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PFAS Contaminated Water Summary, And Protocol, Australia Second PFAS Test/Study Demonstration

CMTA International and the OSEI Corporation performed a trial to remediate PFAS contaminated soil using our technology Oil Spill Eater II (OSE II). The PFAS contaminated soil was provided by an Australian Federal Government Department for the purpose of CMTA and the OSEI Corporation to perform its own trial to demonstrate how effective OSEII is at remediating PFAS contaminated water for waste treatment plants. The trial commenced in Thursday March 20, and concluded in March 28, 2025.

CMTA International with the OSEI Corporation developed a PFAS remediation protocol for the trial. The PFAS Contaminated water was placed in a suitable biological container, not a chemistry test, where OSE II was mixed with natural water, and applied to the contaminated water. Extractions were noted in the protocol and utilized, each time for consistent extraction points understanding the water was mixed and turned 24/7 to reach and maintain homogeneity.

The Eurofins Laboratory, an independent Laboratory, was engaged to perform the extractions in triplicate for each of the prescribed extraction intervals noted in the protocol. Eurofins transported the samples on ice to the laboratory a NATA certified laboratory with experience in testing PFAS in water. The laboratory was directed to perform PFAS Speciation US EPA method 1633, utilized along with Total Oxidizable Precursor, Total Fluoride (Inorganic/Organic), and Total Soluble Inorganic Fluoride tests were conducted.

The mode of OSE II that allows it to remediate halogenated hydrocarbons as well as hydrocarbons, starts with the ability of the bio-surfactants combined with the multitude of enzymes, as well as additional proprietary aspects of OSE II developed during the manufacturing process, to partition and penetrate the molecules of a contaminant, where in the case of halogenated hydrocarbons, causes the slight oxidizing of the halogen, since it becomes in part a gas.

This also reduces the toxicity of the inorganic volume as well as the organic aspects of PFAS, hence allowing the colonization of indigenous bacteria to flourish and at some point, transition to the remaining PFAS/PFOS matrices, where it will become CO2 and water. This has been the mode of OSE II actions for numerous halogenated hydrocarbon clean ups, including PCB's (see the following links):

PCB in Farsee https://www.osei.us/wp-content/uploads/Iran-PCB-transformer-company-test.pdf

PCB Translated to English https://www.osei.us/wp-content/uploads/Iran-Transformer-Research-Institute-translated-English.pdf

Dichloral Benzene https://www.osei.us/tech-library-pdfs/2011/16-OSEI%20Manual_ChlorHydroEfficacyTest.pdf

The fact that OSE II has detoxified the PFAS to levels that even single celled organisms can survive is shown by Eurofins Laboratory report, where they state " The aerobic microbial count on the heterotrophic plate count was 5.9X10/4th with total E Coli elevated to >24000 MPN/100, and the total Coliform elevated to >24000 MPN/100".

Note: the reason you clean up toxic contaminants is to reduce the toxicity to the environment, so that singled celled microbes can survive, and if they can survive then there should be no adverse effects to human health, so you clean up toxic contaminants to protect human health.

The fact that there are any bacteria alive at all, shows that OSE II has detoxified the PFAS to the point singled celled micro-organisms can survive and exist. This proves the PFAS, once its molecules are partitioned, and oxidized, reducing the volume of Fluorine due to OSE II, and at the same time reduced other components of the PFAS, the bacteria can now colonize and start digesting the remaining matrices of PFAS. This also means in a short time after applying OSE II a dramatic decrease in the PFAS toxicity has been reduced quickly reducing the environmental impact of PFAS.

The Eurofins report shows that OSE II made quick remediation of the PFAS, since the report shows not only has OSE II reduced the PFAS levels below acceptable standards for Australia, OSE II reduced the PFAS levels at or below the acceptable level for drinking water in only 7 days. Amazing!

This Test/study/trial/demonstration was the second one performed with OSE II on PFAS, the first test being on soil, and this trial on water. See link to soil test/trial https://www.osei.us/wp-content/uploads/PFAS.pdf

OSE II has cleaned up numerous sites with halogenated hydrocarbons since 1989, however this trial and the previous trial on soil show absolute proof OSE II is more than capable to Bio-remediate PFAS.

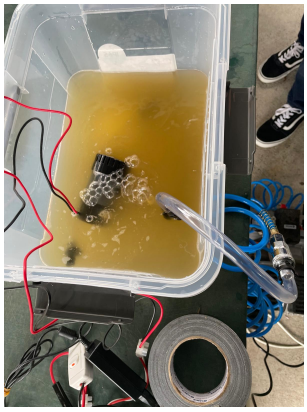
Steven Pedigo
CEO OSEI Corporation

Document contains trial Summary above
Pictures below
Laboratory Report for PFAS
MPN/Bacteria count test
PFAS Charts with Drinking water Standard
Protocol

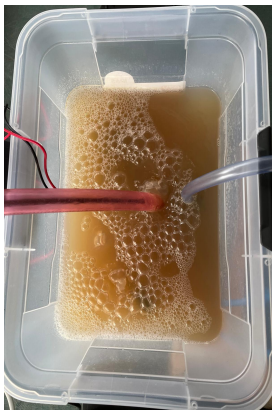
PFAS as it was delivered to the trial site

Pouring PFAS into the Aquarium

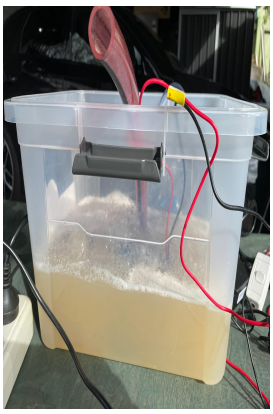
Mixing OSE II to apply to the PFAS Contaminated water



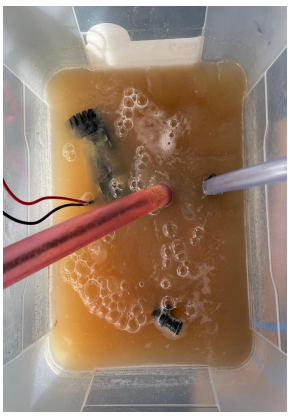
Water starts becoming turbid, showing bacteria growth



Water so turbid its hard to see through, huge amount of bacteria growth



A side view showing the turbidity of the water, showing a large amount of bacteria growth



Water starting to clear once all the PFAS has been remediated, bacteria has no food to live off of, dying off.

PFAS Laboratory Test Results Report

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Certificate of Analysis

Prensa Pty Ltd VIC
5 Burwood Rd
Hawthorn
VIC 3122

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Sam Lo Presti**

Report **1206066-W**
Project name KEILOR PARK
Project ID 136821M
Received Date Apr 04, 2025

Client Sample ID			**136821M_W3**
Sample Matrix			**Water**
Eurofins Sample No.			**M25-Ap0014312**
Date Sampled			**Apr 04, 2025**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	1.1
TRH C15-C28	0.1	mg/L	13
TRH C29-C36	0.1	mg/L	0.5
TRH C10-C36 (Total)	0.1	mg/L	14.6
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	2.8
TRH >C10-C16 less Naphthalene (F2)*[N01]	0.05	mg/L	2.8
TRH >C16-C34	0.1	mg/L	11
TRH >C34-C40	0.1	mg/L	0.1
TRH >C10-C40 (total)*	0.1	mg/L	13.9
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
Pathogens			
E.coli (MPN)*	1	MPN/100mL	See attached
Enterococci (MPN)	1	MPN/100mL	See attached
Heterotrophic Colony Count	100	CFU/mL	See attached
Total Coliforms (MPN)*	1	MPN/100mL	See attached
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.03
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.03
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	%	65
13C5-PFPeA (surr.)	1	%	61
13C5-PFHxA (surr.)	1	%	82
13C4-PFHpA (surr.)	1	%	89

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Client Sample ID			136821M_W3
Sample Matrix			Water
Eurofins Sample No.			M25-Ap0014312
Date Sampled			Apr 04, 2025
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)			
13C8-PFOA (surr.)	1	%	125
13C5-PFNA (surr.)	1	%	125
13C6-PFDA (surr.)	1	%	90
13C2-PFUnDA (surr.)	1	%	59
13C2-PFDoDA (surr.)	1	%	40
13C2-PFTeDA (surr.)	1	%	64
Perfluoroalkyl sulfonamido substances			
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
13C8-FOSA (surr.)	1	%	20
D3-N-MeFOSA (surr.)	1	%	123
D5-N-EtFOSA (surr.)	1	%	185
D7-N-MeFOSE (surr.)	1	%	28
D9-N-EtFOSE (surr.)	1	%	37
D5-N-EtFOSAA (surr.)	1	%	51
D3-N-MeFOSAA (surr.)	1	%	54
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	[G01]< 0.02
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	[N09]0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01
13C3-PFBS (surr.)	1	%	179
18O2-PFHxS (surr.)	1	%	100
13C8-PFOS (surr.)	1	%	84
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
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)[N11]	0.01	ug/L	< 0.01
13C2-4:2 FTSA (surr.)	1	%	178
13C2-6:2 FTSA (surr.)	1	%	190
13C2-8:2 FTSA (surr.)	1	%	187
13C2-10:2 FTSA (surr.)	1	%	129

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Client Sample ID			136821M_W3
Sample Matrix			Water
Eurofins Sample No.			M25-Ap0014312
Date Sampled			Apr 04, 2025
Test/Reference	LOR	Unit	
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 DWER PFAS (n=10)*	0.05	ug/L	0.07
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1

The Sum of each of the test shown to the left, are the results that show OSE II reduced the PFAS level at or below the drinking water standard for Australia

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Sample History

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

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
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 05, 2025	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 05, 2025	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 05, 2025	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Apr 05, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Apr 05, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Apr 05, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Apr 05, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise	43 Detroit Drive	1277 Cameron Road
Penrose	Mount Wellington	Rolleston	Gate Pa
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Prensa Pty Ltd VIC
Address: 5 Burwood Rd
Hawthorn
VIC 3122

Project Name: KEILOR PARK
Project ID: 136821M

Order No.:
Report #: 1206066
Phone: 9508 0100
Fax:

Received: Apr 4, 2025 5:29 PM
Due: Apr 11, 2025
Priority: 5 Day
Contact Name: Sam Lo Presti

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						E.coli (MPN)	Enterococci (MPN)	Heterotrophic Colony Count	Total Coliforms (MPN)	Total Recoverable Hydrocarbons	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254										X	X
External Laboratory						X	X	X	X		
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	136821M_W3	Apr 04, 2025		Water	M25-Ap0014312	X	X	X	X	X	X
Test Counts						1	1	1	1	1	1

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	106			70-130	Pass	
TRH C10-C14	%	74			70-130	Pass	
TRH C6-C10	%	109			70-130	Pass	
TRH >C10-C16	%	73			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	95			70-130	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	86			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	81			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	117			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	109			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	116			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	109			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	103			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	110			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	108			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	56			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	100			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	97			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	99			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	90			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	96			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	92			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	98			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	93			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	102			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	108			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	85			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	90			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	97			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M25-Ap0011079	NCP	%	80			70-130	Pass	
TRH C10-C14	M25-Ap0015878	NCP	%	96			70-130	Pass	
TRH C6-C10	M25-Ap0011079	NCP	%	77			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C10-C16	M25-Ap0015878	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M25-Ap0011079	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M25-Ap0012803	NCP	%	96			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M25-Ap0012803	NCP	%	95			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M25-Ap0012803	NCP	%	120			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M25-Ap0012803	NCP	%	115			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M25-Ap0012803	NCP	%	124			50-150	Pass	
Perfluorononanoic acid (PFNA)	M25-Ap0012803	NCP	%	122			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M25-Ap0012803	NCP	%	120			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M25-Ap0012803	NCP	%	134			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M25-Ap0012803	NCP	%	124			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M25-Ap0012803	NCP	%	72			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M25-Ap0012803	NCP	%	120			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M25-Ap0012803	NCP	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M25-Ap0012803	NCP	%	97			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M25-Ap0012803	NCP	%	108			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M25-Ap0012803	NCP	%	93			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M25-Ap0012803	NCP	%	99			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M25-Ap0012803	NCP	%	107			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M25-Ap0012803	NCP	%	107			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M25-Ap0012803	NCP	%	111			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M25-Ap0012803	NCP	%	98			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M25-Ap0008913	NCP	%	82			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M25-Ap0012803	NCP	%	120			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M25-Ap0012803	NCP	%	102			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M25-Ap0012803	NCP	%	91			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M25-Ap0012803	NCP	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M25-Ap0012803	NCP	%	102			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M25-Ap0012803	NCP	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M25-Ap0008913	NCP	%	108			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M25-Ap0008913	NCP	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M25-Ap0012803	NCP	%	117			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M25-Ap0015452	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M25-Ap0014737	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M25-Ap0014737	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M25-Ap0014737	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C6-C10	M25-Ap0015452	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M25-Ap0014737	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M25-Ap0014737	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M25-Ap0014737	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M25-Ap0015452	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M25-Ap0014516	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M25-Ap0008909	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M25-Ap0008909	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M25-Ap0008909	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M25-Ap0014516	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

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Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised by:

Savini Suduweli	Analytical Services Manager
Joseph Edouard	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-PFAS
Joseph Edouard	Senior Analyst-Volatile

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

MPN is a bacteria count test or Most Probale Number Test, that depicts the number of bacteria in cfu/ml, and MPN/100 ml. As stated above, the type of bacteria in the water or medium where OSE II is applied really does not matter, since OSE II will enhance/colonize any bacteria to use a contaminant as a food source.

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6 Monterey Road | Dandenong South | VIC 3175
https://www.eurofins.com.au/food-testing

Accredited for compliance with ISO/IEC 17025 - Testing
Accreditation Number **20293**

ANALYTICAL REPORT

Report: AR-25-NV-007447-01 **Date:** 10/04/2025 **Order :** EUAUTWU-00067456

Attention to: Analytical Reports, Eurofins Environment Testing Australia Pty Ltd
6 Monterey Road, Dandenong South, 3175 Melbourne, AUSTRALIA
Your contact: Monica Chen
+61385645000, Monica.Chen@eurofinsanz.com
PO number: 1206066
Submission Refer Merged from order CAU001-Order-1206066-250407.xml

25-Ap0014312: 136821M_W3

Sample code: 726-2025-00019677 Reception date: 07/04/2025 Reception temperature: 5 °C
Sampled Date & Time: 04/04/2025 17:29

	RESULTS		LOQ	TEST	START DATE
MICROBIOLOGY					
Heterotrophic Plate Count	$5.90x10^6$	cfu/ml	100	VQ243	07/04/2025
Enterococci	>24000	MPN/100 ml	1	VQ796	07/04/2025
Escherichia coli	>24000	MPN/100 ml	1	ZML8E	07/04/2025
Total Coliforms	>24000	MPN/100 ml	1	ZMLAE	07/04/2025

LIST OF METHODS

VQ243 - Heterotrophic Colony Count: Internal Method
ZML8E - Escherichia coli E (Water) [AU Food] <1 >24 000 /100 ml (1) Colilert-18-Q: AS 4276.21
VQ796 - Enterococci: AS 4276.9
ZMLAE - Total Coliforms E (Water) [AU Food] <1 >24 000 /100 ml (1) Colilert-18-Q: AS 4276.21

Khalid Haydar (Team Leader - Food Melbourne)

EXPLANATORY NOTE

◆ Test is not accredited
○ Test is subcontracted within Eurofins group and is accredited
● Test is subcontracted within Eurofins group and is not accredited
□ Test is subcontracted outside Eurofins group and is accredited
■ Test is subcontracted outside Eurofins group and is not accredited

N/A means Not Applicable
Not Detected means not detected at or above the Limit of Quantification (LOQ)
LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates

The test result(s) in this report apply only to the sample as received.
The tests are identified by a five-digit code, their description is available on request.
Accreditation does not apply to comments or graphical representations.
Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 6 Monterey Road, Dandenong South, VIC 3175, AUSTRALIA.

The PFAS Charts shows where the contaminant Levels started, and the end points, that shows OSE II reduced the PFAS levels below drinking water standards.

138621M: Water Remediation Trials
April 2025

132821M - Table A1 - Water Analytical Results

prensa
property › environment › safety ›

				PFAS													
				8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.005	0.005
PFAS NEMP 2025 Drinking water quality guideline									0.07		0.07						
Monitoring Round	**Field ID**	**Date**	**Lab Report Number**														
Pre Treatment	**132821M_W1**	**24 Feb 2025**	**1191199**	<0.001	<0.001	0.003	0.009	0.003	0.019	0.002	0.090	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
Post Treatment Round 1	**136821M_W2**	**28 Mar 2025**	**1203675**	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	0.003	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
Post Treatment Round 2	**136821M_W3**	**04 Apr 2025**	**1206066**	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05

132821M - Table A1 - Water Analytical Results

	PFAS							
	Perfluorononanesulfonic acid (PFNS)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)	Sum of PFAS (PFOS + PFOA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)
	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.000001	0.001	0.005	0.005	0.001	0.001	0.001	0.005
PFAS NEMP 2025 Drinking water quality guideline		0.07						
Monitoring Round	**Field ID**	**Date**	**Lab Report Number**								
Pre Treatment	**132821M_W1**	**24 Feb 2025**	**1191199**	<0.000001	0.109	0.326	0.304	0.171	0.152	<0.001	<0.005
Post Treatment Round 1	**136821M_W2**	**28 Mar 2025**	**1203675**	<0.000001	0.003	0.015	0.015	0.003	0.003	<0.001	<0.005
Post Treatment Round 2	**136821M_W3**	**04 Apr 2025**	**1206066**	<0.00001	0.01	<0.1	0.07	0.01	0.01	<0.01	<0.05

138621M: Water Remediation Trials
April 2025

132821M - Table A1 - Water Analytical Results

				PFAS												BTEX
				N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Naphthalene (VOC)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL				0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.01
PFAS NEMP 2025 Drinking water quality guideline										0.56							
Monitoring Round	**Field ID**	**Date**	**Lab Report Number**														
Pre Treatment	**132821M_W1**	**24 Feb 2025**	**1191199**	<0.005	<0.005	0.031	0.036	0.035	0.022	0.062	0.007	<0.001	0.007	<0.001	<0.001	<0.001	0.02
Post Treatment Round 1	**136821M_W2**	**28 Mar 2025**	**1203675**	<0.005	<0.005	<0.005	0.006	0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01
Post Treatment Round 2	**136821M_W3**	**04 Apr 2025**	**1206066**	<0.05	<0.05	<0.05	0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

138621M: Water Remediation Trials
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132821M - Table A1 - Water Analytical Results

					TRH											
					C6-C10 Fraction (F1)	C6-C10	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					20	20	50	50	100	100	100	20	50	100	100	100
PFAS NEMP 2025 Drinking water quality guideline																
Monitoring Round	**Field ID**	**Date**	**Lab Report Number**													
Pre Treatment	**132821M_W1**	**24 Feb 2025**	**1191199**		1,400	760	380,000	379,980	410,000	<100	790,000	720	220,000	600,000	<100	820,000
Post Treatment Round 1	**136821M_W2**	**28 Mar 2025**	**1203675**		1,200	1,200	950	950	400	<100	1,350	950	980	700	<100	1,680
Post Treatment Round 2	**136821M_W3**	**04 Apr 2025**	**1206066**		<20	<20	2,800	2,800	11,000	100	13,900	<20	1,100	13,000	500	14,600

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PFAS Contamination With OSE II Remediation Protocol

DESKTOP TRIAL OF PFAS CONTAMINATED WATERPROTOCOL
Conducted at:7 Erebus Street, Keilor Park, 3043
Date: March / April 2025
Laboratory: Independent

Scope
Test to be conducted on 5 litres of PFAS contaminated water to ascertain length of PFAS remediation by the use of OSEII.

Items Required
•5 litres of PFAS contaminated water (supplied)
•Plastic tub to hold minimum of 7 litres or water
•I x pump for aeration

Laboratory Requirements
•NATA certified•Experience in testing PFAS levels in water
•Pre-testing of PFAS contaminated water sample to produce baseline contaminant report; there after water analysis to be conducted at intervals during the trial and after the trial
•MPN (bacteria count test) we need one MPN each time there are water extractions, to verify the flurine has been oxidized, and the hydrocarbons detoxified, which means the PFAS/PFOS will bioremediate
•Independent
•Compliance with national Testing Standards•Collection of water samples at intervals for independent analysis
•Chain of custody requirements for collection of water samples from test site and transportation to laboratory for analysis

Collection Intervals
After commencement of the trial, water samples to be collected at the following intervals:
1.7 days
2.14 days
3.21 days
4.35 days
5.45 days
6.60 days

Note that depending on the level of remediation of the PFAS by OSEII, the required level of remediation to meet the required threshold or reduction to zero could be achieved around 15-45 days.

OSEII Requirements
Test to be conducted at ratio of 25:1

•1.25 litres of fresh water

•50 mls of OSEII

Trial Steps
1.Place 5 litres of PFAS contaminated water (supplied) into plastic tub
2.Turn on pump and aerate water
3.Inject 80% of OSEII / water mix (40 mls OSEII / 1 litre water)
4.Continue aeration5.After 7 days, laboratory to collect sample of water for analysis(include MPN -bacteria count test)
6.Continue same process of aeration
7.After 14 days, laboratory to collect sample of water for analysis(include MPN -bacteria count test)
8.Continue same process of aeration
9.After 21 days, laboratory to collect water for analysis(include MPN -bacteria count test)
10.Inject remaining 20% of OSEII / water mix (10 mls OSEII / 250 mls water)
11.Continue aeration
12.After 35 days, laboratory to collect sample of water for analysis(include MPN -bacteria count test)
13.Continue aeration and collection of samples as per intervals specified above until the analysis of the water shows PFAS has been remediated to the required threshold level or to zero.

The Calculations were amended to once the concentration of PFAS was determined.

Dear Peter,

The PFAS is in parts per billion, and the TPH or with the term their using TRPH is less than a thousand, so this site should be quite easy to remediate.
I am not sure what this site looks like, however you would need a circulation pump or 2, an aerator, next mix OSE II 25 to 1, and correlate it to the percent of PFAS, and percent of TRPH which is 1% total, then divide this by 25 and that is the volume of OSE II required, then X 25, which is the amount of water to mix with OSE II. The next step would be to calculate 80% of the total volume of OSE II and natural water, inject OSE II into the site with circulation and aeration. 21 days after the initial application mix the remaining 20% of OSE II with natural water, and inject the remaining 20%, in 30 to 45 days the site should be remediated if not sooner.
If you get me the site parameters, we can put together a formal protocol, however your protocol above is good as well.

Steven Pedigo

Reply

Hi Steven

Based on your email and doing a desktop water treatment of 5 litres the amount of OSEII requires would be:

5 litres =5.283 quarts 5,000ml
5,000 mls X 1% = 50mls
50mls divides by 25 = 2 mls

So 2 mls of OSEII and 50mls of water.

Kind Regards

Peter Mogridge | Director