Monthly Data Summary

BAYSWATER MONTHLY DATA SUMMARY MARCH 2016

LICENCE NO	**779**
LICENCE HOLDER	AGL Macquarie
REPORTING PERIOD	MARCH 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 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
MARCH 2016	14/03/2016	Oil and Grease	milligrams per litre	Fortnightly	5	<5	2.5	<5	10 mg/L
MARCH 2016	14/03/2016	Total suspended solids	milligrams per litre	Fortnightly	5	4.0	5.4	7.0	20 mg/L
MARCH 2016	14/03/2016	Volume discharge	kilolitres per week	Weekly during discharge	4	688	13,189	32,778	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
MARCH 2016	14/03/2016	Conductivity	uS/cm	Weekly	5	2620.0	3194.0	3920.0	4500 uS/cm
MARCH 2016	14/03/2016	pH	pH Units	Weekly	5	7.9	8.1	8.3	6.5 - 8.5
MARCH 2016	14/03/2016	Volume discharge	Megalitres per month	Weekly during discharge	18	449.2			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 / measurment frequency	Samples collected and analysed	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
MARCH 2016	14/03/2016	Conductivity	uS/cm	Continuous during disharge	1	2260.0	2260.0	2260.0	-
MARCH 2016	14/03/2016	pH	pH Units	Daily during discharge	1	7.8	7.8	7.8	6.5 - 8.5
MARCH 2016	14/03/2016	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
MARCH 2016	14/03/2016	Volume discharge	Megalitres per day	Daily during discharge	NA	-	-	-	700 ML
Comments:	HRSTS discharge event did not occur during March 2016. Results gained during 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
MARCH 2016	14/03/2016	Conductivity	uS/cm	Continuous during disharge	1	6410.0	6410.0	6410.0	-
MARCH 2016	14/03/2016	pH	pH Units	Daily during discharge	1	8.5	8.5	8.5	6.5 - 9.5
MARCH 2016	14/03/2016	Total suspended solids	milligrams per litre	Monthly	1	<5	2.5	<5	30 mg/L
MARCH 2016	14/03/2016	Boron	milligrams per litre	Weekly duirng discharge	1	2.6	2.6	2.6	0.81
MARCH 2016	14/03/2016	Cadmium	milligrams per litre	Weekly duirng discharge	1	<0.0001	0.0	<0.0001	0.0003
MARCH 2016	14/03/2016	Copper	milligrams per litre	Weekly duirng discharge	1	<0.001	0.0	<0.001	0.001
MARCH 2016	14/03/2016	Iron	milligrams per litre	Weekly duirng discharge	1	0.0	0.0	0.0	0.27
MARCH 2016	14/03/2016	Molybdenum	milligrams per litre	Weekly duirng discharge	1	0.3	0.3	0.3	0.29
MARCH 2016	14/03/2016	Nickel	milligrams per litre	Weekly duirng discharge	1	0.0	0.0	0.0	0.19
MARCH 2016	14/03/2016	Silver	milligrams per litre	Weekly duirng discharge	1	<0.0001	0.0	<0.0001	0.0005
MARCH 2016	14/03/2016	Volume discharge	Megalitres per day	Daily during discharge	NA	-	-	-	20 ML
Comments:	**HRSTS discharge event did not occur during March 2016. Results gained during 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 / measurment frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
MARCH 2016	14/03/2016	Nitrogen Oxides	parts per million	Continuous	One hour	100.0%	147.3	374.9	501.6	700 ppm
MARCH 2016	14/03/2016		milligrams per cubic metre				302.2	769.6	1029.4	1500 mg/m^3
MARCH 2016	14/03/2016	Sulphur dioxide	parts per million	Continuous	One hour	100.0%	263.1	355.6	455.4	600 ppm
MARCH 2016	14/03/2016		milligrams per cubic metre				752.0	1016.3	1301.5	-
MARCH 2016	14/03/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	4.6%	9.0%	13.0%	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^3
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 / measurment frequency	Averaging period	Data capture %	Lowest sample value	Mean of samples	Highest sample value	EPL Limit
MARCH 2016	14/03/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	99.1%	1.7%	6.1%	10.4%	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
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, 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
MARCH 2016	14/03/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	100.0%	4.2%	8.7%	15.3%	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, 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
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, 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
MARCH 2016	14/03/2016	Opacity -Undifferentiated particles	Percent	Continuous	One hour	99.8%	0.2%	2.9%	18.6%	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, 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
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

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)**
High pH of 8.51 and electrical conductivity of 4875µS/cm were recorded at EPL Point 7
If required, further details on particulars of non-compliance
-
Date(s) when the non-compliance occurred, if applicable
15-Mar-16
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
An intense rainfall event resulted in approximately 12 ML of stormwater flowing through the monitoring point resulting in the monitoring equipment being stranded on the bank.
The erratic nature of the readings from DP7 after the storm event is most likely the result of the flood flow and the resulting stranding of the instream monitoring equipment.
Action taken or that will be taken to mitigate any adverse effects of the non-compliance
In stream monitoring equipment was returned to the water upon discovery.
Action taken or that will be taken to prevent a recurrence of the non-compliance
An investigation into methods for preventing this type of damage to the monitoring equipment is being undertaken.