

West Hornsby Wastewater Treatment Plant

2021-22 Pollution monitoring yearly limit summaries



EPL 1695

Summary period: 01-07-2021 to 30-06-2022

Date published: 30-08-2022

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

50 percentile yearly summary								
EPA Point 5 Site code WH0005		Point description: Downstream of the disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	50 percentile limit	50 percentile value	within limits
biochemical oxygen demand	mg/L	every 6 days	60	<2	25	10	<2	yes
carbonaceous biochemical oxygen demand	mg/L	every 6 days	60	<2	22	10	<2	yes
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	12	>100	100	50	100	yes
nitrogen (ammonia)	mg/L	every 6 days	60	<0.01	3.6	0.9	0.02	yes
nitrogen (total)	mg/L	every 6 days	60	1.47	7.92	10	3.44	yes
phosphorus (total)	mg/L	every 6 days	60	0.02	0.74	0.3	0.04	yes
total suspended solids	mg/L	every 6 days	60	<2	37	5	<2	yes

80 percentile yearly summary								
EPA Point 5 Site code WH0005		Point description: Downstream of the disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	80 percentile limit	80 percentile value	within limits
faecal coliforms	CFU/100mL	every 6 days	61	<1	500,000	200	49	yes

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90 percentile yearly summary								
EPA Point 5 Site code WH0005	Point description: Downstream of the disinfection facilities							
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	90 percentile limit	90 percentile value	within limits
aluminium	ug/L	monthly	12	116	332	620	275	yes
biochemical oxygen demand	mg/L	every 6 days	60	<2	25	15	10	yes
carbonaceous biochemical oxygen demand	mg/L	every 6 days	60	<2	22	15	9	yes
copper	ug/L	monthly	12	2.4	5.2	17	5	yes
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	60	<30	yes
iron	ug/L	monthly	12	30	71	1,500	54	yes
nitrogen (ammonia)	mg/L	every 6 days	60	<0.01	3.6	1.4	1.58	no ¹
nitrogen (total)	mg/L	every 6 days	60	1.47	7.92	15	5.88	yes
phosphorus (total)	mg/L	every 6 days	60	0.02	0.74	1	0.27	yes
total suspended solids	mg/L	every 6 days	60	<2	37	15	9	yes
zinc	ug/L	monthly	12	12	20	40	18	yes

¹The Nitrogen (Ammonia) 90th%-ile concentration limit exceedance was largely due to the significant wet weather events experienced within the catchment area between 22 February – 10 March 2022, 26 March – 1 April and 6 – 10 April 2022. Compliance to concentration limits is heavily dependent on weather conditions at West Hornsby WRRF due to facility design as the final effluent monitoring point (EPL Point 5) is a combination of full treatment and bypass streams.

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Average yearly summary								
EPA Point 5 Site code WH0005	Point description: Downstream of the disinfection facilities							
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	Average Limit	Average value	within limits
aluminium	ug/L	monthly	12	116	332	330	204	yes
copper	ug/L	monthly	12	2.4	5.2	8	4	yes
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	30	<30	yes
iron	ug/L	monthly	12	30	71	490	43	yes
zinc	ug/L	monthly	12	12	20	26	15	yes
cyanide	ug/L	bi-annually	2	<5	<5	-	<5	n/a

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

As per clause M2.4 under EPL 1695, collection of daily samples from EPA Points 7 or 10 is required during the occurrence of any bypass or discharge from EPA Point 8 or 9, greater than 2 hours during normal working hours. There was no bypass recorded from EPA Point 8 or 9 during normal working hours greater than 2 hours in the 2021-22 period.