

Drinking Water Quality Management Plan – Annual Report 2014/15

2 February 2016



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1.0 Introduction

This document represents the Drinking Water Quality Management Plan (DWQMP) Report for financial year 2014/15 for the Coppabella Water Supply Scheme, which was approved by the Department of Energy and Water Supply (DEWS) on the 15th January 2015. Aurizon Operations Limited is the designated provider of the Scheme. Details specific to the operation of the Scheme are provided in the DWQMP which has been provided to DEWS and approved. As previously advised to DEWS, Aurizon does not currently charge any person or entity within the town of Coppabella for the supply of drinking water. As required by Section 142(3) of the *Water Supply (Safety and Reliability) Act 2008*, this Report documents:

- the information required under the latest report requirement given to the provider;
- the actions the provider took to implement the plan;
- the outcome of any review of the plan in the financial year and how the provider has addressed matters raised in the review;
- if a drinking water quality management plan audit report has been prepared for the financial year—a summary of its findings and any recommendations;
- details of any information the provider gave the regulator under sections 102 and 102A in the financial year;
- details of the provider's compliance with water quality criteria for drinking water; and
- if the provider supplies drinking water to customers—details of any complaints to the provider about the provider's drinking water service.

2.0 Reporting Requirements

2.1 Information Required under Latest Report Requirement

The latest report requirement does not specify information separate or additional to that required by Condition 10.3. This Report satisfies Condition 10.3.

2.2 Actions Taken to Implement Plan

All actions documented in the DWQMP for the Coppabella Water Supply Scheme were implemented as required to ensure compliance with the approved DWQMP. In summary, the following tasks were completed, in accordance with Section 8 of the approved DWQMP

Source Water from Braeside Bore

- Daily monitoring of disinfection dosage (to control change in water quality – bacteria) by Duty Operator.
- Quarterly and/or monthly sampling (to identify change in water quality – pH, TDS, turbidity, conductivity, TVC etc.) completed by external contractors (namely Blomfield Environmental).

Sourcing Infrastructure

- Servicing the air release valves on off-take line and at WTP on 6 monthly basis.

Treatment Infrastructure

- Daily monitoring of pump.
- Servicing of pump on 6 monthly basis.

Disinfection Infrastructure

- Daily inspection by Duty Operator to avoid mechanical failure.
- Daily sampling of chlorine levels and bacterial content to determine mechanical failure.
- Weekly maintenance of injector quills to avoid mechanical failure.
- Storage volumes of NaOCl managed so as not to exceed one month of storage to avoid NaOCl degradation.

Reservoirs and Reticulation

- Regular inspection of 1ML reservoir to identify pest ingress.
- Daily monitoring of tank volume to identify impact on supply.
- Daily supply of water to top of tank and daily mixing of tank water to avoid change in water quality.
- Daily visual inspection of tank to identify reservoir failure.
- Daily inspection by Duty Operator of tank gauge to mitigate failure of high or low level alarm.
- Daily inspection of valve and gauges by Duty Operator to identify valve failure.
- Daily inspection of pumps to avoid equipment/mechanical failure.
- Weekly testing of chlorine residual in reticulation.
- Maintenance and calibration of equipment undertaken on a regular basis to ensure inaccurate data regarding water quality is not obtained.

2.3 Outcomes of Plan Review

The current version of the DWQMP was approved on the 15th January 2015. As such, this version of the DWQMP has been in place for just over 12 months. An internal review of the DWQMP, undertaken before 11 October 2015 indicated no immediate need to modify, amend or update the DWQMP.

2.4 DWQMP Audit Report

Pursuant to Condition 10.2 of DEWS' Approval of the DWQMP for Coppabella, an audit of the DWQMP must be completed by 11 October 2017. Details of the outcome of this audit will be presented in the DWQMP Annual Report for financial year 2016/17.

2.5 Details of Financial Information

There were no exceedances of the health parameters within the drinking water quality criteria, nor were there any prescribed incidents during financial year 2014/15. As such, Aurizon has not had to provide any information to DEWS under sections 102 and 102A in financial year 2014/15.

2.6 Compliance with Water Quality Criteria

Appendix A of this Report contains data (previously provided to DEWS) regarding the Coppabella Water Supply Scheme's compliance with water quality criteria.

None of the health parameters sampled were exceeded in the treated water, however there have been slight exceedances for aesthetic parameters in the treated water for turbidity and hardness however these events are infrequent and minor.

2.7 Details of Complaints

There were no recorded complaints made to Aurizon during the financial year 2014/15 by any residents or entities in relation to the drinking water service which is currently provided free of charge.

Appendix A: Performance Against Water Quality Criteria 2014/15

Annual period

Jul 2014 - 30 Jun 2015

Parameter	Scheme component	Name of scheme component	Laboratory	Units	LOR	# Samples	# of samples parameter was detected	# exceeding health guideline	min	max	avg
pH value at 25°C	Reticulation	Coppabella	Eurofins		0.01	4	4	0	7.8	7.98	7.85
Conductivity at 25°C	Reticulation	Coppabella	Eurofins	uS/cm	1	4	4	0	630	951	845.00
Total dissolved solids, calc	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	420	485	449.50
True Colour	Reticulation	Coppabella	Eurofins	PCU	1	4	4	0	5	5	5.00
Turbidity, raw	Reticulation	Coppabella	Eurofins	NTU	0.1	4	4	0	0.2	3.1	1.65
Total hardness, as CaCO3	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	237	260	250.00
Total alkalinity, as CaCO3	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	210	260	236.75
Sulphate as SO4	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	13	14	13.50
Chloride	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	120	140	129.00
Calcium	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	47	55	50.00
Magnesium	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	29	33	30.25
Sodium	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	0.7	110	73.68
Potassium	Reticulation	Coppabella	Eurofins	mg/L	1	4	4	0	1.8	83	42.40
Cadmium	Reticulation	Coppabella	Eurofins	mg/L	0.0001	4	4	0	<0.002	<0.002	<0.002
Copper	Reticulation	Coppabella	Eurofins	mg/L	0.001	4	4	0	0.001	0.002	0.00
Lead	Reticulation	Coppabella	Eurofins	mg/L	0.001	4	4	0	<0.001	<0.001	<0.001
Manganese as Mn	Reticulation	Coppabella	Eurofins	mg/L	0.001	4	4	0	<0.005	<0.005	<0.005
Zinc	Reticulation	Coppabella	Eurofins	mg/L	0.005	4	4	0	0.011	0.012	0.01
Total Iron as Fe	Reticulation	Coppabella	Eurofins	mg/L	0.05	4	4	0	<0.005	<0.005	<0.005
Silica	Reticulation	Coppabella	Eurofins	mg/L	0.1	1	1	0	0.035	0.035	0.04
Fluoride	Reticulation	Coppabella	Eurofins	mg/L	0.1	4	4	0	0.2	0.3	0.25
Nitrite + Nitrate as N	Reticulation	Coppabella	Eurofins	mg/L	0.01	0	0	0			
pH Value	SW	Coppabella	Eurofins	pH Unit	0.01	4	4	0	7.3	7.78	7.55
Electrical Conductivity @ 25°C	SW	Coppabella	Eurofins	µS/cm	1	4	4	0	740	937	866.50
Total Hardness as CaCO3	SW	Coppabella	Eurofins	mg/L	1	4	4	0	30	243	175.00
Chloride	SW	Coppabella	Eurofins	mg/L	1	4	4	0	120	140	128.50
Calcium	SW	Coppabella	Eurofins	mg/L	1	4	4	0	42	48	46.00
Magnesium	SW	Coppabella	Eurofins	mg/L	1	4	4	0	22	30	26.25
Sodium	SW	Coppabella	Eurofins	mg/L	1	4	4	0	77	105	85.75
Potassium	SW	Coppabella	Eurofins	mg/L	1	4	4	0	0.5	1	0.75
Free Chlorine	Reticulation	Coppabella	in-house	mg/L	0.1	365	365	0			

ADWG
6.5 - 8.5
<1
60-200
25
250
180
0.002
1
0.01
0.1
3
0.3
1.5
11
5

SW - Source Water

Drinking water scheme: Queensland Rail - Coppabella SPID 203

Year	2014											
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
No. of samples collected	10	10	10	10	10	10	10	10	10	10	10	10
No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	120	120	120	120	120	120	120	120	120	120	120	120
No. of failures for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Compliance with 98% annual value	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

CALCULATE PERCENTAGE USING A TWELVE (12) MONTH 'ROLLING' ANNUAL VALUE

The *Public Health Regulation 2005* (the regulation) requires that 98 per cent of samples taken in a 12 month period should contain no *E. Coli*. This requirement is referred to as the 'annual value' in Schedule 3A of the regulation.

This requirement comes into effect once you have 12 months data and should be assessed every month based on the previous 12 months data (so that it is a 'rolling' assessment).

Year	2015											
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
No. of samples collected	10	10	10	10	10	10						
No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)	0	0	0	0	0	0						
No. of samples collected in previous 12 month period	120	120	120	120	120	120						
No. of failures for previous 12 month period	0	0	0	0	0	0						
% of samples that comply	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						
Compliance with 98% annual value	YES	YES	YES	YES	YES	YES						

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