

Penrith Water Resource Recovery Facility

June Pollution Monitoring Summary



EPL 1409

Summary period: 01-06-2024 to 30-06-2024
Date obtained: 08-07-2024
Date published: 22-07-2024

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
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
copper	ug/L	monthly	1	-	-	3.6
faecal coliforms	CFU/100mL	every 6 days	5	<1	4	11
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	112
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.14	0.37
nitrogen (total)	mg/L	every 6 days	5	5.08	5.36	6.07
phosphorus (total)	mg/L	every 6 days	5	0.19	0.21	0.25
total suspended solids	mg/L	every 6 days	5	<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

May Pollution Monitoring Summary



EPL 1409

Summary period: 01-05-2024 to 31-05-2024
Date obtained: 11-06-2024
Date published: 21-06-2024

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
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	-	-	100
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	7.3
faecal coliforms	CFU/100mL	every 6 days	6	1	11	28
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	115
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.34	0.9
nitrogen (total)	mg/L	every 6 days	5	4.32	5.14	5.76
phosphorus (total)	mg/L	every 6 days	5	0.1	0.19	0.5
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	0.07

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.

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: 01-04-2024 to 30-04-2024
Date obtained: 08-05-2024
Date published: 20-05-2024

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
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	-	-	144
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	7
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	7.3
faecal coliforms	CFU/100mL	every 6 days	5	15	13885	69,000
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	119
nitrogen (ammonia)	mg/L	every 6 days	5	0.04	0.5	2.31
nitrogen (total)	mg/L	every 6 days	5	5.63	6.4	7.23
phosphorus (total)	mg/L	every 6 days	5	0.09	0.26	0.88
total suspended solids	mg/L	every 6 days	5	<2	4	17
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	-	-	70.7

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

March Pollution Monitoring Summary



EPL 1409

Summary period: 01-03-2024 to 31-03-2024
Date obtained: 09-04-2024
Date published: 23-04-2024

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
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	6	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	7.1
faecal coliforms	CFU/100mL	every 6 days	5	41	74	120
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	131
nitrogen (ammonia)	mg/L	every 6 days	6	0.03	0.04	0.05
nitrogen (total)	mg/L	every 6 days	6	4.78	5.88	6.59
phosphorus (total)	mg/L	every 6 days	6	0.08	0.11	0.13
total suspended solids	mg/L	every 6 days	6	<2	3	19
zinc	ug/L	monthly	1	-	-	44

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

February Pollution Monitoring Summary



EPL 1409

Summary period: 01-02-2024 to 29-02-2024
Date obtained: 13-03-2024
Date published: 25-03-2024

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
total suspended solids	mg/L	monthly	10	4	yes

3 Day Geometric Mean (3DGM) is a way to average a set of values and is commonly used with water quality assessments which show a great deal of variability. 3DGM is calculated by multiplying the results of the analysis of three samples collected on three consecutive days and then taking the cubed root of that amount.

Table 2: Routine monitoring data

EPA Point 5 Site code 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	-	-	128
arsenic	ug/L	bi-annually	1	-	-	0.6
biochemical oxygen demand	mg/L	every 6 days	4	<2	<2	2
cadmium	ug/L	monthly	1	-	-	<0.1
cobalt	ug/L	bi-annually	1	-	-	0.5
copper	ug/L	monthly	1	-	-	5
faecal coliforms	CFU/100mL	every 6 days	5	25	113	200
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	101
nickel	ug/L	bi-annually	1	-	-	2.6
nitrogen (ammonia)	mg/L	every 6 days	4	0.04	0.25	0.45
nitrogen (total)	mg/L	every 6 days	4	3.91	4.99	5.63
phosphorus (total)	mg/L	every 6 days	4	0.15	0.16	0.19
total suspended solids	mg/L	every 6 days	4	<2	<2	3
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.

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: 01-01-2024 to 31-01-2024
 Date obtained: 07-02-2024
 Date published: 19-02-2024

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
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	-	-	128
biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	7.8
faecal coliforms	CFU/100mL	every 6 days	5	<1	180	380
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	94
nitrogen (ammonia)	mg/L	every 6 days	6	0.03	0.09	0.16
nitrogen (total)	mg/L	every 6 days	6	4.69	5.35	5.81
phosphorus (total)	mg/L	every 6 days	6	0.05	0.08	0.1
total suspended solids	mg/L	every 6 days	6	<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	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	-	-	70.7

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

December Pollution Monitoring Summary



EPL 1409

Summary period: 01-12-2023 to 31-12-2023
Date obtained: 10-01-2024
Date published: 22-01-2024

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
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	-	-	209
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	7.2
faecal coliforms	CFU/100mL	every 6 days	5	5	126	480
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	134
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.17	0.73
nitrogen (total)	mg/L	every 6 days	5	2.78	3.59	4.54
phosphorus (total)	mg/L	every 6 days	5	0.05	0.07	0.08
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	<0.04

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: 01-11-2023 to 30-11-2023Á

Date obtained: 06-12-2023

Date published: 11-12-2023

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
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	-	-	156
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	6.6
faecal coliforms	CFU/100mL	every 6 days	5	15	45	82
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	154
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.06	0.16
nitrogen (total)	mg/L	every 6 days	5	2.97	4.74	5.93
phosphorus (total)	mg/L	every 6 days	5	0.07	0.11	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

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Penrith Water Resource Recovery Facility

October Pollution Monitoring Summary



EPL 1409

Summary period: 01-10-2023 to 31-10-2023
 Date obtained: 03-11-2023
 Date published: 17-11-2023

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
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	<2
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	6.7
faecal coliforms	CFU/100mL	every 6 days	5	1	26	100
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	121
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.11	0.43
nitrogen (total)	mg/L	every 6 days	5	4.29	5.74	6.93
phosphorus (total)	mg/L	every 6 days	5	0.12	0.17	0.26
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

September Pollution Monitoring Summary



EPL 1409

Summary period: 01-09-2023 to 30-09-2023

Date obtained: 05-10-2023

Date published: 13-10-2023

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
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
copper	ug/L	monthly	1	-	-	3.6
faecal coliforms	CFU/100mL	every 6 days	5	<1	10	23
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	140
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.11	0.41
nitrogen (total)	mg/L	every 6 days	5	4.35	5.91	8.68
phosphorus (total)	mg/L	every 6 days	5	0.07	0.21	0.73
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

August Pollution Monitoring Summary



EPL 1409

Summary period: 01-08-2023 to 31-08-2023

Date obtained: 05-09-2023

Date published: 14-09-2023

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
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	-	-	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
cobalt	ug/L	bi-annually	1	-	-	0.5
copper	ug/L	monthly	1	-	-	2.7
faecal coliforms	CFU/100mL	every 6 days	5	<1	3	5
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	170
nickel	ug/L	bi-annually	1	-	-	2.2
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.03	0.05
nitrogen (total)	mg/L	every 6 days	5	3.23	3.6	4.69
phosphorus (total)	mg/L	every 6 days	5	0.07	0.07	0.08
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	25

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: 01-07-2023 to 31-07-2023

Date obtained: 06-08-2023

Date published: 15-08-2023

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
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	-	-	230
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
copper	ug/L	monthly	1	-	-	3.4
faecal coliforms	CFU/100mL	every 6 days	5	<1	10	22
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30
iron	ug/L	monthly	1	-	-	199
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.19	0.67
nitrogen (total)	mg/L	every 6 days	5	3.26	3.59	4.25
phosphorus (total)	mg/L	every 6 days	5	0.07	0.08	0.1
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	-	-	61.6

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).