

# 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 – August 2016</b>
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<b>Report Date:</b>	<b>14/08/2016</b>
<b>Distribution:</b>	<b>Mannering Colliery Website</b>

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# Report

Title:

Mannering Colliery Monthly Environmental Report

## Summary

Monitoring was undertaken in August 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 August 2016 to 31 August 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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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 – August 2016

ALS Environmental - Monthly Water Monitoring Results August 2016

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## Monitoring Results

### Water – Quality

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

August 2016			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Period	1-Aug-16	to	31-Aug-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)
1/08/2016	8.0	10	<5
2/08/2016	8.0	2	<5
3/08/2016	7.9	5	<5
4/08/2016	8.1	4	<5
5/08/2016	8.1	3	<5
6/08/2016			
7/08/2016			
8/08/2016	8.1	3	<5
9/08/2016	8.1	6	<5
10/08/2016	8.0	6	<5
11/08/2016	8.0	2	<5
12/08/2016	8.0	1	<5
13/08/2016			
14/08/2016			
15/08/2016			
16/08/2016			
17/08/2016			
18/08/2016	8.4	1	<5
19/08/2016			
20/08/2016			
21/08/2016			
22/08/2016			
23/08/2016	7.9	3	<5
24/08/2016			
25/08/2016			
26/08/2016			
27/08/2016			
28/08/2016			
29/08/2016			
30/08/2016			
31/08/2016	8.0	4	<5

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## Water – Volume

August 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
1/08/2016	kL	1165
2/08/2016	kL	1614
3/08/2016	kL	1606
4/08/2016	kL	808
5/08/2016	kL	371
6/08/2016	kL	0
7/08/2016	kL	0
8/08/2016	kL	1454
9/08/2016	kL	1593
10/08/2016	kL	1591
11/08/2016	kL	893
12/08/2016	kL	724
13/08/2016	kL	0
14/08/2016	kL	0
15/08/2016	kL	1360
16/08/2016	kL	1889
17/08/2016	kL	643
18/08/2016	kL	664
19/08/2016	kL	1919
20/08/2016	kL	0
21/08/2016	kL	0
22/08/2016	kL	1630
23/08/2016	kL	1584
24/08/2016	kL	1021
25/08/2016	kL	511
26/08/2016	kL	0
27/08/2016	kL	0
28/08/2016	kL	0
29/08/2016	kL	1264
30/08/2016	kL	2053
31/08/2016	kL	1571

## Air Quality

### Monthly depositional dust results

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## Monthly Depositional Dust Data

August 2016

<b>EPL</b>	191		
<b>Licensee</b>	LakeCoal Pty Ltd		
<b>Premises</b>	Mannering Colliery		
<b>Date Sampled</b>	15-Jul-16	to	15-Aug-16
<b>Date Obtained</b>	23-Aug-16		
<b>Date Reported</b>	Refer report date		
<b>Sampling Point</b>	As per site below		

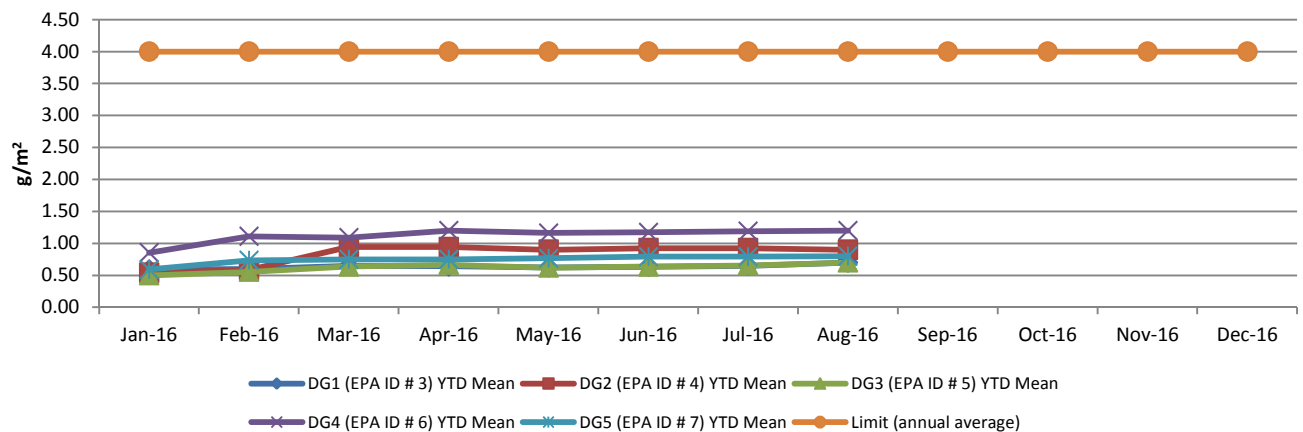
Site	Insoluble Matter (g/m <sup>2</sup> /month)
DG1 (EPA ID # 3)	0.3
DG2 (EPA ID # 4)	0.3
DG3 (EPA ID # 5)	0.6
DG4 (EPA ID # 6)	0.4
DG5 (EPA ID # 7)	0.3

Notes:

- For site locations refer to Air Quality Management Plan

## Rolling annual average depositional dust results

### Yearly Rolling Average Depositional Dust Data - 2016



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## Operational Noise

Attended noise monitoring was undertaken in August. There was one exceedance was identified at location RA2. A summary of the monitoring results is provided below. The exceedance was reported to the EPA and DP&E in accordance with the site Noise Monitoring Program.

Follow up monitoring was undertaken at location RA2 at 10:23pm with noise levels back within compliance.

*Table 1.1 :  $L_{Aeq,15min}$  GENERATED BY MC AGAINST IMPACT ASSESSMENT CRITERIA*

Location	Date and Time	Wind Speed (m/s)	VTG (deg/C per 100m) <sup>1</sup>	$L_{Aeq,15min}$ Criterion dB	Criterion Applies? <sup>2,3</sup>	MC $L_{Aeq,15min}$ dB <sup>4</sup>	Exceedance
RA2	18:25 11/08/2016	0.9	3.0	39	Yes	42	<b>3</b>
RA2	22:23 11/08/2016	0.9	3.0	39	Yes	NM	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 Mannering Colliery (MC) in the absence of all other noise sources; and
  4. Bolded results in red are those greater than the relevant criterion (if applicable).



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## 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			
<b>EPL</b>	191		
<b>Licensee</b>	LakeCoal Pty Ltd		
<b>Premises</b>	Mannering Colliery		
<b>Location</b>	W1 (on-site weather station)		
<b>Date published:</b>	Refer report date		
<b>Date sampled:</b>	Daily		
<b>Date obtained:</b>	14/09/2016		
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	115	4.5	24.3
Sep-16			
Oct-16			
Nov-16			
Dec-16			