

# Penrith Wastewater Treatment Plant

## June Pollution Monitoring Summary



### EPL 1409

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

Date obtained: 07-07-2022

Date published: 15-07-2022

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	<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	-	-	148
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	4.6
faecal coliforms	CFU/100mL	every 6 days	5	1	10	25
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	148
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.09	0.37
nitrogen (total)	mg/L	every 6 days	5	3.75	4.52	5.17
phosphorus (total)	mg/L	every 6 days	5	0.07	0.08	0.09
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	18

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## May Pollution Monitoring Summary



### EPL 1409

Summary period: 01-05-2022 to 31-05-2022

Date obtained: 06-06-2022

Date published: 17-06-2022

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	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	-	-	96
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	2.1
faecal coliforms	CFU/100mL	every 6 days	5	4	77	320
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	108
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.03	0.04
nitrogen (total)	mg/L	every 6 days	5	3.11	3.91	4.99
phosphorus (total)	mg/L	every 6 days	5	0.07	0.09	0.1
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	26

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## April Pollution Monitoring Summary



### EPL 1409

Summary period: 01-04-2022 to 30-04-2022

Date obtained: 09-05-2022

Date published: 20-05-2022

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	<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	-	-	147
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	2.8
faecal coliforms	CFU/100mL	every 6 days	5	10	53	86
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	117
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.27	0.72
nitrogen (total)	mg/L	every 6 days	5	3.31	3.95	4.61
phosphorus (total)	mg/L	every 6 days	5	0.07	0.1	0.17
total suspended solids	mg/L	every 6 days	5	<2	<2	4
zinc	ug/L	monthly	1	-	-	15

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## March Pollution Monitoring Summary



### EPL 1409

Summary period: 01-03-2022 to 31-03-2022

Date obtained: 05-04-2022

Date published: 16-04-2022

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	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	-	-	110
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	4
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	2
copper	ug/L	monthly	1	-	-	2.8
faecal coliforms	CFU/100mL	every 6 days	5	1	183	470
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	84
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.67	1.76
nitrogen (total)	mg/L	every 6 days	5	3.48	4.59	5.77
phosphorus (total)	mg/L	every 6 days	5	0.11	0.26	0.56
total suspended solids	mg/L	every 6 days	5	<2	5	19
zinc	ug/L	monthly	1	-	-	13

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## February Pollution Monitoring Summary



### EPL 1409

Summary period: 01-02-2022 to 28-02-2022

Date obtained: 10-03-2022

Date published: 23-03-2022

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	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	-	-	114
arsenic	ug/L	bi-annually	1	-	-	0.4
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	3
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	3
cobalt	ug/L	bi-annually	1	-	-	1
copper	ug/L	monthly	1	-	-	3.9
faecal coliforms	CFU/100mL	every 6 days	5	5	138	390
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	109
nickel	ug/L	bi-annually	1	-	-	2.1
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.2	0.66
nitrogen (total)	mg/L	every 6 days	5	3.33	3.94	4.61
phosphorus (total)	mg/L	every 6 days	5	0.16	0.2	0.31
total suspended solids	mg/L	every 6 days	5	<2	<2	5
zinc	ug/L	monthly	1	-	-	26

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## January Pollution Monitoring Summary



### EPL 1409

Summary period: 01-01-2022 to 31-01-2022

Date obtained: 08-02-2022

Date published: 11-02-2022

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	<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	-	-	164
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	3.6
faecal coliforms	CFU/100mL	every 6 days	5	42	69	120
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	99
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.19	0.65
nitrogen (total)	mg/L	every 6 days	5	2.9	3.56	4.53
phosphorus (total)	mg/L	every 6 days	5	0.11	0.15	0.19
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	23

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## December Pollution Monitoring Summary



### EPL 1409

Summary period: 01-12-2021 to 31-12-2021

Date obtained: 04-01-2022

Date published: 14-01-2022

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	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	-	-	162
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	4.3
faecal coliforms	CFU/100mL	every 6 days	5	<1	24	59
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	116
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.25	0.6
nitrogen (total)	mg/L	every 6 days	5	2.59	3.02	3.41
phosphorus (total)	mg/L	every 6 days	5	0.1	0.14	0.19
total suspended solids	mg/L	every 6 days	5	<2	<2	3
zinc	ug/L	monthly	1	-	-	26

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## November Pollution Monitoring Summary



### EPL 1409

Summary period: 01-11-2021 to 30-11-2021

Date obtained: 07-12-2021

Date published: 17-12-2021

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	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	-	-	216
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	4
faecal coliforms	CFU/100mL	every 6 days	5	1	5	11
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	173
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.83	2.05
nitrogen (total)	mg/L	every 6 days	5	3.16	3.77	4.79
phosphorus (total)	mg/L	every 6 days	5	0.1	0.2	0.27
total suspended solids	mg/L	every 6 days	5	<2	<2	4
zinc	ug/L	monthly	1	-	-	26

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).



# Penrith Wastewater Treatment Plant

## October Pollution Monitoring Summary



### EPL 1409

Summary period: 01-10-2021 to 31-10-2021

Date obtained: 08-11-2021

Date published: 12-11-2021

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	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 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	-	-	196
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	2.4
faecal coliforms	CFU/100mL	every 6 days	5	<1	7	17
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	144
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.46	2.11
nitrogen (total)	mg/L	every 6 days	5	2.76	3.43	5.74
phosphorus (total)	mg/L	every 6 days	5	0.12	0.16	0.23
total suspended solids	mg/L	every 6 days	5	<2	<2	3
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	<0.04

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## September Pollution Monitoring Summary



### EPL 1409

Summary period: 01-09-2021 to 30-09-2021

Date obtained: 05-10-2021

Date published: 18-10-2021

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	<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	-	-	106
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	3.6
faecal coliforms	CFU/100mL	every 6 days	5	<1	4	14
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	132
nitrogen (ammonia)	mg/L	every 6 days	5	0.04	0.11	0.38
nitrogen (total)	mg/L	every 6 days	5	3.32	3.84	4.44
phosphorus (total)	mg/L	every 6 days	5	0.06	0.09	0.12
total suspended solids	mg/L	every 6 days	5	<2	<2	2
zinc	ug/L	monthly	1	-	-	23

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## August Pollution Monitoring Summary



### EPL 1409

Summary period: 01-08-2021 to 31-08-2021

Date obtained: 06-09-2021

Date published: 13-09-2021

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
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	-	-	143
arsenic	ug/L	bi-annually	1	-	-	0.2
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	bi-annually	1	-	-	0.7
copper	ug/L	monthly	1	-	-	3.8
faecal coliforms	CFU/100mL	every 6 days	5	<1	12	47
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	137
nickel	ug/L	bi-annually	1	-	-	1.5
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.32	1.49
nitrogen (total)	mg/L	every 6 days	5	2.76	3.92	5.46
phosphorus (total)	mg/L	every 6 days	5	0.06	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. Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

# Penrith Wastewater Treatment Plant

## July Pollution Monitoring Summary



### EPL 1409

Summary period: 01-07-2021 to 31-07-2021

Date obtained: 07-08-2021

Date published: 18-08-2021

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
biochemical oxygen demand	mg/L	monthly	30	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	yes
total suspended solids	mg/L	monthly	10	<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	-	-	227
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	4.7
faecal coliforms	CFU/100mL	every 6 days	6	<1	7	27
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	151
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.04	0.05
nitrogen (total)	mg/L	every 6 days	5	3.42	3.8	4.01
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	-	-	39

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.

Effluent quality monitoring results obtained from EPA Points 5, 21 and 22 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).