

# Monthly Data Summary

## LIDDELL MONTHLY DATA SUMMARY OCTOBER 2017

LICENCE NO	2122
LICENCE HOLDER	AGL MACQUARIE
REPORTING PERIOD	OCTOBER 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
OCTOBER 2017	14/11/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	-	-	-	-	1500 mg/m <sup>3</sup>
OCTOBER 2017	14/11/2017		parts per million				-	-	-	700 ppm
OCTOBER 2017	14/11/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	-	-	-	-	
OCTOBER 2017	14/11/2017		parts per million				-	-	-	600 ppm
OCTOBER 2017	14/11/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	-	-	-	-	20%
Comments:		Unit was out of service for the entire monitoring period								

## 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 <sup>3</sup>
-	-	Cadmium	milligrams per cubic metre	1	-	-	1.0
-	-	Chlorine	milligrams per cubic metre	1	-	-	200
-	-	Copper	milligrams per cubic metre	1	-	-	
-	-	Hazardous substances (Metals)	milligrams per cubic metre	1	-	-	5
-	-	Hydrogen chloride	milligrams per cubic metre	1	-	-	100
-	-	Mercury	milligrams per cubic metre	1	-	-	1.0
-	-	Nitrogen oxides	milligrams per cubic metre	1	-	-	1500
-	-	Solid particles	milligrams per cubic metre	1	-	-	100
-	-	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	-	-	100
-	-	Sulphur dioxide	milligrams per cubic metre	1	-	-	
-	-	Total fluoride	milligrams per cubic metre	1	-	-	50
-	-	Volatile organic compounds	milligrams per cubic metre	1	-	-	
Comments:		Unit was out of service for the entire monitoring period					

# 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
OCTOBER 2017	14/11/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	-	-	-	-	1500 mg/m <sup>3</sup>
OCTOBER 2017	14/11/2017		parts per million				-	-	-	700 ppm
OCTOBER 2017	14/11/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	-	-	-	-	
OCTOBER 2017	14/11/2017		parts per million				-	-	-	600 ppm
OCTOBER 2017	14/11/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	-	-	-	-	20%
Comments:		Unit was out of service for the entire monitoring period								

## 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 <sup>3</sup>
-	-	Cadmium	milligrams per cubic metre	1	-	-	1.0
-	-	Chlorine	milligrams per cubic metre	1	-	-	200
-	-	Copper	milligrams per cubic metre	1	-	-	
-	-	Hazardous substances (Metals)	milligrams per cubic metre	1	-	-	5
-	-	Hydrogen chloride	milligrams per cubic metre	1	-	-	100
-	-	Mercury	milligrams per cubic metre	1	-	-	1.0
-	-	Nitrogen oxides	milligrams per cubic metre	1	-	-	1500
-	-	Solid particles	milligrams per cubic metre	1	-	-	100
-	-	Sulfuric acid mist and sulfur trioxide	milligrams per cubic metre	1	-	-	100
-	-	Sulphur dioxide	milligrams per cubic metre	1	-	-	
-	-	Total fluoride	milligrams per cubic metre	1	-	-	50
-	-	Volatile organic compounds	milligrams per cubic metre	1	-	-	
Comments:		Unit was out of service for the entire monitoring period					

# 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
OCTOBER 2017	14/11/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	>99%	328.2	469.8	600.4	1500 mg/m <sup>3</sup>
OCTOBER 2017	14/11/2017		parts per million				159.9			228.9
OCTOBER 2017	14/11/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	>99%	681.8	878.6	1175.0	
OCTOBER 2017	14/11/2017		parts per million				238.6			307.4
OCTOBER 2017	14/11/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	>99%	0.1	3.2	9.6	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 <sup>3</sup>
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	0.01	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	650	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
OCTOBER 2017	14/11/2017	Nitrogen Oxides	milligrams per cubic metre	Continuous	One hour	>99%	452.5	616.0	826.0	1500 mg/m <sup>3</sup>
OCTOBER 2017	14/11/2017		parts per million				220.5	300.1	402.4	700 ppm
OCTOBER 2017	14/11/2017	Sulphur dioxide	milligrams per cubic metre	Continuous	One hour	>99%	702.4	863.7	1169.6	
OCTOBER 2017	14/11/2017		parts per million				245.8	302.2	409.2	600 ppm
OCTOBER 2017	14/11/2017	Opacity - Undifferentiated particles	Percent	Continuous	One hour	>99%	0.8	6.1	13.9	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 <sup>3</sup>			
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	0.01	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	630	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
OCTOBER 2017	14/11/2017	Ammonia	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Antimony	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
OCTOBER 2017	14/11/2017	Arsenic	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Barium	milligrams per litre	Fortnightly	2	0.1	0.1	0.1	
OCTOBER 2017	14/11/2017	Beryllium	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Boron	milligrams per litre	Fortnightly	2	1.1	1.1	1.1	
OCTOBER 2017	14/11/2017	Cadmium	milligrams per litre	Fortnightly	2	<0.0001	0.0	<0.0001	-
OCTOBER 2017	14/11/2017	Chlorine	milligrams per litre	Fortnightly	2	0.0	0.1	0.1	
OCTOBER 2017	14/11/2017	Chromium	milligrams per litre	Fortnightly	2	<0.01	0.0	<0.01	-
OCTOBER 2017	14/11/2017	Chromium (total)	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	
OCTOBER 2017	14/11/2017	Cobalt	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Conductivity	uS/cm	Fortnightly	2	2560.0	2575.0	2590.0	
OCTOBER 2017	14/11/2017	Copper	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Flouride	milligrams per litre	Fortnightly	2	1.2	1.3	1.3	
OCTOBER 2017	14/11/2017	Lead	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Manganese	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
OCTOBER 2017	14/11/2017	Mercury	milligrams per litre	Fortnightly	2	<0.0001	0.0	<0.0001	-
OCTOBER 2017	14/11/2017	Methylene Blue Active Substance	milligrams per litre	Fortnightly	2	<0.1	0.1	<0.1	
OCTOBER 2017	14/11/2017	Molybdenum	milligrams per litre	Fortnightly	2	0.1	0.1	0.1	-

# Monthly Data Summary

OCTOBER 2017	14/11/2017	Nickel	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
OCTOBER 2017	14/11/2017	Nitrogen (total)	milligrams per litre	Fortnightly	2	0.4	0.5	0.6	-
OCTOBER 2017	14/11/2017	Oil and Grease	milligrams per litre	Weekly	5	<5	2.5	<5	
OCTOBER 2017	14/11/2017	pH	pH Units	Fortnightly	31	7.9	8.3	8.5	-
OCTOBER 2017	14/11/2017	Phosphorus	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
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
OCTOBER 2017	14/11/2017	Selemium	milligrams per litre	Fortnightly	2	<0.01	0.0	<0.01	-
OCTOBER 2017	14/11/2017	Temperature	milligrams per litre	Fortnightly	2	26.7	26.8	26.9	
OCTOBER 2017	14/11/2017	Tin	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Total Dissolved Solids	milligrams per litre	Fortnightly	2	1630.0	1650.0	1670.0	
OCTOBER 2017	14/11/2017	Total Organic Carbon	milligrams per litre	Fortnightly	2	6.0	6.0	6.0	-
OCTOBER 2017	14/11/2017	TSS	milligrams per litre	Fortnightly	2	3.0	3.5	4.0	
OCTOBER 2017	14/11/2017	Vanadium	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Zinc	milligrams per litre	Fortnightly	2	<0.005	0.0	<0.005	
Comments									

# Monthly Data Summary

Comments									
<b>Discharge &amp; Monitoring Point 13</b> <b>Discharge to waters &lt;301204 East 6416350 North&gt; Update</b> <b>Liddell Oil and Grit Trap</b>									
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
OCTOBER 2017	14/11/2017	Ammonia	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Antimony	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
OCTOBER 2017	14/11/2017	Arsenic	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Barium	milligrams per litre	Fortnightly	2	0.1	0.1	0.1	
OCTOBER 2017	14/11/2017	Beryllium	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Boron	milligrams per litre	Fortnightly	2	1.0	1.0	1.1	
OCTOBER 2017	14/11/2017	Cadmium	milligrams per litre	Fortnightly	2	<0.0001	0.0	<0.0001	-
OCTOBER 2017	14/11/2017	Chlorine	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
OCTOBER 2017	14/11/2017	Chromium	milligrams per litre	Fortnightly	2	<0.01	0.0	<0.01	-
OCTOBER 2017	14/11/2017	Chromium (total)	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	
OCTOBER 2017	14/11/2017	Cobalt	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Conductivity	uS/cm	Fortnightly	2	2450.0	2470.0	2490.0	
OCTOBER 2017	14/11/2017	Copper	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Flouride	milligrams per litre	Fortnightly	2	1.1	1.1	1.2	
OCTOBER 2017	14/11/2017	Lead	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Manganese	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
OCTOBER 2017	14/11/2017	Mercury	milligrams per litre	Fortnightly	2	<0.0001	0.0	<0.0001	-
OCTOBER 2017	14/11/2017	Methylene Blue Active Substance	milligrams per litre	Fortnightly	2	<0.1	0.1	<0.1	
OCTOBER 2017	14/11/2017	Molybdenum	milligrams per litre	Fortnightly	2	0.1	0.1	0.1	-
OCTOBER 2017	14/11/2017	Nickel	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	



# Monthly Data Summary

OCTOBER 2017	14/11/2017	Nitrogen (total)	milligrams per litre	Fortnightly	2	0.5	0.6	0.6	-
OCTOBER 2017	14/11/2017	Oil and Grease	milligrams per litre	Weekly	5	<5	2.5	<5	
OCTOBER 2017	14/11/2017	pH	pH Units	Fortnightly	31	0.0	0.0	0.0	-
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
OCTOBER 2017	14/11/2017	Phosphorus	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	
OCTOBER 2017	14/11/2017	Selenium	milligrams per litre	Fortnightly	2	<0.01	0.0	<0.01	-
OCTOBER 2017	14/11/2017	Temperature	milligrams per litre	Fortnightly	2	20.5	20.8	21.0	
OCTOBER 2017	14/11/2017	Tin	milligrams per litre	Fortnightly	2	<0.001	0.0	<0.001	-
OCTOBER 2017	14/11/2017	Total Dissolved Solids	milligrams per litre	Fortnightly	2	1550.0	1555.0	1560.0	
OCTOBER 2017	14/11/2017	Total Organic Carbon	milligrams per litre	Fortnightly	2	6.0	6.0	6.0	-
OCTOBER 2017	14/11/2017	TSS	milligrams per litre	Fortnightly	2	5.0	5.5	6.0	
OCTOBER 2017	14/11/2017	Vanadium	milligrams per litre	Fortnightly	2	0.0	0.0	0.0	-
OCTOBER 2017	14/11/2017	Zinc	milligrams per litre	Fortnightly	2	<0.005	0.0	0.0	
Comments									

# Monthly Data Summary

## Compliance with Licence

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 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

-

# Monthly Data Summary

# Monthly Data Summary

# Monthly Data Summary

# Monthly Data Summary

# Monthly Data Summary

# Monthly Data Summary



# Monthly Data Summary

# Monthly Data Summary

# Monthly Data Summary

# Monthly Data Summary