CHAIN OF	CUSTODY	RECORE

Eurofins | mgt | Uni F.3 Building F. 16 Mars Road Lann Cown Yellot NSW 2066 P. 401 2 9403 M00 F. EnviroSerglat/Skidjeurofins coth au

Eurofins | mgt | Unit 1 21 Smallercog Place Muratre | GLD 4172 | P | viol 7 3902 etcc | EryecSample GLD @varpfins.com au

Eurofins | mgt | 2 mg/ton Tolin Chine Olesfeigh 1963 1966 | 5090 | F | 41 3 8564 5090 | E | EnvisSampti-Vicigliaurofins com iss

C	ompany	CH2M		Purcha	se Order	45010	31657					Project Manager	Luke Cler	ments		Pn	ject Na	me	Defe	ence Ho	Isworthy PFAS	
	Address	Level 7, 9 Help Street, (Chatswood NSW	Eurofi Que	ns jægt de Ne							Project No	0382				ronic Re Format		Esd	at		
	itact Name	2067 Luke Clements / Bradle Frank / Campbell Youn		Tilevel)												Ema	il for Re	euits	Also	email l	orts@esdat.com luke.clements@ :@ch2m.com	n.au ch2m.com
Conta	nct Phone Ne	99500200	*:	specify Total or	(e)	0000	Suite)			Surte)							rn Arou quireme		□ 10	AY"	2 DAY	3 DAY* * Surcharges apply and and Defence TAT)
Spec	ial Direction	COC for samples arrivi PFAS Analysis require		Analysis repended please	PFAS (Defence Suite)	Major anions and cations	PFAS Trace (Defence Suite)	표	JQC	ASLP PFAS (Defence Suite)	CEC							Conta	-	H1 (Std.)		of Shipment
	ignature)	Brad Coates /Thomas Fra	ınk / Campbell Young	When melet are	PFAS (Major ani	PFAS Trac			ASLP PFA						1L Plessic	250ml. Plestic 125ml. Plestic	200ml. Amber Glass	40mLvisi nL Amber Glass	a a	Courier (#	d
(Ti	ne / Date)		26/19/17													11.6	250ml	200mL As	40mLvial 125mL Amber (Postal	
Ne		Clent Sample ID	Oata	Matrix																	Sample Comments	I / DG Hazard Warning
1		0382_SW001_170926	26/09/17	Water	X	X										П						
1		0382_SW002_170926	26/09/17	Water	X	X										П						
3		0382_SW003_170926	26/09/17	Water	X	X									1	П		T				
4		0382_SW004_170926	26/09/17	Water	X	X										Ħ	Ť	Ħ		Ħ		
5		0382_SW005_170926	26/09/17	Water	X	×										H	1	Ħ		\forall		
6		0382_SW006_170925	26/09/17	Water	X	X										H		Н		+		
7		0382_SW007_170925	26/09/17	Water	X	X	-									H	+		+	H		
	_	0382_SW008_170925	26/09/17	Water	×	X										Н	+	Н		+	1	
,		0382_SW009_170926	26/09/17	Water	X	X										H	+	H	H	+		
	-		26/09/17	Water		X										H	+	H	-	+	-	
		0382_SW021_170926	-	_	X		-				-					Н	+	Н	+	+	-	
11		0382_SW022_170925	25/09/17	Water	X	X	-									H	-		-	1		
12		0382 SW023 170925	25/09/17	Water	X	X						Ar rys		Cert		1				Ш		1.00- =
Lab	oratory Use On	Received By Received By	suala	p	V	BNE MEL					nte eta	44.	Time	254	Signature Signature	-		=		_	Temperature Report Nz	5650H

	CHAIN	OF	CUSTODY	RECORD
-			AND DESCRIPTION OF THE PARTY NAMED IN	

Eurofins | mgt Sydney Lab

Eurofins | mgt

Eurofins | mgt
Melbourne Lab

Company	CH2M		Purcha	nee Order	4501	031657					Project Manager	Luke Clem	nents		Proje	oct Na	ime		Defe	nce H	olswor	rthy PFA	S	
Address		treet, Chatswood NSW		ins mgt ote Ne							Project Ne	0382		E	lectro F	nic R ormal			Esda	ıt				
Contact Name	2067 Luke Clements / Frank / Campbel	Bradley Coates / Thoma	o Thing)											ı	Email	for R	isults		Also	derp.labreports@esdat.com.au Also email luke.clements@ch2m.com brad.coates@ch2m.com				
Contact Phone Na	99500200		Total Total	te)	Suos	Suite)			Suite)						Turr	n Arou uireme			□ 1 DAY*		* Sur		3 DAY*	
Special Direction	COC for samples PFAS Analysis re	arriving 26-09-2017. equired.	Analysis repared pleas	PFAS (Defence Suite)	Major anions and cabons	PFAS Trace (Defence Suite)	£	T0C	ASLP PFAS (Defence Suite)	OEC					Containers S DAY (Std.)									
Relinguished by (Signature)	Brad Coates /Thom	nas Frank / Campbell Youn	9	PFAS (Major an	PFAS Trac			ASLP PFA					3	250nt Plastic	125ot Place	200mL Anther Gless	4Omt, visi	125mL Anther Glass	la la	Ø	Courier (# Hand Delive		
(Time / Date)		26/19/17												=	250ml	125m	200ml A	404	125mL A			Postal		
Hz	Client Sample ID	Date	Matrix												1	1				-	Sam	ple Comme	nts / DG	Hazard Warni
1	0382_SW024_170925	26/09/17	Water	X	X																			
2	0382_SW025_170926	26/09/17	Water	X	X																			
3	0382_SW026_170926	26/09/17	Water	X	X																			
4	0382_SW015_170926	26/09/17	Water	X	X																			
5	0382_QC1SW01_170925	25/09/17	Water	X	X																			
6	0382_QC2SW01_170925	25/09/17	Water	X	X										Ī						Tr	iplicate - p	lease fo	rward to ALS
7	0382_QC301_170925	25/09/17	Water	X											Ī						RE	В		
	0382_QC501_170925	25/09/17	Water	X												Ī	T	Ī			TE	3		
,	0382_QC302_170926	26/09/17	Water	X											T	Ī	T	Ī			RI	В		
16	0382_QC502_170926	26/09/17	Water	X											T	T	T	T			TE	3		
n															T	T	T	T						
12															T		T	T						
Laboratory Use 0	Received By			SYD E	BNE MEL	. PER	ADL NEW) DAR	Da	ate		Time		Signature	-						ī	l'emperature		65079
Caporatory USE U	Received By			SYD I E	BNE MEL	. PER	ADL NEW	J DAR	Da	ate		Time		Signature								Report Na	1	10.80



Melbourne3-5 Kingston Town Close
Oakleigh Vic 3166
Phone: +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone: +61 2 9900 8400 NATA # 1261 Site # 18217

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Phone: +61 7 3902 4600 NATA # 1261 Site # 20794

Perth 2/91 Leach Highway Kewdale WA 6105 Phone : +61 8 9251 9600 NATA # 1261 Site # 23736

ABN - 50 005 085 521

e.mail : EnviroSales@eurofins.com

web: www.eurofins.com.au

Sample Receipt Advice

Company name: CH2M Hill Australia Pty Ltd NSW

Contact name: Luke Clements

Project name: DEFENCE HOLSWORTHY PFAS

Project ID: NSW_0382_PFAS COC number: Not provided

Turn around time: 5 Day

Date/Time received: Sep 26, 2017 5:29 PM

Eurofins | mgt reference: 565078

Sample information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- Split sample sent to requested external lab.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

0382_SW001_170926 & 0382_SW002_170926 Not received - Analysis Cancelled| 0382_QC2SW01_170925 Forwarded to ALS

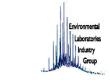
Contact notes

If you have any questions with respect to these samples please contact:

Andrew Black on Phone : or by e.mail: Andrew.Black@labmark.com.au

Results will be delivered electronically via e.mail to Luke Clements - Luke.Clements@ch2m.com.au.







Phone:

Fax:

Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271

02 9950 0200

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone: +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 4600 NATA # 1261 Site # 20794 Perth 2/91 Leach Highway Kewdale WA 6105 Phone: +61 8 9251 9600 NATA # 1261 Site # 23736

Company Name: CH2M Hill Australia Pty Ltd NSW

Address: Level 7, 9 Help St

Chatswood NSW 2067

Project Name: DEFENCE HOLSWORTHY PFAS

Project ID: NSW_0382_PFAS

 Order No.:
 4501034657
 Received:
 Sep 26, 2017 5:29 PM

 Report #:
 565078
 Due:
 Oct 4, 2017

 Due:
 Oct 4, 2017

 Priority:
 5 Day

Contact Name: Luke Clements

Eurofins | mgt Analytical Services Manager : Andrew Black

		Sa	mple Detail			CANCELLED	Major Anions	Major Cations	Per- and Polyfluoroalkyl Substances (PFASs)
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	271		Х	Х	Х	
	ney Laboratory								
	bane Laboratory								Х
	h Laboratory - N rnal Laboratory		36						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	0382_SW003_ 170926	Sep 26, 2017		Water	S17-Se32059		х	х	х
2	0382_SW004_ 170926	Sep 26, 2017	_	Water	S17-Se32060		Х	х	х
3	0382_SW005_ 170926	Sep 26, 2017		Water	S17-Se32061		Х	х	х
4	0382_SW006_ 170925	Sep 26, 2017		Water	S17-Se32062		Х	Х	х
5	0382_SW007_ 170925	Sep 26, 2017		Water	S17-Se32063		Х	х	х
6	0382_SW008_	Sep 26, 2017		Water	S17-Se32064		Х	Х	Х



Phone:

Fax:

Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271

02 9950 0200

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone: +61 2 9900 8400
NATA # 1261 Site # 18217

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Company Name: CH2M Hill Australia Pty Ltd NSW

Address: Level 7, 9 Help St

Chatswood NSW 2067

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 5 Day

Contact Name: Luke Clements

Eurofins | mgt Analytical Services Manager : Andrew Black

		Sam	ple Detail		CANCELLED	Major Anions	Major Cations	Per- and Polyfluoroalkyl Substances (PFASs)
Mell	bourne Laborato	ory - NATA Site #	1254 & 14271		Х	Х	Х	
Syd	ney Laboratory	- NATA Site # 182	17					
		y - NATA Site # 20						Х
Pert		IATA Site # 23736	3					
_	170925	2 22 22/2		0.50000				
7	0382_SW009_ 170926	Sep 26, 2017	Water	S17-Se32065		Х	Х	Х
8	0382_SW021_ 170926	Sep 26, 2017	Water	S17-Se32066		х	х	Х
9	0382_SW022_ 170925	Sep 26, 2017	Water	S17-Se32067		Х	х	х
10	0382_SW023_ 170925	Sep 26, 2017	Water	S17-Se32068		Х	х	х
11	0382_SW024_ 170925	Sep 26, 2017	Water	S17-Se32069		Х	Х	Х
12	0382_SW025_ 170926	Sep 26, 2017	Water	S17-Se32070		Х	х	х
13	0382_SW026_	Sep 26, 2017	Water	S17-Se32071		Х	Х	Х



Phone:

Fax:

Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271

02 9950 0200

Sydney
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Lane Cove West NSW 2066
Phone: +61 2 9900 8400
NATA # 1261 Site # 18217

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Company Name: CH2M Hill Australia Pty Ltd NSW

Address: Level 7, 9 Help St

Chatswood NSW 2067

Project Name: DEFENCE HOLSWORTHY PFAS

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 Due:
 Oct 4, 2017

 Priority:
 5 Day

Contact Name: Luke Clements

Eurofins | mgt Analytical Services Manager : Andrew Black

		Sa	mple Detail			CANCELLED	Major Anions	Major Cations	Per- and Polyfluoroalkyl Substances (PFASs)
Melk	ourne Laborato	ory - NATA Site	# 1254 & 142	271		Х	Х	Х	
Syd	ney Laboratory	- NATA Site # 1	8217						
Bris	bane Laborator	y - NATA Site #	20794						Х
Pert	<mark>h Laboratory - N</mark>	NATA Site # 237	36	ı	1				
	170926								
14	0382_SW015_ 170926	Sep 26, 2017		Water	S17-Se32072		Х	Х	Х
15	0382_QC101_ 170925	Sep 25, 2017		Water	S17-Se32073		Х	х	Х
16	0382_QC301_ 170925	Sep 25, 2017		Water	S17-Se32074		Х	х	х
17	0382_QC302_ 170925	Sep 25, 2017		Water	S17-Se32075		х	х	х
18	0382_SW001_ 170926	Sep 26, 2017		Water	S17-Se32558	Х			
19	0382_SW002_ 170926	Sep 26, 2017		Water	S17-Se32559	Х			
20	0382_QC501_	Sep 25, 2017		Water	S17-Se32570	Х			



Melbourne 2-5 Kingston Town Close Oakleigh VIC 3166 Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271 Sydney
Unit F3, Building F
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NATA # 1261 Site # 18217

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Phone: +61 7 3902 4600 NATA # 1261 Site # 20794 Perth 2/91 Leach Highway Kewdale WA 6105 Phone: +61 8 9251 9600 NATA # 1261 Site # 23736

Sep 26, 2017 5:29 PM

Company Name: CH2M Hill Australia Pty Ltd NSW Order No.: 4501034657 Received:

 Address:
 Level 7, 9 Help St
 Report #:
 565078
 Due:
 Oct 4, 2017

 Chatswood
 Phone:
 02 9950 0200
 Priority:
 5 Day

NSW 2067 Fax: Contact Name: Luke Clements

Project Name: DEFENCE HOLSWORTHY PFAS

Project ID: NSW_0382_PFAS

Eurofins | mgt Analytical Services Manager : Andrew Black

		Sa	ample Detail			CANCELLED	Major Anions	Major Cations	Per- and Polyfluoroalkyl Substances (PFASs)	
Melk	ourne Laborato	ory - NATA Site	# 1254 & 142	271		Х	Х	Х		
	ney Laboratory									
	bane Laborator								Х	
Pert	h Laboratory - N	NATA Site # 237	736							
	170925									
21	0382_QC502_ 170925	Sep 25, 2017		Water	S17-Se32571	Х				
Test	Counts					4	17	17	17	Ì





Certificate of Analysis

NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

CH2M Hill Australia Pty Ltd NSW Level 7, 9 Help St Chatswood NSW 2067

Attention: Luke Clements

Report 565078-W-V3

Project name DEFENCE HOLSWORTHY PFAS

Project ID NSW_0382_PFAS
Received Date Sep 26, 2017

			2222 244222 4	2222 234224 4	2222 214225 4	2222 214222 4
Client Sample ID			0382_SW003_1 70926	0382_SW004_1 70926	0382_SW005_1 70926	0382_SW006_1 70925
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32059	S17-Se32060	S17-Se32061	S17-Se32062
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 26, 2017	Sep 26, 2017
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	0.04	0.02	N090.02	N090.02
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	N090.09	N090.03	N090.03	N090.02
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	N090.02	< 0.01	N090.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	N090.05	^{N09} 0.02	N090.03	N090.02
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)N15	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	99	93	96	99
13C5-PFPeA (surr.)	1	%	68	73	74	72
13C5-PFHxA (surr.)	1	%	107	121	118	122
13C4-PFHpA (surr.)	1	%	105	122	114	112
13C8-PFOA (surr.)	1	%	91	109	95	89
13C5-PFNA (surr.)	1	%	88	117	93	84
13C6-PFDA (surr.)	1	%	74	96	80	72
13C2-PFUnDA (surr.)	1	%	46	67	56	53
13C2-PFDoDA (surr.)	1	%	51	74	61	55
13C2-PFTeDA (surr.)	1	%	30	42	34	39
Perfluoroalkane sulfonamides (PFASAs)						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{M11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	52	71	55	49
D3-N-MeFOSA (surr.)	1	%	39	51	49	41

Report Number: 565078-W-V3



Client Sample ID			0382_SW003_1 70926	0382_SW004_1 70926	0382_SW005_1 70926	0382_SW006_1 70925
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32059	S17-Se32060	S17-Se32061	S17-Se32062
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 26, 2017	Sep 26, 2017
Test/Reference	LOR	Unit				
Perfluoroalkane sulfonamides (PFASAs)						
D5-N-EtFOSA (surr.)	1	%	55	69	71	58
D7-N-MeFOSE (surr.)	1	%	24	44	27	22
D9-N-EtFOSE (surr.)	1	%	41	55	50	43
D5-N-EtFOSAA (surr.)	1	%	39	61	51	52
D3-N-MeFOSAA (surr.)	1	%	42	65	54	51
Perfluoroalkane sulfonic acids & Perfluoroalkane s	ulfonates (F	PFSAs)				
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	0.04	< 0.01	0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	N090.04	< 0.01	N090.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	N090.28	N090.09	N090.09	N090.07
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	N090.24	^{N09} 0.16	N090.06	^{N09} 0.10
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	94	105	97	101
18O2-PFHxS (surr.)	1	%	98	109	100	96
13C8-PFOS (surr.)	1	%	80	105	80	78
n:2 Fluorotelomer sulfonic acids	•	•				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	169	165	162	160
13C2-6:2 FTSA (surr.)	1	%	131	119	114	127
13C2-8:2 FTSA (surr.)	1	%	78	92	88	79
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.52	0.25	0.15	0.17
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.29	0.18	0.09	0.12
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.57	0.27	0.18	0.19
Sum of WA DER PFAS (n=10)*	0.05	ug/L	0.76	0.32	0.25	0.23
Sum of PFASs (n=28)*	0.1	ug/L	0.8	0.32	0.26	0.23
Ammonia (as N)	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Chloride	1	mg/L	110	65	220	140
Nitrate (as N)	0.02	mg/L	< 0.02	0.03	0.09	0.03
Sulphate (as S)	5	mg/L	15	< 5	< 5	< 5
Alkalinity						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	120	63	110
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	34	< 10
Alkali Metals		<u>, .</u>				
Calcium	0.5	mg/L	9.3	18	27	26
Magnesium	0.5	mg/L	5.8	6.1	14	9.3
Potassium	0.5	mg/L	5.6	5.2	3.5	3.3
Sodium	0.5	mg/L	64	45	120	82



Client Sample ID			0382_SW007_1 70925	0382_SW008_1 70925	0382_SW009_1 70926	0382_SW021_1 70926
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32063	S17-Se32064	S17-Se32065	S17-Se32066
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 26, 2017	Sep 26, 2017
Test/Reference	LOR	Unit		, , ,		
Perfluoroalkyl carboxylic acids (PFCAs)	Lon	01111				
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	N090.02	0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	N090.02	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	93	98	100	87
13C5-PFPeA (surr.)	1	%	85	99	87	80
13C5-PFHxA (surr.)	1	%	123	148	123	123
13C4-PFHpA (surr.)	1	%	117	113	119	116
13C8-PFOA (surr.)	1	%	99	139	105	106
13C5-PFNA (surr.)	1	%	95	120	104	105
13C6-PFDA (surr.)	1	%	77	96	83	80
13C2-PFUnDA (surr.)	1	%	53	63	61	60
13C2-PFDoDA (surr.)	1	%	53	57	66	70
13C2-PFTeDA (surr.)	1	%	30	34	40	44
Perfluoroalkane sulfonamides (PFASAs)	1	1				
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	57	80	70	70
D3-N-MeFOSA (surr.)	1	%	42	38	60	56
D5-N-EtFOSA (surr.)	1	%	51	35	68	67
D7-N-MeFOSE (surr.)	1	%	21	23	37	43
D9-N-EtFOSE (surr.)	1	%	43	35	56	56
D5-N-EtFOSAA (surr.)	1	%	43	57	51	53
D3-N-MeFOSAA (surr.)	1	%	47	63	58	59
Perfluoroalkane sulfonic acids & Perfluoroalkane su	ılfonates (F	PFSAs)				
Perfluorobutanesulfonic acid (PFBS)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	^{N09} 0.14	0.02	^{N09} 0.02	N090.02
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	N090.09	^{N09} 0.04	N090.03	N090.02
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	103	136	104	109
18O2-PFHxS (surr.)	1	%	101	142	110	117
13C8-PFOS (surr.)	1	%	82	105	90	89



Client Sample ID			0382_SW007_1 70925	0382_SW008_1 70925	0382_SW009_1 70926	0382_SW021_1 70926
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32063	S17-Se32064	S17-Se32065	S17-Se32066
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 26, 2017	Sep 26, 2017
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids	•					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	162	INT	139	141
13C2-6:2 FTSA (surr.)	1	%	137	180	91	101
13C2-8:2 FTSA (surr.)	1	%	85	69	65	76
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.23	0.06	0.05	0.04
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.11	0.04	0.03	0.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.25	0.06	0.05	0.04
Sum of WA DER PFAS (n=10)*	0.05	ug/L	0.28	0.07	0.05	< 0.05
Sum of PFASs (n=28)*	0.1	ug/L	0.28	< 0.1	< 0.1	< 0.1
Ammonia (as N)	0.01	mg/L	< 0.01	0.07	< 0.01	< 0.01
Chloride	1	mg/L	110	5100	210	12000
Nitrate (as N)	0.02	mg/L	< 0.02	0.12	0.03	0.05
Sulphate (as S)	5	mg/L	< 5	250	31	520
Alkalinity						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	94	90	160	110
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Alkali Metals						
Calcium	0.5	mg/L	23	170	37	300
Magnesium	0.5	mg/L	6.6	450	26	900
Potassium	0.5	mg/L	3.7	140	9.6	270
Sodium	0.5	mg/L	72	3900	130	5700

Client Sample ID			0382_SW022_1 70925 Water	0382_SW023_1 70925 Water	0382_SW024_1 70925 Water	0382_SW025_1 70926 Water
Sample Matrix Eurofins mgt Sample No.			S17-Se32067	S17-Se32068	S17-Se32069	S17-Se32070
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 26, 2017	Sep 26, 2017
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)N15	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01



Client Sample ID			0382_SW022_1 70925	0382_SW023_1 70925	0382_SW024_1 70925	0382_SW025_1 70926
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32067	S17-Se32068	S17-Se32069	S17-Se32070
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 26, 2017	Sep 26, 2017
Test/Reference	LOR	Unit		• •		, ,
Perfluoroalkyl carboxylic acids (PFCAs)	LOIK	O. III				
13C4-PFBA (surr.)	1	%	78	87	85	90
13C5-PFPeA (surr.)	1	%	69	74	74	85
13C5-PFHxA (surr.)	1	%	108	119	117	121
13C4-PFHpA (surr.)	1	%	110	114	112	113
13C8-PFOA (surr.)	1	%	108	103	108	105
13C5-PFNA (surr.)	1	%	109	104	114	105
13C6-PFDA (surr.)	1	%	90	85	93	84
13C2-PFUnDA (surr.)	1	%	66	71	68	67
13C2-PFDoDA (surr.)	1	%	64	69	65	64
13C2-PFTeDA (surr.)	1	%	32	37	41	45
Perfluoroalkane sulfonamides (PFASAs)						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	77	71	79	72
D3-N-MeFOSA (surr.)	1	%	58	63	56	56
D5-N-EtFOSA (surr.)	1	%	64	62	69	72
D7-N-MeFOSE (surr.)	1	%	40	40	35	36
D9-N-EtFOSE (surr.)	1	%	56	61	51	53
D5-N-EtFOSAA (surr.)	1	%	56	63	59	59
D3-N-MeFOSAA (surr.)	1	% %	64	63	70	69
Perfluoroalkane sulfonic acids & Perfluoroalkane su			2.24			
Perfluorobutanesulfonic acid (PFBs) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11} Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L ug/L	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L ug/L	< 0.01	< 0.01	< 0.01	N090.02
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	% %	95	105	106	106
1802-PFHxS (surr.)	1	%	109	113	92	89
13C8-PFOS (surr.)	1	%	98	93	103	97
n:2 Fluorotelomer sulfonic acids		,,,	- 00		.00	Ū.
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2						
FTSA) ^{N11} 1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11} 1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
FTSA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	134	151	152	158
13C2-6:2 FTSA (surr.)	1	%	96	103	112	86
13C2-8:2 FTSA (surr.)	1	%	86	70	79	80



Client Sample ID			0382_SW022_1 70925	0382_SW023_1 70925	0382_SW024_1 70925	0382_SW025_1 70926
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32067	S17-Se32068	S17-Se32069	S17-Se32070
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 26, 2017	Sep 26, 2017
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.02
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.02
Sum of WA DER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=28)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1
Ammonia (as N)	0.01	mg/L	0.02	< 0.01	< 0.01	< 0.01
Chloride	1	mg/L	69	100	110	120
Nitrate (as N)	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Sulphate (as S)	5	mg/L	< 5	< 5	< 5	5.1
Alkalinity						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	190
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Alkali Metals						
Calcium	0.5	mg/L	1.7	1.0	1.4	7.6
Magnesium	0.5	mg/L	5.0	6.9	7.3	7.2
Potassium	0.5	mg/L	1.6	1.4	1.8	3.0
Sodium	0.5	mg/L	34	47	50	120

Client Sample ID			0382_SW026_1 70926	0382_SW015_1 70926	0382_QC101_1 70925	0382_QC301_1 70925
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32071	S17-Se32072	S17-Se32073	S17-Se32074
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 25, 2017	Sep 25, 2017
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)		•				
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	N090.02	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	N090.02	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	^{N09} < 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	^{N09} 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)N15	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	85	83	60	84
13C5-PFPeA (surr.)	1	%	82	80	73	91
13C5-PFHxA (surr.)	1	%	121	118	102	108
13C4-PFHpA (surr.)	1	%	119	113	111	113
13C8-PFOA (surr.)	1	%	103	103	109	112
13C5-PFNA (surr.)	1	%	100	106	100	109
13C6-PFDA (surr.)	1	%	73	86	85	105
13C2-PFUnDA (surr.)	1	%	56	61	67	101
13C2-PFDoDA (surr.)	1	%	64	58	60	86
13C2-PFTeDA (surr.)	1	%	47	38	51	80



Client Sample ID			0382_SW026_1 70926	0382_SW015_1 70926	0382_QC101_1 70925	0382_QC301_1 70925
Sample Matrix			Water	Water	Water	Water
Eurofins mgt Sample No.			S17-Se32071	S17-Se32072	S17-Se32073	S17-Se32074
Date Sampled			Sep 26, 2017	Sep 26, 2017	Sep 25, 2017	Sep 25, 2017
Test/Reference	LOR	Unit		, ,		, ,
Perfluoroalkane sulfonamides (PFASAs)	LOIL	O i iii				
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	68	72	68	79
D3-N-MeFOSA (surr.)	1	%	46	50	59	92
D5-N-EtFOSA (surr.)	1	%	53	53	54	84
D7-N-MeFOSE (surr.)	1	%	28	29	49	73
D9-N-EtFOSE (surr.)	1	%	46	46	44	69
D5-N-EtFOSAA (surr.)	1	%	53	56	88	144
D3-N-MeFOSAA (surr.)	1	<u></u> %	61	58	92	137
Perfluoroalkane sulfonic acids & Perfluoroalkane su	`					
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	N09< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	N090.03	N090.08	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	N090.03	N090.07	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	108	107	102	107
18O2-PFHxS (surr.)	1	%	92	86	109	114
13C8-PFOS (surr.)	1	%	89	97	81	94
n:2 Fluorotelomer sulfonic acids 1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
FTSA) ^{N11} 1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
FTSA) ^{N11} 1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
FTSA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	158	151	137	124
13C2-6:2 FTSA (surr.)	1	%	102	127	130	133
13C2-8:2 FTSA (surr.)	1	%	71	78	104	129
PFASs Summations	ı					
Sum (PFHxS + PFOS)*	0.01	ug/L	0.06	0.15	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.03	0.08	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.06	0.16	< 0.01	< 0.01
Sum of WA DER PFAS (n=10)*	0.05	ug/L	0.06	0.2	< 0.05	< 0.05
Sum of PFASs (n=28)*	0.1	ug/L	< 0.1	0.2	< 0.1	< 0.1
Ammonia (as N)	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Chloride	1	mg/L	10000	200	110	< 1
Nitrate (as N)	0.02	mg/L	0.05	< 0.02	< 0.02	< 0.02
Sulphate (as S)	5	mg/L	450	7.1	< 5	< 5



Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled			0382_SW026_1 70926 Water S17-Se32071 Sep 26, 2017	0382_SW015_1 70926 Water S17-Se32072 Sep 26, 2017	0382_QC101_1 70925 Water S17-Se32073 Sep 25, 2017	0382_QC301_1 70925 Water S17-Se32074 Sep 25, 2017
Test/Reference	LOR	Unit				
Alkalinity						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	110	100	< 20	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Alkali Metals						
Calcium	0.5	mg/L	290	8.8	2.5	< 0.5
Magnesium	0.5	mg/L	890	14	6.9	< 0.5
Potassium	0.5	mg/L	260	8.6	1.8	< 0.5
Sodium	0.5	mg/L	4200	120	50	< 0.5

Client Sample ID			0382_QC302_1 70925
Sample Matrix			Water
Eurofins mgt Sample No.			S17-Se32075
Date Sampled			Sep 25, 2017
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)		•	
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01
Perfluorooctanoic acid (PFOA)N11	0.01	ug/L	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01
Perfluorotridecanoic acid (PFTrDA)N15	0.01	ug/L	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01
13C4-PFBA (surr.)	1	%	89
13C5-PFPeA (surr.)	1	%	97
13C5-PFHxA (surr.)	1	%	119
13C4-PFHpA (surr.)	1	%	124
13C8-PFOA (surr.)	1	%	125
13C5-PFNA (surr.)	1	%	119
13C6-PFDA (surr.)	1	%	105
13C2-PFUnDA (surr.)	1	%	93
13C2-PFDoDA (surr.)	1	%	84
13C2-PFTeDA (surr.)	1	%	85
Perfluoroalkane sulfonamides (PFASAs)			
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05



Client Sample ID			0382_QC302_1 70925
Sample Matrix			Water
Eurofins mgt Sample No.			S17-Se32075
Date Sampled			Sep 25, 2017
Test/Reference	LOR	Unit	,,
Perfluoroalkane sulfonamides (PFASAs)	LOIX	Offic	
13C8-FOSA (surr.)	1	%	87
D3-N-MeFOSA (surr.)	1	%	104
D5-N-EtFOSA (surr.)	1	%	104
D7-N-MeFOSE (surr.)	1	%	80
D9-N-EtFOSE (surr.)	1	%	72
D5-N-EtFOSAA (surr.)	1	%	137
D3-N-MeFOSAA (surr.)	1	%	134
Perfluoroalkane sulfonic acids & Perfluoroalkane s			101
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01
13C3-PFBS (surr.)	1	%	112
18O2-PFHxS (surr.)	1	%	115
13C8-PFOS (surr.)	1	%	97
n:2 Fluorotelomer sulfonic acids		,,,	0.
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2			
FTSA) ^{N11}	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N15}	0.01	ug/L	< 0.01
13C2-4:2 FTSA (surr.)	1	%	138
13C2-6:2 FTSA (surr.)	1	%	145
13C2-8:2 FTSA (surr.)	1	%	136
PFASs Summations			
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of WA DER PFAS (n=10)*	0.05	ug/L	< 0.05
Sum of PFASs (n=28)*	0.1	ug/L	< 0.1
Ammonia (as N)	0.01	mg/L	< 0.01
Chloride	1	mg/L	< 1
Nitrate (as N)	0.02	mg/L	< 0.02
Sulphate (as S)	5	mg/L	< 5
Alkalinity			
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10
Alkali Metals			
Calcium	0.5	mg/L	< 0.5
Magnesium	0.5	mg/L	< 0.5
Potassium	0.5	mg/L	< 0.5
Sodium	0.5	mg/L	< 0.5



Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Sep 29, 2017	14 Day
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Sep 29, 2017	14 Day
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Sep 29, 2017	14 Day
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Sep 29, 2017	14 Day
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Major Cations			
Ammonia (as N)	Melbourne	Oct 02, 2017	28 Day
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Alkali Metals	Melbourne	Sep 28, 2017	180 Day
- Method: USEPA 6010 Alkali Metals			
Major Anions			
Chloride	Melbourne	Sep 28, 2017	28 Day
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Nitrate (as N)	Melbourne	Oct 02, 2017	28 Day
- Method: APHA 4500-NO3 Nitrate Nitrogen by FIA			
Sulphate (as S)	Melbourne	Sep 28, 2017	28 Day
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Sep 28, 2017	14 Day
- Method: APHA 2320 Alkalinity by Titration			