

# Monthly Data Summary

## BAYSWATER MONTHLY DATA SUMMARY SEPTEMBER 2019

LICENCE NO	779
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	SEPTEMBER 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

# Monthly Data Summary

## 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
SEPTEMBER 2019	14/10/2019	Oil and Grease	milligrams per litre	Fortnightly	5	<5	2.5	<5	10 mg/L
SEPTEMBER 2019	14/10/2019	Total suspended solids	milligrams per litre	Fortnightly	5	1.0	2.0	4.0	20 mg/L
SEPTEMBER 2019	14/10/2019	Volume discharge	kilolitres per week	Weekly during discharge	3	0	9,886	13,261	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
SEPTEMBER 2019	14/10/2019	Conductivity	uS/cm	Continuous	0.993	1952.0	3724.8	4402.0	5000 uS/cm
SEPTEMBER 2019	14/10/2019	pH	pH Units	Continuous	0.993	8.0	8.2	8.4	6.5 - 8.5
SEPTEMBER 2019	14/10/2019	Volume discharge	Megalitres per month	Weekly during discharge	28	960.6			1200 ML
Comments: During September 2019 EPA provided concurrence under Licence condition O2.2, as part of an emergency water management strategy, to a temporary increase in the discharge volume from 840 ML/Month to 1200 ML/Month, and a temporary increase in the 100 percentile concentration limit provided for Electrical Conductivity (EC) from 4500µS to 5000µS									

## 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
SEPTEMBER 2019	14/10/2019	Conductivity	uS/cm	Continuous during discharge	1	2800.0	2800.0	2800.0	-
SEPTEMBER 2019	14/10/2019	pH	pH Units	Daily during discharge	1	8.6	8.6	8.6	6.5 - 8.5
SEPTEMBER 2019	14/10/2019	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
SEPTEMBER 2019	14/10/2019	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	700 ML
Comments: HRSTS discharge did not occur during September. Results obtained from 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
SEPTEMBER 2019	14/10/2019	Conductivity	uS/cm	Continuous during discharge	1	7780.0	7780.0	7780.0	-
SEPTEMBER 2019	14/10/2019	pH	pH Units	Daily during discharge	1	8.8	8.8	8.8	6.5 - 9.5
SEPTEMBER 2019	14/10/2019	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
SEPTEMBER 2019	14/10/2019	Boron	milligrams per litre	Weekly during discharge	1	3.2	3.2	3.2	0.81
SEPTEMBER 2019	14/10/2019	Cadmium	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.0003
SEPTEMBER 2019	14/10/2019	Copper	milligrams per litre	Weekly during discharge	1	<0.001	0.0	<0.001	0.001
SEPTEMBER 2019	14/10/2019	Iron	milligrams per litre	Weekly during discharge	1	<0.05	0.0	<0.05	0.27
SEPTEMBER 2019	14/10/2019	Molybdenum	milligrams per litre	Weekly during discharge	1	0.4	0.4	0.4	0.29
SEPTEMBER 2019	14/10/2019	Nickel	milligrams per litre	Weekly during discharge	1	0.0	0.0	0.0	0.19
SEPTEMBER 2019	14/10/2019	Silver	milligrams per litre	Weekly during discharge	1	<0.0001	0.0	<0.0001	0.0005
SEPTEMBER 2019	14/10/2019	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	20 ML
Comments:	HRSTS discharge did not occur during September. 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
SEPTEMBER 2019	14/10/2019	Conductivity	uS/cm	Weekly during discharge	0				-
SEPTEMBER 2019	14/10/2019	pH	pH Units	Weekly during discharge	0				6.5 - 9.5
SEPTEMBER 2019	14/10/2019	Total suspended solids	milligrams per litre	Weekly during discharge	0				30 mg/L
SEPTEMBER 2019	14/10/2019	Boron	milligrams per litre	Weekly during discharge	0				0.81
SEPTEMBER 2019	14/10/2019	Cadmium	milligrams per litre	Weekly during discharge	0				0.0003
SEPTEMBER 2019	14/10/2019	Copper	milligrams per litre	Weekly during discharge	0				0.001

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SEPTEMBER 2019	14/10/2019	Iron	milligrams per litre	Weekly during discharge	0				0.27
SEPTEMBER 2019	14/10/2019	Molybdenum	milligrams per litre	Weekly during discharge	0				0.29
SEPTEMBER 2019	14/10/2019	Nickel	milligrams per litre	Weekly during discharge	0				0.19
SEPTEMBER 2019	14/10/2019	Silver	milligrams per litre	Weekly during discharge	0				0.0005
Comments:	Discharge did not occur during September								

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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
SEPTEMBER 2019	14/10/2019	Nitrogen Oxides	parts per million	Continuous	One hour	98.9%	102.0	193.3	239.0	-
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre				209.3	396.8	490.6	1500 mg/m <sup>3</sup>
SEPTEMBER 2019	14/10/2019	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	129.4	160.2	202.0	600 ppm
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre				369.8	457.8	577.4	-
SEPTEMBER 2019	14/10/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	1.0%	4.0%	17.9%	-
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-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.							

# 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
SEPTEMBER 2019	14/10/2019	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	143.5	204.4	302.4	-
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre				294.6	419.5	620.7	1500 mg/m <sup>3</sup>
SEPTEMBER 2019	14/10/2019	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	173.4	224.0	288.0	600 ppm
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre				495.4	640.1	823.1	-
SEPTEMBER 2019	14/10/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.8%	5.9%	11.1%	-
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 <sup>3</sup>			
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.								

# 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
SEPTEMBER 2019	14/10/2019	Nitrogen Oxides	parts per million	Continuous	One hour	98.2%	101.6	241.4	444.9	-
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre				208.6	495.5	913.2	1500 mg/m <sup>3</sup>
SEPTEMBER 2019	14/10/2019	Sulphur dioxide	parts per million	Continuous	One hour	99.4%	141.0	243.0	385.1	600 ppm
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre				403.0	694.5	1100.8	-
SEPTEMBER 2019	14/10/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.0%	5.7%	11.8%	-
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>
Apr-19	9/05/2019	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Apr-19	9/05/2019	Carbon monoxide	ppm	1	1	<2	
Apr-19	9/05/2019	Chlorine	milligrams per cubic metre	1	1	0.0	200
Apr-19	9/05/2019	Copper	milligrams per cubic metre	1	1	0.0007	
Apr-19	9/05/2019	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.011	5
Apr-19	9/05/2019	Hydrogen chloride	milligrams per cubic metre	1	1	9.3	100
Apr-19	9/05/2019	Mercury	milligrams per cubic metre	1	1	0.00081	1.0
Apr-19	9/05/2019	Nitrogen oxides	milligrams per cubic metre	1	1	710	1500
Apr-19	9/05/2019	Solid particles	milligrams per cubic metre	1	1	7.5	100
Apr-19	9/05/2019	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	0.76	100
Apr-19	9/05/2019	Sulphur dioxide	milligrams per cubic metre	1	1	1100	
Apr-19	9/05/2019	Total fluoride	milligrams per cubic metre	1	1	7.6	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.							

# 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
SEPTEMBER 2019	14/10/2019	Nitrogen Oxides	parts per million	Continuous	One hour					-
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre							1500 mg/m <sup>3</sup>
SEPTEMBER 2019	14/10/2019	Sulphur dioxide	parts per million	Continuous	One hour					600 ppm
SEPTEMBER 2019	14/10/2019		milligrams per cubic metre							-
SEPTEMBER 2019	14/10/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour					-
Comments:		Unit was out of service for the 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 <sup>3</sup>			
Mar-19	13/05/2019	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0			
Mar-19	13/05/2019	Carbon monoxide	ppm	1	1	<3				
Mar-19	13/05/2019	Chlorine	milligrams per cubic metre	1	1	0.0	200			
Mar-19	13/05/2019	Copper	milligrams per cubic metre	1	1	0.0007				
Mar-19	13/05/2019	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.032	5			
Mar-19	13/05/2019	Hydrogen chloride	milligrams per cubic metre	1	1	3.8	100			
Mar-19	13/05/2019	Mercury	milligrams per cubic metre	1	1	0.00120	1.0			
Mar-19	13/05/2019	Nitrogen oxides	milligrams per cubic metre	1	1	860	1500			
Mar-19	13/05/2019	Solid particles	milligrams per cubic metre	1	1	15.0	100			
Mar-19	13/05/2019	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	5.20	100			
Mar-19	13/05/2019	Sulphur dioxide	milligrams per cubic metre	1	1	960				
Mar-19	13/05/2019	Total fluoride	milligrams per cubic metre	1	1	5.3	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 4.								



# Monthly Data Summary

<b>Details of Non-Compliance with Licence Conditions</b>	
Licence condition number not complied with	
Summary of particulars of the non-compliance ( <b>NO MORE THAN 50 WORDS</b> )	
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	