

Castle Hill Wastewater Treatment Plant

2020-21 Pollution monitoring yearly limit summaries



EPL 1725

Summary period: 01-07-2020 to 30-06-2021

Date published: 13-08-2021

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

| 50 percentile yearly summary | | | | | | | | |
|---------------------------------|-----------------|--|-------------------|----------------|----------------|---------------------|---------------------|---------------|
| EPA Point 5 Site code CH0005 | | Point description: In the channel between the tertiary filters and 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 | 50 | <2 | <2 | 7 | <2 | yes |
| nitrogen (ammonia) | mg/L | every 6 days | 61 | 0.01 | 1.45 | 0.9 | 0.13 | yes |
| nitrogen (total) | mg/L | every 6 days | 61 | 4.24 | 18.7 | 20 | 15.7 | yes |
| phosphorus (total) | mg/L | every 6 days | 61 | 0.03 | 0.22 | 0.3 | 0.08 | yes |
| total suspended solids | mg/L | every 6 days | 61 | <2 | 3 | 5 | <2 | yes |

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| 90 percentile yearly summary | | | | | | | | |
|---------------------------------|--|--------------------|-------------------|----------------|----------------|---------------------|---------------------|---------------|
| EPA Point 5 Site code CH0005 | Point description: In the channel between the tertiary filters and 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 | 62 | 129 | 400 | 111 | yes |
| cadmium | ug/L | monthly | 12 | <0.1 | <0.1 | 0.2 | <0.1 | yes |
| biochemical oxygen demand | mg/L | every 6 days | 50 | <2 | <2 | 10 | <2 | yes |
| cobalt | ug/L | monthly | 2 | 0.4 | 0.5 | - | 0.5 | n/a |
| copper | ug/L | monthly | 12 | 5.6 | 7.7 | 11 | 7.6 | yes |
| diazinon | ug/L | monthly | 12 | <0.1 | <0.1 | 0.1 | <0.1 | yes |
| iron | ug/L | monthly | 12 | 31 | 133 | 1,100 | 53 | yes |
| nitrogen (ammonia) | mg/L | every 6 days | 61 | 0.01 | 1.45 | 1.4 | 0.4 | yes |
| nitrogen (total) | mg/L | every 6 days | 61 | 4.24 | 18.7 | 25 | 17.4 | yes |
| phosphorus (total) | mg/L | every 6 days | 61 | 0.03 | 0.22 | 1 | 0.16 | yes |
| total suspended solids | mg/L | every 6 days | 61 | <2 | 3 | 10 | <2 | yes |
| zinc | ug/L | monthly | 12 | 16 | 25 | 37 | 22 | yes |

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| Average yearly summary | | | | | | | | |
|---------------------------------|-----------------|--|-------------------|----------------|----------------|---------------|---------------|---------------|
| EPA Point 5 Site code CH0005 | | Point description: In the channel between the tertiary filters and 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 | 62 | 129 | 160 | 90 | yes |
| cadmium | ug/L | monthly | 12 | <0.1 | <0.1 | 0.2 | <0.1 | yes |
| cobalt | ug/L | monthly | 2 | 0.4 | 0.5 | 1.4 | 0.5 | yes |
| copper | ug/L | monthly | 12 | 5.6 | 7.7 | 8 | 7 | yes |
| diazinon | ug/L | monthly | 12 | <0.1 | <0.1 | 0.2 | <0.1 | yes |
| iron | ug/L | monthly | 12 | 31 | 133 | 360 | 49 | yes |
| zinc | ug/L | monthly | 12 | 16 | 25 | 29 | 19 | yes |

| 50 percentile yearly summary | | | | | | | | |
|--|-----------------|---|-------------------|----------------|----------------|---------------------|---------------------|---------------|
| EPA Point 6 Site code CH0006 | | Point description: At the outlet from the STP 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 6 Site code CH0006 | | Point description: At the outlet from the STP 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 | 110,000 | 200 | 18 | yes |

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| 90 percentile yearly summary | | | | | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|----------------|---------------------|---------------------|---------------|
| EPA Point 6 Site code CH0006 | | Point description: At the outlet from the STP 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 6 Site code CH0006 | | Point description: At the outlet from the STP 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 |

Effluent quality monitoring results obtained from EPA Points 5 and 6 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Note: Sydney Water commenced monitoring of biochemical oxygen demand from 1st September 2020. Historically, carbonaceous biochemical oxygen demand was monitored.