulfate	23		mg SO4/L	P421104	
	SM 2320 B-2011	Total Alkalinity	55		mg CaCO3/L	P420770	
	SM 2540 C-2015	TDS	204	A	mg/L	P421275	
	SM 2540 D-2015	TSS	9	IA	mg/L	P420916	
	SM 4500-F- C-2011	Fluoride	0.43		mg F/L	P420772	
2360787	EPA 350.1 Rev. 2.0	Ammonia-N	0.043		mg N/L	P420792	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P420652	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P420662	
	EPA 365.1 Rev. 2.0	Total-P	1.7		mg P/L	P420611	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P420780	

Ref. Method and Comment:

SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 221 µmhos/cm.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Gamble Creek West Branch @ CR 675

Collection Date/Time: 10/05/2022 10:15

Field ID: G2SW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2360808	EPA 8321B	2,4-D	4.3		ug/L	P420565	
		Acesulfame K	0.10	U	ug/L	P420486	
		2,4,5-T	0.0040	U	ug/L	P420565	
		AMPA	0.59		ug/L	P420486	
		Acetaminophen	0.0080	U	ug/L	P420565	
		Acetamiprid	0.0020	U	ug/L	P420565	
		Endothall	0.25	U	ug/L	P420486	MS
		Glufosinate	0.10	U	ug/L	P420486	
		Glyphosate	3.3		ug/L	P420486	
		Afidopyropen	0.0020	U	ug/L	P420565	
		Bentazon	0.0042		ug/L	P420565	
		Sucralose	0.21		ug/L	P420486	
		Benzovindiflupyr	0.0020	U	ug/L	P420565	
		Carbamazepine	8.0E-04	U	ug/L	P420565	
		Clothianidin	0.0020	U	ug/L	P420565	
		Dinotefuran	0.0075	I	ug/L	P420565	
		Diuron	0.0045	I	ug/L	P420565	
		Fenuron	0.032	U	ug/L	P420565	
		Fluridone	8.0E-04	U	ug/L	P420565	
		Imazapyr	3.1		ug/L	P420565	
		Hydrocodone	0.0020	U	ug/L	P420565	
		Ibuprofen	0.080	U	ug/L	P420565	
		Imidacloprid	0.0040	I	ug/L	P420565	
		Linuron	0.0040	U	ug/L	P420565	
		Mandestrobin	0.0020	U	ug/L	P420565	
		MCPP	0.0040	U	ug/L	P420565	
		Naproxen	0.0080	U	ug/L	P420565	
		Primidone	0.0040	U	ug/L	P420565	
		Pyraclostrobin	0.0020	U	ug/L	P420565	
		Silvex	0.0040	U	ug/L	P420565	
		Thiamethoxam	0.0025	I	ug/L	P420565	
		Tolfenpyrad	0.0020	U	ug/L	P420565	
		Triclopyr	0.0040	U	ug/L	P420565	

Sample Location: Manatee River near River Isles Clubhouse

Collection Date/Time: 10/05/2022 13:00

Field ID: G2SW0119

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2360810	EPA 8321B	2,4-D	0.049		ug/L	P420565	
		Acesulfame K	0.10	U	ug/L	P420486	
		2,4,5-T	0.0040	U	ug/L	P420565	
		AMPA	1.4		ug/L	P420486	
		Acetaminophen	0.0080	U	ug/L	P420565	
		Acetamiprid	0.0020	U	ug/L	P420565	
		Endothall	0.25	U	ug/L	P420486	MS
		Glufosinate	0.10	U	ug/L	P420486	
		Glyphosate	1.1		ug/L	P420486	
		Afidopyropen	0.0020	U	ug/L	P420565	
		Bentazon	0.073		ug/L	P420565	
		Sucralose	0.33		ug/L	P420486	
		Benzovindiflupyr	0.0020	U	ug/L	P420565	
		Carbamazepine	8.0E-04	U	ug/L	P420565	
		Clothianidin	0.0022	I	ug/L	P420565	
		Dinotefuran	0.044		ug/L	P420565	
		Diuron	0.0036	I	ug/L	P420565	
		Fenuron	0.032	U	ug/L	P420565	
		Fluridone	0.0056		ug/L	P420565	
		Imazapyr	0.062		ug/L	P420565	
		Hydrocodone	0.0020	U	ug/L	P420565	
		Ibuprofen	0.080	U	ug/L	P420565	
		Imidacloprid	0.040		ug/L	P420565	
		Linuron	0.0040	U	ug/L	P420565	
		Mandestrobin	0.0020	U	ug/L	P420565	
		MCPP	0.0040	U	ug/L	P420565	
		Naproxen	0.0080	U	ug/L	P420565	
		Primidone	0.0040	U	ug/L	P420565	
		Pyraclostrobin	0.0020	U	ug/L	P420565	
		Silvex	0.0040	U	ug/L	P420565	
		Thiamethoxam	0.015		ug/L	P420565	
		Tolfenpyrad	0.0020	U	ug/L	P420565	
		Triclopyr	0.0040	U	ug/L	P420565	

Sample Location: Gamble Creek @ CR 675

Collection Date/Time: 10/05/2022 10:35

Field ID: G2SW0140

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2360809	EPA 8321B	2,4-D	0.0020	U	ug/L	P420565	MS
		Acesulfame K	0.10	U	ug/L	P420486	
		2,4,5-T	0.0040	U	ug/L	P420565	
		AMPA	2.9		ug/L	P420486	
		Acetaminophen	0.0080	U	ug/L	P420565	
		Acetamiprid	0.0020	U	ug/L	P420565	
		Endothall	0.25	U	ug/L	P420486	
		Glufosinate	0.10	U	ug/L	P420486	
		Glyphosate	2.2		ug/L	P420486	
		Afidopyropen	0.0020	U	ug/L	P420565	
		Bentazon	0.078		ug/L	P420565	
		Sucralose	0.049		ug/L	P420486	
		Benzovindiflupyr	0.0039	I	ug/L	P420565	
		Carbamazepine	8.0E-04	U	ug/L	P420565	
		Clothianidin	0.0021	I	ug/L	P420565	
		Dinotefuran	0.051		ug/L	P420565	
		Diuron	0.0034	I	ug/L	P420565	
		Fenuron	0.032	U	ug/L	P420565	
		Fluridone	0.0027	I	ug/L	P420565	
		Imazapyr	0.018		ug/L	P420565	
		Hydrocodone	0.0020	U	ug/L	P420565	
		Ibuprofen	0.080	U	ug/L	P420565	
		Imidacloprid	0.017		ug/L	P420565	
		Linuron	0.0040	U	ug/L	P420565	
		Mandestrobin	0.0020	U	ug/L	P420565	
		MCPP	0.0040	U	ug/L	P420565	
		Naproxen	0.0080	U	ug/L	P420565	
		Primidone	0.0040	U	ug/L	P420565	
		Pyraclostrobin	0.0020	U	ug/L	P420565	
		Silvex	0.0040	U	ug/L	P420565	
		Thiamethoxam	0.0059	I	ug/L	P420565	
		Tolfenpyrad	0.0020	U	ug/L	P420565	
		Triclopyr	0.0040	U	ug/L	P420565	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P420579

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P420584

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421101

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421104

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420792

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420652

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420662

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420611

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

Reference Method: EPA 8321B
Batch ID: P420486

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P420486

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P420565

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P420770

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

Reference Method: SM 2540 C-2015

Batch ID: P421275

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P420916

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P420772

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P420780

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P420579

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P420584

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421101

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421104

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420792

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420652

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420662

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: P420611

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

Reference Method: EPA 8321B
Batch ID: P420486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	116		P	40 - 150
AMPA	97.0		P	40 - 150
Endothall	98.2		P	40 - 150
Glufosinate	108		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P420486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	103		P	40 - 150
Sucralose	99.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P420565

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	94.4		P	30 - 160
2,4,5-T	79.8		P	30 - 160
Acetaminophen	102		P	30 - 150
Acetamiprid	87.4		P	30 - 160
Afidopyropen	70.5		P	30 - 160
Bentazon	118		P	30 - 150
Benzovindiflupyr	91.4		P	30 - 160
Carbamazepine	88.4		P	30 - 160
Clothianidin	100		P	30 - 160
Dinotefuran	112		P	30 - 160
Diuron	90.2		P	30 - 160
Fenuron	117		P	30 - 160
Fluridone	99.0		P	30 - 160
Hydrocodone	104		P	30 - 160
Ibuprofen	70.8		P	30 - 160
Imazapyr	99.5		P	30 - 160
Imidacloprid	103		P	30 - 160
Linuron	84.2		P	30 - 160
Mandestrobin	93.6		P	30 - 160
MCPP	96.7		P	30 - 160
Naproxen	102		P	30 - 160
Primidone	97.9		P	30 - 160
Pyraclostrobin	79.1		P	30 - 160
Silvex	74.9		P	30 - 160
Thiamethoxam	100		P	30 - 160
Tolfenpyrad	44.5		P	30 - 160
Triclopyr	86.9		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P420770

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P421275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	92.2		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P420916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	89.0		P	85 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P420772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P420780

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421101

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360307	Chloride	95.9		P	90 - 110
2360786	Chloride	96.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421104

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360307	Sulfate	96.8		P	90 - 110
2360786	Sulfate	96.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360787	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360846	NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360771	Total-P	107	109	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P420486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360287	Acesulfame K	97.3	92.6	P/P	40 - 150
2360287	AMPA	74.4	72.8	P/P	40 - 150
2360287	Endothall	149	158	P/F	40 - 150
2360287	Glufosinate	79.3	75.7	P/P	40 - 150
2360287	Glyphosate	90.9	96.1	P/P	40 - 150
2360287	Sucralose	91.8	95.2	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P420565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360257	2,4-D	104	102	P/P	30 - 160
2360257	2,4,5-T	89.4	90.9	P/P	30 - 160
2360257	Acetaminophen	78.0	78.2	P/P	30 - 150
2360257	Acetamiprid	99.1	101	P/P	30 - 160
2360257	Afidopyropen	85.7	82.2	P/P	30 - 160
2360257	Bentazon	122	114	P/P	30 - 150
2360257	Benzovindiflupyr	79.0	81.9	P/P	30 - 160
2360257	Carbamazepine	76.9	79.9	P/P	30 - 160
2360257	Clothianidin	79.5	80.9	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P420565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360257	Dinotefuran	101	104	P/P	30 - 160
2360257	Diuron	78.9	79.5	P/P	30 - 160
2360257	Fenuron	108	102	P/P	30 - 160
2360257	Fluridone	93.5	94.3	P/P	30 - 160
2360257	Hydrocodone	88.0	90.1	P/P	30 - 160
2360257	Ibuprofen	97.6	84.6	P/P	30 - 160
2360257	Imazapyr	78.3	79.4	P/P	30 - 160
2360257	Imidacloprid	99.2	104	P/P	30 - 160
2360257	Linuron	71.9	68.0	P/P	30 - 160
2360257	Mandestrobin	88.1	89.1	P/P	30 - 160
2360257	MCPP	108	108	P/P	30 - 160
2360257	Naproxen	93.8	97.0	P/P	30 - 160
2360257	Primidone	71.5	71.0	P/P	30 - 160
2360257	Pyraclostrobin	77.1	79.9	P/P	30 - 160
2360257	Silvex	97.9	88.2	P/P	30 - 160
2360257	Thiamethoxam	97.7	96.9	P/P	30 - 160
2360257	Tolfenpyrad	39.2	40.7	P/P	30 - 160
2360257	Triclopyr	99.7	88.7	P/P	30 - 160

Reference Method: SM 4500-F- C-2011

Batch ID: P420772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2361114	Fluoride	102	101	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P420780

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2360686	Organic Carbon	99.2	97.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P420579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360769	Color (true)	0.119	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P420584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360769	Turbidity	3.21	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421101

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360307	Chloride	0.505	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421104

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360307	Sulfate	1.17	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360787	Ammonia-N	0.537	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360846	Kjeldahl Nitrogen	0.701	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360846	NO2NO3-N	0.971	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360771	Total-P	1.69	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P420486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360287	Acesulfame K	4.98	Spike	P	0 - 30
2360287	AMPA	2.16	Spike	P	0 - 30
2360287	Endothall	5.81	Spike	P	0 - 30
2360287	Glufosinate	4.71	Spike	P	0 - 30
2360287	Glyphosate	5.56	Spike	P	0 - 30
2360287	Sucralose	3.51	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P420565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360257	2,4-D	2.49	Spike	P	0 - 30
2360257	2,4,5-T	1.62	Spike	P	0 - 30
2360257	Acetaminophen	0.256	Spike	P	0 - 30
2360257	Acetamiprid	1.58	Spike	P	0 - 30
2360257	Afidopyropen	4.11	Spike	P	0 - 30
2360257	Bentazon	5.06	Spike	P	0 - 30
2360257	Benzovindiflupyr	3.57	Spike	P	0 - 30
2360257	Carbamazepine	3.63	Spike	P	0 - 30
2360257	Clothianidin	1.70	Spike	P	0 - 30
2360257	Dinotefuran	2.41	Spike	P	0 - 30
2360257	Diuron	0.698	Spike	P	0 - 30
2360257	Fenuron	5.60	Spike	P	0 - 30
2360257	Fluridone	0.845	Spike	P	0 - 30
2360257	Hydrocodone	2.44	Spike	P	0 - 30
2360257	Ibuprofen	14.3	Spike	P	0 - 30
2360257	Imazapyr	1.06	Spike	P	0 - 30
2360257	Imidacloprid	4.69	Spike	P	0 - 30
2360257	Linuron	5.58	Spike	P	0 - 30
2360257	Mandestrobin	1.17	Spike	P	0 - 30
2360257	MCPP	0.695	Spike	P	0 - 30
2360257	Naproxen	3.30	Spike	P	0 - 30
2360257	Primidone	0.659	Spike	P	0 - 30
2360257	Pyraclostrobin	3.62	Spike	P	0 - 30
2360257	Silvex	10.4	Spike	P	0 - 30
2360257	Thiamethoxam	0.822	Spike	P	0 - 30
2360257	Tolfenpyrad	3.75	Spike	P	0 - 30
2360257	Triclopyr	11.7	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P420770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2361114	Total Alkalinity	0.728	Sample	P	0 - 3.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P421275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360786	TDS	5.41	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P420772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2361114	Fluoride	0.476	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P420780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2360686	Organic Carbon	1.09	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2360807

Field Sample ID: G1SW0123

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	74.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	59.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	56.9	P	30 - 160
EPA 8321B	Diuron-d6	45.7	P	30 - 160
EPA 8321B	Endothall-d6	100	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.4	P	30 - 160
EPA 8321B	Primidone-d5	44.4	P	30 - 160
EPA 8321B	Sucralose-d6	90.2	P	30 - 160

Lab Sample ID: 2360808

Field Sample ID: G2SW0156

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	119	P	30 - 160
EPA 8321B	Acetaminophen-d4	57.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.4	P	30 - 160
EPA 8321B	Diuron-d6	48.3	P	30 - 160
EPA 8321B	Endothall-d6	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.0	P	30 - 160
EPA 8321B	Primidone-d5	39.9	P	30 - 160
EPA 8321B	Sucralose-d6	89.4	P	30 - 160

Lab Sample ID: 2360809

Field Sample ID: G2SW0140

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	92.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	69.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.0	P	30 - 160
EPA 8321B	Diuron-d6	59.9	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.2	P	30 - 160
EPA 8321B	Primidone-d5	50.8	P	30 - 160
EPA 8321B	Sucralose-d6	89.3	P	30 - 160

Lab Sample ID: 2360810

Field Sample ID: G2SW0119

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	64.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.8	P	30 - 160
EPA 8321B	Diuron-d6	53.7	P	30 - 160
EPA 8321B	Endothall-d6	99.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.8	P	30 - 160
EPA 8321B	Primidone-d5	49.6	P	30 - 160
EPA 8321B	Sucralose-d6	87.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A115157

Included Lab Sample IDs: 2360786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A115159

Included Lab Sample IDs: 2360786

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

Reference Method: EPA 8321B

Run ID: A115198

Included Lab Sample IDs: 2360807, 2360808, 2360809, 2360810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	111	110	P/P	60 - 160
Sucralose	95.9	95.3	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A115199

Included Lab Sample IDs: 2360787

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A115208

Included Lab Sample IDs: 2360787

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115218

Included Lab Sample IDs: 2360787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A115219

Included Lab Sample IDs: 2360807, 2360808, 2360809, 2360810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	106	105	P/P	60 - 160
Endothall	117	117	P/P	60 - 160
Glufosinate	96.8	111	P/P	60 - 160
Glyphosate	109	107	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A115243

Included Lab Sample IDs: 2360786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	99.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A115243

Included Lab Sample IDs: 2360786

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

Reference Method: SM 5310 B-2011

Run ID: A115247

Included Lab Sample IDs: 2360787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	99.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A115250

Included Lab Sample IDs: 2360807, 2360808, 2360809, 2360810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	116	P/P	50 - 150
2,4-D	109	113	P/P	50 - 150
2,4,5-T	99.4	107	P/P	50 - 150
Acetaminophen	104	102	P/P	60 - 160
Acetamiprid	110	113	P/P	50 - 150
Afidopyropen	102	98.6	P/P	50 - 150
Bentazon	102	107	P/P	50 - 160
Bentazon	98.8	102	P/P	50 - 160
Benzovindiflupyr	100	104	P/P	50 - 160
Carbamazepine	94.6	101	P/P	60 - 150
Clothianidin	103	98.4	P/P	60 - 150
Dinotefuran	105	105	P/P	50 - 150
Diuron	103	109	P/P	60 - 160
Fenuron	104	104	P/P	60 - 150
Fluridone	101	105	P/P	60 - 160
Hydrocodone	102	106	P/P	60 - 150
Ibuprofen	147	118	P/P	50 - 160
Imazapyr	115	119	P/P	50 - 150
Imazapyr	120	113	P/P	50 - 150
Imidacloprid	105	121	P/P	60 - 150
Linuron	96.1	103	P/P	60 - 150
Mandestrobin	98.3	101	P/P	50 - 150
MCPP	106	114	P/P	50 - 150
Naproxen	94.6	91.9	P/P	50 - 160
Primidone	99.1	98.9	P/P	60 - 150
Pyraclostrobin	99.9	100	P/P	60 - 150
Silvex	114	113	P/P	50 - 150
Thiamethoxam	102	105	P/P	50 - 150
Tolfenpyrad	102	106	P/P	60 - 150
Triclopyr	106	106	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115254

Included Lab Sample IDs: 2360787

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A115395

Included Lab Sample IDs: 2360786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.7	97.6	P/P	90 - 110
Sulfate	97.8	98.8	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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	100				0.119	
EPA 180.1 Rev. 2.0	Turbidity	101				3.21	
EPA 300.0 Rev. 2.1	Chloride	97.0	95.9	96.5		0.505	
	Sulfate	98.4	96.8	96.0		1.17	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	100	101			0.537
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.3					0.701
EPA 353.2 Rev. 2.0	NO2NO3-N	102	104	102			0.971
EPA 365.1 Rev. 2.0	Total-P	105	107	109			1.69
EPA 8321B	2,4-D	94.4	104	102			2.49
	2,4,5-T	79.8	89.4	90.9			1.62
	Acesulfame K	116	97.3	92.6			4.98
	Acetaminophen	102	78.0	78.2			0.256
	Acetamiprid	87.4	99.1	101			1.58
	Afidopyropen	70.5	85.7	82.2			4.11
	AMPA	97.0	74.4	72.8			2.16
	Bentazon	118	122	114			5.06
	Benzovindiflupyr	91.4	79.0	81.9			3.57
	Carbamazepine	88.4	76.9	79.9			3.63
	Clothianidin	100	79.5	80.9			1.70
	Dinotefuran	112	101	104			2.41
	Diuron	90.2	78.9	79.5			0.698
	Endothall	98.2	149	158			5.81
	Fenuron	117	108	102			5.60
	Fluridone	99.0	93.5	94.3			0.845
	Glufosinate	108	79.3	75.7			4.71
	Glyphosate	103	90.9	96.1			5.56
	Hydrocodone	104	88.0	90.1			2.44
	Ibuprofen	70.8	97.6	84.6			14.3
	Imazapyr	99.5	78.3	79.4			1.06
	Imidacloprid	103	99.2	104			4.69
	Linuron	84.2	71.9	68.0			5.58
	Mandestrobin	93.6	88.1	89.1			1.17
	MCPP	96.7	108	108			0.695
	Naproxen	102	93.8	97.0			3.30
	Primidone	97.9	71.5	71.0			0.659
	Pyraclostrobin	79.1	77.1	79.9			3.62
	Silvex	74.9	97.9	88.2			10.4
	Sucralose	99.1	91.8	95.2			3.51
	Thiamethoxam	100	97.7	96.9			0.822
	Tolfenpyrad	44.5	39.2	40.7			3.75
	Triclopyr	86.9	99.7	88.7			11.7
SM 2320 B-2011	Total Alkalinity	102				0.728	
SM 2540 C-2015	TDS	92.2				5.41	
SM 2540 D-2015	TSS	89.0					
SM 4500-F- C-2011	Fluoride	102	102	101			0.476
SM 5310 B-2011	Organic Carbon	98.6	99.2	97.4			1.09

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2360786
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2360786
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2360786

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2360786
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2360787
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2360787
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2360787
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2360787
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2360807, 2360808, 2360809, 2360810
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2360786
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2360786
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2360786
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2360786
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2360787

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	10/06/2022			10/06/2022 14:22	Anna M. Plaviak	2360786
EPA 180.1 Rev. 2.0	10/06/2022			10/06/2022 14:24	Chandler E Cox	2360786
EPA 300.0 Rev. 2.1	10/06/2022			10/18/2022 14:35	Anna M. Plaviak	2360786
EPA 350.1 Rev. 2.0	10/06/2022			10/12/2022 10:58	Judith K. Clark	2360787
EPA 351.2 Rev. 2.0	10/06/2022	10/10/2022 13:58	Samantha L Bates	10/11/2022 09:54	Samantha L Bates	2360787
EPA 353.2 Rev. 2.0	10/06/2022			10/10/2022 10:08	Beverly Y. Sanders	2360787
EPA 365.1 Rev. 2.0	10/06/2022	10/07/2022 02:30	Adam P Silver	10/10/2022 12:01	James L Waggeberby	2360787
EPA 8321B	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/07/2022 18:09	Umesh Chiluwal	2360807
	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/07/2022 18:24	Umesh Chiluwal	2360808
	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/07/2022 18:40	Umesh Chiluwal	2360809
	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/07/2022 18:54	Umesh Chiluwal	2360810
	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/10/2022 19:33	Umesh Chiluwal	2360807
	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/10/2022 19:46	Umesh Chiluwal	2360808
	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/10/2022 19:59	Umesh Chiluwal	2360809
	10/06/2022	10/06/2022 12:00	Umesh Chiluwal	10/10/2022 20:12	Umesh Chiluwal	2360810
	10/06/2022	10/10/2022 10:30	June Rhew	10/12/2022 01:11	Juyoung Kim	2360807
	10/06/2022	10/10/2022 10:30	June Rhew	10/12/2022 01:32	Juyoung Kim	2360808
	10/06/2022	10/10/2022 10:30	June Rhew	10/12/2022 01:52	Juyoung Kim	2360809
	10/06/2022	10/10/2022 10:30	June Rhew	10/12/2022 02:13	Juyoung Kim	2360810
	10/06/2022	10/10/2022 10:30	June Rhew	10/12/2022 09:33	Juyoung Kim	2360808
	10/06/2022	10/10/2022 10:30	June Rhew	10/12/2022 09:54	Juyoung Kim	2360809
SM 2320 B-2011	10/06/2022			10/12/2022 00:18	Adam P Silver	2360786
SM 2540 C-2015	10/06/2022			10/11/2022 15:26	Yijie Li	2360786
SM 2540 D-2015	10/06/2022			10/11/2022 15:26	Yijie Li	2360786
SM 4500-F- C-2011	10/06/2022			10/12/2022 00:18	Adam P Silver	2360786
SM 5310 B-2011	10/06/2022			10/11/2022 19:30	Khloe J Berg	2360787