

Quakers Hill Water Resource Recovery Facility September Pollution Monitoring Summary



EPL 1724

Summary period: 01-09-2024 to 30-09-2024

Date obtained: 09-10-2024

Date published: 23-10-2024

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 4 Site code QH0004		Point description: Downstream of the overflow weir in the clean water tank					
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM actual	100 percentile limit	100 percentile actual	within limits
biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	4.36	yes
phosphorus	mg/L	every 6 days	-	-	5	0.14	yes
total suspended solids	mg/L	monthly	10	<2	-	-	yes

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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 4 Site code QH0004		Point description: Downstream of the overflow weir in the clean water tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	88
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
chromium	ug/L	monthly	1	-	-	0.4
copper	ug/L	monthly	1	-	-	6.9
nitrogen (ammonia)	mg/L	every 6 days	5	<0.01	0.02	0.04
nitrogen (total)	mg/L	every 6 days	5	4.04	4.24	4.36
phosphorus	mg/L	every 6 days	5	0.03	0.08	0.14
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	18

EPA Point 5 Site code QH0005		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
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04
faecal coliforms	CFU/100mL	every 6 days	5	<1	6	20
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30

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

Effluent quality monitoring results obtained from EPA Points 4 and 5 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Quakers Hill Water Resource Recovery Facility

August Pollution Monitoring Summary



EPL 1724

Summary period: 01-08-2024 to 31-08-2024

Date obtained: 10-09-2024

Date published: 13-09-2024

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 4 Site code QH0004		Point description: Downstream of the overflow weir in the clean water tank					
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM actual	100 percentile limit	100 percentile actual	within limits
biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	5.82	yes
phosphorus	mg/L	every 6 days	-	-	5	0.13	yes
total suspended solids	mg/L	monthly	10	<2	-	-	yes

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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 4 Site code QH0004		Point description: Downstream of the overflow weir in the clean water 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
chromium	ug/L	monthly	1	-	-	<0.2
cobalt	ug/L	biannually	1	-	-	0.4
copper	ug/L	monthly	1	-	-	2.8
manganese	ug/L	biannually	1	-	-	5.8
molybdenum	ug/L	biannually	1	-	-	2.4
nickel	ug/L	biannually	1	-	-	1.8
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.02	0.03
nitrogen (total)	mg/L	every 6 days	5	3.78	4.56	5.82
phosphorus	mg/L	every 6 days	5	0.07	0.09	0.13
total suspended solids	mg/L	every 6 days	5	<2	<2	2
zinc	ug/L	monthly	1	-	-	21

EPA Point 5 Site code QH0005		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
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	0.04
faecal coliforms	CFU/100mL	every 6 days	5	<1	11	29
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30

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

Effluent quality monitoring results obtained from EPA Points 4 and 5 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Quakers Hill Water Resource Recovery Facility

July Pollution Monitoring Summary



EPL 1724

Summary period: 01-07-2024 to 31-07-2024

Date obtained: 18-08-2024

Date published: 27-08-2024

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 4 Site code QH0004		Point description: Downstream of the overflow weir in the clean water tank					
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM actual	100 percentile limit	100 percentile actual	within limits
biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	4.34	yes
phosphorus	mg/L	every 6 days	-	-	5	0.12	yes
total suspended solids	mg/L	monthly	10	<2	-	-	yes

100 percentile means that 100 % of samples (or all samples) taken must not exceed the limit for that pollutant.

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 4 Site code QH0004		Point description: Downstream of the overflow weir in the clean water tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	134
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cadmium	ug/L	monthly	1	-	-	<0.1
chromium	ug/L	monthly	1	-	-	0.3
copper	ug/L	monthly	1	-	-	3
nitrogen (ammonia)	mg/L	every 6 days	5	<0.01	0.01	0.03
nitrogen (total)	mg/L	every 6 days	5	2.77	3.56	4.34
phosphorus	mg/L	every 6 days	5	0.07	0.09	0.12
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	17

EPA Point 5 Site code QH0005		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
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	6	<0.04	<0.04	<0.04
faecal coliforms	CFU/100mL	every 6 days	6	2	5	12
hydrogen sulphide (unionised)	ug/L	monthly	1	-	-	<30

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

Effluent quality monitoring results obtained from EPA Points 4 and 5 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).