

# 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 – July 2016</b>
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<b>Distribution:</b>	<b>Mannering Colliery Website</b>

# Report

Title: **Mannering Colliery Monthly Environmental Report**

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## Summary

Monitoring was undertaken in July 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 July 2016 to 30 July 2016.

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.

Mannering Colliery Information	
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.

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Title:

Mannering Colliery Monthly Environmental Report

## Scope

This report presents the results from the various environmental monitoring undertaken for Mannering 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 – July 2016

ALS Environmental - Monthly Water Monitoring Results – July 2016

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## Monitoring Results

### Water – Quality

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

Jul-16			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Period	01-Jul-16	to	31-Jul-16
Location	LDP001 (EPA ID # 1)		
Date sampled	Weekly		
Date reported	Refer report date		
Monitoring requirement	Weekly		
pH limit	6.5 - 8.5		
TSS limit (mg/L)	50		
Oil and grease limit (mg/L)	10		
Exceedance (Yes/No)	No		
Water Quality Results			
Date	pH	TSS (mg/L)	Oil and grease (mg/L)
01/07/2016	8.0	5	<5
02/07/2016			
03/07/2016			
04/07/2016	8.3	6	<5
05/07/2016	8.0	3	<5
06/07/2016	7.9	2	<5
07/07/2016	7.9	1	<5
08/07/2016	7.9	7	<5
09/07/2016			
10/07/2016			
11/07/2016	8.0	4	<5
12/07/2016	8.0	<1	<5
13/07/2016	7.9	2	<5
14/07/2016	7.9	7	<5
15/07/2016	7.8	7	<5
16/07/2016			
17/07/2016			
18/07/2016	7.8	3	<5
19/07/2016	7.9	2	<5
20/07/2016	8.0	5	<5
21/07/2016	8.0	2	<5
22/07/2016	7.9	2	<5
23/07/2016			
24/07/2016			
25/07/2016	8.1	1	<5
26/07/2016	7.8	1	<5
27/07/2016	7.9	2	<5
28/07/2016	8.0	3	<5
29/07/2016	8.1	1	<5
30/07/2016			
31/07/2016			

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## Water – Volume

July 2016		
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	LDP001 (EPA ID # 1)	
Date (24 hour period)	Unit	Volume
01/07/2016	kL	639
02/07/2016	kL	0
03/07/2016	kL	0
04/07/2016	kL	1812
05/07/2016	kL	1577
06/07/2016	kL	1394
07/07/2016	kL	1341
08/07/2016	kL	0
09/07/2016	kL	0
10/07/2016	kL	0
11/07/2016	kL	1592
12/07/2016	kL	1521
13/07/2016	kL	1524
14/07/2016	kL	486
15/07/2016	kL	987
16/07/2016	kL	0
17/07/2016	kL	0
18/07/2016	kL	1780
19/07/2016	kL	2060
20/07/2016	kL	1026
21/07/2016	kL	331
22/07/2016	kL	642
23/07/2016	kL	0
24/07/2016	kL	0
25/07/2016	kL	1801
26/07/2016	kL	1525
27/07/2016	kL	1556
28/07/2016	kL	966
29/07/2016	kL	1053
30/07/2016	kL	0
31/07/2016	kL	0

## Air Quality

### Monthly depositional dust results

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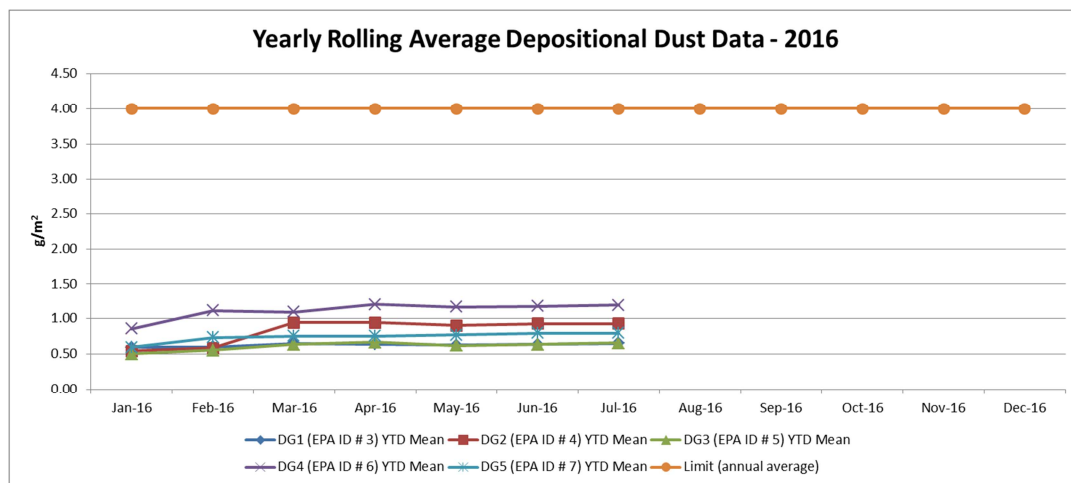
Monthly Depositional Dust Data			
July 2016			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Date Sampled	14-Jun-16	to	15-Jul-16
Date Obtained	22-Jul-16		
Date Reported	Refer report date		
Sampling Point	As per site below		

Site	Insoluble Matter (g/m2/month)
DG1 (EPA ID # 3)	0.4
DG2 (EPA ID # 4)	0.3
DG3 (EPA ID # 5)	0.4
DG4 (EPA ID # 6)	0.5
DG5 (EPA ID # 7)	0.4

## Notes:

- For site locations refer to Air Quality Management Plan

## Rolling annual average depositional dust results



## Operational Noise

Attended noise monitoring was undertaken in July. No exceedances were identified. A summary of the monitoring results is provided below.

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

Location	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</sup> <sub>5</sub>
Day							
RA1	18/07/2016 13:59	2.2	-2.0	42	Yes	IA	Nil
RA2	18/07/2016 14:24	1.7	-2.0	39	Yes	IA	Nil
RA3	18/07/2016 14:51	1.9	-2.0	39	Yes	IA	Nil
Evening							
RA1	27/07/2016 20:50	1.2	3.0	42	Yes	IA	Nil
RA2	27/07/2016 21:14	0.7	3.0	39	Yes	IA	Nil
RA3	27/07/2016 21:37	0.4	3.0	39	Yes	IA	Nil
Night							
RA1	27/07/2016 22:02	0.3	3.0	41	Yes	IA	Nil
RA2	27/07/2016 22:22	0.2	3.0	39	Yes	IA	Nil
RA3	27/07/2016 22:41	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. Noise emission limits do not apply for winds greater than 3 metres per second (at a height of 10 metres); or temperature inversion conditions greater than 4°C/100m;
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.



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Monthly Weather Data			
2016			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Location	W1 (on-site weather station)		
Date published:	Refer report date		
Date sampled:	Daily		
Date obtained:	14/08/2016		
Month	Total Rainfall / Month (mm)	Minimum Temperature (°C)	Maximum Temperature (°C)
Jan-16	329	14.3	36
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			
Sep-16			
Oct-16			
Nov-16			
Dec-16			