

Biological Analysis Report

WAS-SECT-2018-01-31-01

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

Event Description: **Black, Wards, Caney, Harbiwood, Little R., Meginis**

Request ID: **RQ-2018-01-29-33**

Customer: **WAS-SECT**

Project ID: **SMP**

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Date Certified: 11-MAR-2018 13:28



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: Chlorophyll/Grain Size/BOD, Microbiology and Molecular.

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: Little River 100 meters upstream of US 90

Collection Date/Time: 01/31/2018 08:35

Field ID: G1WA0073

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963364	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.7		ug/L	P339484	
		Phaeophytin-a	2.1		ug/L	P339484	
		Chlorophyll-a, Uncorrected	5.0		ug/L	P339484	

Sample Location: Little River 100 meters upstream of US 90

Collection Date/Time: 01/31/2018 08:35

Field ID: G1WA0073

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963370	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	770.1		MPN/100 mL	P339164	

Sample Location: Little River 100 meters upstream of US 90

Collection Date/Time: 01/31/2018 08:35

Field ID: G1WA0073

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963378	SOP-PCR-1.0	HF183-qPCR**	1.3E+03	I	GEU/100 mL	P340257	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: Megginnis Arm Run Downstream of Sharer

Collection Date/Time: 01/31/2018 09:25

Field ID: G1WA0033

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963365	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.8		ug/L	P339484	
		Phaeophytin-a	0.42	I	ug/L	P339484	
		Chlorophyll-a, Uncorrected	3.1		ug/L	P339484	

Sample Location: Megginnis Arm Run Downstream of Sharer

Collection Date/Time: 01/31/2018 09:25

Field ID: G1WA0033

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963371	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	161.6		MPN/100 mL	P339164	

Sample Location: Megginnis Arm Run Downstream of Sharer

Collection Date/Time: 01/31/2018 09:25

Field ID: G1WA0033

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963379	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Sample Location: Harbinwood Estates Drain

Collection Date/Time: 01/31/2018 10:00

Field ID: G1WA0034

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963366	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.3		ug/L	P339484	
		Phaeophytin-a	1.4		ug/L	P339484	
		Chlorophyll-a, Uncorrected	6.2		ug/L	P339484	

Sample Location: Harbinwood Estates Drain

Collection Date/Time: 01/31/2018 10:00

Field ID: G1WA0034

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963372	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	5.2		MPN/100 mL	P339164	

Sample Location: Harbinwood Estates Drain

Collection Date/Time: 01/31/2018 10:00

Field ID: G1WA0034

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963380	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Sample Location: Wards Creek upstream of bridge at CR 259

Collection Date/Time: 01/31/2018 11:00

Field ID: G1WA0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963367	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.2		ug/L	P339484	
		Phaeophytin-a	1.1	I	ug/L	P339484	
		Chlorophyll-a, Uncorrected	4.0		ug/L	P339484	

Sample Location: Wards Creek upstream of bridge at CR 259

Collection Date/Time: 01/31/2018 11:00

Field ID: G1WA0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963373	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	11.0		MPN/100 mL	P339164	

Sample Location: Wards Creek upstream of bridge at CR 259

Collection Date/Time: 01/31/2018 11:00

Field ID: G1WA0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963377	SOP-PCR-1.0	HF183-qPCR**	280	U	GEU/100 mL	P339080	
	SOP-PCR-1.4	BacR-qPCR**	3.0E+03	U	TSC/100 mL	P339080	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Ref. Method and Comment:
 SOP-PCR-1.0: No amplification of HF183 marker.
 SOP-PCR-1.4: No amplification of BACR marker.

Sample Location: Caney Creek upstream of US 90

Collection Date/Time: 01/31/2018 11:35

Field ID: G1WA0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963368	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.1		ug/L	P339484	
		Phaeophytin-a	0.71	I	ug/L	P339484	
		Chlorophyll-a, Uncorrected	2.7		ug/L	P339484	

Sample Location: Caney Creek upstream of US 90

Collection Date/Time: 01/31/2018 11:35

Field ID: G1WA0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963374	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	325.5		MPN/100 mL	P339164	

Sample Location: Caney Creek upstream of US 90

Collection Date/Time: 01/31/2018 11:35

Field ID: G1WA0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963376	SOP-PCR-1.0	HF183-qPCR**	180	T	GEU/100 mL	P338707	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Sample Location: Black Creek upstream of CR158

Collection Date/Time: 01/31/2018 12:10

Field ID: G1WA0072

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963369	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.3		ug/L	P339484	
		Phaeophytin-a	0.40	U	ug/L	P339484	
		Chlorophyll-a, Uncorrected	2.5		ug/L	P339484	

Sample Location: Black Creek upstream of CR158

Collection Date/Time: 01/31/2018 12:10

Field ID: G1WA0072

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963375	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray	325.5		MPN/100 mL	P339164	

Sample Location: Black Creek upstream of CR158

Collection Date/Time: 01/31/2018 12:10

Field ID: G1WA0072

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963381	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)

Batch ID: P339484

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.55	U	ug/L
Chlorophyll-a, Uncorrected	0.40	U	ug/L
Phaeophytin-a	0.40	U	ug/L

Reference Method: SM 9223 Quanti-Tray

Batch ID: P339164

Component	Result	Code	Units
Escherichia Coli-Quanti-Tray	1.0	U	MPN/100 mL

Reference Method: SOP-PCR-1.0

Batch ID: P338707

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.0

Batch ID: P339080

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Quality Assurance Report Method Blank Results

Reference Method: SOP-PCR-1.0
Batch ID: P340257

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.4
Batch ID: P339080

Component	Result	Code	Units
BacR-qPCR	3.0E+03	U	TSC/100 mL
BacR-qPCR	3.0E+03	U	TSC/100 mL

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P339484

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	112		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P338707

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	122	114	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P339080

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	112	87.7	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P340257

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	102	95.1	P/P	50 - 175
HF183-qPCR	122	124	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P339080

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	105	111	P/P	50 - 175
BacR-qPCR	100	113	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P338707

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1958064	HF183-qPCR	108		P	50 - 175
1958092	HF183-qPCR	94.3		P	50 - 175
1958093	HF183-qPCR	86.7		P	50 - 175
1958094	HF183-qPCR	96.8		P	50 - 175
1958503	HF183-qPCR	83.7		P	50 - 175
1958586	HF183-qPCR	60.1		P	50 - 175
1960208	HF183-qPCR	92.9		P	50 - 175
1960209	HF183-qPCR	83.9		P	50 - 175
1960210	HF183-qPCR	84.2		P	50 - 175
1961509	HF183-qPCR	93.7		P	50 - 175
1962140	HF183-qPCR	89.4	92.6	P/P	50 - 175
1963376	HF183-qPCR	97.2		P	50 - 175
1963584	HF183-qPCR	86.0		P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P339080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960211	HF183-qPCR	86.4		P	50 - 175
1960432	HF183-qPCR	98.3		P	50 - 175
1960444	HF183-qPCR	86.7		P	50 - 175
1960445	HF183-qPCR	82.7		P	50 - 175
1960446	HF183-qPCR	89.5		P	50 - 175
1963189	HF183-qPCR	99.1	82.3	P/P	50 - 175
1963190	HF183-qPCR	81.9		P	50 - 175
1963377	HF183-qPCR	90.5		P	50 - 175
1964711	HF183-qPCR	96.8		P	50 - 175
1965581	HF183-qPCR	84.2		P	50 - 175
1965582	HF183-qPCR	83.5		P	50 - 175
1965800	HF183-qPCR	78.1		P	50 - 175
1965801	HF183-qPCR	85.5		P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P340257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963137	HF183-qPCR	106		P	50 - 175
1963138	HF183-qPCR	105		P	50 - 175
1963139	HF183-qPCR	74.7		P	50 - 175
1963140	HF183-qPCR	77.6		P	50 - 175
1963378	HF183-qPCR	72.6		P	50 - 175
1963529	HF183-qPCR	65.7		P	50 - 175
1963576	HF183-qPCR	75.4		P	50 - 175
1963834	HF183-qPCR	73.2		P	50 - 175
1964002	HF183-qPCR	58.1		P	50 - 175
1964003	HF183-qPCR	64.8	60.5	P/P	50 - 175
1969471	HF183-qPCR	78.6		P	50 - 175
1969472	HF183-qPCR	82.5		P	50 - 175
1969473	HF183-qPCR	74.1		P	50 - 175
1969474	HF183-qPCR	75.7		P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.4
 Batch ID: P339080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1960444	BacR-qPCR	63.1		P	50 - 175
1960445	BacR-qPCR	75.3		P	50 - 175
1960446	BacR-qPCR	73.3		P	50 - 175
1961602	BacR-qPCR	83.6		P	50 - 175
1963137	BacR-qPCR	57.2		P	50 - 175
1963138	BacR-qPCR	58.3		P	50 - 175
1963189	BacR-qPCR	64.7	72.9	P/P	50 - 175
1963190	BacR-qPCR	66.0		P	50 - 175
1963377	BacR-qPCR	83.5		P	50 - 175
1964711	BacR-qPCR	72.0		P	50 - 175
1965581	BacR-qPCR	67.6		P	50 - 175
1965582	BacR-qPCR	79.5		P	50 - 175
1965801	BacR-qPCR	74.9		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
 Batch ID: P339484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963223	Chlorophyll-a, Corrected	4.68	Sample	P	0 - 25
1963223	Chlorophyll-a, Uncorrected	5.11	Sample	P	0 - 25
1963223	Phaeophytin-a	7.96	Sample	P	0 - 25

Reference Method: SM 9223 Quanti-Tray
 Batch ID: P339164

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963050	Escherichia Coli-Quanti-Tray	25.7	Sample	P	0 - 80

Reference Method: SOP-PCR-1.0
 Batch ID: P338707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962140	HF183-qPCR	3.51	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0
 Batch ID: P339080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963189	HF183-qPCR	18.5	Spike	P	0 - 25

Quality Assurance Report Precision

Reference Method: SOP-PCR-1.0
 Batch ID: P340257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964003	HF183-qPCR	6.94	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
 Batch ID: P339080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963189	BacR-qPCR	11.8	Spike	P	0 - 25

* 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: 1963376
 Field Sample ID: G1WA0014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	124	P	50 - 300

Lab Sample ID: 1963377
 Field Sample ID: G1WA0002

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	125	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	118	P	50 - 300

Lab Sample ID: 1963378
 Field Sample ID: G1WA0073

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	101	P	50 - 300

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery			MS % Recovery			LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected	112							4.68	
	Chlorophyll-a, Uncorrected								5.11	
	Phaeophytin-a								7.96	
SM 9223 Quanti-Tray SOP-PCR-1.0	Escherichia Coli-Quanti-Tray								25.7	
	HF183-qPCR	114	122		93.7	89.4	92.6			3.51
	HF183-qPCR	87.7	112		108	82.3	81.9			18.5
	HF183-qPCR	102	124	122	90.5	105	74.7			6.94
SOP-PCR-1.4	BacR-qPCR	95.1			77.6					
		105	113	100	57.2	58.3	64.7			11.8
		111			72.9					

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	1963364, 1963365, 1963366, 1963367, 1963368, 1963369
SM 9223 Quanti-Tray / E31780	Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems	1963370, 1963371, 1963372, 1963373, 1963374, 1963375
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	1963376, 1963377, 1963378
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	1963377
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	1963376, 1963377, 1963378, 1963379, 1963380, 1963381

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	01/31/2018	01/31/2018 15:21	Cathy Sherrer	02/06/2018	Kim M. Spencer	1963364, 1963365, 1963366, 1963367, 1963368, 1963369
SM 9223 Quanti-Tray	01/31/2018	01/31/2018 15:50	Edwin Gonzalez-Soto	02/01/2018 11:00	Carina A. Tull	1963370, 1963371, 1963372, 1963373, 1963374, 1963375
SOP-PCR-1.0	01/31/2018	01/31/2018 15:45	Avril Wood	02/07/2018	Sarah Menz	1963376
	01/31/2018	01/31/2018 15:45	Mailin Lopez	02/09/2018	Sarah Menz	1963377
	01/31/2018	01/31/2018 15:45	Puja Jasrotia	02/23/2018	Sarah Menz	1963378
SOP-PCR-1.4	01/31/2018	01/31/2018 15:45	Mailin Lopez	02/13/2018	Sarah Menz	1963377
SOP-PCR-4.0	01/31/2018	01/31/2018 15:45	Angela Smith	02/20/2018	Puja Jasrotia	1963376, 1963377, 1963378, 1963379, 1963380, 1963381