Monthly Data Summary

BAYSWATER MONTHLY DATA SUMMARY NOVEMBER 2018

LICENCE NO	**779**
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	NOVEMBER 2018

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
NOVEMBER 2018	14/12/2018	Oil and Grease	milligrams per litre	Fortnightly	4	<5	2.5	<5	10 mg/L
NOVEMBER 2018	14/12/2018	Total suspended solids	milligrams per litre	Fortnightly	4	1.0	2.8	4.0	20 mg/L
NOVEMBER 2018	14/12/2018	Volume discharge	kilolitres per week	Weekly during discharge	4	0	15,141	17,969	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
NOVEMBER 2018	14/12/2018	Conductivity	uS/cm	Continuous	0.993	2.0	3642.7	4392.9	4500 uS/cm
NOVEMBER 2018	14/12/2018	pH	pH Units	Continuous	0.993	7.3	8.1	8.3	6.5 - 8.5
NOVEMBER 2018	14/12/2018	Volume discharge	Megalitres per month	Weekly during discharge	20	454.4			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
NOVEMBER 2018	14/12/2018	Conductivity	uS/cm	Continuous during disharge	1	2790.0	2790.0	2790.0	-
NOVEMBER 2018	14/12/2018	pH	pH Units	Daily during discharge	1	8.1	8.1	8.1	6.5 - 8.5
NOVEMBER 2018	14/12/2018	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
NOVEMBER 2018	14/12/2018	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	700 ML
Comments:	Discharge did not occur during November. 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
NOVEMBER 2018	14/12/2018	Conductivity	uS/cm	Continuous during disharge	1	7950.0	7950.0	7950.0	-
NOVEMBER 2018	14/12/2018	pH	pH Units	Daily during discharge	1	8.5	8.5	8.5	6.5 - 9.5
NOVEMBER 2018	14/12/2018	Total suspended solids	milligrams per litre	Monthly	1	10.0	10.0	10.0	30 mg/L
NOVEMBER 2018	14/12/2018	Boron	milligrams per litre	Weekly duirng discharge	1	3.4	3.4	3.4	0.81
NOVEMBER 2018	14/12/2018	Cadmium	milligrams per litre	Weekly duirng discharge	1	<0.0001	0.0	<0.0001	0.0003
NOVEMBER 2018	14/12/2018	Copper	milligrams per litre	Weekly duirng discharge	1	<0.001	0.0	<0.001	0.001
NOVEMBER 2018	14/12/2018	Iron	milligrams per litre	Weekly duirng discharge	1	<0.05	0.0	<0.05	0.27
NOVEMBER 2018	14/12/2018	Molybdenum	milligrams per litre	Weekly duirng discharge	1	0.4	0.4	0.4	0.29
NOVEMBER 2018	14/12/2018	Nickel	milligrams per litre	Weekly duirng discharge	1	0.0	0.0	0.0	0.19
NOVEMBER 2018	14/12/2018	Silver	milligrams per litre	Weekly duirng discharge	1	<0.0001	0.0	<0.0001	0.0005
NOVEMBER 2018	14/12/2018	Volume discharge	Megalitres per day	Daily during discharge	-	-	-	-	20 ML
Comments:	**Discharge did not occur during November. 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
NOVEMBER 2018	14/12/2018	Conductivity	uS/cm	Weekly duirng discharge	0				-
NOVEMBER 2018	14/12/2018	pH	pH Units	Weekly duirng discharge	0				6.5 - 9.5
NOVEMBER 2018	14/12/2018	Total suspended solids	milligrams per litre	Weekly duirng discharge	0				30 mg/L
NOVEMBER 2018	14/12/2018	Boron	milligrams per litre	Weekly duirng discharge	0				0.81
NOVEMBER 2018	14/12/2018	Cadmium	milligrams per litre	Weekly duirng discharge	0				0.0003
NOVEMBER 2018	14/12/2018	Copper	milligrams per litre	Weekly duirng discharge	0				0.001

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NOVEMBER 2018	14/12/2018	Iron	milligrams per litre	Weekly duirng discharge	0				**0.27**
NOVEMBER 2018	14/12/2018	Molybdenum	milligrams per litre	Weekly duirng discharge	0				**0.29**
NOVEMBER 2018	14/12/2018	Nickel	milligrams per litre	Weekly duirng discharge	0				**0.19**
NOVEMBER 2018	14/12/2018	Silver	milligrams per litre	Weekly duirng discharge	0				**0.0005**
Comments:	**Discharge did not occur during November**								

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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
NOVEMBER 2018	14/12/2018	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	105.2	286.3	410.8	-
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				215.9	587.7	843.2	1500 mg/m^3
NOVEMBER 2018	14/12/2018	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	104.0	239.7	368.7	600 ppm
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				297.2	685.1	1053.8	-
NOVEMBER 2018	14/12/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.0%	3.8%	5.8%	-
Comments:	Data available to 23-Nov-18 due to a technical issue. Report will be reissued once this fault is rectified and remaining November data is retrieved.									

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. In most years one boiler is tested each quarter. This table contains the latest results from Boiler 1.						

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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
NOVEMBER 2018	14/12/2018	Nitrogen Oxides	parts per million	Continuous	One hour	97.4%	100.2	234.5	325.3	-
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				205.7	481.4	667.7	1500 mg/m^3
NOVEMBER 2018	14/12/2018	Sulphur dioxide	parts per million	Continuous	One hour	99.5%	108.4	254.1	382.5	600 ppm
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				309.8	726.2	1093.1	-
NOVEMBER 2018	14/12/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	2.6%	5.2%	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
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.**						

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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
NOVEMBER 2018	14/12/2018	Nitrogen Oxides	parts per million	Continuous	One hour	97.4%	128.3	361.0	443.4	-
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				263.3	740.9	910.1	1500 mg/m^3
NOVEMBER 2018	14/12/2018	Sulphur dioxide	parts per million	Continuous	One hour	98.9%	131.8	359.7	457.3	600 ppm
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				376.7	1028.1	1306.9	-
NOVEMBER 2018	14/12/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	1.6%	5.2%	19.5%	-
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-18	18/05/2018	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Apr-18	18/05/2018	Carbon monoxide	ppm	1	1	61	
Apr-18	18/05/2018	Chlorine	milligrams per cubic metre	1	1	0.0	200
Apr-18	18/05/2018	Copper	milligrams per cubic metre	1	1	0.0009	
Apr-18	18/05/2018	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.015	5
Apr-18	18/05/2018	Hydrogen chloride	milligrams per cubic metre	1	1	14.0	100
Apr-18	18/05/2018	Mercury	milligrams per cubic metre	1	1	0.00140	1.0
Apr-18	18/05/2018	Nitrogen oxides	milligrams per cubic metre	1	1	610	1500
Apr-18	18/05/2018	Solid particles	milligrams per cubic metre	1	1	34.0	100
Apr-18	18/05/2018	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	4.50	100
Apr-18	18/05/2018	Sulphur dioxide	milligrams per cubic metre	1	1	1100	
Apr-18	18/05/2018	Total fluoride	milligrams per cubic metre	1	1	12.0	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.**						

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, 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
NOVEMBER 2018	14/12/2018	Nitrogen Oxides	parts per million	Continuous	One hour	97.8%	101.4	228.8	324.7	-
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				208.1	469.6	666.4	1500 mg/m^3
NOVEMBER 2018	14/12/2018	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	201.4	273.0	440.5	600 ppm
NOVEMBER 2018	14/12/2018		milligrams per cubic metre				575.6	780.3	1259.0	-
NOVEMBER 2018	14/12/2018	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	1.8%	4.5%	13.1%	-
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
Apr-18	10/08/2018	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Apr-18	10/08/2018	Carbon monoxide	ppm	1	1	2	
Apr-18	10/08/2018	Chlorine	milligrams per cubic metre	1	1	<0.006	200
Apr-18	10/08/2018	Copper	milligrams per cubic metre	1	1	0.0012	
Apr-18	10/08/2018	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.016	5
Apr-18	10/08/2018	Hydrogen chloride	milligrams per cubic metre	1	1	15.0	100
Apr-18	10/08/2018	Mercury	milligrams per cubic metre	1	1	0.00340	1.0
Apr-18	10/08/2018	Nitrogen oxides	milligrams per cubic metre	1	1	650	1500
Apr-18	10/08/2018	Solid particles	milligrams per cubic metre	1	1	31.0	100
Apr-18	10/08/2018	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	2.20	100
Apr-18	10/08/2018	Sulphur dioxide	milligrams per cubic metre	1	1	1200	
Apr-18	10/08/2018	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.**						

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Details of Non-Compliance with Licence Conditions
Licence condition number not complied with
N/A
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