

Monthly Website Report



SITE:	Mannering Colliery
Department:	Technical Services
REPORT TITLE:	Monthly Environmental Report – December 2015
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Summary

Monitoring was undertaken in December 2015 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 December 2015 to 31 December 2015.

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 – December 2015 (Ref 10241-0)

ALS Environmental - Monthly Water Monitoring Results – December 2015

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Monitoring Results

Water – Quality

Weekly Water Quality Results

Dec-15			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Period	01-Dec-15	to	31-Dec-15
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		
Weekly Water Quality Results			
Date	pH	TSS (mg/L)	Oil and grease (mg/L)
02/12/2015	7.8	1	<5
10/12/2015	7.9	<1	<5
16/12/2015	7.9	3	<5
22/12/2015	7.9	3	<5
30/12/2015	8.4	2	<5
Notes:			
Monitoring undertaken weekly in accordance with EPL 191 requirements			

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Monthly Water Quality Results

December 2015			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Date Sampled			
Date Obtained	22-Dec-15		
Date Reported	Refer report date		
Sampling Point	1		

Parameter	Units	Limit	Result
Aluminium (Dissolved)	µg/L		<100
Aluminium (Total)	µg/L		<100
Antimony	µg/L		<10
Arsenic (Dissolved)	µg/L		<10
Arsenic (Total)	µg/L		<10
Barium	µg/L		284
Beryllium (Dissolved)	µg/L		<10
Beryllium (Total)	µg/L		<10
Boron	µg/L		<500
Cadmium (Dissolved)	µg/L		<1.0
Cadmium (Total)	µg/L		<1.0
Calcium	mg/L		336
Chromium (Dissolved)	µg/L		<10
Chromium (Total)	µg/L		<10
Cobalt (Dissolved)	µg/L		<10
Cobalt (Total)	µg/L		<10
Conductivity	µs/cm		27200
Copper (Dissolved)	µg/L		<10
Copper (Total)	µg/L		<10
Iron	µg/L		<500
Lead (Total)	µg/L		<10
Lead (dissolved)	µg/L		<10
Lithium	µg/L		790
Magnesium	mg/L		359
Manganese (dissolved)	µg/L		54
Mercury (Total)	µg/L		<0.1
Mercury (dissolved)	µg/L		<0.1
Molybdenum (Dissolved)	µg/L		<10
Molybdenum (Total)	µg/L		12
Nickel (Dissolved)	µg/L		<10
Nickel (Total)	µg/L		<10
Nitrogen (Ammonia)	mg/L		0.94
Phosphorous (Total)	mg/L		0.03
Potassium	mg/L		44
Selenium (Dissolved)	µg/L		<100
Selenium (Total)	µg/L		<100
Silica	mg/L		13.3
Silver (Total)	µg/L		<10
Silver (dissolved)	µg/L		<10
Sulfur	mg/L		145
Tin (Total)	µg/L		<10
Titanium (Total)	µg/L		<100
Vanadium (Dissolved)	µg/L		<100
Vanadium (Total)	µg/L		<100
Zinc (Dissolved)	µg/L		<50
Zinc (Total)	µg/L		<50

Water – Volume

December 2015		
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
01/12/2015	kL	2124
02/12/2015	kL	2082
03/12/2015	kL	739
04/12/2015	kL	714
05/12/2015	kL	0
06/12/2015	kL	0
07/12/2015	kL	813
08/12/2015	kL	2052
09/12/2015	kL	1573
10/12/2015	kL	174
11/12/2015	kL	0
12/12/2015	kL	0
13/12/2015	kL	0
14/12/2015	kL	0
15/12/2015	kL	1282
16/12/2015	kL	1938
17/12/2015	kL	2151
18/12/2015	kL	1095
19/12/2015	kL	0
20/12/2015	kL	0
21/12/2015	kL	1211
22/12/2015	kL	2106
23/12/2015	kL	2429
24/12/2015	kL	1520
25/12/2015	kL	0
26/12/2015	kL	601
27/12/2015	kL	0
28/12/2015	kL	0
29/12/2015	kL	0
30/12/2015	kL	283
31/12/2015	kL	264

Air Quality

Monthly depositional dust results

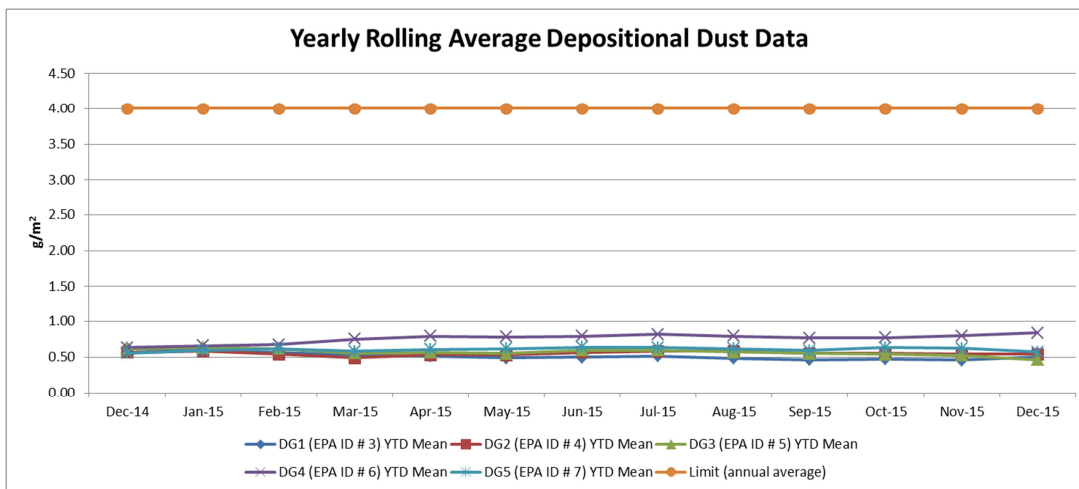
Monthly Depositional Dust Data			
December 2015			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Date Sampled	10-Nov-15	to	11-Dec-15
Date Obtained	23-Dec-15		
Date Reported	Refer report date		
Sampling Point	As per site below		

Site	Insoluble Matter (g/m ² /month)
DG1 (EPA ID # 3)	1.2
DG2 (EPA ID # 4)	0.8
DG3 (EPA ID # 5)	1.1
DG4 (EPA ID # 6)	c6.8
DG5 (EPA ID # 7)	1.3

Notes:

- For site locations refer to Air Quality Management Plan
- DG4 contaminated with bird droppings as identified on field sheet at time of sampling

Rolling annual average depositional dust results



Operational Noise

Q3 Noise monitoring report finalised. No non compliances identified. Will be reported once the monitoring report has been finalised.

LA_{eq}^{15m} Attended Noise Monitoring Results – Quarter 3 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 3 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.			

Q4 noise monitoring undertaken in December 2015. No non compliances identified from the attended monitoring. Results will be published once report has been finalised.

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			
Dec-15			
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:	08/01/2015		
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

