

Riverstone Wastewater Treatment Plant

January Pollution Monitoring Summary



EPL 1796

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

Date obtained: 12-02-2021

Date published: 23-02-2021

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact 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
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	2.84	yes
phosphorus	mg/L	every 6 days	-	-	5	0.01	yes
total suspended solids	mg/L	monthly	30	<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 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	28
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	0.4
copper	ug/L	monthly	1	-	-	1.3
cyanide	ug/L	monthly	1	-	-	<5
iron	ug/L	monthly	1	-	-	8
nickel	ug/L	monthly	1	-	-	1.8
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.02
nitrogen (total)	mg/L	every 6 days	5	1.03	1.9	2.84
phosphorus	mg/L	every 6 days	5	0.01	0.01	0.01
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	6

EPA Point 4 Site code RS0004		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	5	11	28
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 3 and 4 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Riverstone Wastewater Treatment Plant

December Pollution Monitoring Summary



EPL 1796

Summary period: 01-12-2020 to 31-12-2020

Date obtained: 08-01-2021

Date published: 18-01-2021

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact 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
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	3.42	yes
phosphorus	mg/L	every 6 days	-	-	5	0.02	yes
total suspended solids	mg/L	monthly	30	<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 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	24
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	1.4
iron	ug/L	monthly	1	-	-	7
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.02	0.04
nitrogen (total)	mg/L	every 6 days	5	1.06	1.8	3.42
phosphorus	mg/L	every 6 days	5	0.01	0.02	0.02
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	6

EPA Point 4 Site code RS0004		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	30	72
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 3 and 4 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Riverstone Wastewater Treatment Plant

November Pollution Monitoring Summary



EPL 1796

Summary period: 01-11-2020 to 30-11-2020

Date obtained: 10-12-2020

Date published: 15-12-2020

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact 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
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	1.84	yes
phosphorus	mg/L	every 6 days	-	-	5	0.03	yes
total suspended solids	mg/L	monthly	30	<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 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	31
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	0.9
iron	ug/L	monthly	1	-	-	10
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.02
nitrogen (total)	mg/L	every 6 days	5	1.09	1.32	1.84
phosphorus	mg/L	every 6 days	5	0.01	0.02	0.03
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	7

EPA Point 4 Site code RS0004		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	14	25
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 3 and 4 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Riverstone Wastewater Treatment Plant October Pollution Monitoring Summary



EPL 1796

Summary period: 01-10-2020 to 31-10-2020

Date obtained: 10-11-2020

Date published: 13-11-2020

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact 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
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	2.64	yes
phosphorus	mg/L	every 6 days	-	-	5	0.02	yes
total suspended solids	mg/L	monthly	30	<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 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	37
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	1.1
iron	ug/L	monthly	1	-	-	10
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.01
nitrogen (total)	mg/L	every 6 days	5	1.79	2.07	2.64
phosphorus	mg/L	every 6 days	5	0.02	0.02	0.02
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	7

EPA Point 4 Site code RS0004		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	6	57	210
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 3 and 4 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Riverstone Wastewater Treatment Plant September Pollution Monitoring Summary



EPL 1796

Summary period: 01-09-2020 to 30-09-2020

Date obtained: 15-10-2020

Date published: 23-10-2020

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact 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
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	1.72	yes
phosphorus	mg/L	every 6 days	-	-	5	0.02	yes
total suspended solids	mg/L	monthly	30	<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 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	46
biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
copper	ug/L	monthly	1	-	-	1.2
iron	ug/L	monthly	1	-	-	11
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.01	0.01
nitrogen (total)	mg/L	every 6 days	5	1.06	1.43	1.72
phosphorus	mg/L	every 6 days	5	0.01	0.02	0.02
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	11

EPA Point 4 Site code RS0004		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	100	240
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 3 and 4 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Note: biochemical oxygen demand monitoring commenced from September 2020.

Riverstone Wastewater Treatment Plant

August Pollution Monitoring Summary



EPL 1796

Summary period: 01-08-2020 to 31-08-2020

Date obtained: 07-09-2020

Date published: 16-09-2020

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank					
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM actual	100 percentile limit	100 percentile actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	2.86	yes
phosphorus	mg/L	every 6 days	-	-	5	0.04	yes
total suspended solids	mg/L	monthly	30	<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 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	31
carbonaceous biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
copper	ug/L	monthly	1	-	-	1
iron	ug/L	monthly	1	-	-	8
nitrogen (ammonia)	mg/L	every 6 days	6	0.01	0.01	0.01
nitrogen (total)	mg/L	every 6 days	6	1.94	2.27	2.86
phosphorus	mg/L	every 6 days	6	0.01	0.02	0.04
total suspended solids	mg/L	every 6 days	6	<2	<2	<2
zinc	ug/L	monthly	1	-	-	8

EPA Point 4 Site code RS0004		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	2	3
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 3 and 4 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).

Riverstone Wastewater Treatment Plant

July Pollution Monitoring Summary



EPL 1796

Summary period: 01-07-2020 to 31-07-2020

Date obtained: 04-08-2020

Date published: 14-08-2020

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

Table 1: 3 Day Geometric Mean and 100 percentile data

EPA Point 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank					
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM actual	100 percentile limit	100 percentile actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	30	<2	-	-	yes
nitrogen (total)	mg/L	every 6 days	-	-	45	3.92	yes
phosphorus	mg/L	every 6 days	-	-	5	0.03	yes
total suspended solids	mg/L	monthly	30	<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 3 Site code RS0003		Point description: Downstream of the weir in the chlorine contact tank				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	63
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
cobalt	ug/L	monthly	1	-	-	0.4
copper	ug/L	monthly	1	-	-	1.1
cyanide	ug/L	monthly	1	-	-	<5
iron	ug/L	monthly	1	-	-	12
nickel	ug/L	monthly	1	-	-	1.3
nitrogen (ammonia)	mg/L	every 6 days	5	0.01	0.03	0.09
nitrogen (total)	mg/L	every 6 days	5	2.62	3.15	3.92
phosphorus	mg/L	every 6 days	5	0.01	0.02	0.03
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	11

EPA Point 4 Site code RS0004		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	81	400
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 3 and 4 are used to indicate the quality of water discharged at EPA Point 1 (discharge to waters).