

# Penrith Water Resource Recovery Facility

## June Pollution Monitoring Summary



### EPL 1409

Summary period: 01-06-2023 to 30-06-2023

Date obtained: 10-07-2023

Date published: 24-07-2023

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	-	-	168
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	2	5	8
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	164
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.2	0.89
nitrogen (total)	mg/L	every 6 days	5	3.36	3.66	3.88
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	-	-	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 Water Resource Recovery Facility

## May Pollution Monitoring Summary



### EPL 1409

Summary period: 01-05-2023 to 31-05-2023

Date obtained: 08-06-2023

Date published: 22-06-2023

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	-	-	149
biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
copper	ug/L	monthly	1	-	-	4
faecal coliforms	CFU/100mL	every 6 days	5	8	11	20
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	163
nitrogen (ammonia)	mg/L	every 6 days	6	0.02	0.03	0.05
nitrogen (total)	mg/L	every 6 days	6	2.72	3.13	3.68
phosphorus (total)	mg/L	every 6 days	6	0.08	0.09	0.09
total suspended solids	mg/L	every 6 days	6	<2	<2	<2
zinc	ug/L	monthly	1	-	-	30

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 Water Resource Recovery Facility

## April Pollution Monitoring Summary



### EPL 1409

Summary period: 01-04-2023 to 30-04-2023

Date obtained: 10-05-2023

Date published: 19-05-2023

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	-	-	129
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	5	<1	7	24
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	156
nitrogen (ammonia)	mg/L	every 6 days	5	0.07	0.2	0.63
nitrogen (total)	mg/L	every 6 days	5	2.49	2.99	4.09
phosphorus (total)	mg/L	every 6 days	5	0.11	0.13	0.16
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	35

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 Water Resource Recovery Facility

## March Pollution Monitoring Summary



### EPL 1409

Summary period: 01-03-2023 to 31-03-2023

Date obtained: 04-04-2023

Date published: 14-04-2023

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	-	-	138
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
faecal coliforms	CFU/100mL	every 6 days	5	9	58	140
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	137
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.12	0.37
nitrogen (total)	mg/L	every 6 days	5	2.26	2.68	3.12
phosphorus (total)	mg/L	every 6 days	5	0.1	0.16	0.2
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	24

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	-	-	26.8

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 Water Resource Recovery Facility

## February Pollution Monitoring Summary



### EPL 1409

Summary period: 01-02-2023 to 28-02-2023

Date obtained: 06-03-2023

Date published: 17-03-2023

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	-	-	127
arsenic	ug/L	monthly	1	-	-	0.3
biochemical oxygen demand	mg/L	every 6 days	4	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	4	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	1.7
copper	ug/L	monthly	1	-	-	2.2
faecal coliforms	CFU/100mL	every 6 days	5	<1	68	290
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	179
nickel	ug/L	monthly	1	-	-	2
nitrogen (ammonia)	mg/L	every 6 days	4	0.04	0.22	0.5
nitrogen (total)	mg/L	every 6 days	4	2.13	2.43	2.73
phosphorus (total)	mg/L	every 6 days	4	0.18	0.22	0.26
total suspended solids	mg/L	every 6 days	4	<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	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	-	-	7.7

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 Water Resource Recovery Facility

## January Pollution Monitoring Summary



### EPL 1409

Summary period: 01-01-2023 to 31-01-2023

Date obtained: 08-02-2023

Date published: 15-02-2023

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	-	-	133
biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
copper	ug/L	monthly	1	-	-	2.8
faecal coliforms	CFU/100mL	every 6 days	5	<1	56	170
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	138
nitrogen (ammonia)	mg/L	every 6 days	6	0.03	1.09	4.07
nitrogen (total)	mg/L	every 6 days	6	2.37	3.39	5.75
phosphorus (total)	mg/L	every 6 days	6	0.11	0.23	0.61
total suspended solids	mg/L	every 6 days	6	<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	5	<0.04	<0.04	0.19

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 Water Resource Recovery Facility

## December Pollution Monitoring Summary



### EPL 1409

Summary period: 01-12-2022 to 31-12-2022

Date obtained: 01-01-2023

Date published: 10-01-2023

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	-	-	123
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	3	29	44
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	113
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.1	0.4
nitrogen (total)	mg/L	every 6 days	5	2.64	3.4	4.2
phosphorus (total)	mg/L	every 6 days	5	0.09	0.12	0.15
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	22

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 Water Resource Recovery Facility

## November Pollution Monitoring Summary



### EPL 1409

Summary period: 01-11-2022 to 30-11-2022

Date obtained: 06-12-2022

Date published: 09-12-2022

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	-	-	116
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	-	-	2.2
faecal coliforms	CFU/100mL	every 6 days	5	<1	9	27
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	143
nitrogen (ammonia)	mg/L	every 6 days	5	0.04	0.68	2.38
nitrogen (total)	mg/L	every 6 days	5	2.04	3.34	4.65
phosphorus (total)	mg/L	every 6 days	5	0.11	0.16	0.2
total suspended solids	mg/L	every 6 days	5	<2	<2	2
zinc	ug/L	monthly	1	-	-	21

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 Water Resource Recovery Facility

## October Pollution Monitoring Summary



### EPL 1409

Summary period: 01-10-2022 to 31-10-2022

Date obtained: 04-11-2022

Date published: 15-11-2022

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	-	-	132
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	5
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	4
copper	ug/L	monthly	1	-	-	1.9
faecal coliforms	CFU/100mL	every 6 days	5	<1	5	12
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	144
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	1.56	5.13
nitrogen (total)	mg/L	every 6 days	5	2.33	3.96	6.97
phosphorus (total)	mg/L	every 6 days	5	0.09	0.36	0.92
total suspended solids	mg/L	every 6 days	5	<2	<2	8
zinc	ug/L	monthly	1	-	-	24

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 Water Resource Recovery Facility

## September Pollution Monitoring Summary



### EPL 1409

Summary period: 01-09-2022 to 30-09-2022

Date obtained: 10-10-2022

Date published: 21-10-2022

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	-	-	150
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	-	-	2.3
faecal coliforms	CFU/100mL	every 6 days	5	<1	19	45
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	161
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.07	0.27
nitrogen (total)	mg/L	every 6 days	5	2.34	2.69	2.94
phosphorus (total)	mg/L	every 6 days	5	0.12	0.14	0.17
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	0.08

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 Water Resource Recovery Facility

## August Pollution Monitoring Summary



### EPL 1409

Summary period: 01-08-2022 to 31-08-2022

Date obtained: 08-09-2022

Date published: 14-09-2022

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	-	-	149
arsenic	ug/L	bi-annually	1	-	-	0.3
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	bi-annually	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	bi-annually	1	-	-	1
copper	ug/L	monthly	1	-	-	2.8
faecal coliforms	CFU/100mL	every 6 days	5	2	10	20
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	170
nickel	ug/L	bi-annually	1	-	-	1.5
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.03	0.06
nitrogen (total)	mg/L	every 6 days	5	2.41	3.58	5.65
phosphorus (total)	mg/L	every 6 days	5	0.08	0.09	0.11
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 Water Resource Recovery Facility

## July Pollution Monitoring Summary



### EPL 1409

Summary period: 01-07-2022 to 31-07-2022

Date obtained: 11-08-2022

Date published: 25-08-2022

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	-	-	200
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	5
cadmium	ug/L	monthly	1	-	-	<0.1
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	4
copper	ug/L	monthly	1	-	-	2.8
faecal coliforms	CFU/100mL	every 6 days	5	<1	2	4
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	148
nitrogen (ammonia)	mg/L	every 6 days	5	0.08	0.38	1.15
nitrogen (total)	mg/L	every 6 days	5	3.12	4.65	5.48
phosphorus (total)	mg/L	every 6 days	5	0.06	0.14	0.38
total suspended solids	mg/L	every 6 days	5	<2	2	11
zinc	ug/L	monthly	1	-	-	22

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).