



EML (CHEM) PTY LTD

A.C.N. 006 948 321 A.B.N. 86 006 948 321

P.O. Box 466, Canterbury, VIC 3126
417-425 Canterbury Road, Surrey Hills VIC 3127
Telephone (03) 9836 1999 - Facsimile (03) 9830 0961
Email: emlchem@emlchem.com.au

FINAL REPORT

Report No: N115340

Job No: 2403/461

Page: 1 of 6

Date: 16 April 2024

Cool-Off Pty Ltd
271 Jude Road
HOWLONG NSW 2643
Attention: Mr Derrick Addison

Dear Sir/Madam,

Re: Analysis of Wastewater Samples

METHOD LIST

Method	Method Description (in-house method based on)	Method	Method Description (in-house method based on)
1001G	21st Ed. 2005 A.P.H.A. Method 2540 A, C	1110A	22nd Ed. 2012 A.P.H.A. Method 2540 A, D
ALK	23rd Ed. 2017 A.P.H.A. Method 2320 A, B	AORGKJN-HL	21rd Ed. 2017 A.P.H.A. Method 4500-NH3 A, B, C
BOD5	23rd Ed. 2017 A.P.H.A. Method 5210 A, B	CATIONS	22nd Ed. 2012 A.P.H.A. Method 3010 A, 3030, 3111, 3114
CHLORIDE	23rd Ed. 2017 A.P.H.A. Method 4500-Cl- A, D	COD-HL	23rd Ed. 2017 A.P.H.A. Method 5220 A, B
COND-M	22nd Ed. 2012 A.P.H.A. Method 2510 A, B	FLUORIDE	24th Ed. 2021 A.P.H.A. Method 4500-F A, C
HEM	23rd Ed. 2017 A.P.H.A. Method 5520 A,B; USEPA Method 1664 Revision A February 1999	METALS-AAS	22nd Ed. 2012 A.P.H.A. Method 3010 A, 3030, 3111, 3114
METALS-ICP	22nd Ed. 2012 A.P.H.A. Method 3010 A, 3030; USEPA Method 6010B, 3005A, 3010A, 3050B	NO2	23rd Ed. 2017 A.P.H.A. Method 4500-N A, 4500-NO2 B
NO3	22nd Ed. 2012 A.P.H.A. Method 4500-N A, 4500-NO3 A; 13th Ed. 1971 A.P.H.A. Method 213 C	ORTP-LL-DA	23rd Ed. 2017 A.P.H.A. Method 4500-P A, B, F; Aquakem, Phosphate in waters, Apr 2004; USEPA Method 365.1 Rev 2.0 Aug 1993
PH	22nd Ed. 2012 A.P.H.A. Method 4500-H+ A, B	SALINITY	Salinity by calculation from Conductivity at 25C, based on 20th Ed. 1998 A.P.H.A. Method 2520 A, B. NATA Accreditation does not cover the performance of this service.
SAR	Manual calculation based on 20th Ed. 1998 A.P.H.A. Method 2340 A, B. NATA Accreditation does not cover the performance of this service.	SO3-THIO	20th Ed. 1998 A.P.H.A. Method 4500-SO3 ²⁻ B
SO4	15th Ed. 1980 A.P.H.A. Method 426 C; USEPA Method 9038 Rev 0 Sep 1986	TNITROGEN	Manual calculation based on 22nd Ed. 2012 A.P.H.A. Method 4500-NH3 A, B, C, F, Method 4500-NO2 B; 13th Ed. 1971 A.P.H.A. Method 213 C.
TOTP-LL-DA	22nd Ed. 2012 A.P.H.A. Method 4500-P A, B, F; Aquakem, Phosphate in waters, April 2004	TSULPHUR	Manual calculation based on 20th Ed. 1998 A.P.H.A. Method 4500-SO3 ²⁻ B; 15th Ed. 1998 A.P.H.A. Method 426 C.
TURB-HL	22nd Ed. 2012 A.P.H.A. Method 2130 A, B; USEPA Method 180.1, Rev 2.0 Aug 1993.		

Comments:

Samples are outside the holding time for BOD5. Results should be considered as indicative.

Some results in this report are indicative only, please see the holding time section of this report for more details.

Yours faithfully
EML (CHEM) PTY LTD



K Charlson BAppSc
(Managing Director)

Report No: N115340

Page: 2 of 6

Date: 16 April 2024



Important Notes

- 1. This is a final report and it supersedes any previous interim reports pertaining to this work that you may have received*
- 2. The results in this report pertain to samples as submitted to the laboratory*

NATA Accreditation No. 2731. Accredited for compliance with ISO/IEC 17025 - Testing

This laboratory is accredited by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of accreditation. This document shall not be reproduced except in full



Sample Description			Raw Sample	Raw Sample
			Received	Filtered 1.2um Received
Sample Collection Method			18/03/2024 10:58am	18/03/2024 10:58am
Sample Taken Date/Time			26/03/2024 01:30pm	26/03/2024 01:30pm
Lab. Received Date/Time			EML-4557	EML-4558
EML Lab. No.				
Analyte	Unit	Method		
B.O.D.(5)	mg/L	BOD5	130	28
Suspended Solids at 103-105C	mg/L	1110A	120	
Total Dissolved Solids at 180C	mg/L	1001G	210	
Conductivity at 25C	uS/cm	COND-M	320	
Turbidity	NTU	TURB-HL	110	
pH		PH	6.6	
Total Alkalinity as CaCO3	mg/L	ALK	89	
Carbonate Alkalinity as CaCO3	mg/L	ALK	0	
Sulphite as S	mg/L	SO3-THIO	<2	
Thiosulphate as S	mg/L	SO3-THIO	<8	
Sulphate as S	mg/L	SO4	<13	
Total Oxidised Sulphur as S	mg/L	TSULPHUR	<23	
C.O.D. (High Level)	mg/L	COD-HL	340	96
Total Kjeldahl Nitrogen as N	mg/L	AORGKJN-HL	25	21
Nitrate Nitrogen as N	mg/L	NO3	<1	<1
Nitrite Nitrogen as N	mg/L	NO2	<0.1	<0.1
Total Nitrogen as N	mg/L	TNITROGEN	25	21
Total Phosphorus as P	mg/L	TOTP-LL-DA	7.1	6.6
Orthophosphate as P	mg/L	ORTP-LL-DA	4.3	3.9
Chloride as Cl	mg/L	CHLORIDE	14	
n-Hexane Extractable Material (Oil&Grease)	mg/L	HEM	<100	
Fluoride as F	mg/L	FLUORIDE	<0.1	
Calcium as Ca	mg/L	CATIONS	8.4	7.3
Magnesium as Mg	mg/L	CATIONS	2.6	2.5
Sodium as Na	mg/L	CATIONS	25	
Sodium Adsorption Ratio		SAR	1.9	
Total Calcium as Ca	mg/L	METALS-AAS	9.8	
Total Magnesium as Mg	mg/L	METALS-AAS	2.7	
Total Sodium as Na	mg/L	METALS-AAS	25	
Total Potassium as K	mg/L	METALS-AAS	12	
Total Boron as B	mg/L	METALS-ICP	0.01	
Total Sulphur as S *	mg/L	METALS-ICP	12	
Salinity, by calculation from Cond. @ 25C	‰	SALINITY	0.16	

Notes:

- Blank space indicates test not performed
- Calculated results are based on raw data
- LOR: Limit of Reporting, calculated from undiluted sample
- * = NATA Accreditation does not cover the performance of this service



Sample History and Holding Time

EML Lab. No.	Analyte	Taken On	Lab. Received On	Analysed On	Result	Unit	Limit
EML-4557	pH	18/03/24 10:58am	26/03/24 1:30pm	26/03/24 05:44pm	6.6		0.25 h ^

^ The result is an indicative result only as the sample/test holding time requirement specified in the test method was not met

Holding Time Reference:

22nd Ed. 2012 A.P.H.A. - Standard Methods for the Examination of Water and Wastewater, Table 1060.I Regulatory

EML Lab. No.	Sample Collection Method	Description
EML-4557	Received	Sample not collected by EML (CHEM) and is analysed as received
EML-4558	Received	Sample not collected by EML (CHEM) and is analysed as received



Performance of Testing

Laboratory Analysis

Analysis	Unit	Performed	EML Lab. No.	Sample Taken On	Lab. Received On	Test Analysed On
B.O.D.(5)	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 09:01am
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 09:01am
Total Dissolved Solids at 180C	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 10:19am
Conductivity at 25C	uS/cm	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	26/03/24 05:43pm
Turbidity	NTU	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	26/03/24 05:45pm
pH		In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	26/03/24 05:44pm
Total Alkalinity as CaCO3	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	05/04/24 12:54pm
Carbonate Alkalinity as CaCO3	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	05/04/24 12:54pm
Sulphite as S	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	03/04/24 01:24pm
Thiosulphate as S	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	03/04/24 01:24pm
Sulphate as S	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	02/04/24 04:19pm
C.O.D. (High Level)	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	04/04/24 04:29pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	04/04/24 04:29pm
Total Kjeldahl Nitrogen as N	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	04/04/24 05:31pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	04/04/24 05:31pm
Nitrate Nitrogen as N	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 01:14pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 01:14pm
Nitrite Nitrogen as N	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 12:54pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 12:54pm
Total Phosphorus as P	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	03/04/24 03:47pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	03/04/24 03:47pm
Orthophosphate as P	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	26/03/24 05:43pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	26/03/24 05:43pm
Chloride as Cl	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	03/04/24 03:38pm
n-Hexane Extractable Material (Oil&Grease)	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	05/04/24 10:39am
Fluoride as F	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	09/04/24 01:50pm
Calcium as Ca	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	28/03/24 04:34pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	28/03/24 04:34pm
Magnesium as Mg	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	28/03/24 04:34pm
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	28/03/24 04:34pm
Sodium as Na	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	28/03/24 04:34pm
Total Sulphur as S *	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 04:33pm
Total Boron as B	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 04:33pm
Suspended Solids at 103-105C	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	27/03/24 11:41am
Total Oxidised Sulphur as S	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	04/04/24 04:33pm
Total Nitrogen as N	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	05/04/24 07:39am
			EML-4558	18/03/24 10:58am	26/03/24 1:30pm	05/04/24 07:39am
Sodium Adsorption Ratio		In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	28/03/24 05:14pm
Total Calcium as Ca	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	15/04/24 08:50am
Total Magnesium as Mg	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	15/04/24 08:51am
Total Sodium as Na	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	15/04/24 08:58am
Total Potassium as K	mg/L	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	15/04/24 08:51am
Salinity, by calculation from Cond. @ 25C	‰	In Lab	EML-4557	18/03/24 10:58am	26/03/24 1:30pm	03/04/24 03:09pm



EML (CHEM) PTY LTD A.C.N. 006 948 321 A.B.N. 86 006 948 321

Report prepared for: Cool-Off Pty Ltd

Report No: N115340

Job No: 2403/461

Page: 6 of 6

Date: 16 April 2024

Field Analysis

Analysis	Unit	Performed	EML Lab. No.	Sample Taken On	Test Analysed On
----------	------	-----------	--------------	-----------------	------------------

No Field Analysis
