

Monthly Data Summary

BAYSWATER MONTHLY DATA SUMMARY OCTOBER 2018

LICENCE NO	779
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	OCTOBER 2018

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 hoB Wing 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 2018	15/11/2018	Oil and Grease	milligrams per litre	Fortnightly	5	<5	<5	<5	10 mg/L
OCTOBER 2018	15/11/2018	Total suspended solids	milligrams per litre	Fortnightly	5	<1	1.2	2.0	20 mg/L
OCTOBER 2018	15/11/2018	Volume discharge	kilolitres per week	Weekly during discharge	4	0	16,014	25,629	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 2018	15/11/2018	Conductivity	uS/cm	Continuous	99.3%	18	3637	4444	4500 uS/cm
OCTOBER 2018	15/11/2018	pH	pH Units	Continuous	99.3%	7.05	8.10	8.57	6.5 - 8.5
OCTOBER 2018	15/11/2018	Volume discharge	Megalitres per month	Weekly during discharge	17		377.6		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 2018	15/11/2018	Conductivity	uS/cm	Continuous during discharge	1	2820.0	2820.0	2820.0	-
OCTOBER 2018	15/11/2018	pH	pH Units	Daily during discharge	1	8.1	8.1	8.1	6.5 - 8.5
OCTOBER 2018	15/11/2018	Total suspended solids	milligrams per litre	Monthly	1	5.0	5.0	5.0	30 mg/L
OCTOBER 2018	15/11/2018	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	700 ML
Comments: HRSTS Discharge did not occur during October. Results obtained during routine monthly sampling									

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Discharge & Monitoring Point 17

Discharge to waters

Ravensthorpe 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 2018	15/11/2018	Conductivity	uS/cm	Continuous during discharge	1	7810.0	7810.0	7810.0	-
OCTOBER 2018	15/11/2018	pH	pH Units	Daily during discharge	1	8.6	8.6	8.6	6.5 - 9.5
OCTOBER 2018	15/11/2018	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
OCTOBER 2018	15/11/2018	Boron	milligrams per litre	Weekly during discharge	1	3.32	3.32	3.32	0.81
OCTOBER 2018	15/11/2018	Cadmium	milligrams per litre	Weekly during discharge	1	<0.0001	<0.0001	<0.0001	0.0003
OCTOBER 2018	15/11/2018	Copper	milligrams per litre	Weekly during discharge	1	0.001	0.001	0.001	0.001
OCTOBER 2018	15/11/2018	Iron	milligrams per litre	Weekly during discharge	1	0.03	0.03	0.03	0.27
OCTOBER 2018	15/11/2018	Molybdenum	milligrams per litre	Weekly during discharge	1	0.408	0.408	0.408	0.29
OCTOBER 2018	15/11/2018	Nickel	milligrams per litre	Weekly during discharge	1	0.01	0.01	0.01	0.19
OCTOBER 2018	15/11/2018	Silver	milligrams per litre	Weekly during discharge	1	<0.0001	<0.0001	<0.0001	0.0005
OCTOBER 2018	15/11/2018	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	20 ML
Comments:	HRSTS Discharge did not occur during October. Results obtained during 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 2018	15/11/2018	Conductivity	uS/cm	Weekly during discharge	-	-	-	-	-
OCTOBER 2018	15/11/2018	pH	pH Units	Weekly during discharge	-	-	-	-	6.5 - 9.5
OCTOBER 2018	15/11/2018	Total suspended solids	milligrams per litre	Weekly during discharge	-	-	-	-	30 mg/L
OCTOBER 2018	15/11/2018	Boron	milligrams per litre	Weekly during discharge	-	-	-	-	0.81
OCTOBER 2018	15/11/2018	Cadmium	milligrams per litre	Weekly during discharge	-	-	-	-	0.0003
OCTOBER 2018	15/11/2018	Copper	milligrams per litre	Weekly during discharge	-	-	-	-	0.001

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OCTOBER 2018	15/11/2018	Iron	milligrams per litre	Weekly during discharge	-	-	-	-	0.27
OCTOBER 2018	15/11/2018	Molybdenum	milligrams per litre	Weekly during discharge	-	-	-	-	0.29
OCTOBER 2018	15/11/2018	Nickel	milligrams per litre	Weekly during discharge	-	-	-	-	0.19
OCTOBER 2018	15/11/2018	Silver	milligrams per litre	Weekly during discharge	-	-	-	-	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 2018	15/11/2018	Nitrogen Oxides	parts per million	Continuous	One hour	98.5%	100.4	247.4	388.2	-
OCTOBER 2018	15/11/2018		milligrams per cubic metre				206.1	507.7	796.8	1500 mg/m ³
OCTOBER 2018	15/11/2018	Sulphur dioxide	parts per million	Continuous	One hour	99.9%	179.4	263.7	361.3	600 ppm
OCTOBER 2018	15/11/2018		milligrams per cubic metre				512.8	753.7	1032.7	-
OCTOBER 2018	15/11/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	1.3%	3.8%	15.5%	-
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-17	15/11/2017	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Oct-17	15/11/2017	Carbon monoxide	ppm	1	1	<2	
Oct-17	15/11/2017	Chlorine	milligrams per cubic metre	1	1	0.0	200
Oct-17	15/11/2017	Copper	milligrams per cubic metre	1	1	0.0005	
Oct-17	15/11/2017	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.013	5
Oct-17	15/11/2017	Hydrogen chloride	milligrams per cubic metre	1	1	15.0	100
Oct-17	15/11/2017	Mercury	milligrams per cubic metre	1	1	0.00180	1.0
Oct-17	15/11/2017	Nitrogen oxides	milligrams per cubic metre	1	1	850	1500
Oct-17	15/11/2017	Solid particles	milligrams per cubic metre	1	1	45.0	100
Oct-17	15/11/2017	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	20.00	100
Oct-17	15/11/2017	Sulphur dioxide	milligrams per cubic metre	1	1	950	
Oct-17	15/11/2017	Total fluoride	milligrams per cubic metre	1	1	9.9	50
Comments: Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. This table contains the results from Boiler 1 tested on 10 October 2017.							

Monthly Data Summary

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 2018	15/11/2018	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	105.6	226.3	336.4	-
OCTOBER 2018	15/11/2018		milligrams per cubic metre				216.7	464.5	690.4	1500 mg/m ³
OCTOBER 2018	15/11/2018	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	155.4	252.5	370.6	600 ppm
OCTOBER 2018	15/11/2018		milligrams per cubic metre				444.1	721.8	1059.3	-
OCTOBER 2018	15/11/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.7%	4.8%	10.4%	-
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-17	15/11/2017	Cadmium	milligrams per cubic metre	1	1	<0.0001	1.0			
Oct-17	15/11/2017	Carbon monoxide	ppm	1	1	3				
Oct-17	15/11/2017	Chlorine	milligrams per cubic metre	1	1	<0.007	200			
Oct-17	15/11/2017	Copper	milligrams per cubic metre	1	1	0.0004				
Oct-17	15/11/2017	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.0096	5			
Oct-17	15/11/2017	Hydrogen chloride	milligrams per cubic metre	1	1	14.0	100			
Oct-17	15/11/2017	Mercury	milligrams per cubic metre	1	1	0.00089	1.0			
Oct-17	15/11/2017	Nitrogen oxides	milligrams per cubic metre	1	1	620	1500			
Oct-17	15/11/2017	Solid particles	milligrams per cubic metre	1	1	41.0	100			
Oct-17	15/11/2017	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	3.00	100			
Oct-17	15/11/2017	Sulphur dioxide	milligrams per cubic metre	1	1	970				
Oct-17	15/11/2017	Total fluoride	milligrams per cubic metre	1	1	9.2	50			
Comments:		Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. This table contains the results from Boiler 2 tested on 12 October 2017								

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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, Easments, 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 2018	15/11/2018	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	169.8	309.4	512.0	-
OCTOBER 2018	15/11/2018		milligrams per cubic metre				348.5	635.0	1050.9	1500 mg/m ³
OCTOBER 2018	15/11/2018	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	223.8	331.8	480.3	600 ppm
OCTOBER 2018	15/11/2018		milligrams per cubic metre				639.7	948.2	1372.6	-
OCTOBER 2018	15/11/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.0%	5.7%	19.4%	-
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, Easments, 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. This table contains the results from Boiler 3 tested on 19 April 2018							

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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 2018	15/11/2018	Nitrogen Oxides	parts per million	Continuous	One hour	98.0%	100.2	186.8	342.6	-
OCTOBER 2018	15/11/2018		milligrams per cubic metre				205.7	383.5	703.2	1500 mg/m ³
OCTOBER 2018	15/11/2018	Sulphur dioxide	parts per million	Continuous	One hour	99.8%	151.2	273.6	377.8	600 ppm
OCTOBER 2018	15/11/2018		milligrams per cubic metre				432.3	781.9	1079.9	-
OCTOBER 2018	15/11/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	1.2%	3.7%	9.5%	-
Comments:										

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. This table contains the results from Boiler 4 tested on 17 April 2018							

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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 23 October 2018 at approximately 3.00pm EPL point 7 exceeded the pH limit of 8.5, recording pH 8.57. Normal pH returned at 3.10pm. 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	
23-Oct-18	
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 blowdown was in operation during return to service. No other sources were identified.	
Action taken or that will be taken to mitigate any adverse effects of the non-compliance	
Reduction in Unit 1 blowdown and increase in Unit 1, 2 & 3 cooling tower blowdown.	
Action taken or that will be taken to prevent a recurrence of the non-compliance	
Monitoring of Unit blowdown and increase in 1, 2 & 3 cooling tower blowdown.	