

Penrith Wastewater Treatment Plant

June Pollution Monitoring Summary



EPL 1409

Summary period: 01-06-2018 to 30-06-2018

Date obtained: 05-07-2018

Date published: 11-07-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	226
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	1
copper	ug/L	monthly	1	-	-	4.5
faecal coliforms	CFU/100mL	every 6 days	5	<1	7	22
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	126
nickel	ug/L	monthly	1	-	-	2.1
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.03	0.07
nitrogen (total)	mg/L	every 6 days	5	2.88	3.23	3.44
phosphorus (total)	mg/L	every 6 days	5	0.05	0.05	0.07
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	31

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	6	<0.04	<0.04	0.13

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

May Pollution Monitoring Summary



EPL 1409

Summary period: 01-05-2018 to 31-05-2018

Date obtained: 04-06-2018

Date published: 13-06-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	239
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	1.1
copper	ug/L	monthly	1	-	-	4.4
faecal coliforms	CFU/100mL	every 6 days	5	<1	<1	1
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	141
nickel	ug/L	monthly	1	-	-	2
nitrogen (ammonia)	mg/L	every 6 days	5	0.22	1.33	4.4
nitrogen (total)	mg/L	every 6 days	5	3.27	4.24	7.04
phosphorus (total)	mg/L	every 6 days	5	0.05	0.07	0.09
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	33

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

April Pollution Monitoring Summary



EPL 1409

Summary period: 01-04-2018 to 30-04-2018

Date obtained: 07-05-2018

Date published: 11-05-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	183
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	1.3
copper	ug/L	monthly	1	-	-	3.5
faecal coliforms	CFU/100mL	every 6 days	5	<1	70	270
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	158
nickel	ug/L	monthly	1	-	-	2
nitrogen (ammonia)	mg/L	every 6 days	5	0.04	0.49	1.02
nitrogen (total)	mg/L	every 6 days	5	2.83	3.04	3.22
phosphorus (total)	mg/L	every 6 days	5	0.06	0.08	0.09
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	40

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

March Pollution Monitoring Summary



EPL 1409

Summary period: 01-03-2018 to 31-03-2018

Date obtained: 06-04-2018

Date published: 13-04-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	200
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	1.1
copper	ug/L	monthly	1	-	-	0.6
faecal coliforms	CFU/100mL	every 6 days	5	<1	8	24
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	131
nickel	ug/L	monthly	1	-	-	2.2
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.12	0.37
nitrogen (total)	mg/L	every 6 days	5	2.22	2.71	3.6
phosphorus (total)	mg/L	every 6 days	5	0.06	0.06	0.07
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	36

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

February Pollution Monitoring Summary



EPL 1409

Summary period: 01-02-2018 to 28-02-2018

Date obtained: 07-03-2018

Date published: 15-03-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	131
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	0.9
copper	ug/L	monthly	1	-	-	3.7
faecal coliforms	CFU/100mL	every 6 days	5	<1	53	140
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	140
nickel	ug/L	monthly	1	-	-	2.2
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.69	3.31
nitrogen (total)	mg/L	every 6 days	5	2.25	3.44	5.88
phosphorus (total)	mg/L	every 6 days	5	0.06	0.08	0.14
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	32

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

January Pollution Monitoring Summary



EPL 1409

Summary period: 01-01-2018 to 31-01-2018

Date obtained: 15-02-2018

Date published: 23-02-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	156
arsenic	ug/L	monthly	1	-	-	0.3
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	0.9
copper	ug/L	monthly	1	-	-	4.2
faecal coliforms	CFU/100mL	every 6 days	5	1	39	80
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	124
nickel	ug/L	monthly	1	-	-	2.7
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.02
nitrogen (total)	mg/L	every 6 days	5	1.88	2.31	2.62
phosphorus (total)	mg/L	every 6 days	5	0.06	0.07	0.08
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	41

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

December Pollution Monitoring Summary



EPL 1409

Summary period: 01-12-2017 to 31-12-2017

Date obtained: 23-01-2018

Date published: 29-01-2018

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	126
arsenic	ug/L	monthly	1	-	-	0.4
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	2
cobalt	ug/L	monthly	1	-	-	0.8
copper	ug/L	monthly	1	-	-	5.6
faecal coliforms	CFU/100mL	every 6 days	5	<1	11	37
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	161
nickel	ug/L	monthly	1	-	-	2.9
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	1.06	5.27
nitrogen (total)	mg/L	every 6 days	5	3.56	4.49	7.27
phosphorus (total)	mg/L	every 6 days	5	0.04	0.06	0.11
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	28

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	6	<0.04	0.2	0.64

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

November Pollution Monitoring Summary



EPL 1409

Summary period: 01-11-2017 to 30-11-2017

Date obtained: 13-12-2017

Date published: 21-12-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	3	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	111
arsenic	ug/L	monthly	1	-	-	0.3
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	5
cobalt	ug/L	monthly	1	-	-	0.7
copper	ug/L	monthly	1	-	-	4.6
faecal coliforms	CFU/100mL	every 6 days	5	<1	7	28
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	38
iron	ug/L	monthly	1	-	-	129
nickel	ug/L	monthly	1	-	-	2.4
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.02	0.03
nitrogen (total)	mg/L	every 6 days	5	3.42	3.63	4
phosphorus (total)	mg/L	every 6 days	5	0.04	0.05	0.05
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	32

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

October Pollution Monitoring Summary



EPL 1409

Summary period: 01-10-2017 to 31-10-2017

Date obtained: 13-11-2017

Date published: 22-11-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	90
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	9
cobalt	ug/L	monthly	1	-	-	0.7
copper	ug/L	monthly	1	-	-	3.9
faecal coliforms	CFU/100mL	every 6 days	5	<1	1	5
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	99
nickel	ug/L	monthly	1	-	-	1.7
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.01
nitrogen (total)	mg/L	every 6 days	5	2.95	3.35	4.21
phosphorus (total)	mg/L	every 6 days	5	0.04	0.05	0.05
total suspended solids	mg/L	every 6 days	5	<2	<2	2
zinc	ug/L	monthly	1	-	-	32

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	0.07

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

September Pollution Monitoring Summary



EPL 1409

Summary period: 01-09-2017 to 30-09-2017

Date obtained: 09-10-2017

Date published: 19-10-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	3	yes
total suspended solids	mg/L	monthly	30	2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	130
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	0.7
copper	ug/L	monthly	1	-	-	3.4
faecal coliforms	CFU/100mL	every 6 days	5	<1	<1	1
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	122
nickel	ug/L	monthly	1	-	-	1.8
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.01
nitrogen (total)	mg/L	every 6 days	5	3.39	3.96	4.51
phosphorus (total)	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	-	-	27

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	0.17

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

August Pollution Monitoring Summary



EPL 1409

Summary period: 01-08-2017 to 31-08-2017

Date obtained: 19-09-2017

Date published: 21-09-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	214
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	1
copper	ug/L	monthly	1	-	-	5
faecal coliforms	CFU/100mL	every 6 days	6	<1	11	28
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	133
nickel	ug/L	monthly	1	-	-	1.8
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.02
nitrogen (total)	mg/L	every 6 days	5	3.91	4.24	4.52
phosphorus (total)	mg/L	every 6 days	5	0.06	0.07	0.08
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	37

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	6	<0.04	<0.04	<0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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

Penrith Wastewater Treatment Plant

July Pollution Monitoring Summary



EPL 1409

Summary period: 01-07-2017 to 31-07-2017

Date obtained: 07-08-2017

Date published: 11-08-2017

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean data

EPA Point 5 Site code PR0005		Point description: At the outlet of the chlorine contact tank			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	30	<2	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 PR0005		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
aluminium	ug/L	monthly	1	-	-	205
arsenic	ug/L	monthly	1	-	-	0.2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	0.9
copper	ug/L	monthly	1	-	-	4.9
faecal coliforms	CFU/100mL	every 6 days	5	7	29	43
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	126
nickel	ug/L	monthly	1	-	-	1.8
nitrogen (ammonia)	mg/L	every 6 days	6	0.01	0.01	0.01
nitrogen (total)	mg/L	every 6 days	6	4.08	4.7	5.8
phosphorus (total)	mg/L	every 6 days	6	0.07	0.09	0.11
total suspended solids	mg/L	every 6 days	6	<2	<2	<2
zinc	ug/L	monthly	1	-	-	38

EPA Point 21 Site code PR0021		Point description: Downstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04

EPA Point 22 Site code PR0022		Point description: Upstream of the St Marys Advanced Water Treatment Plant return stream				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100

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