Concentration Limit Table

North Richmond Wastewater Treatment Plant

EPL 190

Updated 21-10-2024

Sydney Water's treatment plants operate under environmental protection licences issued by the NSW Environmental Protection Authority (EPA). For each monitoring/discharge point the concentration of a pollutant must not exceed the concentration limits specified for that pollutant in the table.

pollutant	unit of measure	3DGM limit	50 percentile limit	80 percentile limit	90 percentile limit	average limit
aluminium	µg/L	-	-	-	873	500
biochemical oxygen demand	mg/L	30	10	-	15	-
Ceriodaphnia dubia immobilisation (EC50)	% effluent by volume	-	50	-	-	-
copper	µg/L	-	-	-	7	5
cyanide	µg/L	-	-	-	-	-
diazinon	µg/L	-	-	-	0.1	0.2
faecal coliforms	cfu/100ml	-	-	200	-	-
hydrogen sulphide (un-ionised)	µg/L	-	-	-	60	30
iron	µg/L	-	-	-	180	95
nitrogen (ammonia)[1]	mg/L	-	1.2	-	2.5	-
nitrogen (total)	mg/L	-	10	-	15	-
phosphorus (total)	mg/L	-	2	-	5	-
total suspended solids	mg/L	10	5	-	10	-
zinc	µg/L	-	-	-	57	44

Licence limits for *Ceriodaphnia dubia* immobilisation (EC50) and sea urchin sperm fertilisation (EC50) are breached if the result is below the EPA specified limit value.

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

A licence condition with a 100 Percentile Limit means that 100% of samples (or all samples) taken must not exceed the limit for that pollutant. This can be extrapolated for other percentiles, for example an 80 Percentile Limit means that 80% of samples taken must not exceed the limit for that pollutant within the annual licence period.

1As per Condition L3.9 of EPL 190, revised concentration limits for Nitrogen (ammonia) are applicable from 28 June 2024 until 1 July 2026 whilst transfer of all sewage flows from North Richmond WRRF to Richmond WRRF is being completed.