

Monthly Data Summary

BAYSWATER MONTHLY DATA SUMMARY NOVEMBER 2017

LICENCE NO	779
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	NOVEMBER 2017

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
NOVEMBER 2017	15/11/2017	Oil and Grease	milligrams per litre	Fortnightly	4	<5	2.5	<5	10 mg/L
NOVEMBER 2017	15/11/2017	Total suspended solids	milligrams per litre	Fortnightly	4	2.0	6.0	11.0	20 mg/L
NOVEMBER 2017	15/11/2017	Volume discharge	kilolitres per week	Weekly during discharge	4	0	10,236	12,319	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
NOVEMBER 2017	15/11/2017	Conductivity	uS/cm	Continuous	1	866.0	2592.3	3419.0	4500 uS/cm
NOVEMBER 2017	15/11/2017	pH	pH Units	Continuous	1	7.2	8.1	8.4	6.5 - 8.5
NOVEMBER 2017	15/11/2017	Volume discharge	Megalitres per month	Weekly during discharge	22		280.4		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
NOVEMBER 2017	15/11/2017	Conductivity	uS/cm	Continuous during discharge	1	2520.0	2520.0	2520.0	-
NOVEMBER 2017	15/11/2017	pH	pH Units	Daily during discharge	1	7.9	7.9	7.9	6.5 - 8.5
NOVEMBER 2017	15/11/2017	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
NOVEMBER 2017	15/11/2017	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	700 ML
Comments: HRSTS discharge did not occur during November. Results obtained from routine monthly monitoring									

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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
NOVEMBER 2017	15/11/2017	Conductivity	uS/cm	Continuous during discharge	1	6980.0	6980.0	6980.0	-
NOVEMBER 2017	15/11/2017	pH	pH Units	Daily during discharge	1	8.7	8.7	8.7	6.5 - 9.5
NOVEMBER 2017	15/11/2017	Total suspended solids	milligrams per litre	Monthly	1	9.0	9.0	9.0	30 mg/L
NOVEMBER 2017	15/11/2017	Boron	milligrams per litre	Weekly during discharge	1	2.7	2.7	2.7	0.81
NOVEMBER 2017	15/11/2017	Cadmium	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.0003
NOVEMBER 2017	15/11/2017	Copper	milligrams per litre	Weekly during discharge	1	<0.001	0.0	<0.001	0.001
NOVEMBER 2017	15/11/2017	Iron	milligrams per litre	Weekly during discharge	1	<0.05	0.0	<0.05	0.27
NOVEMBER 2017	15/11/2017	Molybdenum	milligrams per litre	Weekly during discharge	1	0.4	0.4	0.4	0.29
NOVEMBER 2017	15/11/2017	Nickel	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.19
NOVEMBER 2017	15/11/2017	Silver	milligrams per litre	Weekly during discharge	1	<0.0001	0.0	<0.0001	0.0005
NOVEMBER 2017	15/11/2017	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	20 ML
Comments:	HRSTS discharge did not occur during November. Results obtained from routine monthly monitoring								

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
NOVEMBER 2017	15/11/2017	Conductivity	uS/cm	Weekly during discharge	0	-	-	-	-
NOVEMBER 2017	15/11/2017	pH	pH Units	Weekly during discharge	0	-	-	-	6.5 - 9.5
NOVEMBER 2017	15/11/2017	Total suspended solids	milligrams per litre	Weekly during discharge	0	-	-	-	30 mg/L
NOVEMBER 2017	15/11/2017	Boron	milligrams per litre	Weekly during discharge	0	-	-	-	0.81
NOVEMBER 2017	15/11/2017	Cadmium	milligrams per litre	Weekly during discharge	0	-	-	-	0.0003
NOVEMBER 2017	15/11/2017	Copper	milligrams per litre	Weekly during discharge	0	-	-	-	0.001

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NOVEMBER 2017	15/11/2017	Iron	milligrams per litre	Weekly during discharge	0	-	-	-	0.27
NOVEMBER 2017	15/11/2017	Molybdenum	milligrams per litre	Weekly during discharge	0	-	-	-	0.29
NOVEMBER 2017	15/11/2017	Nickel	milligrams per litre	Weekly during discharge	0	-	-	-	0.19
NOVEMBER 2017	15/11/2017	Silver	milligrams per litre	Weekly during discharge	0	-	-	-	0.0005
Comments:	Discharge did not occur in November 2017								

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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, 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
NOVEMBER 2017	15/11/2017	Nitrogen Oxides	parts per million	Continuous	One hour	99.7%	112.7	320.6	612.2	-
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				231.3	658.1	1256.5	1500 mg/m ³
NOVEMBER 2017	15/11/2017	Sulphur dioxide	parts per million	Continuous	One hour	99.7%	209.3	291.4	412.4	600 ppm
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				598.3	832.7	1178.6	-
NOVEMBER 2017	15/11/2017	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	1.8%	4.3%	9.2%	-
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, 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
May-16	22/06/2016	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
May-16	22/06/2016	Carbon monoxide	ppm	1	1	390	
May-16	22/06/2016	Chlorine	milligrams per cubic metre	1	1	0.0	200
May-16	22/06/2016	Copper	milligrams per cubic metre	1	1	0.0007	
May-16	22/06/2016	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.011	5
May-16	22/06/2016	Hydrogen chloride	milligrams per cubic metre	1	1	5.1	100
May-16	22/06/2016	Mercury	milligrams per cubic metre	1	1	<0.00040	1.0
May-16	22/06/2016	Nitrogen oxides	milligrams per cubic metre	1	1	510	1500
May-16	22/06/2016	Solid particles	milligrams per cubic metre	1	1	4.5	100
May-16	22/06/2016	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	0.51	100
May-16	22/06/2016	Sulphur dioxide	milligrams per cubic metre	1	1	920	
May-16	22/06/2016	Total fluoride	milligrams per cubic metre	1	1	3.6	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 30 May 2016.							

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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, 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
NOVEMBER 2017	15/11/2017	Nitrogen Oxides	parts per million	Continuous	One hour	96.5%	109.6	237.6	289.9	-
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				224.9	487.7	595.0	1500 mg/m ³
NOVEMBER 2017	15/11/2017	Sulphur dioxide	parts per million	Continuous	One hour	99.7%	100.5	254.0	340.1	600 ppm
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				287.2	725.9	972.1	-
NOVEMBER 2017	15/11/2017	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.0%	5.5%	9.5%	-
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, 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
Sep-16	15/11/2016	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Sep-16	15/11/2016	Carbon monoxide	ppm	1	1	12	
Sep-16	15/11/2016	Chlorine	milligrams per cubic metre	1	1	<0.007	200
Sep-16	15/11/2016	Copper	milligrams per cubic metre	1	1	0.0016	
Sep-16	15/11/2016	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.031	5
Sep-16	15/11/2016	Hydrogen chloride	milligrams per cubic metre	1	1	11.0	100
Sep-16	15/11/2016	Mercury	milligrams per cubic metre	1	1	0.00320	1.0
Sep-16	15/11/2016	Nitrogen oxides	milligrams per cubic metre	1	1	880	1500
Sep-16	15/11/2016	Solid particles	milligrams per cubic metre	1	1	31.0	100
Sep-16	15/11/2016	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	2.70	100
Sep-16	15/11/2016	Sulphur dioxide	milligrams per cubic metre	1	1	1100	
Sep-16	15/11/2016	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 2 tested on 27 September 2016							

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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
NOVEMBER 2017	15/11/2017	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	149.4	350.6	422.4	-
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				306.7	719.6	867.0	1500 mg/m ³
NOVEMBER 2017	15/11/2017	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	222.9	351.0	421.8	600 ppm
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				637.1	1003.1	1205.6	-
NOVEMBER 2017	15/11/2017	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.2%	6.7%	12.0%	-
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
May-17	3/07/2017	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
May-17	3/07/2017	Carbon monoxide	ppm	1	1	97	
May-17	3/07/2017	Chlorine	milligrams per cubic metre	1	1	<0.006	200
May-17	3/07/2017	Copper	milligrams per cubic metre	1	1	0.0007	
May-17	3/07/2017	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.011	5
May-17	3/07/2017	Hydrogen chloride	milligrams per cubic metre	1	1	22.0	100
May-17	3/07/2017	Mercury	milligrams per cubic metre	1	1	0.00130	1.0
May-17	3/07/2017	Nitrogen oxides	milligrams per cubic metre	1	1	720	1500
May-17	3/07/2017	Solid particles	milligrams per cubic metre	1	1	24.0	100
May-17	3/07/2017	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	1.90	100
May-17	3/07/2017	Sulphur dioxide	milligrams per cubic metre	1	1	1100	
May-17	3/07/2017	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 3 tested on 30 May 2017							

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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
NOVEMBER 2017	15/11/2017	Nitrogen Oxides	parts per million	Continuous	One hour	99.6%	116.3	304.2	371.1	-
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				238.6	624.3	761.6	1500 mg/m ³
NOVEMBER 2017	15/11/2017	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	196.1	276.4	402.1	600 ppm
NOVEMBER 2017	15/11/2017		milligrams per cubic metre				560.5	789.8	1149.1	-
NOVEMBER 2017	15/11/2017	Opacity -Undifferentiated particles	Percent	Continuous	One hour	99.9%	1.5%	5.3%	9.7%	-
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
Jul-17	5/09/2017	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Jul-17	5/09/2017	Carbon monoxide	ppm	1	1	90	
Jul-17	5/09/2017	Chlorine	milligrams per cubic metre	1	1	0.0	200
Jul-17	5/09/2017	Copper	milligrams per cubic metre	1	1	0.0017	
Jul-17	5/09/2017	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.025	5
Jul-17	5/09/2017	Hydrogen chloride	milligrams per cubic metre	1	1	17.0	100
Jul-17	5/09/2017	Mercury	milligrams per cubic metre	1	1	0.00061	1.0
Jul-17	5/09/2017	Nitrogen oxides	milligrams per cubic metre	1	1	650	1500
Jul-17	5/09/2017	Solid particles	milligrams per cubic metre	1	1	48.0	100
Jul-17	5/09/2017	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	2.40	100
Jul-17	5/09/2017	Sulphur dioxide	milligrams per cubic metre	1	1	750	
Jul-17	5/09/2017	Total fluoride	milligrams per cubic metre	1	1	10.0	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 27 July 2017							

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Details of Non-Compliance with Licence Conditions	
Licence condition number not complied with	
Summary of particulars of the non-compliance (NO MORE THAN 50 WORDS)	
If required, further details on particulars of non-compliance	
-	
Date(s) when the non-compliance occurred, if applicable	
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	
Action taken or that will be taken to mitigate any adverse effects of the non-compliance	
Action taken or that will be taken to prevent a recurrence of the non-compliance	