

North Richmond Wastewater Treatment Plant

2023-24 Pollution monitoring yearly limit summaries



EPL 190

Summary period: 01-07-2023 to 30-06-2024

Date published: 01-09-2024

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

50 percentile yearly summary								
EPA Point 4 Site code NR0004		Point description: Downstream of the weir from the disinfection facilities						
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	4	10	<2	yes
nitrogen (ammonia)	mg/L	every 6 days	61	0.28	3.33	0.9	0.71	yes
nitrogen (total)	mg/L	every 6 days	61	6.06	17.7	10	8.93	yes
phosphorus (total)	mg/L	every 6 days	61	0.07	2.18	2	0.26	yes
total suspended solids	mg/L	every 6 days	61	<2	15	5	4	yes

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90 percentile yearly summary								
EPA Point 4 Site code NR0004	Point description: Downstream of the weir from the disinfection facilities							
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	268	743	873	669	yes
biochemical oxygen demand	mg/L	every 6 days	61	<2	4	15	2	yes
copper	ug/L	monthly	12	3.6	11.4	7	8.9	no ¹
diazinon	ug/L	monthly	12	<0.1	<0.1	0.1	<0.1	yes
iron	ug/L	monthly	12	8	55	180	52	yes
nitrogen (ammonia)	mg/L	every 6 days	61	0.28	3.33	1.4	1.47	no ²
nitrogen (total)	mg/L	every 6 days	61	6.06	17.7	15	10.4	yes
phosphorus (total)	mg/L	every 6 days	61	0.07	2.18	5	0.58	yes
total suspended solids	mg/L	every 6 days	61	<2	15	10	8	yes
zinc	ug/L	monthly	12	15	38	57	37	yes

1 The total copper 90th percentile exceedance was largely influenced by increasing inflows to North Richmond WRRF due to catchment growth and limitations of the existing biological treatment technology to meet the recently revised Stage 1 concentration limits. To restore compliance, Sydney Water are initiating the option to upgrade Richmond WRRF treatment capacity, transfer flows from North Richmond WRRF to Richmond WRRF and decommission North Richmond WRRF.

2 The ammonia nitrogen 90th percentile exceedance was largely influenced by increasing inflows to North Richmond WRRF due to catchment growth and limitations of the existing biological treatment technology to meet the recently revised Stage 1 concentration limits. To restore compliance, Sydney Water are initiating the option to upgrade Richmond WRRF treatment capacity, transfer flows from North Richmond WRRF to Richmond WRRF and decommission North Richmond WRRF.

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Average yearly summary								
EPA Point 4 Site code NR0004		Point description: Downstream of the weir from the disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	Average Limit	Average value	within limits
aluminium	ug/L	monthly	12	268	743	500	466	yes
copper	ug/L	monthly	12	3.6	11.4	5	6.8	no ³
diazinon	ug/L	monthly	12	<0.1	<0.1	0.2	<0.1	yes
iron	ug/L	monthly	12	8	55	95	29	yes
zinc	ug/L	monthly	12	15	38	44	26	yes

50 percentile yearly summary								
EPA Point 5 Site code NR0005		Point description: Outlet of the disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	50 percentile limit	50 percentile value	within limits
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	12	100	100	50	100	yes

80 percentile yearly summary								
EPA Point 5 Site code NR0005		Point description: Outlet of the disinfection facilities						
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	4,900	200	52	yes

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90 percentile yearly summary								
EPA Point 5 Site code NR0005		Point description: Outlet of the disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	90 percentile limit	90 percentile value	within limits
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	60	<30	yes

Average yearly summary								
EPA Point 5 Site code NR0005		Point description: Outlet of the disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	Average Limit	Average value	within limits
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	30	<30	yes

3 The total copper average limit exceedance was largely influenced by increasing inflows to North Richmond WRRF due to catchment growth and limitations of the existing biological treatment technology to meet the recently revised Stage 1 concentration limits. To restore compliance, Sydney Water are initiating the option to upgrade Richmond WRRF treatment capacity, transfer flows from North Richmond WRRF to Richmond WRRF and decommission North Richmond WRRF.