

Monthly Data Summary

BAYSWATER MONTHLY DATA SUMMARY OCTOBER 2019

LICENCE NO	779
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	OCTOBER 2019

A1 Licence Holder

Licence Number 779
Licence Holder AGL Macquarie
Trading Name (if applicable)
ABN 18 402 904 344

A2 Premises to which Licence Applies (if applicable)

Common Name (if any) BAYSWATER POWER STATION
Premises NEW ENGLAND HIGHWAY MUSWELLBROOK NSW 2333

A3 Activities to which Licence Applies

Electricity Generation

A4 Other Activities (if applicable) Crushing, Grinding or Separating Works Aircraft (helicopter) facilities

Crushing, Grinding or Separating Works
Sewage Treatment Systems
Chemical Storage Facilities
Aircraft (helicopter) facilities

A5 Fee-Based Activity Classifications

Note that the fee based activity classification is used to calculate the administrative fee.

Fee-based activity	Activity scale	Unit of measure
Generation of electrical power from coal	> 4,000.00	Gwh generated
Chemical Storage	> 100	Tonnes Generated or Stored
Coal Works	> 5000000	Tonnes handled

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Discharge & Monitoring Point 1

Discharge to waters

Effluent quality and volume monitoring, Discharge from main station oil separator hoBwing basin and Treated Process Water Pond to Tinkers Creek, shown as "EPA ID No. 1" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easments, Site Survey" dated 24/12/2004

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Oil and Grease	milligrams per litre	Fortnightly	4	<5	2.5	<5	10 mg/L
OCTOBER 2019	10/10/2018	Total suspended solids	milligrams per litre	Fortnightly	4	2.0	2.0	2.0	20 mg/L
OCTOBER 2019	10/10/2018	Volume discharge	kilolitres per week	Weekly during discharge	4	0	9,287	10,599	36,400 kL
Comments:									

Discharge & Monitoring Point 7

Discharge to waters

Effluent quality and volume monitoring, Discharge from cooling towers to Tinkers Creek, shown as "EPA ID No. 7" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easments, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Conductivity	uS/cm	Continuous	0.993	37.0	3255.0	3931.0	4500 uS/cm
OCTOBER 2019	10/10/2018	pH	pH Units	Continuous	0.993	7.4	8.1	8.6	6.5 - 8.5
OCTOBER 2019	10/10/2018	Volume discharge	Megalitres per month	Weekly during discharge	10		227.1		840 ML
Comments:									

Discharge & Monitoring Point 8

Discharge to waters

Discharge & monitoring point under the Hunter River Salinity Trading Scheme, Discharge pipe from Lake Liddel dam wall, shown as "EPA ID No. 8" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easments, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Conductivity	uS/cm	Continuous during discharge	1	2630.0	2630.0	2630.0	-
OCTOBER 2019	10/10/2018	pH	pH Units	Daily during discharge	1	8.1	8.1	8.1	6.5 - 8.5
OCTOBER 2019	10/10/2018	Total suspended solids	milligrams per litre	Monthly	1	6.0	6.0	6.0	30 mg/L
OCTOBER 2019	10/10/2018	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	700 ML
Comments: HRSTS discharge did not occur during October. Results obtained from routine monthly sampling									

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Discharge & Monitoring Point 17

Discharge to waters

Ravensworth void. Inlet point located on the Void 4 pontoon pump system

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Conductivity	uS/cm	Continuous during discharge	1	8490.0	8490.0	8490.0	-
OCTOBER 2019	10/10/2018	pH	pH Units	Daily during discharge	1	8.7	8.7	8.7	6.5 - 9.5
OCTOBER 2019	10/10/2018	Total suspended solids	milligrams per litre	Monthly	1	7.0	7.0	7.0	30 mg/L
OCTOBER 2019	10/10/2018	Boron	milligrams per litre	Weekly during discharge	1	3.2	3.2	3.2	0.81
OCTOBER 2019	10/10/2018	Cadmium	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.0003
OCTOBER 2019	10/10/2018	Copper	milligrams per litre	Weekly during discharge	1	<0.001	0.0	<0.001	0.001
OCTOBER 2019	10/10/2018	Iron	milligrams per litre	Weekly during discharge	1	<0.05	0.0	<0.05	0.27
OCTOBER 2019	10/10/2018	Molybdenum	milligrams per litre	Weekly during discharge	1	0.4	0.4	0.4	0.29
OCTOBER 2019	10/10/2018	Nickel	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.19
OCTOBER 2019	10/10/2018	Silver	milligrams per litre	Weekly during discharge	1	<0.0001	0.0	<0.0001	0.0005
OCTOBER 2019	10/10/2018	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	20 ML
Comments:	HRSTS discharge did not occur during October. Results obtained from routine monthly sampling								

Discharge & Monitoring Point 18

Discharge to waters

Discharge from Bayswater Ash Dam unlined flood pillway located near left abutment

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Conductivity	uS/cm	Weekly during discharge	0				-
OCTOBER 2019	10/10/2018	pH	pH Units	Weekly during discharge	0				6.5 - 9.5
OCTOBER 2019	10/10/2018	Total suspended solids	milligrams per litre	Weekly during discharge	0				30 mg/L
OCTOBER 2019	10/10/2018	Boron	milligrams per litre	Weekly during discharge	0				0.81
OCTOBER 2019	10/10/2018	Cadmium	milligrams per litre	Weekly during discharge	0				0.0003
OCTOBER 2019	10/10/2018	Copper	milligrams per litre	Weekly during discharge	0				0.001
OCTOBER 2019	10/10/2018	Iron	milligrams per litre	Weekly during discharge	0				0.27

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OCTOBER 2019	10/10/2018	Molybdenum	milligrams per litre	Weekly during discharge	0				0.29
OCTOBER 2019	10/10/2018	Nickel	milligrams per litre	Weekly during discharge	0				0.19
OCTOBER 2019	10/10/2018	Silver	milligrams per litre	Weekly during discharge	0				0.0005
Comments:	Discharge did not occur during October								

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Discharge & Monitoring Point 10

Discharge to air

Air emission monitoring, Boiler 1 stack emissions, shown as "EPA ID No. 10" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	125.2	190.0	278.4	-
OCTOBER 2019	10/10/2018		milligrams per cubic metre				257.0	389.9	571.4	1500 mg/m ³
OCTOBER 2019	10/10/2018	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	119.1	154.8	211.5	600 ppm
OCTOBER 2019	10/10/2018		milligrams per cubic metre				340.5	442.3	604.6	-
OCTOBER 2019	10/10/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	1.8%	3.8%	7.1%	-
Comments:										

Annual monitoring of discharges to air

Air emission monitoring, Boiler 1 stack emissions, shown as "EPA ID No. 13" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	No. of samples required by licence	Samples collected and analysed	Sample value	EPL Limit mg/m ³
Oct-18	26/11/2018	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Oct-18	26/11/2018	Carbon monoxide	ppm	1	1	4	
Oct-18	26/11/2018	Chlorine	milligrams per cubic metre	1	1	0.0	200
Oct-18	26/11/2018	Copper	milligrams per cubic metre	1	1	0.0013	
Oct-18	26/11/2018	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.016	5
Oct-18	26/11/2018	Hydrogen chloride	milligrams per cubic metre	1	1	11.0	100
Oct-18	26/11/2018	Mercury	milligrams per cubic metre	1	1	0.00100	1.0
Oct-18	26/11/2018	Nitrogen oxides	milligrams per cubic metre	1	1	860	1500
Oct-18	26/11/2018	Solid particles	milligrams per cubic metre	1	1	15.0	100
Oct-18	26/11/2018	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	3.10	100
Oct-18	26/11/2018	Sulphur dioxide	milligrams per cubic metre	1	1	930	
Oct-18	26/11/2018	Total fluoride	milligrams per cubic metre	1	1	8.5	50
Comments: Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. In most years one boiler is tested each quarter. This table contains the latest results from Boiler 1.							

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Discharge & Monitoring Point 11

Discharge to air

Air emission monitoring, Boiler 2 stack emissions, shown as "EPA ID No. 11" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Nitrogen Oxides	parts per million	Continuous	One hour	99.7%	124.9	204.6	298.6	-
OCTOBER 2019	10/10/2018		milligrams per cubic metre				256.4	420.0	612.8	1500 mg/m ³
OCTOBER 2019	10/10/2018	Sulphur dioxide	parts per million	Continuous	One hour	99.9%	124.3	198.0	256.0	600 ppm
OCTOBER 2019	10/10/2018		milligrams per cubic metre				355.3	565.9	731.8	-
OCTOBER 2019	10/10/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.1%	5.6%	12.4%	-
Comments:										

Annual monitoring of discharges to air

Air emission monitoring, Boiler 2 stack emissions, shown as "EPA ID No. 13" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	No. of samples required by licence	Samples collected and analysed	Sample value	EPL Limit mg/m ³			
Oct-18	26/11/2018	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0			
Oct-18	26/11/2018	Carbon monoxide	ppm	1	1	<2				
Oct-18	26/11/2018	Chlorine	milligrams per cubic metre	1	1	0.0	200			
Oct-18	26/11/2018	Copper	milligrams per cubic metre	1	1	0.0008				
Oct-18	26/11/2018	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.038	5			
Oct-18	26/11/2018	Hydrogen chloride	milligrams per cubic metre	1	1	8.5	100			
Oct-18	26/11/2018	Mercury	milligrams per cubic metre	1	1	0.00160	1.0			
Oct-18	26/11/2018	Nitrogen oxides	milligrams per cubic metre	1	1	760	1500			
Oct-18	26/11/2018	Solid particles	milligrams per cubic metre	1	1	17.0	100			
Oct-18	26/11/2018	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	3.10	100			
Oct-18	26/11/2018	Sulphur dioxide	milligrams per cubic metre	1	1	760				
Oct-18	26/11/2018	Total fluoride	milligrams per cubic metre	1	1	5.9	50			
Comments:		Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. In most years one boiler is tested each quarter. This table contains the latest results from Boiler 2.								

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Discharge & Monitoring Point 12

Discharge to air

Air emission monitoring, Boiler 3 stack emissions, shown as "EPA ID No. 12" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Nitrogen Oxides	parts per million	Continuous	One hour	99.7%	110.5	396.9	524.0	-
OCTOBER 2019	10/10/2018		milligrams per cubic metre				226.9	814.7	1075.6	1500 mg/m ³
OCTOBER 2019	10/10/2018	Sulphur dioxide	parts per million	Continuous	One hour	99.7%	113.6	356.4	420.1	600 ppm
OCTOBER 2019	10/10/2018		milligrams per cubic metre				324.8	1018.5	1200.8	-
OCTOBER 2019	10/10/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	99.7%	1.1%	5.7%	10.1%	-
Comments:										

Annual monitoring of discharges to air

Air emission monitoring, Boiler 3 stack emissions, shown as "EPA ID No. 13" on plan titled "Bayswater Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	No. of samples required by licence	Samples collected and analysed	Sample value	EPL Limit mg/m ³
Apr-18	18/05/2018	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Apr-18	18/05/2018	Carbon monoxide	ppm	1	1	61	
Apr-18	18/05/2018	Chlorine	milligrams per cubic metre	1	1	0.0	200
Apr-18	18/05/2018	Copper	milligrams per cubic metre	1	1	0.0009	
Apr-18	18/05/2018	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.015	5
Apr-18	18/05/2018	Hydrogen chloride	milligrams per cubic metre	1	1	14.0	100
Apr-18	18/05/2018	Mercury	milligrams per cubic metre	1	1	0.00140	1.0
Apr-18	18/05/2018	Nitrogen oxides	milligrams per cubic metre	1	1	610	1500
Apr-18	18/05/2018	Solid particles	milligrams per cubic metre	1	1	34.0	100
Apr-18	18/05/2018	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	4.50	100
Apr-18	18/05/2018	Sulphur dioxide	milligrams per cubic metre	1	1	1100	
Apr-18	18/05/2018	Total fluoride	milligrams per cubic metre	1	1	12.0	50
Comments: Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. In most years one boiler is tested each quarter. This table contains the latest results from Boiler 3.							

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Discharge & Monitoring Point 13

Discharge to air

Air emission monitoring, Boiler 4 stack emissions, shown as "EPA ID No. 12" on plan titled "Bayswater

Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurement frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
OCTOBER 2019	10/10/2018	Nitrogen Oxides	parts per million	Continuous	One hour					-
OCTOBER 2019	10/10/2018		milligrams per cubic metre							1500 mg/m ³
OCTOBER 2019	10/10/2018	Sulphur dioxide	parts per million	Continuous	One hour					600 ppm
OCTOBER 2019	10/10/2018		milligrams per cubic metre							-
OCTOBER 2019	10/10/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour					-
Comments:		Unit out of service for entire monitoring period								

Annual monitoring of discharges to air

Air emission monitoring, Boiler 4 stack emissions, shown as "EPA ID No. 13" on plan titled "Bayswater

Power Station Unit 1-4, Open Space, Easements, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	No. of samples required by licence	Samples collected and analysed	Sample value	EPL Limit mg/m ³			
Apr-18	10/08/2018	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0			
Apr-18	10/08/2018	Carbon monoxide	ppm	1	1	2				
Apr-18	10/08/2018	Chlorine	milligrams per cubic metre	1	1	<0.006	200			
Apr-18	10/08/2018	Copper	milligrams per cubic metre	1	1	0.0012				
Apr-18	10/08/2018	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.016	5			
Apr-18	10/08/2018	Hydrogen chloride	milligrams per cubic metre	1	1	15.0	100			
Apr-18	10/08/2018	Mercury	milligrams per cubic metre	1	1	0.00340	1.0			
Apr-18	10/08/2018	Nitrogen oxides	milligrams per cubic metre	1	1	650	1500			
Apr-18	10/08/2018	Solid particles	milligrams per cubic metre	1	1	31.0	100			
Apr-18	10/08/2018	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	2.20	100			
Apr-18	10/08/2018	Sulphur dioxide	milligrams per cubic metre	1	1	1200				
Apr-18	10/08/2018	Total fluoride	milligrams per cubic metre	1	1	11.0	50			
Comments:		Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. In most years one boiler is tested each quarter. This table contains the latest results from Boiler 4.								

Monthly Data Summary

Details of Non-Compliance with Licence Conditions
Licence condition number not complied with
Condition L3.6
Summary of particulars of the non-compliance (NO MORE THAN 50 WORDS)
On 30 October 2019 at approximately 22.05pm EPL point 7 exceeded the pH limit of 8.5, recording a high of pH 8.55 at 22.15pm. Normal pH returned at 22.25pm. There was no actual or material environmental harm.
If required, further details on particulars of non-compliance
-
Date(s) when the non-compliance occurred, if applicable
30-Oct-19
If relevant, precise location where the non-compliance occurred (attach a map or diagram)
If applicable, registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-compliance
-
Cause of non-compliance
Unit 3 blowdown was in operation during return to service on 30 October 2019. No other sources were identified.
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
Blowdown on cooling towers was applied to manage water quality
Action taken or that will be taken to prevent a recurrence of the non-compliance
Continued monitoring and management of discharge.