

Quakers Hill Wastewater Treatment Plant

June Pollution Monitoring Summary



EPL 1724

Summary period: 01-06-2017 to 30-06-2017

Date obtained: 20-07-2017

Date published: 25-07-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 6.09 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.06 | yes |
| total suspended solids | mg/L | monthly | 30 | 2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 54 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 0.3 |
| cobalt | ug/L | monthly | 1 | - | - | 0.6 |
| copper | ug/L | monthly | 1 | - | - | 3.5 |
| manganese | ug/L | monthly | 1 | - | - | 47.8 |
| molybdenum | ug/L | monthly | 1 | - | - | 0.9 |
| nickel | ug/L | monthly | 1 | - | - | 2 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.01 | 0.77 | 1.52 |
| nitrogen (total) | mg/L | every 6 days | 5 | 5.26 | 5.79 | 6.09 |
| phosphorus | mg/L | every 6 days | 5 | 0.04 | 0.04 | 0.06 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | 2 |
| zinc | ug/L | monthly | 1 | - | - | 26 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | 0.13 | 0.6 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | <1 | 110 | 550 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant

May Pollution Monitoring Summary



EPL 1724

Summary period: 01-05-2017 to 31-05-2017

Date obtained: 20-06-2017

Date published: 23-06-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 6.4 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.04 | yes |
| total suspended solids | mg/L | monthly | 30 | <2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 44 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | 3 |
| chromium | ug/L | monthly | 1 | - | - | <0.2 |
| cobalt | ug/L | monthly | 1 | - | - | 0.3 |
| copper | ug/L | monthly | 1 | - | - | 2.7 |
| manganese | ug/L | monthly | 1 | - | - | 24.9 |
| molybdenum | ug/L | monthly | 1 | - | - | 1.6 |
| nickel | ug/L | monthly | 1 | - | - | 1.9 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.01 | 0.05 | 0.15 |
| nitrogen (total) | mg/L | every 6 days | 5 | 4.97 | 5.99 | 6.4 |
| phosphorus | mg/L | every 6 days | 5 | 0.03 | 0.04 | 0.04 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| zinc | ug/L | monthly | 1 | - | - | 24 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 1 | 4 | 8 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant

April Pollution Monitoring Summary



EPL 1724

Summary period: 01-04-2017 to 30-04-2017

Date obtained: 16-05-2017

Date published: 24-05-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 6.7 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.06 | yes |
| total suspended solids | mg/L | monthly | 30 | <2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 58 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | <0.2 |
| cobalt | ug/L | monthly | 1 | - | - | 0.5 |
| copper | ug/L | monthly | 1 | - | - | 4.3 |
| manganese | ug/L | monthly | 1 | - | - | 26 |
| molybdenum | ug/L | monthly | 1 | - | - | 1.4 |
| nickel | ug/L | monthly | 1 | - | - | 2.7 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.02 | 0.06 | 0.18 |
| nitrogen (total) | mg/L | every 6 days | 5 | 5.88 | 6.25 | 6.7 |
| phosphorus | mg/L | every 6 days | 5 | 0.04 | 0.05 | 0.06 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| zinc | ug/L | monthly | 1 | - | - | 24 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 3 | 7 | 15 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant

March Pollution Monitoring Summary



EPL 1724

Summary period: 01-03-2017 to 31-03-2017

Date obtained: 11-04-2017

Date published: 19-04-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 7.43 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.18 | yes |
| total suspended solids | mg/L | monthly | 30 | 2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 132 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | 2 |
| chromium | ug/L | monthly | 1 | - | - | 0.2 |
| cobalt | ug/L | monthly | 1 | - | - | 0.5 |
| copper | ug/L | monthly | 1 | - | - | 4.9 |
| manganese | ug/L | monthly | 1 | - | - | 41 |
| molybdenum | ug/L | monthly | 1 | - | - | 2.1 |
| nickel | ug/L | monthly | 1 | - | - | 2.6 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.03 | 1.16 | 3.66 |
| nitrogen (total) | mg/L | every 6 days | 5 | 4.08 | 5.51 | 7.43 |
| phosphorus | mg/L | every 6 days | 5 | 0.08 | 0.12 | 0.18 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | 4 |
| zinc | ug/L | monthly | 1 | - | - | 21 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | 0.19 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 3 | 8 | 12 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant

February Pollution Monitoring Summary



EPL 1724

Summary period: 01-02-2017 to 28-02-2017

Date obtained: 07-03-2017

Date published: 14-03-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 4.21 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.18 | yes |
| total suspended solids | mg/L | monthly | 30 | 2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 85 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | <0.2 |
| cobalt | ug/L | monthly | 1 | - | - | 0.3 |
| copper | ug/L | monthly | 1 | - | - | 2.1 |
| manganese | ug/L | monthly | 1 | - | - | 40 |
| molybdenum | ug/L | monthly | 1 | - | - | 1.6 |
| nickel | ug/L | monthly | 1 | - | - | 2 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.15 | 0.47 | 0.96 |
| nitrogen (total) | mg/L | every 6 days | 5 | 3.75 | 3.96 | 4.21 |
| phosphorus | mg/L | every 6 days | 5 | 0.1 | 0.13 | 0.18 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | 2 |
| zinc | ug/L | monthly | 1 | - | - | 12 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | <1 | 8 | 15 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant

January Pollution Monitoring Summary



EPL 1724

Summary period: 01-01-2017 to 31-01-2017

Date obtained: 09-02-2017

Date published: 15-02-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 5.77 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.11 | yes |
| total suspended solids | mg/L | monthly | 30 | 2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 90 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 1 |
| cobalt | ug/L | monthly | 1 | - | - | 0.4 |
| copper | ug/L | monthly | 1 | - | - | 2.7 |
| manganese | ug/L | monthly | 1 | - | - | 19.1 |
| molybdenum | ug/L | monthly | 1 | - | - | 1.9 |
| nickel | ug/L | monthly | 1 | - | - | 2.9 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.02 | 0.08 | 0.2 |
| nitrogen (total) | mg/L | every 6 days | 5 | 3.26 | 4 | 5.77 |
| phosphorus | mg/L | every 6 days | 5 | 0.05 | 0.08 | 0.11 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | 2 |
| zinc | ug/L | monthly | 1 | - | - | 14 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 2 | 24 | 88 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant December Pollution Monitoring Summary



EPL 1724

Summary period: 01-12-2016 to 31-12-2016

Date obtained: 09-01-2017

Date published: 13-01-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 6.67 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.24 | yes |
| total suspended solids | mg/L | monthly | 30 | <2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 58 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 0.3 |
| cobalt | ug/L | monthly | 1 | - | - | 0.3 |
| copper | ug/L | monthly | 1 | - | - | 2.4 |
| manganese | ug/L | monthly | 1 | - | - | 13.2 |
| molybdenum | ug/L | monthly | 1 | - | - | 2.1 |
| nickel | ug/L | monthly | 1 | - | - | 2.2 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.02 | 1.01 | 4.6 |
| nitrogen (total) | mg/L | every 6 days | 5 | 3.24 | 4.31 | 6.67 |
| phosphorus | mg/L | every 6 days | 5 | 0.05 | 0.11 | 0.24 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| zinc | ug/L | monthly | 1 | - | - | 13 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 3 | 24 | 92 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant November Pollution Monitoring Summary



EPL 1724

Summary period: 01-11-2016 to 30-11-2016

Date obtained: 05-12-2016

Date published: 12-12-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 4.3 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.11 | yes |
| total suspended solids | mg/L | monthly | 30 | 3 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 76 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 0.2 |
| cobalt | ug/L | monthly | 1 | - | - | 0.3 |
| copper | ug/L | monthly | 1 | - | - | 2.9 |
| manganese | ug/L | monthly | 1 | - | - | 31.8 |
| molybdenum | ug/L | monthly | 1 | - | - | 2 |
| nickel | ug/L | monthly | 1 | - | - | 3.2 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.02 | 0.05 | 0.12 |
| nitrogen (total) | mg/L | every 6 days | 5 | 3.63 | 3.95 | 4.3 |
| phosphorus | mg/L | every 6 days | 5 | 0.06 | 0.08 | 0.11 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | 2 |
| zinc | ug/L | monthly | 1 | - | - | 16 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 4 | 18 | 53 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant October Pollution Monitoring Summary



EPL 1724

Summary period: 01-10-2016 to 31-10-2016

Date obtained: 07-11-2016

Date published: 11-11-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 4.81 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.09 | yes |
| total suspended solids | mg/L | monthly | 30 | <2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 48 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 0.6 |
| cobalt | ug/L | monthly | 1 | - | - | 0.6 |
| copper | ug/L | monthly | 1 | - | - | 2 |
| manganese | ug/L | monthly | 1 | - | - | 41.9 |
| molybdenum | ug/L | monthly | 1 | - | - | 2.2 |
| nickel | ug/L | monthly | 1 | - | - | 2.4 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.02 | 0.33 | 0.93 |
| nitrogen (total) | mg/L | every 6 days | 5 | 3.56 | 4.05 | 4.81 |
| phosphorus | mg/L | every 6 days | 5 | 0.05 | 0.08 | 0.09 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| zinc | ug/L | monthly | 1 | - | - | 18 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 1 | 6 | 14 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant September Pollution Monitoring Summary



EPL 1724

Summary period: 01-09-2016 to 30-09-2016

Date obtained: 10-10-2016

Date published: 14-10-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 5.4 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.12 | yes |
| total suspended solids | mg/L | monthly | 30 | <2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 50 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 0.4 |
| cobalt | ug/L | monthly | 1 | - | - | 0.4 |
| copper | ug/L | monthly | 1 | - | - | 2.5 |
| manganese | ug/L | monthly | 1 | - | - | 22.7 |
| molybdenum | ug/L | monthly | 1 | - | - | 1.6 |
| nickel | ug/L | monthly | 1 | - | - | 2 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.02 | 0.08 | 0.21 |
| nitrogen (total) | mg/L | every 6 days | 5 | 4.28 | 4.86 | 5.4 |
| phosphorus | mg/L | every 6 days | 5 | 0.05 | 0.08 | 0.12 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| zinc | ug/L | monthly | 1 | - | - | 17 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | 0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 2 | 28 | 110 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant

August Pollution Monitoring Summary



EPL 1724

Summary period: 01-08-2016 to 31-08-2016

Date obtained: 06-09-2016

Date published: 12-09-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 5.73 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.18 | yes |
| total suspended solids | mg/L | monthly | 30 | <2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 173 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 0.6 |
| cobalt | ug/L | monthly | 1 | - | - | 0.4 |
| copper | ug/L | monthly | 1 | - | - | 3.4 |
| manganese | ug/L | monthly | 1 | - | - | 19.5 |
| molybdenum | ug/L | monthly | 1 | - | - | 1.5 |
| nickel | ug/L | monthly | 1 | - | - | 2 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.01 | 0.02 | 0.03 |
| nitrogen (total) | mg/L | every 6 days | 5 | 4.42 | 5.07 | 5.73 |
| phosphorus | mg/L | every 6 days | 5 | 0.06 | 0.1 | 0.18 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | 2 |
| zinc | ug/L | monthly | 1 | - | - | 20 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 5 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 1 | 6 | 13 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.

Quakers Hill Wastewater Treatment Plant

July Pollution Monitoring Summary



EPL 1724

Summary period: 01-07-2016 to 31-07-2016

Date obtained: 08-08-2016

Date published: 12-08-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | | |
|--|-----------------|--|------------|-------------|----------------------|-----------------------|---------------|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM actual | 100 percentile limit | 100 percentile actual | within limits |
| carbonaceous biochemical oxygen demand | mg/L | monthly | 30 | <2 | - | - | yes |
| nitrogen (total) | mg/L | every 6 days | - | - | 45 | 6.36 | yes |
| phosphorus | mg/L | every 6 days | - | - | 5 | 0.15 | yes |
| total suspended solids | mg/L | monthly | 30 | <2 | - | - | yes |

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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.

Table 2: Routine monitoring data

| EPA Point 4 Site code QH0004 | | Point description: Downstream of the overflow weir in the clean water tank | | | | |
|--|-----------------|--|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 337 |
| cadmium | ug/L | monthly | 1 | - | - | <0.1 |
| carbonaceous biochemical oxygen demand | mg/L | every 6 days | 5 | <2 | <2 | <2 |
| chromium | ug/L | monthly | 1 | - | - | 0.7 |
| cobalt | ug/L | monthly | 1 | - | - | 0.4 |
| copper | ug/L | monthly | 1 | - | - | 3.8 |
| manganese | ug/L | monthly | 1 | - | - | 16.1 |
| molybdenum | ug/L | monthly | 1 | - | - | 1.5 |
| nickel | ug/L | monthly | 1 | - | - | 2.2 |
| nitrogen (ammonia) | mg/L | every 6 days | 5 | 0.01 | 0.13 | 0.61 |
| nitrogen (total) | mg/L | every 6 days | 5 | 5.19 | 5.82 | 6.36 |
| phosphorus | mg/L | every 6 days | 5 | 0.05 | 0.08 | 0.15 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | <2 | 2 |
| zinc | ug/L | monthly | 1 | - | - | 18 |

| EPA Point 5 Site code QH0005 | | Point description: At the outlet of the chlorine contact tank | | | | |
|--|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| Ceriodaphnia dubia immobilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| chlorine (total residual) | mg/L | every 6 days | 6 | <0.04 | <0.04 | <0.04 |
| faecal coliforms | CFU/100mL | every 6 days | 6 | 2 | 5 | 10 |
| hydrogen sulphide (unionised) | ug/L | monthly | 1 | - | - | <30 |

Average and percentile limits are only applied annually for routine monitoring data in Table 2.