

Biological Analysis Report

NW-DIST-2017-11-02-02

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

Overflow Analyses Performed By:
University of West Florida
11000 University Parkway
Pensacola, FL 32514
DOH Accreditation E71969

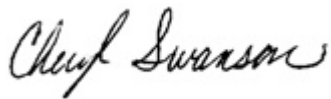
Event Description: **ENR C WBID 49A 722 742 789 712**
Request ID: **RQ-2017-10-09-21**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208A
Pensacola, FL 32502-5794
Attn: Michael King

For additional information please contact
Cheryl Swanson - Administrator
J. Marshall Faircloth - Aquatic Toxicology
Jacqueline Savage - Bench Biology
Jacqueline Savage - Microbiology
Puja Jasrotia, Ph.D. - Molecular Biology
Jennifer Walters - Taxonomy (Invertebrate & Algal)
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8177

Certified by: Cheryl A. Swanson, Program Administrator

Date Certified: 13-APR-2018 12:08



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, Molecular and Overflow.

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: LA GRANGE BAYOU MIDDLE

Collection Date/Time: 11/01/2017 11:35

Field ID: G3NW0036

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942567	SM 10200 H (mod.)	Chlorophyll-a, Corrected	13		ug/L	P335247	
		Phaeophytin-a	0.46	I	ug/L	P335247	
		Chlorophyll-a, Uncorrected	14		ug/L	P335247	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: BASIN BAYOU AT INLET

Collection Date/Time: 11/01/2017 12:30

Field ID: G3NW0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942574	Enterolert/QT	Enterococci-Quanti-Tray	10		MPN/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	11	B	cfu/100 mL		

Sample Location: BASIN BAYOU AT INLET

Collection Date/Time: 11/01/2017 12:30

Field ID: G3NW0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942580	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Sample Location: BASIN BAYOU AT INLET

Collection Date/Time: 11/01/2017 12:30

Field ID: G3NW0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942568	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.4	I	ug/L	P335247	
		Phaeophytin-a	0.40	U	ug/L	P335247	
		Chlorophyll-a, Uncorrected	1.5		ug/L	P335247	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: MULLET CREEK UPSTREAM OF HWY 20

Collection Date/Time: 11/01/2017 13:10

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942575	Enterolert/QT	Enterococci-Quanti-Tray	160		MPN/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	200		cfu/100 mL		

Sample Location: MULLET CREEK UPSTREAM OF HWY 20

Collection Date/Time: 11/01/2017 13:10

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942569	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.83	I	ug/L	P335247	
		Phaeophytin-a	0.40	U	ug/L	P335247	
		Chlorophyll-a, Uncorrected	0.88	I	ug/L	P335247	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: MULLET CREEK UPSTREAM OF HWY 20

Collection Date/Time: 11/01/2017 13:10

Field ID: G3NW0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942583	SOP-PCR-1.0	HF183-qPCR**	4.8	T	GEU/100 mL	P336561	
	SOP-PCR-1.3	GFD-purified-qPCR**	57	T	TSC/100 mL	P334197	LCS, MS, RPD
	SOP-PCR-1.4	BacR-qPCR**	590	T	TSC/100 mL	P334519	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Ref. Method and Comment:
 SOP-PCR-1.0: Precision data unavailable for Analysis Batch # A80921.

Sample Location: MULLET CREEK UPSTREAM OF HWY 20

Collection Date/Time: 11/01/2017 13:15

Field ID: G3NW0137DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942576	Enterolert/QT	Enterococci-Quanti-Tray	146		MPN/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	167	B	cfu/100 mL		

Sample Location: MULLET CREEK UPSTREAM OF HWY 20

Collection Date/Time: 11/01/2017 13:15

Field ID: G3NW0137DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942570	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.79	I	ug/L	P335247	
		Phaeophytin-a	0.40	U	ug/L	P335247	
		Chlorophyll-a, Uncorrected	0.88	I	ug/L	P335247	

Ref. Method and Comment:
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: MULLET CREEK UPSTREAM OF HWY 20

Collection Date/Time: 11/01/2017 13:20

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942577	Enterolert/QT	Enterococci-Quanti-Tray	1	U	MPN/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U	cfu/100 mL		

Sample Location: MULLET CREEK UPSTREAM OF HWY 20

Collection Date/Time: 11/01/2017 13:20

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942571	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P335247	
		Phaeophytin-a	0.40	U	ug/L	P335247	
		Chlorophyll-a, Uncorrected	0.40	U	ug/L	P335247	

Ref. Method and Comment:
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: ROCKY BAYOU MOUTH

Collection Date/Time: 11/01/2017 14:10

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942581	SOP-PCR-4.0	HF183 - Human Source Marker**	No Result				

Ref. Method and Comment:
 SOP-PCR-4.0: No micro sample received in Overflow Lab

Sample Location: ROCKY BAYOU MOUTH

Collection Date/Time: 11/01/2017 14:10

Field ID: G3NW0031

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942572	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.9		ug/L	P335247	
		Phaeophytin-a	0.40	U	ug/L	P335247	
		Chlorophyll-a, Uncorrected	1.9		ug/L	P335247	

Ref. Method and Comment:
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: CINCO BAYOU WEST OF CINCO BRIDGE

Collection Date/Time: 11/01/2017 15:15

Field ID: G3NW0088

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942582	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Sample Location: CINCO BAYOU WEST OF CINCO BRIDGE

Collection Date/Time: 11/01/2017 15:15

Field ID: G3NW0088

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1942573	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.7		ug/L	P335247	
		Phaeophytin-a	0.40	U	ug/L	P335247	
		Chlorophyll-a, Uncorrected	2.6		ug/L	P335247	

Ref. Method and Comment:
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: CINCO BAYOU WEST OF CINCO BRIDGE

Collection Date/Time: 11/01/2017 15:15

Field ID: G3NW0088

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1971520	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
 Batch ID: P335247

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

Quality Assurance Report Method Blank Results

Reference Method: SOP-PCR-1.0
Batch ID: P336561

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

Reference Method: SOP-PCR-1.3
Batch ID: P334197

Component	Result	Code	Units
GFD-purified-qPCR	340	U	TSC/100 mL
GFD-purified-qPCR	340	U	TSC/100 mL
GFD-purified-qPCR	340	U	TSC/100 mL

Reference Method: SOP-PCR-1.4
Batch ID: P334519

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P335247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	106		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P336561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	108	115	P/P	50 - 175
HF183-qPCR	67.2	110	P/P	50 - 175

Reference Method: SOP-PCR-1.3
Batch ID: P334197

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	24.9	149	F/P	50 - 175
GFD-purified-qPCR	87.9	149	P/P	50 - 175
GFD-purified-qPCR	11.5	24.9	F/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P334519

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	91.6	103	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0

Batch ID: P336561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1942583	HF183-qPCR	68.5		P	50 - 175
1943494	HF183-qPCR	67.8		P	50 - 175
1946368	HF183-qPCR	70.3		P	50 - 175
1947217	HF183-qPCR	75.7		P	50 - 175
1950320	HF183-qPCR	67.8		P	50 - 175
1950321	HF183-qPCR	67.6		P	50 - 175
1951207	HF183-qPCR	99.7		P	50 - 175
1951442	HF183-qPCR	79.1		P	50 - 175
1951443	HF183-qPCR	75.7	74.3	P/P	50 - 175
1951610	HF183-qPCR	92.2		P	50 - 175
1951702	HF183-qPCR	83.4		P	50 - 175
1951703	HF183-qPCR	76.2		P	50 - 175

Reference Method: SOP-PCR-1.3

Batch ID: P334197

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934547	GFD-purified-qPCR	95.4		P	50 - 175
1935007	GFD-purified-qPCR	96.6		P	50 - 175
1935457	GFD-purified-qPCR	77.0		P	50 - 175
1938788	GFD-purified-qPCR	106	106	P/P	50 - 175
1940825	GFD-purified-qPCR	102		P	50 - 175
1940826	GFD-purified-qPCR	13.6		F	50 - 175
1940827	GFD-purified-qPCR	142		P	50 - 175
1940858	GFD-purified-qPCR	81.1	88.9	P/P	50 - 175
1940860	GFD-purified-qPCR	36.5		F	50 - 175
1940861	GFD-purified-qPCR	108		P	50 - 175
1940862	GFD-purified-qPCR	52.2		P	50 - 175
1941076	GFD-purified-qPCR	115		P	50 - 175
1942583	GFD-purified-qPCR	126		P	50 - 175
1942883	GFD-purified-qPCR	124		P	50 - 175
1942884	GFD-purified-qPCR	118		P	50 - 175
1942953	GFD-purified-qPCR	135		P	50 - 175
1943019	GFD-purified-qPCR	123		P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P334519

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938442	BacR-qPCR	57.7		P	50 - 175
1939201	BacR-qPCR	62.8		P	50 - 175
1941909	BacR-qPCR	67.1		P	50 - 175
1941910	BacR-qPCR	61.5	67.9	P/P	50 - 175
1941911	BacR-qPCR	62.2		P	50 - 175
1942583	BacR-qPCR	72.9		P	50 - 175
1942883	BacR-qPCR	56.6		P	50 - 175
1942884	BacR-qPCR	72.8		P	50 - 175

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P335247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1942644	Chlorophyll-a, Corrected	20.5	Sample	P	0 - 25
1942644	Chlorophyll-a, Uncorrected	24.3	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P336561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1951443	HF183-qPCR	1.80	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
Batch ID: P334197

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940858	GFD-purified-qPCR	9.16	Spike	P	0 - 25
1946394	GFD-purified-qPCR	13.5	Sample	P	0 - 25
1946394	GFD-purified-qPCR	126	Spike	F	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P334519

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1941910	BacR-qPCR	9.91	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: 1942583
Field Sample ID: G3NW0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	55.8	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	93.8	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	106							20.5	
	Chlorophyll-a, Uncorrected								24.3	
SOP-PCR-1.0	HF183-qPCR	108	110	67.2	79.1	75.7	74.3			1.80
		115			92.2					
SOP-PCR-1.3	GFD-purified-qPCR	24.9	149	24.9	106	106	102		13.5	126
		149			13.6					9.16

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
SOP-PCR-1.4	BacR-qPCR	103	91.6	67.1	61.5	67.9			9.91
				62.2					

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
Enterolert/QT / E71969	Enterococci by Enterolert Quanti-Tray method by UWF Overflow Laboratory for NWD	1942574, 1942575, 1942576, 1942577, 1971520
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	1942567, 1942568, 1942569, 1942570, 1942571, 1942572, 1942573
SM 9222 D / E71969	Fecal coliforms by membrane filter method by UWF Overflow Laboratory for NWD	1942574, 1942575, 1942576, 1942577
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	1942583
SOP-PCR-1.3 / E31780	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	1942583
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	1942583
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	1942580, 1942581, 1942582, 1942583

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
Enterolert/QT	11/01/2017	11/01/2017 17:55		11/02/2017 18:21	UWF Lab	1942574, 1942575, 1942576, 1942577, 1971520
SM 10200 H (mod.)	11/02/2017	11/02/2017 15:30	Cathy Sherrer	11/14/2017 07:40	Kim M. Spencer	1942567, 1942568, 1942569, 1942570, 1942571, 1942572, 1942573
SM 9222 D	11/01/2017	11/01/2017 18:05		11/02/2017 16:25	UWF Lab	1942574, 1942575, 1942576, 1942577
SOP-PCR-1.0	11/02/2017	11/02/2017 13:30	Sarah Menz	12/14/2017 10:03	Sarah Menz	1942583
SOP-PCR-1.3	11/02/2017	11/02/2017 13:30	Sarah Menz	11/13/2017 09:27	Sarah Menz	1942583
SOP-PCR-1.4	11/02/2017	11/02/2017 13:30	Sarah Menz	11/20/2017 09:35	Sarah Menz	1942583
SOP-PCR-4.0	11/02/2017	11/02/2017 13:30	Avril Wood	12/12/2017 11:51	Puja Jasrotia	1942580, 1942581, 1942582, 1942583