Chemical Analysis Report

SO-DIST-2021-10-07-02

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

Event Description: **2021 SMP: Billy Creek**
Request ID: **RQ-2021-10-04-66**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: William Mullen

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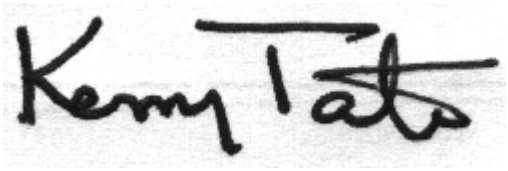
Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 18-OCT-2021 15:18



NON-CONFORMANCE REPORT INCLUDED

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 group are included in this report: 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: Billy Creek @ SeaboardSt **Collection Date/Time: 10/05/2021 09:20**

Field ID: G3SD0203 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2281588	EPA 8321B	2,4-D	0.030		ug/L	P404638	
		Acesulfame K	0.16	I J	ug/L	P404637	MS
		2,4,5-T	0.0040	U	ug/L	P404638	
		AMPA	0.67		ug/L	P404637	
		Acetaminophen	0.015	I	ug/L	P404638	
		Acetamiprid	0.0020	U	ug/L	P404638	
		Endothall	0.25	U	ug/L	P404637	
		Glufosinate	0.10	U	ug/L	P404637	
		Glyphosate	1.6		ug/L	P404637	
		Afidopyropen	0.0020	U	ug/L	P404638	
		Bentazon	0.041		ug/L	P404638	
		Sucralose	0.29		ug/L	P404637	
		Benzovindiflupyr	0.0020	U	ug/L	P404638	
		Carbamazepine	0.0011	I	ug/L	P404638	
		Clothianidin	0.0020	U	ug/L	P404638	
		Dinotefuran	0.0034	I	ug/L	P404638	
		Diuron	0.0030	I	ug/L	P404638	
		Fenuron	0.016	U	ug/L	P404638	
		Fluridone	8.6E-04	I	ug/L	P404638	
		Imazapyr	0.41		ug/L	P404638	
		Hydrocodone	0.0020	U	ug/L	P404638	
		Ibuprofen	0.020	U	ug/L	P404638	
		Imidacloprid	0.032		ug/L	P404638	
		Linuron	0.0040	U	ug/L	P404638	
		Mandestrobin	0.0020	U	ug/L	P404638	
		MCPP	0.0065	I	ug/L	P404638	
		Naproxen	0.0080	U	ug/L	P404638	
		Primidone	0.0040	U	ug/L	P404638	
		Pyraclostrobin	0.0020	U	ug/L	P404638	
		Thiamethoxam	0.0020	U	ug/L	P404638	
		Tolfenpyrad	0.0020	U	ug/L	P404638	
		Triclopyr	0.0040	U	ug/L	P404638	

Ref. Method and Comment:
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: BillyCrk@ShadyOaksBrdwk **Collection Date/Time: 10/05/2021 09:45**

Field ID: G3SD0196 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2281589	EPA 8321B	2,4-D	0.0043	I J	ug/L	P404838	MS
		Acesulfame K	0.14	I	ug/L	P404637	MS
		2,4,5-T	0.0040	U	ug/L	P404838	
		AMPA	0.37	I	ug/L	P404637	
		Acetaminophen	0.0080	UJ	ug/L	P404838	MS, RPD
		Acetamiprid	0.0020	U	ug/L	P404838	
		Endothall	0.25	U	ug/L	P404637	
		Glufosinate	0.10	U	ug/L	P404637	
		Glyphosate	1.3		ug/L	P404637	
		Afidopyropen	0.0020	U	ug/L	P404838	
		Bentazon	0.099		ug/L	P404838	
		Sucralose	0.43		ug/L	P404637	
		Benzovindiflupyr	0.0020	U	ug/L	P404838	
		Carbamazepine	0.0021	I	ug/L	P404838	
		Clothianidin	0.0020	UJ	ug/L	P404838	MS
		Dinotefuran	0.0071	I	ug/L	P404838	
		Diuron	0.0020	U	ug/L	P404838	
		Fenuron	0.016	U	ug/L	P404838	
		Fluridone	8.0E-04	U	ug/L	P404838	
		Imazapyr	0.15	J	ug/L	P404838	MS
		Hydrocodone	0.0020	U	ug/L	P404838	
		Ibuprofen	0.020	U	ug/L	P404838	
		Imidacloprid	0.0087	J	ug/L	P404838	MS
		Linuron	0.0040	U	ug/L	P404838	
		Mandestrobin	0.0020	U	ug/L	P404838	
		MCPP	0.012	J	ug/L	P404838	MS
		Naproxen	0.0080	U	ug/L	P404838	
		Primidone	0.0040	U	ug/L	P404838	
		Pyraclostrobin	0.0020	U	ug/L	P404838	
		Thiamethoxam	0.0020	UJ	ug/L	P404838	MS
		Tolfenpyrad	0.0020	U	ug/L	P404838	
		Triclopyr	0.0040	UJ	ug/L	P404838	MS

Ref. Method and Comment:
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: BillyCreek@VSShoemaker **Collection Date/Time: 10/05/2021 10:10**

Field ID: G3SD0197 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2281590	EPA 8321B	2,4-D	0.020		ug/L	P404838	MS
		Acesulfame K	0.20	I	ug/L	P404637	MS
		2,4,5-T	0.0040	U	ug/L	P404838	
		AMPA	0.86		ug/L	P404637	
		Acetaminophen	0.0080	U	ug/L	P404838	MS, RPD
		Acetamiprid	0.0020	U	ug/L	P404838	
		Endothall	0.25	U	ug/L	P404637	
		Glufosinate	0.10	U	ug/L	P404637	
		Glyphosate	1.6		ug/L	P404637	
		Afidopyropen	0.0020	U	ug/L	P404838	
		Bentazon	0.026		ug/L	P404838	
		Sucralose	0.23		ug/L	P404637	
		Benzovindiflupyr	0.0020	U	ug/L	P404838	
		Carbamazepine	0.0013	I	ug/L	P404838	
		Clothianidin	0.0020	U	ug/L	P404838	MS
		Dinotefuran	0.0020	U	ug/L	P404838	
		Diuron	0.0020	U	ug/L	P404838	
		Fenuron	0.021	I	ug/L	P404838	
		Fluridone	0.0014	I	ug/L	P404838	
		Imazapyr	0.48		ug/L	P404838	MS
		Hydrocodone	0.0020	U	ug/L	P404838	
		Ibuprofen	0.020	U	ug/L	P404838	
		Imidacloprid	0.041		ug/L	P404838	MS
		Linuron	0.0040	U	ug/L	P404838	
		Mandestrobin	0.0020	U	ug/L	P404838	
		MCPP	0.0049	I	ug/L	P404838	MS
		Naproxen	0.0080	U	ug/L	P404838	
		Primidone	0.0040	U	ug/L	P404838	
		Pyraclostrobin	0.0020	U	ug/L	P404838	
		Thiamethoxam	0.0020	U	ug/L	P404838	MS
		Tolfenpyrad	0.0020	U	ug/L	P404838	
		Triclopyr	0.0040	U	ug/L	P404838	MS

Ref. Method and Comment:
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: BilllyCreek@ArnoldDr **Collection Date/Time: 10/05/2021 10:35**

Field ID: G3SD0198 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2281591	EPA 8321B	2,4-D	0.016		ug/L	P404838	MS
		Acesulfame K	0.13	I	ug/L	P404637	MS
		2,4,5-T	0.0040	U	ug/L	P404838	
		AMPA	1.3		ug/L	P404637	
		Acetaminophen	0.0080	U	ug/L	P404838	MS, RPD
		Acetamiprid	0.0020	U	ug/L	P404838	
		Endothall	0.25	U	ug/L	P404637	
		Glufosinate	0.10	U	ug/L	P404637	
		Glyphosate	3.0		ug/L	P404637	
		Afidopyropen	0.0020	U	ug/L	P404838	
		Bentazon	0.021		ug/L	P404838	
		Sucralose	0.18		ug/L	P404637	
		Benzovindiflupyr	0.0020	U	ug/L	P404838	
		Carbamazepine	0.0013	I	ug/L	P404838	
		Clothianidin	0.0020	U	ug/L	P404838	MS
		Dinotefuran	0.0020	U	ug/L	P404838	
		Diuron	0.0020	U	ug/L	P404838	
		Fenuron	0.016	U	ug/L	P404838	
		Fluridone	9.0E-04	I	ug/L	P404838	
		Imazapyr	0.57		ug/L	P404838	MS
		Hydrocodone	0.0020	U	ug/L	P404838	
		Ibuprofen	0.020	U	ug/L	P404838	
		Imidacloprid	0.073		ug/L	P404838	MS
		Linuron	0.0040	U	ug/L	P404838	
		Mandestrobin	0.0020	U	ug/L	P404838	
		MCPP	0.0057	I	ug/L	P404838	MS
		Naproxen	0.0080	U	ug/L	P404838	
		Primidone	0.0040	U	ug/L	P404838	
		Pyraclostrobin	0.0020	U	ug/L	P404838	
		Thiamethoxam	0.0020	U	ug/L	P404838	MS
		Tolfenpyrad	0.0020	U	ug/L	P404838	
		Triclopyr	0.0040	U	ug/L	P404838	MS

Ref. Method and Comment:
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: BillyCreekUpstrmofMarsh **Collection Date/Time: 10/05/2021 11:05**

Field ID: G3SD0199 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2281592	EPA 8321B	2,4-D	0.013		ug/L	P404838	MS
		Acesulfame K	0.15	I	ug/L	P404637	MS
		2,4,5-T	0.0040	U	ug/L	P404838	
		AMPA	2.1		ug/L	P404637	
		Acetaminophen	0.0097	I	ug/L	P404838	MS, RPD
		Acetamiprid	0.0020	U	ug/L	P404838	
		Endothall	0.25	U	ug/L	P404637	
		Glufosinate	0.10	U	ug/L	P404637	
		Glyphosate	13		ug/L	P404637	
		Afidopyropen	0.0020	U	ug/L	P404838	
		Bentazon	0.031		ug/L	P404838	
		Sucralose	0.17		ug/L	P404637	
		Benzovindiflupyr	0.0020	U	ug/L	P404838	
		Carbamazepine	0.0035		ug/L	P404838	
		Clothianidin	0.0020	U	ug/L	P404838	MS
		Dinotefuran	0.0020	U	ug/L	P404838	
		Diuron	0.0020	U	ug/L	P404838	
		Fenuron	0.016	U	ug/L	P404838	
		Fluridone	8.0E-04	U	ug/L	P404838	
		Imazapyr	0.34		ug/L	P404838	MS
		Hydrocodone	0.0020	U	ug/L	P404838	
		Ibuprofen	0.020	U	ug/L	P404838	
		Imidacloprid	0.022		ug/L	P404838	MS
		Linuron	0.0040	U	ug/L	P404838	
		Mandestrobin	0.0020	U	ug/L	P404838	
		MCPP	0.0084		ug/L	P404838	MS
		Naproxen	0.0080	U	ug/L	P404838	
		Primidone	0.0040	U	ug/L	P404838	
		Pyraclostrobin	0.0020	U	ug/L	P404838	
		Thiamethoxam	0.0020	U	ug/L	P404838	MS
		Tolfenpyrad	0.0020	U	ug/L	P404838	
		Triclopyr	0.0040	U	ug/L	P404838	MS

Ref. Method and Comment:
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Billy Creek @ Ortiz Ave **Collection Date/Time: 10/05/2021 11:30**

Field ID: G3SD0200 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2281593	EPA 8321B	2,4-D	0.014		ug/L	P404838	MS
		Acesulfame K	0.18	I	ug/L	P404637	MS
		2,4,5-T	0.0040	U	ug/L	P404838	
		AMPA	1.4		ug/L	P404637	
		Acetaminophen	0.0080	U	ug/L	P404838	MS, RPD
		Acetamiprid	0.0020	U	ug/L	P404838	
		Endothall	0.25	U	ug/L	P404637	
		Glufosinate	0.10	U	ug/L	P404637	
		Glyphosate	11		ug/L	P404637	
		Afidopyropen	0.0020	U	ug/L	P404838	
		Bentazon	0.037		ug/L	P404838	
		Sucralose	0.18		ug/L	P404637	
		Benzovindiflupyr	0.0020	U	ug/L	P404838	
		Carbamazepine	0.0038		ug/L	P404838	
		Clothianidin	0.0020	U	ug/L	P404838	MS
		Dinotefuran	0.0020	U	ug/L	P404838	
		Diuron	0.0020	U	ug/L	P404838	
		Fenuron	0.016	U	ug/L	P404838	
		Fluridone	8.0E-04	U	ug/L	P404838	
		Imazapyr	0.29		ug/L	P404838	MS
		Hydrocodone	0.0020	U	ug/L	P404838	
		Ibuprofen	0.020	U	ug/L	P404838	
		Imidacloprid	0.023		ug/L	P404838	MS
		Linuron	0.0040	U	ug/L	P404838	
		Mandestrobin	0.0020	U	ug/L	P404838	
		MCPP	0.0069	I	ug/L	P404838	MS
		Naproxen	0.0080	U	ug/L	P404838	
		Primidone	0.0040	U	ug/L	P404838	
		Pyraclostrobin	0.0020	U	ug/L	P404838	
		Thiamethoxam	0.0020	U	ug/L	P404838	MS
		Tolfenpyrad	0.0020	U	ug/L	P404838	
		Triclopyr	0.0040	U	ug/L	P404838	MS

Ref. Method and Comment:
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Non-Conformance Report

NCR ID: 9063

Event(s)	Job(s)	Sample(s)	Test(s)
SO-DIST-2021-10-07-02			

NCR Type: SHIPPING/RECEIVING **NCR Category: Samples arrived late**

Observation: Samples arrived late, samples received within the acceptable temperature range.

Resolution: Samples will be qualified as appropriate.
Customer contacted, email correspondence attached to sample submittal forms.
Biology and Chemistry supervisors were notified by email.

Authorized by/Date: Joshua Ayres 10/15/2021

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P404637

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: EPA 8321B
Batch ID: P404638

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	0.016	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
Mandestrobin	0.0020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P404838

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P404838

Component	Result	Code	Units
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
Mandestrobin	0.0020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P404637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	109		P	40 - 150
AMPA	96.8		P	40 - 160
Endothall	69.1		P	40 - 150
Glufosinate	111		P	40 - 160
Glyphosate	79.7		P	40 - 160
Sucralose	125		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P404638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	113		P	40 - 150
2,4,5-T	116		P	40 - 150
Acetaminophen	78.6		P	30 - 150
Acetamiprid	92.1		P	40 - 150
Afidopyropen	92.5		P	40 - 150
Bentazon	125		P	30 - 150
Benzovindiflupyr	83.7		P	40 - 150
Carbamazepine	103		P	40 - 150
Clothianidin	103		P	40 - 150
Dinotefuran	91.2		P	40 - 150
Diuron	91.1		P	40 - 150
Fenuron	96.6		P	40 - 150
Fluridone	96.3		P	40 - 150
Hydrocodone	90.4		P	40 - 150
Ibuprofen	75.2		P	40 - 150
Imazapyr	103		P	40 - 150
Imidacloprid	98.2		P	40 - 150
Linuron	83.3		P	40 - 150
Mandestrobin	90.9		P	40 - 150
MCPP	109		P	40 - 150
Naproxen	134		P	40 - 150
Primidone	109		P	40 - 150
Pyraclostrobin	77.0		P	40 - 150
Thiamethoxam	97.0		P	40 - 150
Tolfenpyrad	53.0		P	30 - 150
Triclopyr	121		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P404838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	102		P	40 - 150
2,4,5-T	99.6		P	40 - 150
Acetaminophen	86.3		P	30 - 150
Acetamiprid	90.5		P	40 - 150
Afidopyropen	101		P	40 - 150
Bentazon	106		P	30 - 150
Benzovindiflupyr	84.3		P	40 - 150
Carbamazepine	105		P	40 - 150
Clothianidin	114		P	40 - 150
Dinotefuran	84.5		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P404838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	98.9		P	40 - 150
Fenuron	95.6		P	40 - 150
Fluridone	104		P	40 - 150
Hydrocodone	94.9		P	40 - 150
Ibuprofen	90.4		P	40 - 150
Imazapyr	97.7		P	40 - 150
Imidacloprid	97.5		P	40 - 150
Linuron	88.1		P	40 - 150
Mandestrobin	99.1		P	40 - 150
MCPP	115		P	40 - 150
Naproxen	98.5		P	40 - 150
Primidone	93.3		P	40 - 150
Pyraclostrobin	91.9		P	40 - 150
Thiamethoxam	96.0		P	40 - 150
Tolfenpyrad	57.7		P	30 - 150
Triclopyr	102		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P404637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2281588	Acesulfame K	153	113	F/P	40 - 150
2281588	AMPA	65.5	70.2	P/P	40 - 160
2281588	Endothall	97.4	94.3	P/P	40 - 150
2281588	Glufosinate	72.7	80.8	P/P	40 - 160
2281588	Glyphosate	42.0	44.5	P/P	40 - 160
2281588	Sucralose	118	119	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P404638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2280800	2,4-D	111	127	P/P	40 - 150
2280800	2,4,5-T	109	122	P/P	40 - 150
2280800	Acetaminophen	133	112	P/P	30 - 150
2280800	Acetamiprid	98.2	90.4	P/P	40 - 150
2280800	Afidopyropen	101	104	P/P	40 - 150
2280800	Benzovindiflupyr	84.6	81.3	P/P	40 - 150
2280800	Carbamazepine	110	114	P/P	40 - 150
2280800	Clothianidin	109	106	P/P	40 - 150
2280800	Dinotefuran	111	118	P/P	40 - 150
2280800	Diuron	96.3	100	P/P	40 - 150
2280800	Fenuron	87.6	93.1	P/P	40 - 150
2280800	Fluridone	94.5	90.3	P/P	40 - 150
2280800	Hydrocodone	105	109	P/P	40 - 150
2280800	Ibuprofen	82.5	93.2	P/P	40 - 150
2280800	Imazapyr	141	123	P/P	40 - 150
2280800	Imidacloprid	124	130	P/P	40 - 150
2280800	Linuron	74.6	80.2	P/P	40 - 150
2280800	Mandestrobin	91.5	90.3	P/P	40 - 150
2280800	MCPP	129	131	P/P	40 - 150
2280800	Naproxen	97.4	97.0	P/P	40 - 150
2280800	Primidone	99.4	91.9	P/P	40 - 150
2280800	Pyraclostrobin	76.7	82.4	P/P	40 - 150
2280800	Thiamethoxam	123	136	P/P	40 - 150
2280800	Tolfenpyrad	49.2	53.9	P/P	30 - 150
2280800	Triclopyr	119	124	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P404838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2281589	2,4-D	150	149	F/P	40 - 150
2281589	2,4,5-T	148	140	P/P	40 - 150
2281589	Acetaminophen	161	116	F/P	30 - 150
2281589	Acetamiprid	117	107	P/P	40 - 150
2281589	Afidopyropen	127	119	P/P	40 - 150
2281589	Benzovindiflupyr	118	119	P/P	40 - 150
2281589	Carbamazepine	139	131	P/P	40 - 150
2281589	Clothianidin	136	157	P/F	40 - 150
2281589	Dinotefuran	119	117	P/P	40 - 150
2281589	Diuron	105	108	P/P	40 - 150
2281589	Fenuron	105	94.9	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P404838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2281589	Fluridone	111	98.1	P/P	40 - 150
2281589	Hydrocodone	122	117	P/P	40 - 150
2281589	Ibuprofen	97.4	75.2	P/P	40 - 150
2281589	Imazapyr	204	154	F/F	40 - 150
2281589	Imidacloprid	162	164	F/F	40 - 150
2281589	Linuron	104	97.7	P/P	40 - 150
2281589	Mandestrobin	112	106	P/P	40 - 150
2281589	MCPP	168	146	F/P	40 - 150
2281589	Naproxen	117	100	P/P	40 - 150
2281589	Primidone	113	122	P/P	40 - 150
2281589	Pyraclostrobin	107	101	P/P	40 - 150
2281589	Thiamethoxam	172	164	F/F	40 - 150
2281589	Tolfenpyrad	72.3	68.1	P/P	30 - 150
2281589	Triclopyr	160	155	F/F	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P404637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2281588	Acesulfame K	28.2	Spike	P	0 - 30
2281588	AMPA	4.95	Spike	P	0 - 30
2281588	Endothall	3.22	Spike	P	0 - 30
2281588	Glufosinate	10.7	Spike	P	0 - 30
2281588	Glyphosate	2.29	Spike	P	0 - 30
2281588	Sucralose	0.910	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P404638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2280800	2,4-D	11.9	Spike	P	0 - 30
2280800	2,4,5-T	11.8	Spike	P	0 - 30
2280800	Acetaminophen	17.0	Spike	P	0 - 30
2280800	Acetamiprid	8.31	Spike	P	0 - 30
2280800	Afidopyropen	2.75	Spike	P	0 - 30
2280800	Bentazon	1.57	Spike	P	0 - 30
2280800	Benzovindiflupyr	3.97	Spike	P	0 - 30
2280800	Carbamazepine	2.82	Spike	P	0 - 30
2280800	Clothianidin	2.93	Spike	P	0 - 30
2280800	Dinotefuran	5.71	Spike	P	0 - 30
2280800	Diuron	3.56	Spike	P	0 - 30
2280800	Fenuron	6.07	Spike	P	0 - 30
2280800	Fluridone	3.76	Spike	P	0 - 30
2280800	Hydrocodone	3.23	Spike	P	0 - 30
2280800	Ibuprofen	12.2	Spike	P	0 - 30
2280800	Imazapyr	8.95	Spike	P	0 - 30
2280800	Imidacloprid	4.18	Spike	P	0 - 30
2280800	Linuron	7.22	Spike	P	0 - 30
2280800	Mandestrobin	1.23	Spike	P	0 - 30
2280800	MCPP	1.97	Spike	P	0 - 30
2280800	Naproxen	0.397	Spike	P	0 - 30
2280800	Primidone	7.82	Spike	P	0 - 30
2280800	Pyraclostrobin	7.27	Spike	P	0 - 30
2280800	Thiamethoxam	9.90	Spike	P	0 - 30
2280800	Tolfenpyrad	9.18	Spike	P	0 - 30
2280800	Triclopyr	4.49	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P404838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2281589	2,4-D	1.19	Spike	P	0 - 30
2281589	2,4,5-T	5.91	Spike	P	0 - 30
2281589	Acetaminophen	32.4	Spike	F	0 - 30
2281589	Acetamiprid	9.01	Spike	P	0 - 30
2281589	Afidopyropen	7.00	Spike	P	0 - 30
2281589	Bentazon	0.742	Spike	P	0 - 30
2281589	Benzovindiflupyr	0.660	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P404838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2281589	Carbamazepine	5.19	Spike	P	0 - 30
2281589	Clothianidin	13.8	Spike	P	0 - 30
2281589	Dinotefuran	1.70	Spike	P	0 - 30
2281589	Diuron	2.75	Spike	P	0 - 30
2281589	Fenuron	9.98	Spike	P	0 - 30
2281589	Fluridone	12.4	Spike	P	0 - 30
2281589	Hydrocodone	4.41	Spike	P	0 - 30
2281589	Ibuprofen	25.7	Spike	P	0 - 30
2281589	Imazapyr	13.5	Spike	P	0 - 30
2281589	Imidacloprid	1.31	Spike	P	0 - 30
2281589	Linuron	5.91	Spike	P	0 - 30
2281589	Mandestrobin	5.58	Spike	P	0 - 30
2281589	MCPP	12.8	Spike	P	0 - 30
2281589	Naproxen	15.0	Spike	P	0 - 30
2281589	Primidone	7.86	Spike	P	0 - 30
2281589	Pyraclostrobin	5.84	Spike	P	0 - 30
2281589	Thiamethoxam	4.48	Spike	P	0 - 30
2281589	Tolfenpyrad	5.92	Spike	P	0 - 30
2281589	Triclopyr	2.66	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2281588
Field Sample ID: G3SD0203

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	152	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	83.8	P	30 - 160
EPA 8321B	Endothall-d6	98.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	52.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.2	P	30 - 160
EPA 8321B	Primidone-d5	86.7	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2281589
Field Sample ID: G3SD0196

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	150	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	131	P	30 - 160
EPA 8321B	Diuron-d6	108	P	30 - 160
EPA 8321B	Endothall-d6	82.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.6	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2281590
Field Sample ID: G3SD0197

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	131	P	30 - 160
EPA 8321B	Acetaminophen-d4	109	P	30 - 160
EPA 8321B	Carbamazepine-d10	121	P	30 - 160
EPA 8321B	Diuron-d6	97.6	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	61.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.5	P	30 - 160
EPA 8321B	Primidone-d5	127	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2281591
Field Sample ID: G3SD0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	146	P	30 - 160
EPA 8321B	Acetaminophen-d4	115	P	30 - 160
EPA 8321B	Carbamazepine-d10	121	P	30 - 160
EPA 8321B	Diuron-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	85.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	57.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.0	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2281592
Field Sample ID: G3SD0199

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	152	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	128	P	30 - 160
EPA 8321B	Diuron-d6	103	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	60.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.1	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2281593
Field Sample ID: G3SD0200

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	138	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	113	P	30 - 160
EPA 8321B	Diuron-d6	87.3	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	59.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.6	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A108217
Included Lab Sample IDs: 2281588, 2281589, 2281590, 2281591, 2281592, 2281593

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	93.8	97.6	P/P	60 - 160
AMPA	96.5	93.8	P/P	60 - 160
Glufosinate	110	108	P/P	60 - 160
Glufosinate	111	110	P/P	60 - 160
Glyphosate	78.5	82.2	P/P	60 - 160
Glyphosate	80.8	78.5	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A108249
Included Lab Sample IDs: 2281588, 2281589, 2281590, 2281591, 2281592, 2281593

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	114	P/P	60 - 160
Acesulfame K	114	118	P/P	60 - 160
Acesulfame K	118	102	P/P	60 - 160
Endothall	67.2	71.0	P/P	60 - 160
Endothall	71.0	63.8	P/P	60 - 160
Endothall	71.9	67.2	P/P	60 - 160
Sucralose	117	114	P/P	60 - 160
Sucralose	122	117	P/P	60 - 160
Sucralose	122	122	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A108255
Included Lab Sample IDs: 2281588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.9	96.1	P/P	50 - 150
2,4,5-T	92.4	93.2	P/P	50 - 150
Acetaminophen	95.4	90.1	P/P	60 - 160
Acetamiprid	92.4	99.3	P/P	50 - 150
Afidopyropen	101	109	P/P	50 - 150
Bentazon	122	113	P/P	50 - 160
Benzovindiflupyr	97.7	112	P/P	50 - 150
Carbamazepine	105	96.6	P/P	60 - 150
Clothianidin	88.5	101	P/P	60 - 150
Dinotefuran	105	105	P/P	50 - 150
Diuron	123	120	P/P	60 - 160
Fenuron	98.2	98.5	P/P	60 - 150
Fluridone	94.4	96.6	P/P	60 - 160
Hydrocodone	96.3	110	P/P	60 - 150
Ibuprofen	102	111	P/P	50 - 160
Imazapyr	91.9	107	P/P	50 - 150
Imidacloprid	90.3	120	P/P	60 - 150
Linuron	118	96.4	P/P	60 - 150
Mandestrobin	94.5	97.5	P/P	50 - 150
MCPP	97.9	94.4	P/P	50 - 150
Naproxen	149	76.7	P/P	50 - 160
Primidone	95.1	117	P/P	60 - 150
Pyraclostrobin	96.4	96.3	P/P	60 - 150
Thiamethoxam	105	103	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A108255
Included Lab Sample IDs: 2281588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	102	93.4	P/P	60 - 150
Triclopyr	87.1	95.6	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A108334
Included Lab Sample IDs: 2281589, 2281590, 2281591, 2281592, 2281593

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	91.2	P/P	50 - 150
2,4,5-T	111	107	P/P	50 - 150
Acetaminophen	107	103	P/P	60 - 160
Acetamiprid	109	104	P/P	50 - 150
Afidopyropen	121	129	P/P	50 - 150
Bentazon	123	118	P/P	50 - 160
Benzovindiflupyr	112	131	P/P	50 - 150
Carbamazepine	106	117	P/P	60 - 150
Clothianidin	118	123	P/P	60 - 150
Dinotefuran	101	114	P/P	50 - 150
Diuron	123	134	P/P	60 - 160
Fenuron	99.3	103	P/P	60 - 150
Fluridone	119	110	P/P	60 - 160
Hydrocodone	106	103	P/P	60 - 150
Ibuprofen	85.8	141	P/P	50 - 160
Imazapyr	103	92.0	P/P	50 - 150
Imidacloprid	106	105	P/P	60 - 150
Linuron	108	129	P/P	60 - 150
Mandestrobin	121	114	P/P	50 - 150
MCPP	112	108	P/P	50 - 150
Naproxen	90.7	119	P/P	50 - 160
Primidone	98.7	92.4	P/P	60 - 150
Pyraclostrobin	124	126	P/P	60 - 150
Thiamethoxam	109	104	P/P	50 - 150
Tolfenpyrad	118	119	P/P	60 - 150
Triclopyr	127	108	P/P	50 - 150

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	2,4-D	113	111	127			11.9
	2,4-D	102	150	149			1.19
	2,4,5-T	116	109	122			11.8
	2,4,5-T	99.6	148	140			5.91
	Acesulfame K	109	153	113			28.2
	Acetaminophen	78.6	133	112			17.0
	Acetaminophen	86.3	161	116			32.4
	Acetamiprid	92.1	98.2	90.4			8.31
	Acetamiprid	90.5	117	107			9.01
	Afidopyropen	92.5	101	104			2.75
	Afidopyropen	101	127	119			7.00
	AMPA	96.8	65.5	70.2			4.95
	Bentazon	125					1.57
	Bentazon	106					0.742
	Benzovindiflupyr	83.7	84.6	81.3			3.97
	Benzovindiflupyr	84.3	118	119			0.660
	Carbamazepine	103	110	114			2.82
	Carbamazepine	105	139	131			5.19
	Clothianidin	103	109	106			2.93
	Clothianidin	114	136	157			13.8
	Dinotefuran	91.2	111	118			5.71
	Dinotefuran	84.5	119	117			1.70
	Diuron	91.1	96.3	100			3.56
	Diuron	98.9	105	108			2.75
	Endothall	69.1	97.4	94.3			3.22
	Fenuron	96.6	87.6	93.1			6.07
	Fenuron	95.6	105	94.9			9.98
	Fluridone	96.3	94.5	90.3			3.76
	Fluridone	104	111	98.1			12.4
	Glufosinate	111	72.7	80.8			10.7
	Glyphosate	79.7	42.0	44.5			2.29
	Hydrocodone	90.4	105	109			3.23
	Hydrocodone	94.9	122	117			4.41
	Ibuprofen	75.2	82.5	93.2			12.2
	Ibuprofen	90.4	97.4	75.2			25.7
	Imazapyr	103	141	123			8.95
	Imazapyr	97.7	204	154			13.5
	Imidacloprid	98.2	124	130			4.18
	Imidacloprid	97.5	162	164			1.31
	Linuron	83.3	74.6	80.2			7.22
	Linuron	88.1	104	97.7			5.91
	Mandestrobin	90.9	91.5	90.3			1.23
	Mandestrobin	99.1	112	106			5.58
	MCPP	109	129	131			1.97
	MCPP	115	168	146			12.8
	Naproxen	134	97.4	97.0			0.397
	Naproxen	98.5	117	100			15.0
	Primidone	109	99.4	91.9			7.82
	Primidone	93.3	113	122			7.86
	Pyraclostrobin	77.0	76.7	82.4			7.27
	Pyraclostrobin	91.9	107	101			5.84
	Sucralose	125	118	119			0.910
	Thiamethoxam	97.0	123	136			9.90
	Thiamethoxam	96.0	172	164			4.48

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Tolfenpyrad	53.0	49.2	53.9			9.18
	Tolfenpyrad	57.7	72.3	68.1			5.92
	Triclopyr	121	119	124			4.49
	Triclopyr	102	160	155			2.66

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2281588, 2281589, 2281590, 2281591, 2281592, 2281593

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/07/2021 15:41	Juyoung Kim	2281588
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/07/2021 17:07	Juyoung Kim	2281589
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/07/2021 17:17	Juyoung Kim	2281590
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/07/2021 17:28	Juyoung Kim	2281591
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/07/2021 17:39	Juyoung Kim	2281592
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/07/2021 17:50	Juyoung Kim	2281593
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/08/2021 22:19	Manjita Shrestha	2281588
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/09/2021 01:01	Manjita Shrestha	2281589
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/09/2021 01:16	Manjita Shrestha	2281590
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/09/2021 01:46	Manjita Shrestha	2281591
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/09/2021 02:00	Manjita Shrestha	2281592
	10/07/2021	10/07/2021 12:00	Juyoung Kim	10/09/2021 02:15	Manjita Shrestha	2281593
	10/07/2021	10/07/2021 13:00	Hoor Shaik	10/10/2021 16:53	Juyoung Kim	2281588
	10/07/2021	10/12/2021 09:00	Hoor Shaik	10/13/2021 15:22	Juyoung Kim	2281589
	10/07/2021	10/12/2021 09:00	Hoor Shaik	10/13/2021 15:57	Juyoung Kim	2281590
	10/07/2021	10/12/2021 09:00	Hoor Shaik	10/13/2021 16:31	Juyoung Kim	2281591
	10/07/2021	10/12/2021 09:00	Hoor Shaik	10/13/2021 17:06	Juyoung Kim	2281592
	10/07/2021	10/12/2021 09:00	Hoor Shaik	10/13/2021 17:41	Juyoung Kim	2281593