

Monthly Website Report



SITE:	Mannering Colliery
Department:	Technical Services
REPORT TITLE:	Monthly Environmental Report – May 2016
Prepared by:	Wade Covey
Report Date:	14/06/2016
Distribution:	Mannering Colliery Website

TABLE OF CONTENTS

Summary	3
Introduction	3
Scope.....	4
Definitions	4
References	4
Monitoring Results	5
Water – Quality	5
Weekly Water Quality Results	5
Monthly Water Quality Results	5
Water – Volume	6
Air Quality	7
Monthly depositional dust results	7
Rolling annual average depositional dust results	7
Operational Noise	7
Weather	9

Summary

Monitoring was undertaken in May 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 2016 to 31 May 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	http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50781&SYSUID=1&LICID=191

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.

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/m²/month – grams per square metre per month

kL – kilolitres

L_{Aeq} – 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 2016

ALS Environmental - Monthly Water Monitoring Results – May 2016

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-16			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Period		to	
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)
1/05/2016			0.0
2/05/2016	7.7	1	<5
3/05/2016	7.8	6	<5
4/05/2016	7.8	7	<5
5/05/2016	7.7	4	<5
6/05/2016	7.9	5	<5
7/05/2016			
8/05/2016			
9/05/2016	7.8	1	<5
10/05/2016	7.8	6	<5
11/05/2016	7.6	6	<5
12/05/2016	7.9	1	<5
13/05/2016	7.8	5	<5
14/05/2016			
15/05/2016			
16/05/2016	7.7	4	<5
17/05/2016	7.7	2	<5
18/05/2016	7.7	2	<5
19/05/2016	7.7	2	<5
20/05/2016	7.8	1	<5
21/05/2016			
22/05/2016			
23/05/2016	7.7	<1	<5
24/05/2016	7.8	8	<5
25/05/2016	8.0	2	<5
26/05/2016	7.9	1	<5
27/05/2016	7.9	3	<5
28/05/2016			
29/05/2016			
30/05/2016	7.9	2	<5
31/05/2016	7.9	3	<5

Water – Volume

May 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
1/05/2016	kL	0
2/05/2016	kL	1086
3/05/2016	kL	1434
4/05/2016	kL	313
5/05/2016	kL	1506
6/05/2016	kL	1212
7/05/2016	kL	0
8/05/2016	kL	0
9/05/2016	kL	1051
10/05/2016	kL	1271
11/05/2016	kL	93
12/05/2016	kL	162
13/05/2016	kL	485
14/05/2016	kL	0
15/05/2016	kL	0
16/05/2016	kL	1077
17/05/2016	kL	1674
18/05/2016	kL	1654
19/05/2016	kL	1668
20/05/2016	kL	593
21/05/2016	kL	0
22/05/2016	kL	0
23/05/2016	kL	1431
24/05/2016	kL	1671
25/05/2016	kL	1785
26/05/2016	kL	1453
27/05/2016	kL	1550
28/05/2016	kL	0
29/05/2016	kL	0
30/05/2016	kL	1628
31/05/2016	kL	1653

Title: Mannering Colliery Monthly Environmental Report

Air Quality

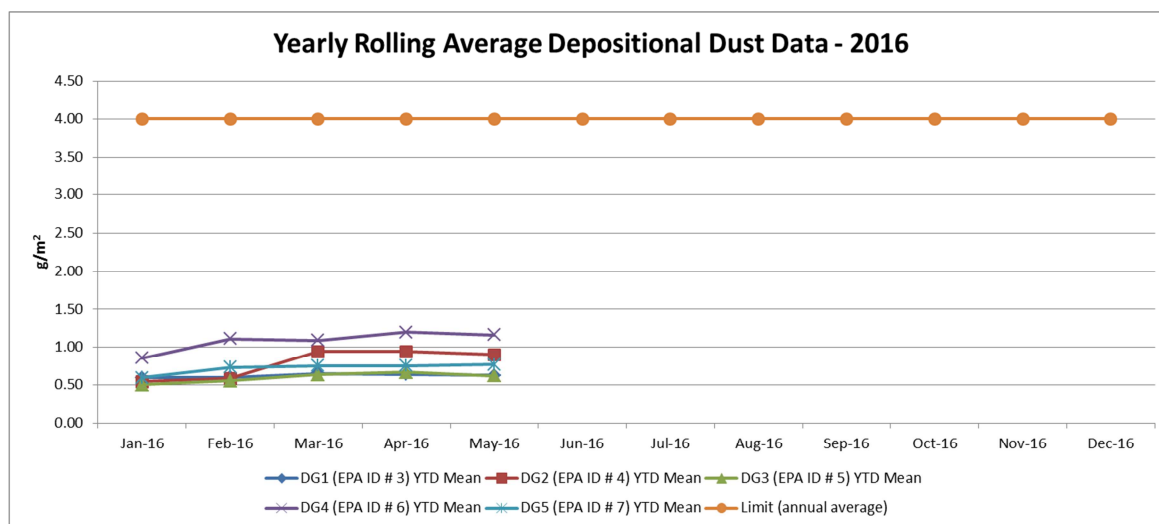
Monthly depositional dust results

Monthly Depositional Dust Data			
May 2016			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Date Sampled		to	
Date Obtained			
Date Reported	Refer report date		
Sampling Point	As per site below		

Site	Insoluble Matter (g/m ² /month)
DG1 (EPA ID # 3)	0.3
DG2 (EPA ID # 4)	0.4
DG3 (EPA ID # 5)	0.3
DG4 (EPA ID # 6)	0.4
DG5 (EPA ID # 7)	0.7

Notes:			
- For site locations refer to Air Quality Management Plan			

Rolling annual average depositional dust results



Operational Noise

Q1 attended noise monitoring has been undertaken. Results shown below.

There were no non-compliances identified from attended monitoring results for Q1 2016.

Table 4.3: *L_{A1,1minute}* GENERATED BY MANNERING COLLIERY AGAINST OPERATIONAL NOISE IMPACT ASSESSMENT CRITERIA

Location	Date And Time	Wind Speed (m/s)	VTG (°C per 100m) ¹	<i>L_{A1,1min}</i> Criteria dB	Criteria Applies? ²	MC <i>L_{A1,1min}</i> dB ^{3,4,5}	Exceedance ⁵
Night							
RA1	30/03/2016 04:37	1.1	0.5	49	Yes	IA	No
RA2	29/03/2016 03:20	1.5	3	50	Yes	NM	No
RA3	30/03/2016 00:27	1.3	3	52	Yes	IA	No

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.

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) ¹	<i>L_{Aeq}</i> Criteria dB	Criteria Applies? ²	MC <i>L_{Aeq}</i> dB ^{3,4,5}	Exceedance ^{4,5}
Day							
RA1	24/03/2016 09:33	1.4	-2	44	Yes	IA	No
RA2	24/03/2016 11:37	1.6	-2	43	Yes	IA	No
RA3	24/03/2016 10:01	1.1	-2	40	Yes	IA	No
Evening							
RA1	29/03/2016 18:00	1.5	3	44	Yes	IA	No
RA2	28/03/2016 18:53	1.2	3	43	Yes	IA	No
RA3	29/03/2016 18:21	1.3	3	40	Yes	IA	No
Night							
RA1	30/03/2016 04:37	1.1	0.5	35	Yes	IA	No
RA2	29/03/2016 03:20	1.5	3	43	Yes	NM	No
RA3	30/03/2016 00:27	1.3	3	40	Yes	IA	No

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.

Title: Mannering Colliery Monthly Environmental Report

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			
May-16			
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:	07/06/2016		
Month	Total Rainfall / Month (mm)	Minimum Temperature (°C)	Maximum Temperature (°C)
May-15	138.4	8	26
Jun-15	90	6	23
Jul-15	20	3	20
Aug-15	32.6	3	27
Sep-15	112.8	7	28
Oct-15	52.4	11	36
Nov-15	110.4	12	41
Dec-15	166.8	12.8	37
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