

Warriewood Wastewater Treatment Plant

June Pollution Monitoring Summary



EPL 1784

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 data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 9 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 14 |
| copper | ug/L | monthly | 1 | - | - | 2.9 |
| cyanide | ug/L | monthly | 1 | - | - | 6 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 18 | 114 | 430 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 5 | 5 | 8 | 11 |

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

Warriewood Wastewater Treatment Plant

May Pollution Monitoring Summary



EPL 1784

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 data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 5 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 8 |
| copper | ug/L | monthly | 1 | - | - | 3.4 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 6 | 5 | 13 | 31 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | 7 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 50.5 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | 4 | 9 |

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

Warriewood Wastewater Treatment Plant

April Pollution Monitoring Summary



EPL 1784

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 data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 5 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 34 |
| copper | ug/L | monthly | 1 | - | - | 4.4 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 3 | 1469 | 5,900 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 5 | <2 | 3 | 6 |

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

Warriewood Wastewater Treatment Plant

March Pollution Monitoring Summary



EPL 1784

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 data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 5 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 18 |
| copper | ug/L | monthly | 1 | - | - | 2.3 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 260 | 20544 | 93,000 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 6 | 5 | 15 | 46 |

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

Warriewood Wastewater Treatment Plant

February Pollution Monitoring Summary



EPL 1784

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 data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 7 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 16 |
| copper | ug/L | monthly | 1 | - | - | 3.4 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 4 | 10 | 11073 | 42,000 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | 7 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 4 | 3 | 5 | 7 |

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

Warriewood Wastewater Treatment Plant

January Pollution Monitoring Summary



EPL 1784

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 data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 12 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 23 |
| copper | ug/L | monthly | 1 | - | - | 7.5 |
| cyanide | ug/L | monthly | 1 | - | - | 9 |
| faecal coliforms | CFU/100mL | every 6 days | 6 | 21 | 149530 | 790,000 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 40 |
| total suspended solids | mg/L | every 6 days | 5 | 7 | 11 | 17 |

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

Warriewood Wastewater Treatment Plant

December Pollution Monitoring Summary



EPL 1784

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 data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 5 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 12 |
| copper | ug/L | monthly | 1 | - | - | 3 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 94 | 18173 | 50,000 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 6 | 5 | 7 | 11 |

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

Warriewood Wastewater Treatment Plant

November Pollution Monitoring Summary



EPL 1784

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

Date obtained: 01-12-2016

Date published: 12-12-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 11 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 14 |
| copper | ug/L | monthly | 1 | - | - | 3.2 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 59 | 1100 | 3,500 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 80.5 |
| total suspended solids | mg/L | every 6 days | 5 | 3 | 7 | 13 |

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

Warriewood Wastewater Treatment Plant

October Pollution Monitoring Summary



EPL 1784

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

Date obtained: 02-11-2016

Date published: 04-11-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 5 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 8 |
| copper | ug/L | monthly | 1 | - | - | 3.3 |
| cyanide | ug/L | monthly | 1 | - | - | 6 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 14 | 26 | 39 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 5 | 4 | 5 | 7 |

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

Warriewood Wastewater Treatment Plant

September Pollution Monitoring Summary



EPL 1784

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

Date obtained: 30-09-2016

Date published: 09-10-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 3 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 33 |
| copper | ug/L | monthly | 1 | - | - | 5.9 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 6 | 11 | 17 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 5 | 2 | 4 | 7 |

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

Warriewood Wastewater Treatment Plant

August Pollution Monitoring Summary



EPL 1784

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

Date obtained: 09-09-2016

Date published: 14-09-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 4 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 8 |
| copper | ug/L | monthly | 1 | - | - | 6.2 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 1 | 34 | 95 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | <5 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 5 | 2 | 10 | 38 |

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

Warriewood Wastewater Treatment Plant

July Pollution Monitoring Summary



EPL 1784

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

Date obtained: 04-08-2016

Date published: 17-08-2016

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

| EPA Point 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|------------|-------------|---------------|--|
| pollutant | unit of measure | sampling frequency | 3DGM limit | 3DGM Actual | within limits | |
| total suspended solids | mg/L | monthly | 80 | 4 | yes | |

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 5 Site code WW0005 | | Point description: Outfall pipeline on the plant's eastern boundary | | | | |
|---------------------------------|-----------------|---|-------------------|----------------|-------------|----------------|
| pollutant | unit of measure | sampling frequency | number of samples | minimum result | mean result | maximum result |
| aluminium | ug/L | monthly | 1 | - | - | 16 |
| copper | ug/L | monthly | 1 | - | - | 4.2 |
| cyanide | ug/L | monthly | 1 | - | - | <5 |
| faecal coliforms | CFU/100mL | every 6 days | 5 | 13 | 70 | 230 |
| nonylphenol ethoxylate | ug/L | monthly | 1 | - | - | 6 |
| sea urchin fertilisation (EC50) | % Effluent/Vol | monthly | 1 | - | - | 100 |
| total suspended solids | mg/L | every 6 days | 5 | 3 | 4 | 4 |

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