

# Monthly Data Summary

## BAYSWATER MONTHLY DATA SUMMARY JULY 2016

LICENCE NO	779
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	JULY 2016

### 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
JULY 2016	12/08/2016	Oil and Grease	milligrams per litre	Fortnightly	4	<5	2.5	<5	10 mg/L
JULY 2016	12/08/2016	Total suspended solids	milligrams per litre	Fortnightly	4	5.0	6.0	7.0	20 mg/L
JULY 2016	12/08/2016	Volume discharge	kilolitres per week	Weekly during discharge	5	0	8,237	9,599	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
JULY 2016	12/08/2016	Conductivity	uS/cm	Weekly	4	1973.0	2318.3	2690.0	4500 uS/cm
JULY 2016	12/08/2016	pH	pH Units	Weekly	4	8.0	8.1	8.2	6.5 - 8.5
JULY 2016	12/08/2016	Volume discharge	Megalitres per month	Weekly during discharge	23		378.4		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
JULY 2016	12/08/2016	Conductivity	uS/cm	Continuous during discharge	1	2210.0	2210.0	2210.0	-
JULY 2016	12/08/2016	pH	pH Units	Daily during discharge	1	8.3	8.3	8.3	6.5 - 8.5
JULY 2016	12/08/2016	Total suspended solids	milligrams per litre	Monthly	1	7.0	7.0	7.0	30 mg/L
JULY 2016	12/08/2016	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	700 ML
Comments: HRSTS Discharge did not occur during this reporting period. Results were obtained from routine monthly sampling									

# Monthly Data Summary

## 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
JULY 2016	12/08/2016	Conductivity	uS/cm	Continuous during discharge	1	6490.0	6490.0	6490.0	-
JULY 2016	12/08/2016	pH	pH Units	Daily during discharge	1	8.5	8.5	8.5	6.5 - 9.5
JULY 2016	12/08/2016	Total suspended solids	milligrams per litre	Monthly	1	12.0	12.0	12.0	30 mg/L
JULY 2016	12/08/2016	Boron	milligrams per litre	Weekly during discharge	1	2.6	2.6	2.6	0.81
JULY 2016	12/08/2016	Cadmium	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.0003
JULY 2016	12/08/2016	Copper	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.001
JULY 2016	12/08/2016	Iron	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.27
JULY 2016	12/08/2016	Molybdenum	milligrams per litre	Weekly during discharge	1	0.3	0.3	0.3	0.29
JULY 2016	12/08/2016	Nickel	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.19
JULY 2016	12/08/2016	Silver	milligrams per litre	Weekly during discharge	1	<0.0001	0.0	<0.0001	0.0005
JULY 2016	12/08/2016	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	20 ML
Comments:	HRSTS Discharge did not occur during this reporting period. Results were obtained from routine monthly sampling								

# 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, 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
JULY 2016	12/08/2016	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	117.0	279.5	519.7	700 ppm
JULY 2016	12/08/2016		milligrams per cubic metre				240.2	573.6	1066.7	1500 mg/m <sup>3</sup>
JULY 2016	12/08/2016	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	220.4	342.9	465.8	600 ppm
JULY 2016	12/08/2016		milligrams per cubic metre				629.9	979.9	1331.4	-
JULY 2016	12/08/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.9%	7.4%	12.6%	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, 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 <sup>3</sup>			
Oct-15	30/11/2015	Cadmium	milligrams per cubic metre	1	1	0.0000	1.0			
Oct-15	30/11/2015	Carbon monoxide	ppm	1	1	23				
Oct-15	30/11/2015	Chlorine	milligrams per cubic metre	1	1	0.0	200			
Oct-15	30/11/2015	Copper	milligrams per cubic metre	1	1	0.0005				
Oct-15	30/11/2015	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.01	5			
Oct-15	30/11/2015	Hydrogen chloride	milligrams per cubic metre	1	1	16.0	100			
Oct-15	30/11/2015	Mercury	milligrams per cubic metre	1	1	0.00160	1.0			
Oct-15	30/11/2015	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500			
Oct-15	30/11/2015	Solid particles	milligrams per cubic metre	1	1	9.5	100			
Oct-15	30/11/2015	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	8.90	100			
Oct-15	30/11/2015	Sulphur dioxide	milligrams per cubic metre	1	1	1100				
Oct-15	30/11/2015	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. This table contains the results from Boiler 1 tested on 27 October 2015.								

# 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, 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
JULY 2016	12/08/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.0%	6.0%	13.1%	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 <sup>3</sup>
Jul-15	17/08/2015	Cadmium	milligrams per cubic metre	1	1	0.0001	1.0
Jul-15	17/08/2015	Carbon monoxide	ppm	1	1	27	
Jul-15	17/08/2015	Chlorine	milligrams per cubic metre	1	1	0.0	200
Jul-15	17/08/2015	Copper	milligrams per cubic metre	1	1	0.0011	
Jul-15	17/08/2015	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.04	5
Jul-15	17/08/2015	Hydrogen chloride	milligrams per cubic metre	1	1	16.0	100
Jul-15	17/08/2015	Mercury	milligrams per cubic metre	1	1	0.00140	1.0
Jul-15	17/08/2015	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500
Jul-15	17/08/2015	Solid particles	milligrams per cubic metre	1	1	8.2	100
Jul-15	17/08/2015	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	55.00	100
Jul-15	17/08/2015	Sulphur dioxide	milligrams per cubic metre	1	1	810	
Jul-15	17/08/2015	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. This table contains the results from Boiler 2 tested on 16 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
JULY 2016	12/08/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.5%	9.9%	18.2%	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 <sup>3</sup>
Jul-15	17/08/2015	Cadmium	milligrams per cubic metre	1	1	0.0000	1.0
Jul-15	17/08/2015	Carbon monoxide	ppm	1	1	5	
Jul-15	17/08/2015	Chlorine	milligrams per cubic metre	1	1	0.0	200
Jul-15	17/08/2015	Copper	milligrams per cubic metre	1	1	0.0011	
Jul-15	17/08/2015	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.01	5
Jul-15	17/08/2015	Hydrogen chloride	milligrams per cubic metre	1	1	12.0	100
Jul-15	17/08/2015	Mercury	milligrams per cubic metre	1	1	0.00170	1.0
Jul-15	17/08/2015	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500
Jul-15	17/08/2015	Solid particles	milligrams per cubic metre	1	1	20.0	100
Jul-15	17/08/2015	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	37.00	100
Jul-15	17/08/2015	Sulphur dioxide	milligrams per cubic metre	1	1	960	
Jul-15	17/08/2015	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. This table contains the results from Boiler 3 tested on 14 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
JULY 2016	12/08/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.7%	6.9%	10.5%	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 <sup>3</sup>			
May-15	7/07/2015	Cadmium	milligrams per cubic metre	1	1	0.0000	1.0			
May-15	7/07/2015	Carbon monoxide	ppm	1	1	<0.0029				
May-15	7/07/2015	Chlorine	milligrams per cubic metre	1	1	0.0	200			
May-15	7/07/2015	Copper	milligrams per cubic metre	1	1	0.0018				
May-15	7/07/2015	Hazardous substances (Metals)	milligrams per cubic metre	1	1	0.01	5			
May-15	7/07/2015	Hydrogen chloride	milligrams per cubic metre	1	1	22.0	100			
May-15	7/07/2015	Mercury	milligrams per cubic metre	1	1	0.00110	1.0			
May-15	7/07/2015	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500			
May-15	7/07/2015	Solid particles	milligrams per cubic metre	1	1	17.0	100			
May-15	7/07/2015	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	9.30	100			
May-15	7/07/2015	Sulphur dioxide	milligrams per cubic metre	1	1	930				
May-15	7/07/2015	Total fluoride	milligrams per cubic metre	1	1	22.0	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 21 May 2015.								

# Monthly Data Summary

<b>Details of Non-Compliance with Licence Conditions</b>
Licence condition number not complied with
Condition L1.1
Summary of particulars of the non-compliance ( <b>NO MORE THAN 50 WORDS</b> )
Leak from flyash transfer line
If required, further details on particulars of non-compliance
-
Date(s) when the non-compliance occurred, if applicable
15-Jul-16
If relevant, precise location where the non-compliance occurred (attach a map or diagram)
Ravensworth ash transfer line approximately 2km from the power station
If applicable, registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-compliance
-
Cause of non-compliance
Internal erosion of line due to flow irregularities caused by varying degrees of scale build up resulting in a 'rat hole' failure
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
Ash pumping immediately ceased on discovery, a temporary clamp was placed on the pipe immediately. Permanent repairs made and clean up of residual ash on the ground.
Action taken or that will be taken to prevent a recurrence of the non-compliance
Map locations of previous failures and identify trends. 24/7 manning of control rooms. Execute PRP in regards to Containment Dams and Leak Detection. Develop and execute strategy in regards to sampling of pipelines to analyze their internal condition. Determine life cycle of the pipeline. Clear all overgrown vegetation.