Monthly Data Summary

BAYSWATER MONTHLY DATA SUMMARY JULY 2019

LICENCE NO	**779**
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	JULY 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

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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 / measurment frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Oil and Grease	milligrams per litre	Fortnightly	5	<5	2.5	<5	10 mg/L
JULY 2019	14/08/2019	Total suspended solids	milligrams per litre	Fortnightly	5	1.0	2.0	3.0	20 mg/L
JULY 2019	14/08/2019	Volume discharge	kilolitres per week	Weekly during discharge	4	0	11,180	15,705	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 / measurment frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Conductivity	uS/cm	Continuous	0.993	1427.0	2564.6	3921.6	4500 uS/cm
JULY 2019	14/08/2019	pH	pH Units	Continuous	0.993	7.8	8.2	8.6	6.5 - 8.5
JULY 2019	14/08/2019	Volume discharge	Megalitres per month	Weekly during discharge	8	276.4			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 / measurment frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Conductivity	uS/cm	Continuous during disharge	1	2790.0	2790.0	2790.0	-
JULY 2019	14/08/2019	pH	pH Units	Daily during discharge	1	8.6	8.6	8.6	6.5 - 8.5
JULY 2019	14/08/2019	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
JULY 2019	14/08/2019	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	700 ML
Comments:	HRSTS discharge did not occur during July. Results obtained from routine monthly sampling								

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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 / measurment frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Conductivity	uS/cm	Continuous during disharge	1	8190.0	8190.0	8190.0	-
JULY 2019	14/08/2019	pH	pH Units	Daily during discharge	1	8.8	8.8	8.8	6.5 - 9.5
JULY 2019	14/08/2019	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
JULY 2019	14/08/2019	Boron	milligrams per litre	Weekly duirng discharge	1	2.9	2.9	2.9	0.81
JULY 2019	14/08/2019	Cadmium	milligrams per litre	Weekly duirng discharge	1	0.0	0.0	0.0	0.0003
JULY 2019	14/08/2019	Copper	milligrams per litre	Weekly duirng discharge	1	<0.001	0.0	<0.001	0.001
JULY 2019	14/08/2019	Iron	milligrams per litre	Weekly duirng discharge	1	0.0	0.0	0.0	0.27
JULY 2019	14/08/2019	Molybdenum	milligrams per litre	Weekly duirng discharge	1	0.4	0.4	0.4	0.29
JULY 2019	14/08/2019	Nickel	milligrams per litre	Weekly duirng discharge	1	0.0	0.0	0.0	0.19
JULY 2019	14/08/2019	Silver	milligrams per litre	Weekly duirng discharge	1	<0.0001	0.0	<0.0001	0.0005
JULY 2019	14/08/2019	Volume discharge	Megalitres per day	Daily during discharge					20 ML
Comments:	**HRSTS discharge did not occur during July. 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 / measurment frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Conductivity	uS/cm	Weekly duirng discharge	0				-
JULY 2019	14/08/2019	pH	pH Units	Weekly duirng discharge	0				6.5 - 9.5
JULY 2019	14/08/2019	Total suspended solids	milligrams per litre	Weekly duirng discharge	0				30 mg/L
JULY 2019	14/08/2019	Boron	milligrams per litre	Weekly duirng discharge	0				0.81
JULY 2019	14/08/2019	Cadmium	milligrams per litre	Weekly duirng discharge	0				0.0003
JULY 2019	14/08/2019	Copper	milligrams per litre	Weekly duirng discharge	0				0.001

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JULY 2019	14/08/2019	Iron	milligrams per litre	Weekly duirng discharge	0				**0.27**
JULY 2019	14/08/2019	Molybdenum	milligrams per litre	Weekly duirng discharge	0				**0.29**
JULY 2019	14/08/2019	Nickel	milligrams per litre	Weekly duirng discharge	0				**0.19**
JULY 2019	14/08/2019	Silver	milligrams per litre	Weekly duirng discharge	0				**0.0005**
Comments:	**Discharge did not occur during July**								

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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 / measurment frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Nitrogen Oxides	parts per million	Continuous	One hour	98.7%	100.3	185.6	272.1	-
JULY 2019	14/08/2019		milligrams per cubic metre				205.8	381.0	558.4	1500 mg/m^3
JULY 2019	14/08/2019	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	106.3	160.3	216.3	600 ppm
JULY 2019	14/08/2019		milligrams per cubic metre				303.7	458.0	618.1	-
JULY 2019	14/08/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.3%	4.4%	18.2%	-
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
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.						

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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 / measurment frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	124.1	213.1	269.5	-
JULY 2019	14/08/2019		milligrams per cubic metre				254.7	437.4	553.3	1500 mg/m^3
JULY 2019	14/08/2019	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	143.7	194.3	272.2	600 ppm
JULY 2019	14/08/2019		milligrams per cubic metre				410.6	555.4	778.0	-
JULY 2019	14/08/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.6%	5.3%	9.9%	-
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
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.**						

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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 / measurment frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Nitrogen Oxides	parts per million	Continuous	One hour	99.7%	109.6	341.4	507.2	-
JULY 2019	14/08/2019		milligrams per cubic metre				225.0	700.7	1041.0	1500 mg/m^3
JULY 2019	14/08/2019	Sulphur dioxide	parts per million	Continuous	One hour	99.8%	167.8	331.7	445.4	600 ppm
JULY 2019	14/08/2019		milligrams per cubic metre				479.5	947.9	1272.9	-
JULY 2019	14/08/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.1%	5.4%	10.9%	-
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-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.						

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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, Easments, Site Survey" dated 24/12/2004.

Month	Date of Publication	Pollutant	Unit of measure	Sampling / measurment frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
JULY 2019	14/08/2019	Nitrogen Oxides	parts per million	Continuous	One hour	99.5%	140.5	293.9	392.2	-
JULY 2019	14/08/2019		milligrams per cubic metre				288.5	603.2	805.0	1500 mg/m^3
JULY 2019	14/08/2019	Sulphur dioxide	parts per million	Continuous	One hour	99.5%	190.7	264.5	359.9	600 ppm
JULY 2019	14/08/2019		milligrams per cubic metre				545.0	755.9	1028.7	-
JULY 2019	14/08/2019	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	3.4%	6.3%	11.3%	-
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, 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
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.**						

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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 26 July 2019 at approximately 19:30hrs EPL point 7 exceeded the pH limit of 8.5, recording a high of pH 8.58 at 19:45hrs. pH returned below 8.5 at 20:10. 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
26-Jul-19
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
No immediate cause could be determined during the site investigation
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
Blowdown on cooling towers was applied to manage water quality
Action taken or that will be taken to prevent a recurrence of the non-compliance
Continued monitoring and management of discharge.