

Penrith Wastewater Treatment Plant

2024-25 Pollution monitoring yearly limit summaries



EPL 1409

Summary period: 01-07-2024 to 30-06-2025

Date published: 01-08-2025

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

50 percentile yearly summary

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	50 percentile limit	50 percentile value	within limits
biochemical oxygen demand	mg/L	every 6 days	61	<2	3	10	<2	yes
nitrogen (ammonia)	mg/L	every 6 days	61	0.02	1.48	1	0.06	yes
nitrogen (total)	mg/L	every 6 days	61	4.61	7.84	10	5.59	yes
phosphorus (total)	mg/L	every 6 days	61	0.05	0.45	0.2	0.11	yes
total suspended solids	mg/L	every 6 days	61	<2	3	5	<2	yes

80 percentile yearly summary

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	80 percentile limit	80 percentile value	within limits
faecal coliforms	CFU/100mL	every 6 days	61	<1	3,400	200	90	yes

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90 percentile yearly summary								
EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	90 percentile limit	90 percentile value	within limits
aluminium	ug/L	monthly	12	82	268	270	209	yes
biochemical oxygen demand	mg/L	every 6 days	61	<2	3	15	<2	yes
cadmium	ug/L	monthly	12	<0.1	<0.1	0.2	<0.1	yes
copper	ug/L	monthly	12	6.3	11.4	9	9.9	no ¹
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	60	<30	yes
iron	ug/L	monthly	12	118	225	350	190	yes
nitrogen (ammonia)	mg/L	every 6 days	61	0.02	1.48	5	0.3	yes
nitrogen (total)	mg/L	every 6 days	61	4.61	7.84	15	6.48	yes
phosphorus (total)	mg/L	every 6 days	61	0.05	0.45	0.4	0.18	yes
total suspended solids	mg/L	every 6 days	61	<2	3	10	2	yes
zinc	ug/L	monthly	12	37	50	180	47	yes

1 The average copper limit and 90-%ile exceedances were largely influenced limitations of the existing treatment technology to meet Stage 1 concentration limits. Once Stage 7 upgrade is complete it is expected compliance will be restored.

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Average yearly summary								
EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	Average Limit	Average value	within limits
aluminium	ug/L	monthly	12	82	268	200	161	yes
cadmium	ug/L	monthly	12	<0.1	<0.1	0.2	<0.1	yes
copper	ug/L	monthly	12	6.3	11.4	8	8.3	no ¹
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	30	<30	yes
iron	ug/L	monthly	12	118	225	330	164	yes
zinc	ug/L	monthly	12	37	50	60	43	yes

90 percentile yearly summary								
EPA Point 21 Site code PR0021		Point description: Disinfected plant effluent quality downstream of the St Marys AWTP return stream						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	90 percentile limit	90 percentile value	within limits
chlorine (total residual)	mg/L	every 6 days	61	<0.04	0.5	0.1	0.08	yes

50 percentile yearly summary								
EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys AWTP return stream						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	50 percentile limit	50 percentile value	within limits
sea urchin fertilisation (EC50)	% Effluent/Vol	monthly	12	100	33	50	100	yes