

# Monthly Website Report



<b>SITE:</b>	<b>Mannering Colliery</b>
<b>Department:</b>	<b>Technical Services</b>
<b>REPORT TITLE:</b>	<b>Monthly Environmental Report – May 2017</b>
<b>Prepared by:</b>	<b>Wade Covey</b>
<b>Report Date:</b>	<b>14/06/2017</b>
<b>Distribution:</b>	<b>Mannering Colliery Website</b>

# Report

Title: Mannering Colliery Monthly Environmental Report

## TABLE OF CONTENTS

Summary .....	3
Introduction .....	3
Scope.....	4
Definitions .....	4
References .....	4
Monitoring Results .....	5
Water – Quality .....	5
Water Quality Results (reverted to Daily during discharge as per EPL PRP requirements) .....	5
Water – Volume .....	6
Air Quality .....	7
Monthly depositional dust results .....	7
Rolling annual average depositional dust results .....	8
Operational Noise .....	8
Weather .....	9

# Report

**Title:** Mannering Colliery Monthly Environmental Report

## Summary

Monitoring was undertaken in December 2016 with all results in compliance with the required limits.

## Introduction

LakeCoal Pty Ltd (LakeCoal) operates the Mannering Colliery, an underground coal mine at the southern end of Lake Macquarie.

This monthly report is to satisfy the requirements of;

- section 66(6) of the Protection of the Environment Operations Act, 1997, to make monitoring data related to an Environment Protection Licence publically available and
- condition 7 & 10, schedule 5, of Development Approval 06\_0311 (as modified) to provide details of monitoring results and environmental performance.

This report provides environmental monitoring data from Mannering Colliery for the period 1 May 2017 to 31 May 2017.

Environmental monitoring data is collected as required under Environment Protection Licence 191 (EPL 191).

Details of the Mannering Colliery and EPL 191 are provided below.

<b>Mannering Colliery Information</b>	
Premises name	Mannering Colliery
Address	Rutleys Road, Doyalson, NSW, 2262
Licensee	LakeCoal Pty Ltd
EPL #	191
EPL location	<a href="http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50781&amp;SYSUID=1&amp;LICID=191">http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50781&amp;SYSUID=1&amp;LICID=191</a>

The overall purpose of this report is to keep stakeholders informed of the environmental monitoring results at Mannering Colliery and maintain a transparent and accountable reporting system.

# Report

Title:

Manning Colliery Monthly Environmental Report

## Scope

This report presents the results from the various environmental monitoring undertaken for Manning Colliery.

Results are presented for each specific month and annual data, averages and trends in data are shown to where relevant.

Where applicable, the results of the monitoring programs are compared with the relevant criteria (from the EPL or Project Approval) to determine compliance.

Monitoring results presented include;

- Water – quality;
- Water – volume;
- Air quality;
- Operational noise; and
- Weather data

## Definitions

°C – degrees celsius

dB – decibels

dB(A) – noise level measurement units are decibels (dB). The A-weighting scale is used to approximate human perception of noise

g/m<sup>2</sup>/month – grams per square metre per month

kL – kilolitres

L<sub>Aeq</sub> – the average A-weighted noise energy (in dB) for a measurement period

mg/L – Milligrams per litre

mm – millimetre

µS/cm – microsiemens per centimetre

## References

Project Approval 06\_0311 (as modified)

Environment Protection Licence 191 (Licence version date: 13 May 2015)

Steel River Testing - Dust Deposition Report – May 2017 Report

ALS Environmental - Monthly Water Monitoring Results May 2017 – ES1711889

Steel River Testing – Water Analysis Report – May 2017 Report No: 13476-0

# Report

**Title:** Mannering Colliery Monthly Environmental Report

## Monitoring Results

### Water – Quality

Water Quality Results (reverted to Daily during discharge as per EPL PRP requirements)

May 2017			
<b>EPL</b>	191		
<b>Licensee</b>	LakeCoal Pty Ltd		
<b>Premises</b>	Mannering Colliery		
<b>Period</b>	01-May-17	to	31-May-17
<b>Location</b>	LDP001 (EPA ID # 1)		
<b>Date sampled</b>	Weekly		
<b>Date reported</b>	Refer report date		
<b>Monitoring requirement</b>	Weekly		
<b>pH limit</b>	6.5 - 8.5		
<b>TSS limit (mg/L)</b>	50		
<b>Oil and grease limit (mg/L)</b>	10		
<b>Exceedance (Yes/No)</b>	No		
Water Quality Results			
Date	pH	TSS (mg/L)	Oil and grease (mg/L)
01/05/2017			
02/05/2017	8.0	8	<5
03/05/2017			
04/05/2017			
05/05/2017			
06/05/2017			
07/05/2017			
08/05/2017			
09/05/2017			
10/05/2017	7.7	2	<5
11/05/2017			
12/05/2017			
13/05/2017			
14/05/2017			
15/05/2017			
16/05/2017			
17/05/2017	7.9	5	<5
18/05/2017			
19/05/2017			
20/05/2017			
21/05/2017			
22/05/2017			
23/05/2017			
24/05/2017	7.7	1	<5
25/05/2017			
26/05/2017			
27/05/2017			
28/05/2017			
29/05/2017			
30/05/2017			
31/05/2017	7.7	<1	<5

# Report

**Title:** Mannering Colliery Monthly Environmental Report

## Water – Volume

May 2017		
EPL	191	
Licensee	LakeCoal Pty Ltd	
Premises	Mannering Colliery	
Date Sampled	Daily	
Date Reported	Refer report date	
Discharge volume limit	4000 kilolitres per day	
Sampling Point	LDPO01 (EPA ID # 1)	

Date (24 hour period)	Unit	Volume
01/05/2017	kL	460
02/05/2017	kL	1465
03/05/2017	kL	955
04/05/2017	kL	944
05/05/2017	kL	576
06/05/2017	kL	0
07/05/2017	kL	0
08/05/2017	kL	576
09/05/2017	kL	966
10/05/2017	kL	968
11/05/2017	kL	1769
12/05/2017	kL	614
13/05/2017	kL	0
14/05/2017	kL	0
15/05/2017	kL	558
16/05/2017	kL	909
17/05/2017	kL	1503
18/05/2017	kL	1443
19/05/2017	kL	1015
20/05/2017	kL	524
21/05/2017	kL	151
22/05/2017	kL	907
23/05/2017	kL	1122
24/05/2017	kL	1165
25/05/2017	kL	1167
26/05/2017	kL	1108
27/05/2017	kL	1168
28/05/2017	kL	1172
29/05/2017	kL	1103
30/05/2017	kL	1181

# Report

**Title:** Mannering Colliery Monthly Environmental Report

## Air Quality

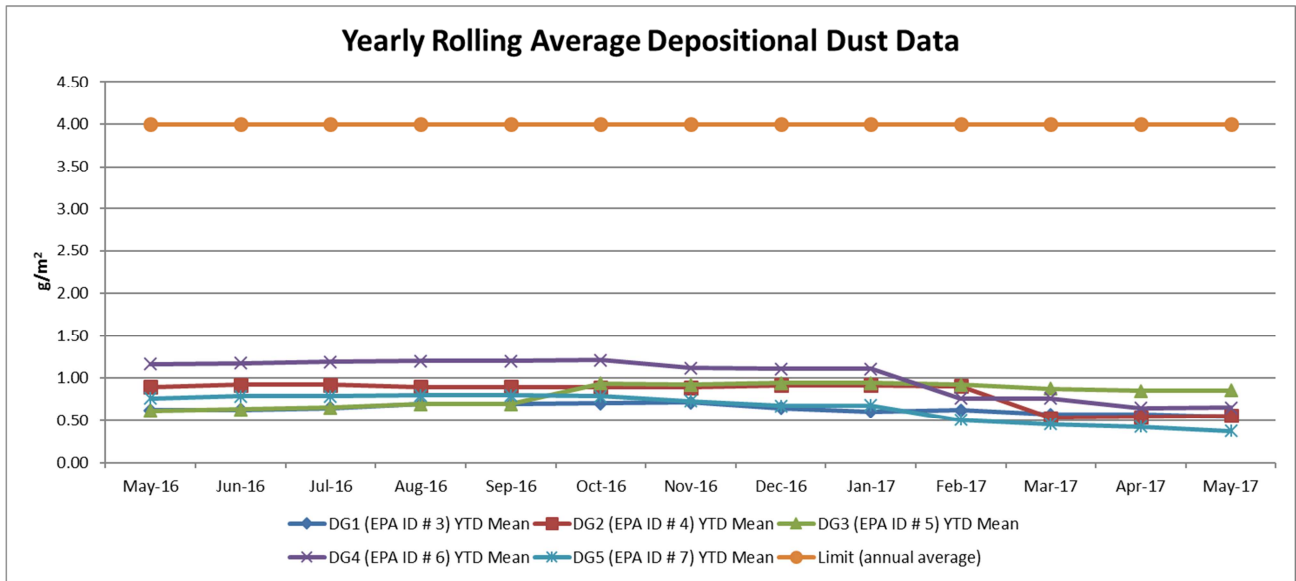
### Monthly depositional dust results

Monthly Depositional Dust Data			
May 2017			
<b>EPL</b>	191		
<b>Licensee</b>	LakeCoal Pty Ltd		
<b>Premises</b>	Mannering Colliery		
<b>Date Sampled</b>	12-Apr-17	to	12-May-17
<b>Date Obtained</b>	17-Apr-17		
<b>Date Reported</b>	Refer report date		
<b>Sampling Point</b>	As per site below		
<b>Site</b>	<b>Insoluble Matter (g/m2/month)</b>		
DG1 (EPA ID # 3)	0.2		
DG2 (EPA ID # 4)	0.6		
DG3 (EPA ID # 5)	0.4		
DG4 (EPA ID # 6)	0.5		
DG5 (EPA ID # 7)	0.1		
<b>Notes:</b>			
- For site locations refer to Air Quality Management Plan			
NS - No Sample taken. Dust guage apparatus stolen from site			

# Report

Title: Mannering Colliery Monthly Environmental Report

## Rolling annual average depositional dust results



## Operational Noise

A summary of noise monitoring results for the month of May:

Table 4.2:  $L_{Aeq,15minute}$  GENERATED BY MANNERING COLLIERY AGAINST OPERATIONAL NOISE IMPACT ASSESSMENT CRITERIA – MAY 2017

Location	Start Date And Time	Wind Speed (m/s)	VTG (%C per 100m) <sup>1</sup>	$L_{Aeq}$ Criteria dB	Criteria Applies? <sup>2</sup>	MC $L_{Aeq}$ dB <sup>3,4,5</sup>	Exceedance <sup>4,5</sup>
Day							
RA1	09/05/2017 10:56	3.4	-2	42	No	IA	NA
RA2	09/05/2017 11:20	3.3	-2	39	No	IA	NA
RA3	09/05/2017 11:44	3.4	-2	39	No	IA	NA
Evening							
RA1	08/05/2017 20:13	1.3	0.5	42	Yes	IA	Nil
RA2	08/05/2017 20:39	1.2	-1	39	Yes	IA	Nil
RA3	08/05/2017 21:10	1.2	-0.5	39	Yes	IA	Nil
Night							
RA1	08/05/2017 22:00	1.3	3	41	Yes	IA	Nil
RA2	08/05/2017 22:24	1.6	0.5	39	Yes	IA	Nil
RA3	08/05/2017 22:45	1.2	-0.5	39	Yes	IA	Nil

Notes:

1. Sigma theta data used to calculate Vertical Temperature Gradient (VTG) in accordance with procedures detailed in the INP;
2. In accordance with Appendix 4A of the Project Approval, noise emission limits do not apply for wind speeds greater than 3m/s at 10 metres above ground level; stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level; or stability category G temperature inversion conditions;
3. These are results for MC in the absence of all other noise sources;
4. Bold results in red are those greater than the relevant criterion (if applicable); and
5. NA in exceedance column means atmospheric conditions outside conditions specified in project approval and so criterion is not applicable.



# Report

Title: Mannering Colliery Monthly Environmental Report

Table 4.3:  $L_{A1,1\text{minute}}$  GENERATED BY MANNERING COLLIERY AGAINST OPERATIONAL NOISE IMPACT ASSESSMENT CRITERIA – MAY 2017

Location	Start Date And Time	Wind Speed (m/s)	VTG ( $^{\circ}\text{C}$ per 100m) <sup>1</sup>	$L_{A1,1\text{min}}$ Criteria dB	Criteria Applies? <sup>2</sup>	MC $L_{A1,1\text{min}}$ dB <sub>3A5</sub>	Exceedance <sup>5</sup>
RA1	08/05/2017 22:00	1.3	3	49	Yes	IA	Nil
RA2	08/05/2017 22:24	1.6	0.5	47	Yes	IA	Nil
RA3	08/05/2017 22:45	1.2	-0.5	49	Yes	IA	Nil

Notes:

1. Sigma theta data used to calculate Vertical Temperature Gradient (VTG) in accordance with procedures detailed in the INP;
2. In accordance with Appendix 4A of the Project Approval, noise emission limits do not apply for wind speeds greater than 3m/s at 10 metres above ground level; stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level; or stability category G temperature inversion conditions;
3. These are results for MC in the absence of all other noise sources;
4. Bold results in red are those greater than the relevant criterion (if applicable); and
5. NA in exceedance column means atmospheric conditions outside conditions specified in project approval and so criterion is not applicable.

## Weather

A summary of weather data recorded by an on-site meteorological monitoring station at the Colliery is presented below for the year to date.

Monthly Weather Data			
2016/17			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Location	W1 (on-site weather station)		
Date publi	Refer report date		
Date sam	Daily		
Date obtai	13/06/2017		
Month	Total Rainfall / Month (mm)	Minimum Temperature ( $^{\circ}\text{C}$ )	Maximum Temperature ( $^{\circ}\text{C}$ )
Feb-16	17.4	16.4	37.7
Mar-16	92.2	14.3	30.1
Apr-16	36.2	12.1	33.5
May-16	46.6	5.3	27.8
Jun-16	248.2	3.4	21.4
Jul-16	73.2	2.5	25
Aug-16	115	4.5	24.3
Sep-16	68	7.4	24.2
Oct-16	61	7.3	33.3
Nov-16	46.8	10.9	35.2
Dec-16	85.2	14.5	38.9
Jan-17	68.6	17.4	40.1
Feb-17	141.2	13.1	39
Mar-17	404	14.5	31.9
Apr-17	85.6	17.4	24.8
May-17	34.8	11.5	24.8