

Monthly Website Report



SITE:	Mannering Colliery
Department:	Technical Services
REPORT TITLE:	Monthly Environmental Report – March 2016
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Summary

Monitoring was undertaken in March 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 March 2016 to 31 March 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 – March 2016 (Ref 10865-0)

ALS Environmental - Monthly Water Monitoring Results – March 2016 (ES1605645)

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Monitoring Results

Water – Quality

Weekly Water Quality Results

Mar-16			
EPL	191		
Licensee	LakeCoal Pty Ltd Mannering		
Premises	Colliery		
Period	1-Mar-16	to	31-Mar-16
Location	LDPO01 (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		
Weekly Water Quality Results			
Date	pH	TSS (mg/L)	Oil and grease (mg/L)
2/03/2016	7.7	1	<5
9/03/2016	7.8	2	<5
14/03/2016	8.0	2	<5
23/03/2016	7.9	2	<5
Notes: Monitoring undertaken weekly in accordance with EPL 191 requirements			

Monthly Water Quality Results

March 2016			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Date Sampled	14-Mar-16		
Date Obtained	04-Apr-16		
Date Reported	Refer report date		
Sampling Point	1		
Parameter	Units	Limit	Result
Aluminium (Dissolved)	µg/L		<10
Aluminium (Total)	µg/L		20
Antimony	µg/L		<1
Arsenic (Dissolved)	µg/L		1
Arsenic (Total)	µg/L		2
Barium	µg/L		214
Beryllium (Dissolved)	µg/L		<1
Beryllium (Total)	µg/L		<1
Boron	µg/L		280
Cadmium (Dissolved)	µg/L		<0.1
Cadmium (Total)	µg/L		<0.1
Calcium	mg/L		169
Chromium (Dissolved)	µg/L		<1
Chromium (Total)	µg/L		<1
Cobalt (Dissolved)	µg/L		<1
Cobalt (Total)	µg/L		<1
Conductivity	µs/cm		21700
Copper (Dissolved)	µg/L		<1
Copper (Total)	µg/L		<1
Iron	µg/L		1550
Lead (Total)	µg/L		<1
Lead (dissolved)	µg/L		<1
Lithium	µg/L		518
Magnesium	mg/L		238
Manganese (dissolved)	µg/L		31
Mercury (Total)	µg/L		<0.1
Mercury (dissolved)	µg/L		<0.1
Molybdenum (Dissolved)	µg/L		15
Molybdenum (Total)	µg/L		15
Nickel (Dissolved)	µg/L		3
Nickel (Total)	µg/L		5
Nitrogen (Ammonia)	mg/L		0.68
Phosphorous (Total)	mg/L		0.02
Potassium	mg/L		28
Selenium (Dissolved)	µg/L		<10
Selenium (Total)	µg/L		<10
Silica	mg/L		11.4
Silver (Total)	µg/L		4
Silver (dissolved)	µg/L		<1
Sulfur	mg/L		125
Tin (Total)	µg/L		<1
Titanium (Total)	µg/L		<10
Vanadium (Dissolved)	µg/L		<10
Vanadium (Total)	µg/L		<10
Zinc (Dissolved)	µg/L		14
Zinc (Total)	µg/L		57

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Water – Volume

March 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	LDPO01 (EPA ID # 1)	
Date (24 hour period)	Unit	Volume
1/03/2016	kL	1816
2/03/2016	kL	1378
3/03/2016	kL	854
4/03/2016	kL	800
5/03/2016	kL	0
6/03/2016	kL	0
7/03/2016	kL	1090
8/03/2016	kL	1495
9/03/2016	kL	1775
10/03/2016	kL	1753
11/03/2016	kL	1637
12/03/2016	kL	0
13/03/2016	kL	0
14/03/2016	kL	1549
15/03/2016	kL	1740
16/03/2016	kL	1692
17/03/2016	kL	1431
18/03/2016	kL	1422
19/03/2016	kL	0
20/03/2016	kL	0
21/03/2016	kL	1033
22/03/2016	kL	1668
23/03/2016	kL	1965
24/03/2016	kL	1806
25/03/2016	kL	0
26/03/2016	kL	0
27/03/2016	kL	0
28/03/2016	kL	0
29/03/2016	kL	1136
30/03/2016	kL	1749
31/03/2016	kL	1733

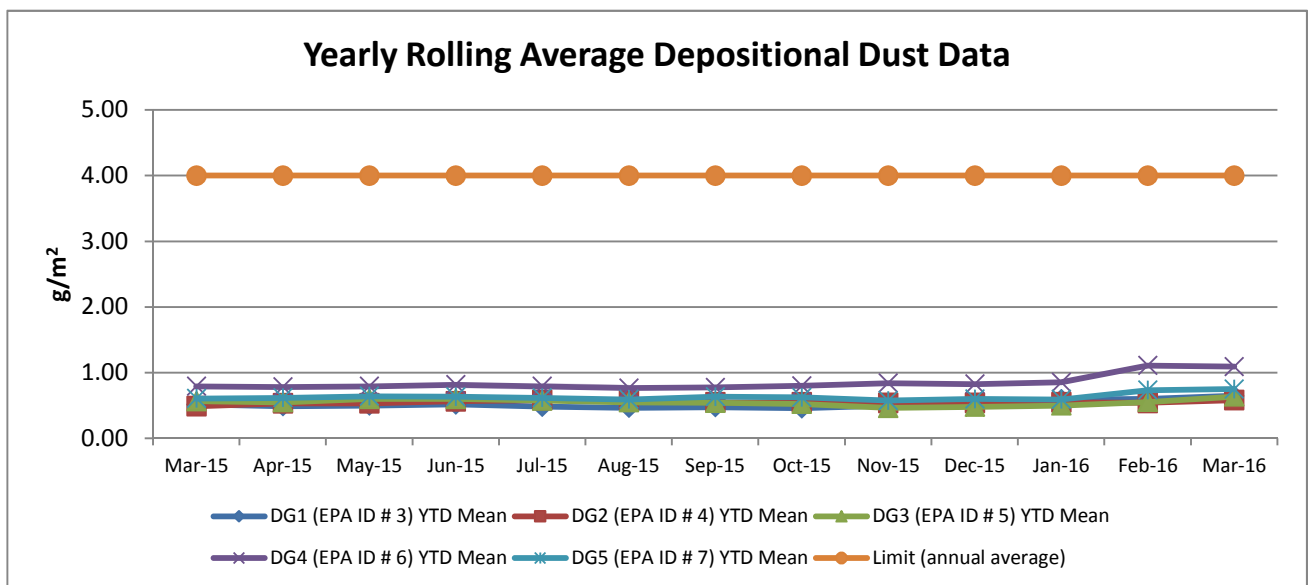
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Air Quality

Monthly depositional dust results

Monthly Depositional Dust Data			
March 2016			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Date Sampled	12-Feb-16	to	21-Mar-16
Date Obtained	21-Mar-16		
Date Reported	Refer report date		
Sampling Point	As per site below		
Site	Insoluble Matter (g/m ² /month)		
DG1 (EPA ID # 3)	1.1		
DG2 (EPA ID # 4)	5.1		
DG3 (EPA ID # 5)	1.4		
DG4 (EPA ID # 6)	0.9		
DG5 (EPA ID # 7)	0.8		
Notes:			
- For site locations refer to Air Quality Management Plan			

Rolling annual average depositional dust results



Operational Noise

Q4 attended noise monitoring results have been received and results against criteria for the site have been shown below.

LA_{eq}^{15m} Attended Noise Monitoring Results – Quarter 4 2015			
Location	Date / Time	Criteria LA _{eq} dB	Criteria MC LA _{eq} dB (from Colliery)
Day			
RA1	21/09/2015 11:11	44	IA
RA2	21/09/2015 12:00	43	IA
RA3	21/09/2015 12:23	40	IA
Evening			
RA1	21/09/2015 18:25	44	IA
RA2	21/09/2015 19:10	43	IA
RA3	21/09/2015 19:30	40	IA
Night			
RA1	28/09/2015 22:01	35	IA
RA2	29/09/2015 1:00	43	IA
RA3	28/09/2015 22:22	40	IA

LA_{A1}^{1m} Attended Noise Monitoring Results – Quarter 4 2015			
Location	Date / Time	Criteria LA _{eq} dB	Criteria LA _{eq} dB (from Colliery)
Night			
RA1	28/09/2015 22:01	49	IA
RA2	29/09/2015 1:00	50	IA
RA3	28/09/2015 22:22	52	IA

Notes: - "Inaudible" (IA)

- for monitoring locations refer to Mannering Colliery Noise Management Plan.

No non-compliances identified from initial attended monitoring results.

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			
Mar-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:	11/04/2016		
Month	Total Rainfall / Month (mm)	Minimum Temperature (°C)	Maximum Temperature (°C)
Jan-15	235.4	13	35
Feb-15	54.2	16	33
Mar-15	122.4	11	35
Apr-15	422.2	12	27
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