

Monthly Data Summary

BAYSWATER MONTHLY DATA SUMMARY DECEMBER 2015

LICENCE NO	779
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	DECEMBER 2015

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

Monthly Data Summary

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
DECEMBER 2015	15/01/2016	Oil and Grease	milligrams per litre	Fortnightly	5	<5	4.6	13.0	10 mg/L
DECEMBER 2015	15/01/2016	Total suspended solids	milligrams per litre	Fortnightly	5	1.0	9.4	16.0	20 mg/L
DECEMBER 2015	15/01/2016	Volume discharge	kilolitres per week	Weekly during discharge	4	0	7,177	9,133	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
DECEMBER 2015	15/01/2016	Conductivity	uS/cm	Weekly	5	2610	2916	3790	4500 uS/cm
DECEMBER 2015	15/01/2016	pH	pH Units	Weekly	5	7.9	8.14	8.4	6.5 - 8.5
DECEMBER 2015	15/01/2016	Volume discharge	Megalitres per month	Weekly during discharge	1		161.2		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
DECEMBER 2015	15/01/2016	Conductivity	uS/cm	Continuous during discharge	1	2270	2270	2270	-
DECEMBER 2015	15/01/2016	pH	pH Units	Daily during discharge	1	8.2	8.2	8.2	6.5 - 8.5
DECEMBER 2015	15/01/2016	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
DECEMBER 2015	15/01/2016	Volume discharge	Megalitres per day	Daily during discharge	0				700 ML
Comments: HRSTS discharge did not occur during December 2015									

Monthly Data Summary

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
DECEMBER 2015	15/01/2016	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	105.1	239.1	368.8	700 ppm
DECEMBER 2015	15/01/2016		milligrams per cubic metre				215.6	490.8	756.9	1500 mg/m ³
DECEMBER 2015	15/01/2016	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	155.4	352.1	442.3	600 ppm
DECEMBER 2015	15/01/2016		milligrams per cubic metre				444.0	1006.3	1264.0	-
DECEMBER 2015	15/01/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.9%	6.5%	13.5%	20%
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
DECEMBER 2015	15/01/2016	Cadmium	milligrams per cubic metre	1	1	0.00003	1.0
DECEMBER 2015	15/01/2016	Carbon monoxide	ppm	1	1	23	
DECEMBER 2015	15/01/2016	Chlorine	milligrams per cubic metre	1	1	0.01	200
DECEMBER 2015	15/01/2016	Copper	milligrams per cubic metre	1	1	0.0005	
DECEMBER 2015	15/01/2016	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.007	5
DECEMBER 2015	15/01/2016	Hydrogen chloride	milligrams per cubic metre	1	1	16.0	100
DECEMBER 2015	15/01/2016	Mercury	milligrams per cubic metre	1	1	0.0016	1.0
DECEMBER 2015	15/01/2016	Nitrogen oxides	milligrams per cubic metre	1	1	830	1500
DECEMBER 2015	15/01/2016	Solid particles	milligrams per cubic metre	1	1	9.5	100
DECEMBER 2015	15/01/2016	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	8.90	100
DECEMBER 2015	15/01/2016	Sulphur dioxide	milligrams per cubic metre	1	1	1100	
DECEMBER 2015	15/01/2016	Total fluoride	milligrams per cubic metre	1	1	9.3	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 tested 27 October 2015.							

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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
DECEMBER 2015	15/01/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.0%	5.4%	14.0%	20%
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
DECEMBER 2015	15/01/2016	Cadmium	milligrams per cubic metre	1	1	0.00005	1.0
DECEMBER 2015	15/01/2016	Carbon monoxide	ppm	1	1	27	
DECEMBER 2015	15/01/2016	Chlorine	milligrams per cubic metre	1	1	0.0	200
DECEMBER 2015	15/01/2016	Copper	milligrams per cubic metre	1	1	0.0011	
DECEMBER 2015	15/01/2016	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.037	5
DECEMBER 2015	15/01/2016	Hydrogen chloride	milligrams per cubic metre	1	1	16.0	100
DECEMBER 2015	15/01/2016	Mercury	milligrams per cubic metre	1	1	0.00140	1.0
DECEMBER 2015	15/01/2016	Nitrogen oxides	milligrams per cubic metre	1	1	670	1500
DECEMBER 2015	15/01/2016	Solid particles	milligrams per cubic metre	1	1	8.2	100
DECEMBER 2015	15/01/2016	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	55	100
DECEMBER 2015	15/01/2016	Sulphur dioxide	milligrams per cubic metre	1	1	810	
DECEMBER 2015	15/01/2016	Total fluoride	milligrams per cubic metre	1	1	6.7	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 tested on 16 and 17 July 2015.							

Monthly Data Summary

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
DECEMBER 2015	15/01/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.4%	7.0%	13.9%	20%
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
DECEMBER 2015	15/01/2016	Cadmium	milligrams per cubic metre	1	1	0.00002	1.0
DECEMBER 2015	15/01/2016	Carbon monoxide	ppm	1	1	5	
DECEMBER 2015	15/01/2016	Chlorine	milligrams per cubic metre	1	1	0.005	200
DECEMBER 2015	15/01/2016	Copper	milligrams per cubic metre	1	1	0.0011	
DECEMBER 2015	15/01/2016	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.01	5
DECEMBER 2015	15/01/2016	Hydrogen chloride	milligrams per cubic metre	1	1	12.0	100
DECEMBER 2015	15/01/2016	Mercury	milligrams per cubic metre	1	1	0.0017	1.0
DECEMBER 2015	15/01/2016	Nitrogen oxides	milligrams per cubic metre	1	1	780	1500
DECEMBER 2015	15/01/2016	Solid particles	milligrams per cubic metre	1	1	20.0	100
DECEMBER 2015	15/01/2016	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	37.00	100
DECEMBER 2015	15/01/2016	Sulphur dioxide	milligrams per cubic metre	1	1	960	
DECEMBER 2015	15/01/2016	Total fluoride	milligrams per cubic metre	1	1	13.0	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 sampled on 14 and 15 July 2015.							

Monthly Data Summary

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
DECEMBER 2015	15/01/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.2%	4.5%	10.7%	20%
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
DECEMBER 2015	15/01/2016	Cadmium	milligrams per cubic metre	1	1	0.00002	1.0
DECEMBER 2015	15/01/2016	Carbon monoxide	ppm	1	1	<0.0029	
DECEMBER 2015	15/01/2016	Chlorine	milligrams per cubic metre	1	1	0.02	200
DECEMBER 2015	15/01/2016	Copper	milligrams per cubic metre	1	1	0.0018	
DECEMBER 2015	15/01/2016	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.012	5
DECEMBER 2015	15/01/2016	Hydrogen chloride	milligrams per cubic metre	1	1	22.0	100
DECEMBER 2015	15/01/2016	Mercury	milligrams per cubic metre	1	1	0.0011	1.0
DECEMBER 2015	15/01/2016	Nitrogen oxides	milligrams per cubic metre	1	1	940	1500
DECEMBER 2015	15/01/2016	Solid particles	milligrams per cubic metre	1	1	17.0	100
DECEMBER 2015	15/01/2016	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	9.30	100
DECEMBER 2015	15/01/2016	Sulphur dioxide	milligrams per cubic metre	1	1	930	
DECEMBER 2015	15/01/2016	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. In most years one boiler is tested each quarter. This table contains the latest results from Boiler 4 sampled on 21 and 22 May 2015.							

Monthly Data Summary

Details of Non-Compliance with Licence Conditions
Licence condition number not complied with
1. Condition L3.6
2. Condition L1.1
3. Condition L1.1
Summary of particulars of the non-compliance (NO MORE THAN 50 WORDS)
1. Elevated Oil and Grease at Discharge monitoring point 1
2. Leak from a flyash transfer line
3. Overboard of Seepage pond 2
If required, further details on particulars of non-compliance
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Date(s) when the non-compliance occurred, if applicable
1. 8-Dec-15
2. 21-Dec-15
3. 23-Dec-15
If relevant, precise location where the non-compliance occurred (attach a map or diagram)
1. EPL discharge monitoring point 1
2. Ravensworth ash transfer line in the vicinity of Bayswater Creek
3. Bayswater ash dam seepage pond 2
If applicable, registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-compliance
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Cause of non-compliance
1. Partial failure of a section of the oily water separator system
2. Internal erosion of line resulting in a 'rat hole' failure of the line
3. Return water pump failure coinciding with a heavy storm event
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
1. Repairs carried out on the oily water separator system
2. Temporary bandage placed on line upon discovery until permanent repair effected. Clean up and removal of all leaked material.
3. Pump B repaired and placed back into service immediately
Action taken or that will be taken to prevent a recurrence of the non-compliance
1. Increased due diligence monitoring. Investigation of further engineering options to ensure compliance of the system in the future
2. Permanent repair of the line carried out
3. Pump A repairs scheduled