

# Rouse Hill Wastewater Treatment Plant

## January Pollution Monitoring Summary



### EPL 4965

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 data**

EPA Point 4 Site code RH0004		Point description: Outlet of the dechlorination tanks			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
biochemical oxygen demand	mg/L	monthly	20	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	20	<2	yes
total suspended solids	mg/L	monthly	20	<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 4 Site code RH0004		Point description: Outlet of the dechlorination tanks				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	64
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
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04
cobalt	ug/L	bi-annually	1	-	-	0.4
copper	ug/L	monthly	1	-	-	3.5
cyanide	ug/L	bi-annually	1	-	-	<5
faecal coliforms	CFU/100mL	every 6 days	5	<1	1	3
iron	ug/L	monthly	1	-	-	19
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.04	0.08
nitrogen (total)	mg/L	every 6 days	5	6.53	7.58	8.59
phosphorus (total)	mg/L	every 6 days	5	0.01	0.01	0.02
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	22

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

As per clause M2.4 under EPL 4965, collection of samples from EPA Point 5 is required during the occurrence of any bypass during normal working hours. There was no bypass recorded from EPA Point 5 during normal working hours in the January monitoring period.

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).

# Rouse Hill Wastewater Treatment Plant

## December Pollution Monitoring Summary



### EPL 4965

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 data**

EPA Point 4 Site code RH0004		Point description: Outlet of the dechlorination tanks			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
biochemical oxygen demand	mg/L	monthly	20	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	20	<2	yes
total suspended solids	mg/L	monthly	20	<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 4 Site code RH0004		Point description: Outlet of the dechlorination tanks				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	73
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
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04
copper	ug/L	monthly	1	-	-	3.7
faecal coliforms	CFU/100mL	every 6 days	5	<1	<1	2
iron	ug/L	monthly	1	-	-	19
nitrogen (ammonia)	mg/L	every 6 days	5	0.02	0.05	0.14
nitrogen (total)	mg/L	every 6 days	5	5.77	7.58	9.23
phosphorus (total)	mg/L	every 6 days	5	0.01	0.01	0.02
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	24

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

As per clause M2.4 under EPL 4965, collection of samples from EPA Point 5 is required during the occurrence of any bypass during normal working hours. There was no bypass recorded from EPA Point 5 during normal working hours in the December monitoring period.

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).

# Rouse Hill Wastewater Treatment Plant

## November Pollution Monitoring Summary



### EPL 4965

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 data**

EPA Point 4 Site code RH0004	Point description: Outlet of the dechlorination tanks				
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
biochemical oxygen demand	mg/L	monthly	20	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	20	<2	yes
total suspended solids	mg/L	monthly	20	<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 4 Site code RH0004	Point description: Outlet of the dechlorination tanks					
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	167
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
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04
copper	ug/L	monthly	1	-	-	3.6
faecal coliforms	CFU/100mL	every 6 days	5	<1	3	6
iron	ug/L	monthly	1	-	-	23
nitrogen (ammonia)	mg/L	every 6 days	5	0.03	0.18	0.38
nitrogen (total)	mg/L	every 6 days	5	7.32	7.84	8.69
phosphorus (total)	mg/L	every 6 days	5	0.01	0.04	0.15
total suspended solids	mg/L	every 6 days	5	<2	3	13
zinc	ug/L	monthly	1	-	-	22

EPA Point 5 Site code RH0005	Point description: Downstream of the dechlorinated effluent					
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
biochemical oxygen demand	mg/L	on bypass	1	-	-	<2
carbonaceous biochemical oxygen demand	mg/L	on bypass	1	-	-	<2
chlorine (total residual)	mg/L	on bypass	1	-	-	0.04
faecal coliforms	CFU/100mL	on bypass	1	-	-	8,300
nitrogen (ammonia)	mg/L	on bypass	1	-	-	1
nitrogen (total)	mg/L	on bypass	1	-	-	6.06
phosphorus (total)	mg/L	on bypass	1	-	-	0.06
total suspended solids	mg/L	on bypass	1	-	-	<2

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

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).

# Rouse Hill Wastewater Treatment Plant

## October Pollution Monitoring Summary



### EPL 4965

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 data**

EPA Point 4 Site code RH0004		Point description: Outlet of the dechlorination tanks			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
biochemical oxygen demand	mg/L	monthly	20	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	20	<2	yes
total suspended solids	mg/L	monthly	20	<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 4 Site code RH0004		Point description: Outlet of the dechlorination tanks				
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	5	<2	<2	<2
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	6	<0.04	<0.04	<0.04
copper	ug/L	monthly	1	-	-	3.2
faecal coliforms	CFU/100mL	every 6 days	6	<1	<1	<1
iron	ug/L	monthly	1	-	-	25
nitrogen (ammonia)	mg/L	every 6 days	5	0.05	0.26	0.56
nitrogen (total)	mg/L	every 6 days	5	6.58	7.04	7.54
phosphorus (total)	mg/L	every 6 days	5	0.01	0.01	0.02
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	28

EPA Point 5 Site code RH0005		Point description: Downstream of the dechlorinated effluent				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
biochemical oxygen demand	mg/L	on bypass	1	-	-	5
carbonaceous biochemical oxygen demand	mg/L	on bypass	1	-	-	3
chlorine (total residual)	mg/L	on bypass	1	-	-	0.06
faecal coliforms	CFU/100mL	on bypass	1	-	-	58,000
nitrogen (ammonia)	mg/L	on bypass	1	-	-	2.1
nitrogen (total)	mg/L	on bypass	1	-	-	7.39
phosphorus (total)	mg/L	on bypass	1	-	-	0.2
total suspended solids	mg/L	on bypass	1	-	-	8

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

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).

# Rouse Hill Wastewater Treatment Plant

## September Pollution Monitoring Summary



### EPL 4965

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 data**

EPA Point 4 Site code RH0004		Point description: Outlet of the dechlorination tanks			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
biochemical oxygen demand	mg/L	monthly	20	<2	yes
carbonaceous biochemical oxygen demand	mg/L	monthly	20	<2	yes
total suspended solids	mg/L	monthly	20	<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 4 Site code RH0004		Point description: Outlet of the dechlorination tanks				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	126
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
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04
copper	ug/L	monthly	1	-	-	3.4
faecal coliforms	CFU/100mL	every 6 days	5	<1	<1	2
iron	ug/L	monthly	1	-	-	22
nitrogen (ammonia)	mg/L	every 6 days	5	0.17	0.27	0.42
nitrogen (total)	mg/L	every 6 days	5	5.84	6.56	6.94
phosphorus (total)	mg/L	every 6 days	5	0.01	0.01	0.02
total suspended solids	mg/L	every 6 days	5	<2	<2	<2
zinc	ug/L	monthly	1	-	-	31

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

As per clause M2.4 under EPL 4965, collection of samples from EPA Point 5 is required during the occurrence of any bypass during normal working hours. There was no bypass recorded from EPA Point 5 during normal working hours in the September monitoring period.

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).

Note: biochemical oxygen demand monitoring commenced from September 2020.

# Rouse Hill Wastewater Treatment Plant

## August Pollution Monitoring Summary



### EPL 4965

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 data**

EPA Point 4 Site code RH0004		Point description: Outlet of the dechlorination tanks			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	20	<2	yes
total suspended solids	mg/L	monthly	20	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 4 Site code RH0004		Point description: Outlet of the dechlorination tanks				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	170
carbonaceous biochemical oxygen demand	mg/L	every 6 days	6	<2	<2	<2
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	<0.04	<0.04
copper	ug/L	monthly	1	-	-	2.5
faecal coliforms	CFU/100mL	every 6 days	5	<1	<1	2
iron	ug/L	monthly	1	-	-	17
nitrogen (ammonia)	mg/L	every 6 days	6	0.29	0.48	0.68
nitrogen (total)	mg/L	every 6 days	6	4.77	5.82	6.23
phosphorus (total)	mg/L	every 6 days	6	0.02	0.02	0.02
total suspended solids	mg/L	every 6 days	6	<2	<2	2
zinc	ug/L	monthly	1	-	-	21

EPA Point 5 Site code RH0005		Point description: Downstream of the dechlorinated effluent				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
carbonaceous biochemical oxygen demand	mg/L	on bypass	1	-	-	3
chlorine (total residual)	mg/L	on bypass	1	-	-	0.09
faecal coliforms	CFU/100mL	on bypass	1	-	-	2,300
nitrogen (ammonia)	mg/L	on bypass	1	-	-	2.4
nitrogen (total)	mg/L	on bypass	1	-	-	5.85
phosphorus (total)	mg/L	on bypass	1	-	-	0.25
total suspended solids	mg/L	on bypass	1	-	-	11

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

As per clause M2.4 under EPL 4965, collection of samples from EPA Point 5 is required during the occurrence of any bypass during normal working hours. Wet weather flows on 10 August resulted in plant operating under wet weather bypass.

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).

# Rouse Hill Wastewater Treatment Plant

## July Pollution Monitoring Summary



### EPL 4965

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

Date obtained: 06-08-2020

Date published: 14-08-2020

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

**Table 1: 3 Day Geometric Mean data**

EPA Point 4 Site code RH0004		Point description: Outlet of the dechlorination tanks			
pollutant	unit of measure	sampling frequency	3DGM limit	3DGM Actual	within limits
carbonaceous biochemical oxygen demand	mg/L	monthly	20	<2	yes
total suspended solids	mg/L	monthly	20	<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 4 Site code RH0004		Point description: Outlet of the dechlorination tanks				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
aluminium	ug/L	monthly	1	-	-	148
carbonaceous biochemical oxygen demand	mg/L	every 6 days	5	<2	<2	<2
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	1	-	-	100
chlorine (total residual)	mg/L	every 6 days	5	<0.04	0.08	0.38
cobalt	ug/L	monthly	1	-	-	0.4
copper	ug/L	monthly	1	-	-	3.5
cyanide	ug/L	monthly	1	-	-	<5
faecal coliforms	CFU/100mL	every 6 days	5	<1	52	260
iron	ug/L	monthly	1	-	-	21
nitrogen (ammonia)	mg/L	every 6 days	5	0.3	0.54	1
nitrogen (total)	mg/L	every 6 days	5	5.21	5.88	6.98
phosphorus (total)	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	-	-	27

EPA Point 5 Site code RH0005		Point description: Downstream of the dechlorinated effluent				
pollutant	unit of measure	sampling frequency	number of samples	minimum result	mean result	maximum result
carbonaceous biochemical oxygen demand	mg/L	on bypass	1	-	-	10
faecal coliforms	CFU/100mL	on bypass	1	-	-	260,000
nitrogen (ammonia)	mg/L	on bypass	1	-	-	3.7
nitrogen (total)	mg/L	on bypass	1	-	-	9.34
phosphorus (total)	mg/L	on bypass	1	-	-	0.56
total suspended solids	mg/L	on bypass	1	-	-	30

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

As per clause M2.4 under EPL 4965, collection of samples from EPA Point 5 is required during the occurrence of any bypass during normal working hours. Wet weather flows on 27 July resulted in plant operating under wet weather bypass.

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).