

Castle Hill Wastewater Treatment Plant

2023-24 Pollution monitoring yearly limit summaries



EPL 1725

Summary period: 01-07-2023 to 30-06-2024

Date published: 01-09-2024

Licensee: Sydney Water Corporation

PO Box 399

PARRAMATTA NSW 2124

50 percentile yearly summary								
EPA Point 5 Site code CH0005		Point description: In the channel between the tertiary filters and 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	61	<2	4	7	<2	yes
nitrogen (ammonia)	mg/L	every 6 days	61	0.03	1.6	0.9	0.23	yes
nitrogen (total)	mg/L	every 6 days	61	7.49	21.9	20	17.8	yes
phosphorus (total)	mg/L	every 6 days	61	0.03	0.14	0.3	0.06	yes
total suspended solids	mg/L	every 6 days	61	<2	4	5	<2	yes

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90 percentile yearly summary								
EPA Point 5 Site code CH0005		Point description: In the channel between the tertiary filters and 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	104	307	400	295	yes
biochemical oxygen demand	mg/L	every 6 days	61	<2	4	10	<2	yes
cadmium	ug/L	monthly	12	<0.1	<0.1	0.2	<0.1	yes
copper	ug/L	monthly	12	4.4	9.9	11	9.3	yes
diazinon	ug/L	monthly	12	<0.1	<0.1	0.1	<0.1	yes
iron	ug/L	monthly	12	37	116	1,100	80	yes
nitrogen (ammonia)	mg/L	every 6 days	61	0.03	1.6	1.4	0.98	yes
nitrogen (total)	mg/L	every 6 days	61	7.49	21.9	25	20.4	yes
phosphorus (total)	mg/L	every 6 days	61	0.03	0.14	1	0.12	yes
total suspended solids	mg/L	every 6 days	61	<2	4	10	<2	yes
zinc	ug/L	monthly	12	15	23	37	20	yes

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Average yearly summary								
EPA Point 5 Site code CH0005		Point description: In the channel between the tertiary filters and 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	104	307	160	190	no ¹
cadmium	ug/L	monthly	12	<0.1	<0.1	0.2	<0.1	yes
copper	ug/L	monthly	12	4.4	9.9	8	7.4	yes
diazinon	ug/L	monthly	12	<0.1	<0.1	0.2	<0.1	yes
iron	ug/L	monthly	12	37	116	360	56	yes
zinc	ug/L	monthly	12	15	23	29	18	yes

50 percentile yearly summary								
EPA Point 6 Site code CH0006		Point description: At the outlet from the STP disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	50 percentile limit	50 percentile value	within limits
Ceriodaphnia dubia immobilisation (EC50)	% Effluent/Vol	monthly	12	100	100	50	100	yes

80 percentile yearly summary								
EPA Point 6 Site code CH0006		Point description: At the outlet from the STP 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	100,000	200	58	yes

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90 percentile yearly summary								
EPA Point 6 Site code CH0006		Point description: At the outlet from the STP disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	90 percentile limit	90 percentile value	within limits
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	60	<30	yes

Average yearly summary								
EPA Point 6 Site code CH0006		Point description: At the outlet from the STP disinfection facilities						
pollutant	unit of measure	sampling frequency	number of samples	minimum result	maximum result	Average Limit	Average value	within limits
hydrogen sulphide (unionised)	ug/L	monthly	12	<30	<30	30	<30	yes

1 Average limit exceeded for aluminium caused by growth in catchment coupled with a change in sludge characteristics in the bioreactors which also had impact on chemical coagulation process using Alum which resulted in higher Total aluminium concentration in the final effluent.