

Monthly Data Summary

LIDDELL MONTHLY DATA SUMMARY AUGUST 2017

LICENCE NO	2122
LICENCE HOLDER	AGL MACQUARIE
REPORTING PERIOD	AUGUST 2017

A1 Licence Holder

Licence Number 2122
Licence Holder AGL MACQUARIE
Trading Name (if applicable)
ABN 18 167 859 494

A2 Premises to which Licence Applies (if applicable)

Common Name (if any) LIDDELL POWER STATION
Premises NEW ENGLAND HIGHWAY MUSWELLBROOK NSW 2333

A3 Activities to which Licence Applies

Electricity Generating Works
Coal Works

A4 Other Activities (if applicable)

Helicopter-related facilities
Chemical storage
Operation of Emergency 1.5 MW diesel generator
Operation of Gas turbine
Sewage treatment
Waste storage

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
Coal works	> 5,000,000.00	T handled
Generation of electrical power from coal	> 4,000.00	Gwh generated

Monthly Data Summary

Discharge & Monitoring Point 7

301204 East 6416350 North

Discharge to Air

In the flue gases of unit 1 boiler labelled as "Unit 1 Boiler 1-2 Chimney Stack" on plan no. LD 800474 amended 03 and dated 6/5/2003

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
AUGUST 2017	12/09/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	>99%	305.6	568.1	749.0	1500 mg/m ³
AUGUST 2017	12/09/2017		parts per million				148.9	276.8	364.9	700 ppm
AUGUST 2017	12/09/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	>99%	786.9	956.2	1271.2	
AUGUST 2017	12/09/2017		parts per million				275.3	334.6	444.8	600 ppm
AUGUST 2017	12/09/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	>99%	4.4	7.4	17.5	20%

Comments:

Annual monitoring of discharges to air

Air emission monitoring, Boiler 1 stack emissions, shown on plan no LD800474 amended 03 and dated 6/5/2003

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-17	5/09/2017	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Jul-17	5/09/2017	Chlorine	milligrams per cubic metre	1	1	0.0	200
Jul-17	5/09/2017	Copper	milligrams per cubic metre	1	1	0.0029	
Jul-17	5/09/2017	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.014	5
Jul-17	5/09/2017	Hydrogen chloride	milligrams per cubic metre	1	1	5.7	100
Jul-17	5/09/2017	Mercury	milligrams per cubic metre	1	1	0.00140	1.0
Jul-17	5/09/2017	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500
Jul-17	5/09/2017	Solid particles	milligrams per cubic metre	1	1	24.0	100
Jul-17	5/09/2017	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	1.100	100
Jul-17	5/09/2017	Sulphur dioxide	milligrams per cubic metre	1	1	1100	
Jul-17	5/09/2017	Total fluoride	milligrams per cubic metre	1	1	3.9	50
Jul-17	5/09/2017	Volatile organic compounds	milligrams per cubic metre	1	1	0.000	

Comments:

Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. This table contains the latest results from Boiler 1 tested 25 July 17.

Monthly Data Summary

Discharge & Monitoring Point 8

301204 East 6416350 North

In the flue gases of unit 2 boiler labelled as "Unit 2 Boiler 1-2 Chimney Stack" on plan no LD800474 amended 03 and dated 6/5/2003

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
AUGUST 2017	12/09/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	>99%	404	502	679	1500 mg/m ³
AUGUST 2017	12/09/2017		parts per million				197	245	331	700 ppm
AUGUST 2017	12/09/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	>99%	787	963	1212	
AUGUST 2017	12/09/2017		parts per million				275	337	424	600 ppm
AUGUST 2017	12/09/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	>99%	4.7	7.0	15.2	20%
Comments:										

Annual monitoring of discharges to air

Air emission monitoring, Boiler 2 stack emissions, shown on plan no LD800474 amended 03 and dated 6/5/2003

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-16	15/11/2016	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Oct-16	15/11/2016	Chlorine	milligrams per cubic metre	1	1	<0.008	200
Oct-16	15/11/2016	Copper	milligrams per cubic metre	1	1	0.0880	
Oct-16	15/11/2016	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.019	5
Oct-16	15/11/2016	Hydrogen chloride	milligrams per cubic metre	1	1	18.0	100
Oct-16	15/11/2016	Mercury	milligrams per cubic metre	1	1	0.00066	1.0
Oct-16	15/11/2016	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500
Oct-16	15/11/2016	Solid particles	milligrams per cubic metre	1	1	27.0	100
Oct-16	15/11/2016	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	1.300	100
Oct-16	15/11/2016	Sulphur dioxide	milligrams per cubic metre	1	1	1000	
Oct-16	15/11/2016	Total fluoride	milligrams per cubic metre	1	1	13.0	50
Oct-16	15/11/2016	Volatile organic compounds	milligrams per cubic metre	1	1	0.110	
Comments: Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. This table contains the latest results from Boiler 2 tested 13 Oct 16.							

Monthly Data Summary

Discharge & Monitoring Point 9

301204 East 6416350 North

In the flue gases of unit 3 boiler labelled as "Unit 3 Boiler 3-4 Chimney Stack" on plan no LD800474 amended 03 and dated 6/5/2003

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
AUGUST 2017	12/09/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	>99%	276.7	486.7	661.8	1500 mg/m ³
AUGUST 2017	12/09/2017		parts per million				134.8			237.1
AUGUST 2017	12/09/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	>99%	733.4	921.9	1234.1	
AUGUST 2017	12/09/2017		parts per million				256.6			322.5
AUGUST 2017	12/09/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	>99%	2.6	6.7	11.3	20%

Comments:

Annual monitoring of discharges to air

Air emission monitoring, Boiler 3 stack emissions, shown on plan no LD800474 amended 03 and dated 6/5/2003

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-17	19/05/2017	Cadmium	milligrams per cubic metre	1	1	<0.0002	1.0
Apr-17	19/05/2017	Chlorine	milligrams per cubic metre	1	1	0.0	200
Apr-17	19/05/2017	Copper	milligrams per cubic metre	1	1	0.0790	
Apr-17	19/05/2017	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.02	5
Apr-17	19/05/2017	Hydrogen chloride	milligrams per cubic metre	1	1	19.0	100
Apr-17	19/05/2017	Mercury	milligrams per cubic metre	1	1	0.00079	1.0
Apr-17	19/05/2017	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500
Apr-17	19/05/2017	Solid particles	milligrams per cubic metre	1	1	15.0	100
Apr-17	19/05/2017	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	1.300	100
Apr-17	19/05/2017	Sulphur dioxide	milligrams per cubic metre	1	1	980	
Apr-17	19/05/2017	Total fluoride	milligrams per cubic metre	1	1	11.0	50
Apr-17	19/05/2017	Volatile organic compounds	milligrams per cubic metre	1	1	<0.2	

Comments:

Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. This table contains the latest results from Boiler 3 tested 4 April 2017.

Monthly Data Summary

Discharge & Monitoring Point 10

301204 East 6416350 North

In the flue gases of unit 4 boiler labelled as "Unit 4 Boiler 3-4 Chimney Stack" on plan no LD800474 amended 03 and dated 6/5/2003

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
AUGUST 2017	12/09/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	>99%	269.7	550.0	799.7	1500 mg/m ³
AUGUST 2017	12/09/2017		parts per million				131.4	267.9	389.6	700 ppm
AUGUST 2017	12/09/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	>99%	745.8	902.8	1199.0	
AUGUST 2017	12/09/2017		parts per million				260.9	315.9	419.5	600 ppm
AUGUST 2017	12/09/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	>99%	3.2	7.1	11.1	20%
Comments:										

Annual monitoring of discharges to air

Air emission monitoring, Boiler 4 stack emissions, shown on plan no LD800474 amended 03 and dated 6/5/2003

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-17	19/05/2017	Cadmium	milligrams per cubic metre	1	1	<0.0001	1.0			
Apr-17	19/05/2017	Chlorine	milligrams per cubic metre	1	1	0.0	200			
Apr-17	19/05/2017	Copper	milligrams per cubic metre	1	1	0.0051				
Apr-17	19/05/2017	Hazardous substances (Metals)	milligrams per cubic metre	1	1	≤0.026	5			
Apr-17	19/05/2017	Hydrogen chloride	milligrams per cubic metre	1	1	18.0	100			
Apr-17	19/05/2017	Mercury	milligrams per cubic metre	1	1	0.00330	1.0			
Apr-17	19/05/2017	Nitrogen oxides	milligrams per cubic metre	1	1	1	1500			
Apr-17	19/05/2017	Solid particles	milligrams per cubic metre	1	1	44.0	100			
Apr-17	19/05/2017	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	1	1.300	100			
Apr-17	19/05/2017	Sulphur dioxide	milligrams per cubic metre	1	1	1000				
Apr-17	19/05/2017	Total fluoride	milligrams per cubic metre	1	1	11.0	50			
Apr-17	19/05/2017	Volatile organic compounds	milligrams per cubic metre	1	1	<0.2				
Comments: Monitoring of emission from each of the 4 boilers for the substances in this table is required annually. This table contains the latest results from Boiler 4 tested 6 April 2017.										

Monthly Data Summary

Discharge & Monitoring Point 12

Discharge to waters <301204 East 6416350 North> Update

Liddell Outfall Canal

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
AUGUST 2017	12/09/2017	Ammonia	milligrams per litre	Fortnightly	3	<0.01	0.0	0.0	-
AUGUST 2017	12/09/2017	Antimony	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	
AUGUST 2017	12/09/2017	Arsenic	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	-
AUGUST 2017	12/09/2017	Barium	milligrams per litre	Fortnightly	3	0.1	0.1	0.1	
AUGUST 2017	12/09/2017	Beryllium	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Boron	milligrams per litre	Fortnightly	3	1.0	1.0	1.1	
AUGUST 2017	12/09/2017	Cadmium	milligrams per litre	Fortnightly	3	<0.0001	0.0	<0.0001	-
AUGUST 2017	12/09/2017	Chlorine	milligrams per litre	Fortnightly	3	0.1	0.1	0.1	See Comment
AUGUST 2017	12/09/2017	Chromium	milligrams per litre	Fortnightly	3	<0.01	0.0	<0.01	See Comment
AUGUST 2017	12/09/2017	Chromium (total)	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	
AUGUST 2017	12/09/2017	Cobalt	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Conductivity	uS/cm	Fortnightly	3	2430.0	2456.7	2510.0	
AUGUST 2017	12/09/2017	Copper	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	-
AUGUST 2017	12/09/2017	Flouride	milligrams per litre	Fortnightly	3	1.1	1.2	1.2	
AUGUST 2017	12/09/2017	Lead	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Manganese	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	
AUGUST 2017	12/09/2017	Mercury	milligrams per litre	Fortnightly	3	<0.0001	0.0	<0.0001	-
AUGUST 2017	12/09/2017	Methylene Blue Active Substance	milligrams per litre	Fortnightly	3	<0.1	0.1	<0.1	
AUGUST 2017	12/09/2017	Molybdenum	milligrams per litre	Fortnightly	3	0.1	0.1	0.1	-
AUGUST 2017	12/09/2017	Nickel	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	
AUGUST 2017	12/09/2017	Nitrogen (total)	milligrams per litre	Fortnightly	3	0.4	0.5	0.6	-
AUGUST 2017	12/09/2017	Oil and Grease	milligrams per litre	Weekly	5	<5	2.5	<5	10
AUGUST 2017	12/09/2017	pH	pH Units	Daily	31	8.2	8.5	8.6	6.5-9.0
AUGUST 2017	12/09/2017	Phosphorus	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	

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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
AUGUST 2017	12/09/2017	Selemium	milligrams per litre	Fortnightly	3	<0.01	0.0	<0.01	-
AUGUST 2017	12/09/2017	Temperature	milligrams per litre	Fortnightly	3	19.4	20.7	22.0	
AUGUST 2017	12/09/2017	Tin	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Total Dissolved Solids	milligrams per litre	Fortnightly	3	1370.0	1480.0	1560.0	
AUGUST 2017	12/09/2017	Total Organic Carbon	milligrams per litre	Fortnightly	3	6.0	6.7	7.0	-
AUGUST 2017	12/09/2017	TSS	milligrams per litre	Fortnightly	3	2.0	3.0	4.0	
AUGUST 2017	12/09/2017	Vanadium	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	-
AUGUST 2017	12/09/2017	Zinc	milligrams per litre	Fortnightly	3	<0.005	0.0	<0.005	
Comments	The 'Chlorine' result recorded here are 'Chlorine (total)'. The 'Chromium' result recorded here is 'Chromium (VI)'								

Monthly Data Summary

Comments									
Discharge & Monitoring Point 13									
Discharge to waters <301204 East 6416350 North> Update									
Liddell Oil and Grit Trap									
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
AUGUST 2017	12/09/2017	Ammonia	milligrams per litre	Fortnightly	3	<0.01	0.4	1.1	-
AUGUST 2017	12/09/2017	Antimony	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	
AUGUST 2017	12/09/2017	Arsenic	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	-
AUGUST 2017	12/09/2017	Barium	milligrams per litre	Fortnightly	3	0.1	0.1	0.1	
AUGUST 2017	12/09/2017	Beryllium	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Boron	milligrams per litre	Fortnightly	3	1.0	1.0	1.0	
AUGUST 2017	12/09/2017	Cadmium	milligrams per litre	Fortnightly	3	<0.0001	0.0	<0.0001	-
AUGUST 2017	12/09/2017	Chlorine	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	See Comment
AUGUST 2017	12/09/2017	Chromium	milligrams per litre	Fortnightly	3	<0.01	0.0	<0.01	See Comment
AUGUST 2017	12/09/2017	Chromium (total)	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	
AUGUST 2017	12/09/2017	Cobalt	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Conductivity	uS/cm	Fortnightly	3	2380.0	2396.7	2410.0	
AUGUST 2017	12/09/2017	Copper	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	-
AUGUST 2017	12/09/2017	Flouride	milligrams per litre	Fortnightly	3	1.1	1.2	1.4	
AUGUST 2017	12/09/2017	Lead	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Manganese	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	
AUGUST 2017	12/09/2017	Mercury	milligrams per litre	Fortnightly	3	<0.0001	0.0	<0.0001	-
AUGUST 2017	12/09/2017	Methylene Blue Active Substance	milligrams per litre	Fortnightly	3	<0.1	0.1	<0.1	
AUGUST 2017	12/09/2017	Molybdenum	milligrams per litre	Fortnightly	3	0.1	0.1	0.1	-
AUGUST 2017	12/09/2017	Nickel	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	
AUGUST 2017	12/09/2017	Nitrogen (total)	milligrams per litre	Fortnightly	3	0.4	0.8	1.5	-
AUGUST 2017	12/09/2017	Oil and Grease	milligrams per litre	Weekly	5	<5	2.5	<5	10
AUGUST 2017	12/09/2017	pH	pH Units	Daily	31	7.7	8.5	8.6	6.5-9.0

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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
AUGUST 2017	12/09/2017	Phosphorus	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	
AUGUST 2017	12/09/2017	Selenium	milligrams per litre	Fortnightly	3	<0.01	0.0	<0.01	-
AUGUST 2017	12/09/2017	Temperature	milligrams per litre	Fortnightly	3	15.5	17.1	17.9	
AUGUST 2017	12/09/2017	Tin	milligrams per litre	Fortnightly	3	<0.001	0.0	<0.001	-
AUGUST 2017	12/09/2017	Total Dissolved Solids	milligrams per litre	Fortnightly	3	1450.0	1516.7	1610.0	
AUGUST 2017	12/09/2017	Total Organic Carbon	milligrams per litre	Fortnightly	3	6.0	6.7	7.0	-
AUGUST 2017	12/09/2017	TSS	milligrams per litre	Fortnightly	3	2.0	3.3	5.0	
AUGUST 2017	12/09/2017	Vanadium	milligrams per litre	Fortnightly	3	0.0	0.0	0.0	-
AUGUST 2017	12/09/2017	Zinc	milligrams per litre	Fortnightly	3	<0.005	0.0	<0.005	
Comments	The 'Chlorine' result recorded here are 'Chlorine (total)'. The 'Chromium' result recorded here is 'Chromium (VI)'								

Monthly Data Summary

Compliance with Licence

Licence condition number not complied with

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 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

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