

North Richmond Wastewater Treatment Plant

2022-23 Pollution monitoring yearly limit summaries



EPL 190

Summary period: 01-07-2022 to 30-06-2023

Date published: 01-09-2023

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 | 5 | 10 | <2 | yes |
| nitrogen (ammonia) | mg/L | every 6 days | 61 | 0.27 | 2.05 | 0.9 | 0.96 | no ¹ |
| nitrogen (total) | mg/L | every 6 days | 61 | 4.32 | 9.32 | 10 | 6.71 | yes |
| phosphorus (total) | mg/L | every 6 days | 61 | 0.08 | 0.62 | 2 | 0.18 | yes |
| total suspended solids | mg/L | every 6 days | 61 | <2 | 12 | 5 | 4 | yes |

1 The ammonia nitrogen 50th and 90th percentile exceedances were 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, particularly during sudden and extended periods of extreme wet weather events.

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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| 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 | 227 | 835 | 873 | 666 | yes |
| biochemical oxygen demand | mg/L | every 6 days | 61 | <2 | 5 | 15 | 3 | yes |
| copper | ug/L | monthly | 12 | 3.4 | 7 | 7 | 6.8 | yes |
| diazinon | ug/L | monthly | 12 | <0.1 | <0.1 | 0.1 | <0.1 | yes |
| iron | ug/L | monthly | 12 | 9 | 58 | 180 | 53 | yes |
| nitrogen (ammonia) | mg/L | every 6 days | 61 | 0.27 | 2.05 | 1.4 | 1.5 | no ¹ |
| nitrogen (total) | mg/L | every 6 days | 61 | 4.32 | 9.32 | 15 | 8.31 | yes |
| phosphorus (total) | mg/L | every 6 days | 61 | 0.08 | 0.62 | 5 | 0.4 | yes |
| total suspended solids | mg/L | every 6 days | 61 | <2 | 12 | 10 | 7 | yes |
| zinc | ug/L | monthly | 12 | 18 | 35 | 57 | 29 | yes |

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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 | 227 | 835 | 500 | 433 | yes |
| copper | ug/L | monthly | 12 | 3.4 | 7 | 5 | 4 | yes |
| diazinon | ug/L | monthly | 12 | <0.1 | <0.1 | 0.2 | <0.1 | yes |
| iron | ug/L | monthly | 12 | 9 | 58 | 95 | 29 | yes |
| zinc | ug/L | monthly | 12 | 18 | 35 | 44 | 24 | 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 | 8,600 | 200 | 49 | 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 |