PORT of BRISBANE
Here for the future

Drinking Water Quality Management Plan
2017-18 Annual Report

16 NOVEMBER 2018

CONTENTS

Introduction

The Port of Brisbane is located at the mouth of the Brisbane River on reclaimed land known as Fisherman Islands. The port is managed by the Port of Brisbane Pty Ltd (PBPL) and processes more than 2,600 ships each year.

PBPL is responsible for the site potable water reticulation network and is committed to ensuring that the water systems are managed so that the supply does not constitute a hazard to employees or the public. PBPL draws its drinking water supply from Queensland Urban Utilities' (QUU) reticulated supply through metered supply points. The management of water quality until it is supplied to PBPL is the responsibility of Queensland Urban Utilities, however, the Australian Drinking Water Guidelines (ADWG) require management of drinking water quality through to the consumer. PBPL is considered a Water Service Provider under Queensland legislation and is required to have a Drinking Water Quality Management Plan (DWQMP) in place to manage water quality within its reticulation system.

A DWQMP was developed in early 2012 and submitted to the Department of Energy and Water Supply (DEWS) in August 2012. The DWQMP was approved on 12 September 2012. Further correspondence from DEWS received on 16 October 2013 outlined repeal and re-approval of the DWQMP. The DWQMP was reviewed and updated in April 2014.

An external audit of the DWQMP was undertaken in March 2016 and the DWQMP underwent a significant review and was submitted to the Regulator in November 2016. In February 2017 PBPL received an Information Requirement Notice regarding the application for amendment, which PBPL then responded to in April 2017. In July 2017 a Further Information Request was received from DEWS in regards to PBPL's response to the Information Requirement Notice; the Further Information Request was addressed by PBPL in July 2017 as requested by DEWS. An Amendment Information Notice with conditional approval of the DWQMP was issued to PBPL in late July 2017, with conditions to be addressed by October 2017. PBPL addressed the conditions in a response to DEWS in October as requested, however in response DEWS directed PBPL to submit another application to amend the DWQMP – this application was submitted on 15 November 2017 and a decision was approved by DEWS on the January 2018.

This report is the fourth annual report of the DWQMP and summarises all actions taken in the 2017-18 financial year in regards to the DWQMP.

Implementation of the DWQMP

Purpose and objectives of the DWQMP

The PBPL DWQMP contributes to maintaining a safe and reliable drinking water supply for consumers. The plan is based on the principles described in the Framework for Management of Drinking Water Quality contained in the Australian Drinking Water Guidelines 2004 (ADWG).

The purpose of the DWQMP is to provide an overview of PBPL's current management system for achieving/maintaining drinking water quality and plans to develop and continually improve the water quality management systems. The management plan focuses on the section of the drinking water scheme over which PBPL has direct control (reticulation operation, maintenance, monitoring and corrective action). The supply components over which PBPL has no control (catchment management, treatment and storage) are the responsibility of QUU and Seqwater and are considered by their respective DWQMP's.

Objectives of the DWQMP

The PBPL DWQMP addresses the 12 elements of the ADWG Framework in order to meet the required levels of service relating to drinking water quality and the legislative requirements of the Queensland *Water Supply (Safety and Reliability) Act 2008* and the *Queensland Public Health Regulation 2005*. The specific objectives of the Drinking Water Quality Management Plan are:

- To demonstrate due diligence and protect public health by implementing a management strategy to ensure a high quality water is supplied to consumers;
- To improve consumer confidence in water quality and the supplier;
- Clearly define current and future management procedures and strategies for maintaining water quality;
- Clearly define strategies for monitoring the quality of water supplied to consumers; and
- To implement a process for continual review, development and improvement of the water quality management system.

Implementation of the DWQMP

The PBPL DWQMP was implemented in its current form in October 2012. The PBPL DWQMP was reviewed and updated in April 2014. A significant review of the DWQMP was undertaken in 2016 with the revised document submitted to the Regulator for approval in November 2016. An application for approval of another revision of the plan was also approved in January 2018.

DWQMP Review and Audit

DWQMP Review

A review of the DWQMP was undertaken in 2016 with the revised document submitted to the Regulator for approval in November 2016. A number of changes were made to the document. A new monitoring location (Pinkenba kitchen) was added to capture the provision of water on the northern side of the river. The BMT kitchen location was removed. An application for approval of another revision (addressing the requirements of an Information Requirement Notice and a Further Information Request received in response to PBPL's 2016 application for amendment of the plan) was approved by DEWS in January 2018.

DWQMP Audit

An audit of the DWQMP was undertaken in March 2016 (prior to 24 April 2016). A copy of the audit report was forwarded to the Regulator.

Monitoring and Compliance

Quarterly Monitoring

PBPL undertakes quarterly verification monitoring at five representative sites at the Port of Brisbane. The original DWQMP included only three test sites. A fourth site, Port West Bunnings, was added in September 2013 to capture water quality at the new PBPL Port West estate. A fifth site, reclamation, was added in May 2014 to capture water quality at the Port of Brisbane reclamation site office.

Verification sampling was undertaken September 2017, December 2017, March 2018 and June 2018.

No exceedances were recorded in FY18.

Elevated levels of heterotrophic plate count were detected during each sampling period across each site. No action was taken in regards to these levels. Heterotrophic plate count will be closely monitored.

E.coli Monitoring

PBPL undertake weekly monitoring for E.coli at the PBPL Main Office. Initial samples are tested in a desktop E.coli sample kit. Where results indicate possible E.coli, a sample is sent to a laboratory for analysis.

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. samples collected	4	5	4	4	5	4	5	4	4	4	5	4
No. samples collected in which E.coli detected	0	0	0	0	0	0	0	0	0	0	0	0
No. detections in previous 12 months	0	0	0	0	0	0	0	0	0	0	0	0
% samples that comply	100	100	100	100	100	100	100	100	100	100	100	100
Compliance with 98% annual value	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Additional Monitoring

Sampling for legionella is now undertaken at all sites. When legionella counts are detected, the water is flushed and retested until nil counts are recorded. No legionella counts of concern were detected.

Complaints Management

PBPL received on complaint from Bunnings on the XXX – The complaint outlines that Bunnings had small particles of dirt sand and clogging some of the filters on their water dependent equipment. CV Services were then engaged to undertake an acoustic leak detection test, which found no leaks or any possible points where fines could enter the water main. PBPL also engaged ALS to undertake water sampling at multiple locations in the Bunnings warehouse and also along Radar Street. The results showed no exceedances, therefore the contamination was not from PBPL's distribution network.

To ensure the problem with the tenant was solved, PBPL installed two automatic backwashing filters. No further action was required.

Appendix

September 2017

Analyte	Unit	Australian Drinking Water Quality Health Guidelines	BMT Kitchen	NPO Ground Floor	Port West	Reclaim	Ops Base Tea Room
pH	pH Unit	6.5-8.5 (aesthetic) No health guideline	7.88	7.90	7.84	8.15	8.01
TDS	mg/L	-	250	259	249	263	265
Colour (True)	PCU	-	3	3	3	3	3
Turbidity	NTU	-	5.0	0.4	0.5	0.4	0.4
Total Hardness as CaCO3	mg/L	-	118	122	120	130	125
Hydroxide Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	-	95	99	95	103	99
Total Alkalinity as CaCO3	mg/L	-	95	99	95	103	99
Sulfate as SO4	mg/L	500	26	27	26	27	26
Chloride	mg/L	250 (aesthetic) No health guideline	66	65	65	67	65
Dissolved Major Cations							
Calcium	mg/L	-	24	26	25	29	27
Magnesium	mg/L	-	14	14	14	14	14
Sodium	mg/L	-	40	39	40	40	39
Potassium	mg/L	-	3	3	3	4	3
Dissolved Metals							
Aluminium	mg/L	-	0.02	0.04	0.04	0.28	0.04
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	2	0.024	0.024	0.024	0.046	0.024
Cadmium	mg/L	0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	2	0.497	0.099	0.102	0.003	0.058

Lead	mg/L	0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	0.5	0.013	<0.001	0.001	<0.001	<0.001
Molybdenum	mg/L	0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	0.02	<0.001	<0.001	<0.001	0.001	<0.001
Selenium	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	0.1	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.415	0.010	0.020	0.008	<0.005
Boron	mg/L	4	<0.05	<0.05	<0.05	<0.05	<0.05
Iron	mg/L	-	<0.05	<0.05	<0.05	<0.05	<0.05
Total Metals							
Aluminium	mg/L	-	0.03	0.04	0.04	0.29	0.04
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	2	0.024	0.025	0.026	0.048	0.024
Cadmium	mg/L	0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	2	0.602	0.112	0.088	0.004	0.062
Lead	mg/L	0.01	0.002	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	0.5	0.015	0.002	0.002	<0.001	0.001
Molybdenum	mg/L	0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	0.1	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.382	0.009	0.018	0.007	<0.005
Boron	mg/L	4	<0.05	<0.05	<0.05	<0.05	<0.05
Iron	mg/L	-	0.41	<0.05	<0.05	<0.05	<0.05
Mercury	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Cyanide	mg/L		<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	1.5	0.8	0.6	0.6	0.8	0.6
Ammonia	mg/L	-	0.02	0.01	0.08	0.02	0.05
Nitrite	mg/L	3	<0.01	<0.01	0.10	<0.01	0.02
Nitrate	mg/L	50	0.27	0.50	0.34	0.54	0.45
Nitrite and Nitrate as N	mg/L	-	0.27	0.50	0.44	0.54	0.47
Sulfide as S2	mg/L	-	<0.1	<0.1	<0.1	<0.1	<0.1
Monocyclic Aromatic Hydrocarbons							
Benzene	µg/L	1	<1	<1	<1	<1	<1
Toluene	µg/L	800	<2	<2	<2	<2	<2

Ethylbenzene	µg/L	300	<2	<2	<2	<2	<2
meta- & para-Xylene	µg/L	600	<2	<2	<2	<2	<2
Styrene	µg/L	30	<5	<5	<5	<5	<5
ortho-Xylene	µg/L	600	<2	<2	<2	<2	<2
Isopropylbenzene	µg/L	-	<5	<5	<5	<5	<5
n-Propylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.3.5-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
sec-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.2.4-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
tert-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
p-Isopropyltoluene	µg/L	-	<5	<5	<5	<5	<5
n-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
Vinyl Acetate	µg/L	-	<50	<50	<50	<50	<50
2-Butanone (MEK)	µg/L	-	<50	<50	<50	<50	<50
4-Methyl-2-pentanone (MIBK)	µg/L	-	<50	<50	<50	<50	<50
2-Hexanone (MBK)	µg/L	-	<50	<50	<50	<50	<50
Carbon disulfide	µg/L	-	<5	<5	<5	<5	<5
2.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	-	<5	<5	<5	<5	<5
Halogenated Aliphatic Compounds							
Dichlorodifluoromethane	µg/L	-	<50	<50	<50	<50	<50
Chloromethane	µg/L	-	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	0.3	<50	<50	<50	<50	<50
Bromomethane	µg/L	-	<50	<50	<50	<50	<50
Chloroethane	µg/L	-	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	-	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	30	<5	<5	<5	<5	<5
Iodomethane	µg/L	-	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	60	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	-	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	60	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	3	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	3	<5	<5	<5	<5	<5
Trichloroethene	µg/L	-	<5	<5	<5	<5	<5
Dibromomethane	µg/L	-	<5	<5	<5	<5	<5

1.1.2-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	50	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	-	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	-	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	0.7	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds							
Chlorobenzene	µg/L	300	<5	<5	<5	<5	<5
Bromobenzene	µg/L	-	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	-	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	40	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	1500	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	30	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	30	<5	<5	<5	<5	<5
Trihalomethanes							
Chloroform	µg/L	250	10	9	10	9	10
Bromodichloromethane	µg/L	250	16	<5	17	<5	11
Dibromochloromethane	µg/L	250	19	<5	22	<5	10
Bromoform	µg/L	250	7	<5	8	<5	<5
*Note: the concentration of trihalomethanes, either individually **or in total**, must not exceed 250 µg/L*							
Naphthalene	µg/L	-	<5	<5	<5	<5	<5
VOC Surrogates							
1.2-Dichloroethane-D4	%	-	119	119	119	119	120
Toluene-D8	%	-	103	104	105	104	103
4-Bromofluorobenzene	%	-	92.2	93.7	93.5	92.4	91.3
Total Petroleum Hydrocarbons							
C6 - C9 Fraction	µg/L	-	30	<20	30	<20	20

C10 - C14 Fraction	µg/L	-	<50	<50	<50	<50	<50
C15 - C28 Fraction	µg/L	-	<100	<100	<100	<100	<100
C29 - C36 Fraction	µg/L	-	<50	<50	<50	<50	<50
C10 - C36 Fraction (sum)	µg/L	-	<50	<50	<50	<50	<50
Heterotrophic Plate Count (22°C)	CFU/mL	-	79	12	~3	<1	<1
Heterotrophic Plate Count (36°C)	CFU/mL	-	86	18	27	~2	<1
Faecal Coliforms	CFU/100mL	nil	<1	<1	<1	<1	<1
Escherichia coli	CFU/100mL	nil	<1	<1	<1	<1	<1
Coliforms	CFU/100mL	nil	<1	<1	<1	<1	<1

December 2017

Analyte	Unit	Australian Drinking Water Quality Health Guidelines	BMT Kitchen	NPO Ground Floor	Port West	Reclaim	Ops Base Tea Room
pH	pH Unit	6.5-8.5 (aesthetic) No health guideline	7.69	7.93	7.84	8.21	7.81
TDS	mg/L	-	257	265	267	343	252
Colour (True)	PCU	-	3	3	3	6	5
Turbidity	NTU	-	4.9	0.2	0.4	0.3	0.6
Total Hardness as CaCO3	mg/L	-	112	120	115	134	118
Hydroxide Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	-	86	89	82	70	87
Total Alkalinity as CaCO3	mg/L	-	86	89	82	70	87
Sulfate as SO4	mg/L	500	27	27	26	51	27
Chloride	mg/L	250 (aesthetic) No health guideline	66	66	64	99	63

Dissolved Major Cations							
Calcium	mg/L	-	22	25	23	29	26
Magnesium	mg/L	-	14	14	14	15	13
Sodium	mg/L	-	39	39	39	60	38
Potassium	mg/L	-	3	3	3	4	3
Dissolved Metals							
Aluminium	mg/L	-	0.02	0.04	0.04	0.24	0.05
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	**2**	0.026	0.025	0.025	0.061	0.024
Cadmium	mg/L	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	**2**	0.226	0.188	0.131	0.003	0.07
Lead	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	**0.5**	0.016	<0.001	<0.001	<0.001	<0.001
Molybdenum	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	**0.02**	<0.001	0.002	<0.001	<0.001	<0.001
Selenium	mg/L	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	**0.1**	0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.286	0.016	0.044	0.006	<0.005
Boron	mg/L	**4**	<0.05	<0.05	<0.05	<0.05	<0.05
Iron	mg/L	-	<0.05	<0.05	<0.05	<0.05	<0.05
Total Metals							
Aluminium	mg/L	-	0.04	0.05	0.06	0.25	0.06
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	**2**	0.024	0.025	0.024	0.057	0.024
Cadmium	mg/L	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	**2**	0.334	0.224	0.146	0.005	0.08
Lead	mg/L	**0.01**	0.003	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	**0.5**	0.019	<0.001	0.001	<0.001	<0.001
Molybdenum	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	**0.02**	<0.001	0.002	<0.001	<0.001	<0.001
Selenium	mg/L	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.36	0.02	0.046	0.008	0.006
Boron	mg/L	**4**	<0.05	<0.05	<0.05	<0.05	<0.05
Iron	mg/L	-	0.58	<0.05	<0.05	<0.05	<0.05

Mercury	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Cyanide	mg/L		<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	**1.5**	0.1	0.1	0.1	0.5	0.1
Ammonia	mg/L	-	0.04	<0.01	<0.01	0.01	<0.01
Nitrite	mg/L	**3**	0.02	<0.01	<0.01	<0.01	<0.01
Nitrate	mg/L	**50**	0.4	2.95	0.82	1.01	0.74
Nitrite and Nitrate as N	mg/L	-	0.42	2.95	0.82	1.01	0.74
Sulfide as S2	mg/L	-	<0.1	<0.1	<0.1	<0.1	<0.1
Monocyclic Aromatic Hydrocarbons							
Benzene	µg/L	**1**	<1	<1	<1	<1	<1
Toluene	µg/L	**800**	<2	<2	<2	<2	<2
Ethylbenzene	µg/L	**300**	<2	<2	<2	<2	<2
meta- & para-Xylene	µg/L	**600**	<2	<2	<2	<2	<2
Styrene	µg/L	**30**	<5	<5	<5	<5	<5
ortho-Xylene	µg/L	**600**	<2	<2	<2	<2	<2
Isopropylbenzene	µg/L	-	<5	<5	<5	<5	<5
n-Propylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.3.5-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
sec-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.2.4-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
tert-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
p-Isopropyltoluene	µg/L	-	<5	<5	<5	<5	<5
n-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
Vinyl Acetate	µg/L	-	<50	<50	<50	<50	<50
2-Butanone (MEK)	µg/L	-	<50	<50	<50	<50	<50
4-Methyl-2-pentanone (MIBK)	µg/L	-	<50	<50	<50	<50	<50
2-Hexanone (MBK)	µg/L	-	<50	<50	<50	<50	<50
Carbon disulfide	µg/L	-	<5	<5	<5	<5	<5
2.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	-	<5	<5	<5	<5	<5
Halogenated Aliphatic Compounds							
Dichlorodifluoromethane	µg/L	-	<50	<50	<50	<50	<50

Chloromethane	µg/L	-	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	**0.3**	<50	<50	<50	<50	<50
Bromomethane	µg/L	-	<50	<50	<50	<50	<50
Chloroethane	µg/L	-	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	-	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	**30**	<5	<5	<5	<5	<5
Iodomethane	µg/L	-	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	**60**	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	-	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	**60**	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	**3**	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	**3**	<5	<5	<5	<5	<5
Trichloroethene	µg/L	-	<5	<5	<5	<5	<5
Dibromomethane	µg/L	-	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	**50**	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	-	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	-	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	**0.7**	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds							
Chlorobenzene	µg/L	**300**	<5	<5	<5	<5	<5
Bromobenzene	µg/L	-	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	-	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	**40**	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	**1500**	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	**30**	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	**30**	<5	<5	<5	<5	<5
Trihalomethanes							
Chloroform	µg/L	**250**	16	17	17	18	17
Bromodichloromethane	µg/L	**250**	19	<5	20	<5	<5

Dibromochloromethane	µg/L	**250**	22	<5	23	<5	<5
Bromoform	µg/L	**250**	6	<5	6	<5	<5
*Note: the concentration of trihalomethanes, either individually **or in total**, must not exceed 250 µg/L*							
Naphthalene	µg/L	-	<5	<5	<5	<5	<5
VOC Surrogates							
1.2-Dichloroethane-D4	%	-	108	104	104	105	104
Toluene-D8	%	-	103	102	102	107	103
4-Bromofluorobenzene	%	-	93.1	92.3	94.2	97.5	93.2
Total Petroleum Hydrocarbons							
C6 - C9 Fraction	µg/L	-	30	<20	30	<20	<20
C10 - C14 Fraction	µg/L	-	<50	<50	<50	<50	<50
C15 - C28 Fraction	µg/L	-	<100	<100	<100	<100	<100
C29 - C36 Fraction	µg/L	-	<50	<50	<50	<50	<50
C10 - C36 Fraction (sum)	µg/L	-	<50	<50	<50	<50	<50
Heterotrophic Plate Count (22°C)	CFU/mL	-	47	29	~7	~1	15
Heterotrophic Plate Count (36°C)	CFU/mL	-	850	79	180	130	100
Faecal Coliforms	CFU/100 mL	**nil**	<1	<1	<1	<1	<1
Escherichia coli	CFU/100 mL	**nil**	<1	<1	<1	<1	<1
Coliforms	CFU/100 mL	**nil**	<1	<1	<1	<1	<1

March 2018

Analyte	Unit	Australian Drinking Water Quality Health Guidelines	BMT Kitchen	NPO Ground Floor	Port West	Reclaim	Ops Base Tea Room
pH	pH Unit	6.5-8.5 (aesthetic) No health guideline	7.25	7.75	7.41	7.96	7.53
TDS	mg/L	-	319	232	233	273	257
Colour (True)	PCU	-	2	2	2	2	2
Turbidity	NTU	-	0.8	0.5	0.3	0.2	0.4
Total Hardness as CaCO3	mg/L	-	104	96	94	123	99
Hydroxide Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	-	61	75	73	106	70
Total Alkalinity as CaCO3	mg/L	-	61	75	73	106	70
Sulfate as SO4	mg/L	500	48	44	44	28	48
Chloride	mg/L	250 (aesthetic) No health guideline	100	52	53	68	61
Dissolved Major Cations							
Calcium	mg/L	-	22	22	21	28	23
Magnesium	mg/L	-	12	10	10	13	10
Sodium	mg/L	-	60	41	40	40	44
Potassium	mg/L	-	3	3	3	4	3
Dissolved Metals							
Aluminium	mg/L	-	0.04	0.06	0.07	0.3	0.09
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	**2**	0.025	0.021	0.023	0.051	0.022
Cadmium	mg/L	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	**0.05**	<0.001	0.002	<0.001	<0.001	<0.001
Copper	mg/L	**2**	0.095	0.1	0.154	0.006	0.049
Lead	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001

Manganese	mg/L	**0.5**	0.006	0.001	<0.001	<0.001	<0.001
Molybdenum	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	**0.02**	<0.001	0.002	<0.001	<0.001	<0.001
Selenium	mg/L	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.183	0.008	0.076	0.006	0.006
Boron	mg/L	**4**	<0.05	<0.05	<0.05	<0.05	<0.05
Iron	mg/L	-	<0.05	<0.05	<0.05	<0.05	<0.05
Total Metals							
Aluminium	mg/L	-	0.04	0.06	0.05	0.3	0.07
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	**2**	0.026	0.022	0.024	0.052	0.022
Cadmium	mg/L	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	**2**	0.161	0.128	0.164	0.003	0.052
Lead	mg/L	**0.01**	<0.001	<0.001	0.001	<0.001	<0.001
Manganese	mg/L	**0.5**	0.008	0.004	0.004	<0.001	0.003
Molybdenum	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	**0.02**	<0.001	0.002	<0.001	<0.001	<0.001
Selenium	mg/L	**0.01**	<0.1	<0.1	<0.1	<0.1	<0.01
Silver	mg/L	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.187	0.01	0.076	0.005	<0.005
Boron	mg/L	**4**	<0.05	<0.05	<0.05	<0.05	<0.05
Iron	mg/L	-	0.1	<0.05	<0.05	<0.05	<0.05
Mercury	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Cyanide	mg/L		<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	**1.5**	<0.1	<0.1	<0.1	**0.1**	<0.1
Ammonia	mg/L	-	0.06	<0.01	<0.01	0.01	0.02

Nitrite	mg/L	**3**	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate	mg/L	**50**	0.54	0.64	0.60	0.65	0.66
Nitrite and Nitrate as N	mg/L	-	0.54	0.64	0.60	0.65	0.66
Sulfide as S2	mg/L	-	<0.1	<0.1	<0.1	<0.1	<0.1
Monocyclic Aromatic Hydrocarbons							
Benzene	µg/L	**1**	<1	<1	<1	<1	<1
Toluene	µg/L	**800**	<2	<2	<2	<2	<2
Ethylbenzene	µg/L	**300**	<2	<2	<2	<2	<2
meta- & para-Xylene	µg/L	**600**	<2	<2	<2	<2	<2
Styrene	µg/L	**30**	<5	<5	<5	<5	<5
ortho-Xylene	µg/L	**600**	<2	<2	<2	<2	<2
Isopropylbenzene	µg/L	-	<5	<5	<5	<5	<5
n-Propylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.3.5-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
sec-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.2.4-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
tert-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
p-Isopropyltoluene	µg/L	-	<5	<5	<5	<5	<5
n-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
Vinyl Acetate	µg/L	-	<50	<50	<50	<50	<50
2-Butanone (MEK)	µg/L	-	<50	<50	<50	<50	<50
4-Methyl-2-pentanone (MIBK)	µg/L	-	<50	<50	<50	<50	<50
2-Hexanone (MBK)	µg/L	-	<50	<50	<50	<50	<50
Carbon disulfide	µg/L	-	<5	<5	<5	<5	<5
2.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	-	<5	<5	<5	<5	<5
Halogenated Aliphatic Compounds							
Dichlorodifluoromethane	µg/L	-	<50	<50	<50	<50	<50
Chloromethane	µg/L	-	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	**0.3**	<50	<50	<50	<50	<50
Bromomethane	µg/L	-	<50	<50	<50	<50	<50
Chloroethane	µg/L	-	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	-	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	**30**	<5	<5	<5	<5	<5
Iodomethane	µg/L	-	<5	<5	<5	<5	<5

trans-1.2-Dichloroethene	µg/L	**60**	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	-	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	**60**	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	**3**	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	**3**	<5	<5	<5	<5	<5
Trichloroethene	µg/L	-	<5	<5	<5	<5	<5
Dibromomethane	µg/L	-	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	**50**	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	-	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	-	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	**0.7**	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds							
Chlorobenzene	µg/L	**300**	<5	<5	<5	<5	<5
Bromobenzene	µg/L	-	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	-	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	**40**	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	**1500**	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	**30**	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	**30**	<5	<5	<5	<5	<5
Trihalomethanes							
Chloroform	µg/L	**250**	19	27	26	12	25
Bromodichloromethane	µg/L	**250**	26	10	15	<5	8
Dibromochloromethane	µg/L	**250**	28	5	<5	<5	<5
Bromoform	µg/L	**250**	6	<5	<5	<5	<5
*Note: the concentration of trihalomethanes, either individually **or in total**, must not exceed 250 µg/L*							

Naphthalene	µg/L	-	<5	<5	<5	<5	<5
VOC Surrogates							
1.2-Dichloroethane-D4	%	-	98.3	98.2	99.7	100	98.0
Toluene-D8	%	-	103	104	103	104	102
4-Bromofluorobenzene	%	-	100	101	114	101	98.1
Total Petroleum Hydrocarbons							
C6 - C9 Fraction	µg/L	-	40	30	30	<20	20
C10 - C14 Fraction	µg/L	-	<50	<50	<50	<50	<50
C15 - C28 Fraction	µg/L	-	<100	<100	<100	<100	<100
C29 - C36 Fraction	µg/L	-	<50	<50	<50	<50	<50
C10 - C36 Fraction (sum)	µg/L	-	<50	<50	<50	<50	<50
Heterotrophic Plate Count (22°C)	CFU/mL	-	32	36	32	~4	~3
Heterotrophic Plate Count (36°C)	CFU/mL	-	220	~2300	64	110	490
Faecal Coliforms	CFU/100 mL	**nil**	<1	<1	<1	<1	<1
Escherichia coli	CFU/100 mL	**nil**	<1	<1	<1	<1	<1
Coliforms	CFU/100 mL	**nil**	<1	<1	<1	<1	<1

June 2018

Analyte	Unit	Australian Drinking Water Quality Health Guidelines	BMT Kitchen	NPO Ground Floor	Port West	Reclaim	Ops Base Tea Room
pH	pH Unit	6.5-8.5 (aesthetic) No health guideline	6.91	7.05	6.99	7.45	7.16
TDS	mg/L	-	185	246	225	261	252
Colour (True)	PCU	-	4	2	2	4	5
Turbidity	NTU	-	5	0.4	0.6	0.3	0.2
Total Hardness as CaCO3	mg/L	-	86	111	99	116	113
Hydroxide Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	-	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	-	75	97	88	98	97
Total Alkalinity as CaCO3	mg/L	-	75	97	88	98	97
Sulfate as SO4	mg/L	500	25	23	21	24	23
Chloride	mg/L	250 (aesthetic) No health guideline	44	68	61	71	66
Dissolved Major Cations							
Calcium	mg/L	-	18	23	20	25	24
Magnesium	mg/L	-	10	13	12	13	13
Sodium	mg/L	-	31	38	36	40	38
Potassium	mg/L	-	2	3	2	4	3
Dissolved Metals							
Aluminium	mg/L	-	0.01	0.03	0.03	0.27	0.03
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	**2**	0.017	0.023	0.023	0.049	0.023
Cadmium	mg/L	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	**2**	0.732	0.112	0.083	0.001	0.015
Lead	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001

Manganese	mg/L	**0.5**	0.018	<0.001	<0.001	<0.001	<0.001
Molybdenum	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	**0.02**	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	mg/L	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.68	0.01	0.023	0.006	0.012
Boron	mg/L	**4**	<0.05	<0.05	0.06	<0.05	<0.05
Iron	mg/L	-	<0.05	<0.05	<0.05	<0.05	<0.05
Total Metals							
Aluminium	mg/L	-	0.02	0.04	0.04	0.3	0.04
Antimony	mg/L	-	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	**2**	0.018	0.024	0.023	0.05	0.024
Cadmium	mg/L	**0.002**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	**2**	0.843	0.132	0.076	0.001	0.018
Lead	mg/L	**0.01**	0.002	<0.001	<0.001	<0.001	<0.001
Manganese	mg/L	**0.5**	0.018	<0.001	0.001	<0.001	<0.001
Molybdenum	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	**0.02**	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	mg/L	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	-	0.754	0.01	0.021	<0.005	0.006
Boron	mg/L	**4**	<0.05	<0.05	0.05	<0.05	<0.05
Iron	mg/L	-	0.53	<0.05	<0.05	<0.05	<0.05
Mercury	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Cyanide	mg/L		<0.004	<0.004	<0.004	<0.004	<0.004
Fluoride	mg/L	**1.5**	0.3	0.1	0.2	0.1	0.1
Ammonia	mg/L	-	0.02	0.02	0.06	0.02	0.03
Nitrite	mg/L	**3**	<0.01	<0.01	0.08	<0.01	<0.01
Nitrate	mg/L	**50**	0.2	0.46	0.4	0.58	0.53
Nitrite and Nitrate as N	mg/L	-	0.2	0.46	0.48	0.58	0.53
Sulfide as S2	mg/L	-	<0.1	<0.1	<0.1	<0.1	<0.1
Monocyclic Aromatic Hydrocarbons							
Benzene	µg/L	**1**	<1	<1	<1	<1	<1
Toluene	µg/L	**800**	<2	<2	<2	<2	<2
Ethylbenzene	µg/L	**300**	<2	<2	<2	<2	<2

meta- & para-Xylene	µg/L	**600**	<2	<2	<2	<2	<2
Styrene	µg/L	**30**	<5	<5	<5	<5	<5
ortho-Xylene	µg/L	**600**	<2	<2	<2	<2	<2
Isopropylbenzene	µg/L	-	<5	<5	<5	<5	<5
n-Propylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.3.5-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
sec-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
1.2.4-Trimethylbenzene	µg/L	-	<5	<5	<5	<5	<5
tert-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
p-Isopropyltoluene	µg/L	-	<5	<5	<5	<5	<5
n-Butylbenzene	µg/L	-	<5	<5	<5	<5	<5
Vinyl Acetate	µg/L	-	<50	<50	<50	<50	<50
2-Butanone (MEK)	µg/L	-	<50	<50	<50	<50	<50
4-Methyl-2-pentanone (MIBK)	µg/L	-	<50	<50	<50	<50	<50
2-Hexanone (MBK)	µg/L	-	<50	<50	<50	<50	<50
Carbon disulfide	µg/L	-	<5	<5	<5	<5	<5
2.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	-	<5	<5	<5	<5	<5
Halogenated Aliphatic Compounds							
Dichlorodifluoromethane	µg/L	-	<50	<50	<50	<50	<50
Chloromethane	µg/L	-	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	**0.3**	<50	<50	<50	<50	<50
Bromomethane	µg/L	-	<50	<50	<50	<50	<50
Chloroethane	µg/L	-	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	-	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	**30**	<5	<5	<5	<5	<5
Iodomethane	µg/L	-	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	**60**	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	-	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	**60**	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	-	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	**3**	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	**3**	<5	<5	<5	<5	<5
Trichloroethene	µg/L	-	<5	<5	<5	<5	<5
Dibromomethane	µg/L	-	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	-	<5	<5	<5	<5	<5

1.3-Dichloropropane	µg/L	-	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	**50**	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	-	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	-	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	-	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	-	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	**0.7**	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds							
Chlorobenzene	µg/L	**300**	<5	<5	<5	<5	<5
Bromobenzene	µg/L	-	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	-	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	-	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	**40**	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	**1500**	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	**30**	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	**30**	<5	<5	<5	<5	<5
Trihalomethanes							
Chloroform	µg/L	**250**	16	11	11	12	11
Bromodichloromethane	µg/L	**250**	14	9	16	<5	6
Dibromochloromethane	µg/L	**250**	11	7	20	<5	<5
Bromoform	µg/L	**250**	<5	<5	7	<5	<5
*Note: the concentration of trihalomethanes, either individually **or in total**, must not exceed 250 µg/L*							
Naphthalene	µg/L	-	<5	<5	<5	<5	<5
VOC Surrogates							
1.2-Dichloroethane-D4	%	-	91.9	92.4	90.4	95.2	93.8
Toluene-D8	%	-	108	110	104	110	110
4-Bromofluorobenzene	%	-	105	106	97.9	102	103
Total Petroleum Hydrocarbons							
C6 - C9 Fraction	µg/L	-	<20	<20	<20	<20	<20
C10 - C14 Fraction	µg/L	-	<50	<50	<50	<50	<50

C15 - C28 Fraction	µg/L	-	<100	<100	<100	<100	<100
C29 - C36 Fraction	µg/L	-	<50	<50	<50	<50	<50
C10 - C36 Fraction (sum)	µg/L	-	<50	<50	<50	<50	<50
Heterotrophic Plate Count (22°C)	CFU/mL	-	51	19	31	91	15
Heterotrophic Plate Count (36°C)	CFU/mL	-	40	~9	42	38	14
Faecal Coliforms	CFU/100 mL	**nil**	<1	<1	<1	<1	<1
Escherichia coli	CFU/100 mL	**nil**	<1	<1	<1	<1	<1
Coliforms	CFU/100 mL	**nil**	<1	<1	<1	<1	<1