

# LDO GROUP Report



<b>SITE:</b>	<b>Mannering Colliery</b>
<b>Department:</b>	<b>HSEC</b>
<b>REPORT TITLE:</b>	<b>Monthly Environmental Report – June 2015</b>
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## Summary

Monitoring was undertaken in June 2015 with all results in compliance with required limits. On the 13 May 2015 a revised version (variation) of Environment Protection Licence (EPL) 191 was issued to LakeCoal. The water quality monitoring frequency for a number of analytes was changed to weekly in line with the varied EPL. Accordingly weekly results will be presented from June onwards.

## 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 June 2015 to 30 June 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	<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.

## 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 – June 2015 (Report 9104-0)

ALS Environmental - Monthly Water Monitoring Results June 2015 (ES1524008)

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## Monitoring Results

### Water – Quality

#### Weekly Water Quality Results

Jun-15			
<b>EPL</b>	191		
<b>Licensee</b>	LakeCoal Pty Ltd		
<b>Premises</b>	Mannering Colliery		
<b>Period</b>	01-Jun-15	to	30-Jun-15
<b>Location</b>	LDP001 (EPA ID # 1)		
<b>Date sampled</b>	Weekly		
<b>Date reported</b>	Refer report date		
<b>Monitoring requirement</b>	Weekly		
<b>pH limit</b>	6.5 - 8.5		
<b>TSS limit (mg/L)</b>	50		
<b>Oil and grease limit (mg/L)</b>	10		
<b>Exceedance (Yes/No)</b>	No		
Weekly Water Quality Results			
Date	pH	TSS (mg/L)	Oil and grease (mg/L)
03/06/2015	7.4	5.0	<5
09/06/2015	7.4	12	<5
16/06/2015	7.8	7	<5
24/06/2015	7.8	15	<5
Notes:			
Monitoring undertaken weekly in accordance with EPL 191 requirements			

## Monthly Water Quality Results

June 2015			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery		
Date Sampled	16-Jun-15		
Date Obtained	24-Jun-15		
Date Reported	Refer report date		
Sampling Point	1		

Parameter	Units	Limit	Result
Aluminium (Dissolved)	µg/L		<10
Aluminium (Total)	µg/L		<10
Antimony	µg/L		<1
Arsenic (Dissolved)	µg/L		<1
Arsenic (Total)	µg/L		1
Barium	µg/L		267
Beryllium (Dissolved)	µg/L		<1
Beryllium (Total)	µg/L		<1
Boron	µg/L		330
Cadmium (Dissolved)	µg/L		<0.1
Cadmium (Total)	µg/L		<0.1
Calcium	mg/L		234
Chromium (Dissolved)	µg/L		<1
Chromium (Total)	µg/L		<1
Cobalt (Dissolved)	µg/L		<1
Cobalt (Total)	µg/L		<1
Conductivity	µS/cm		26300
Copper (Dissolved)	µg/L		<1
Copper (Total)	µg/L		<1
Iron	µg/L		110
Lead (Total)	µg/L		<1
Lead (dissolved)	µg/L		<1
Lithium	µg/L		647
Magnesium	mg/L		289
Manganese (dissolved)	µg/L		46
Mercury (Total)	µg/L		<0.1
Mercury (dissolved)	µg/L		<0.1
Molybdenum (Dissolved)	µg/L		10
Molybdenum (Total)	µg/L		14
Nickel (Dissolved)	µg/L		5
Nickel (Total)	µg/L		5
Nitrogen (Ammonia)	mg/L		1.15
Phosphorous (Total)	mg/L		<0.02
Potassium	mg/L		40
Selenium (Dissolved)	µg/L		<10
Selenium (Total)	µg/L		<10
Silica	mg/L		12.5
Silver (Total)	µg/L		1
Silver (dissolved)	µg/L		1
Sulfur	mg/L		153
Tin (Total)	µg/L		<1
Titanium (Total)	µg/L		<10
Vanadium (Dissolved)	µg/L		<10
Vanadium (Total)	µg/L		<10
Zinc (Dissolved)	µg/L		5
Zinc (Total)	µg/L		12

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## Water – Volume

June 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	LDP001 (EPA ID # 1)	
Date (24 hour period)	Unit	Volume
01/06/2015	kL	1777
02/06/2015	kL	2296
03/06/2015	kL	1717
04/06/2015	kL	436
05/06/2015	kL	0
06/06/2015	kL	0
07/06/2015	kL	0
08/06/2015	kL	0
09/06/2015	kL	1250
10/06/2015	kL	2047
11/06/2015	kL	1500
12/06/2015	kL	1212
13/06/2015	kL	0
14/06/2015	kL	0
15/06/2015	kL	1211
16/06/2015	kL	2135
17/06/2015	kL	1596
18/06/2015	kL	1148
19/06/2015	kL	700
20/06/2015	kL	0
21/06/2015	kL	0
22/06/2015	kL	1309
23/06/2015	kL	2129
24/06/2015	kL	1239
25/06/2015	kL	1065
26/06/2015	kL	665
27/06/2015	kL	0
28/06/2015	kL	0
29/06/2015	kL	0
30/06/2015	kL	0

## Air Quality

### Monthly depositional dust results

Monthly Depositional Dust Data			
June 2015			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Manning Colliery		
Date Sampled	18-May-15	to	17-Jun-15
Date Obtained	24-Jun-15		
Date Reported	Refer report date		
Sampling Point	As per site below		

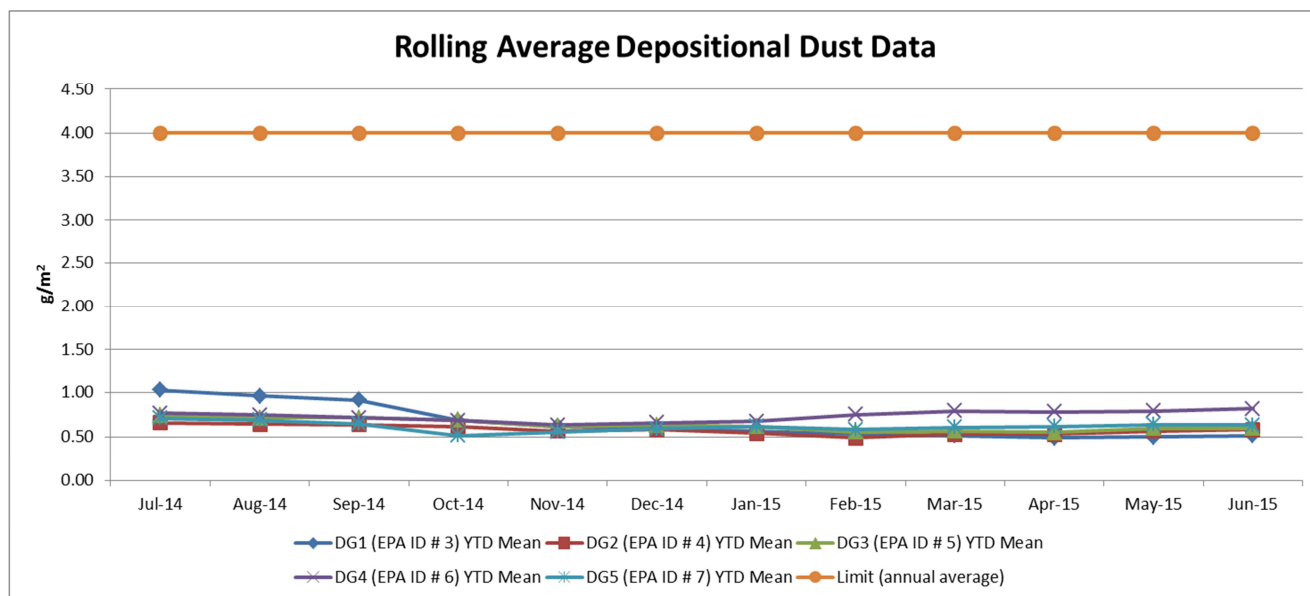
Site	Insoluble Matter (g/m <sup>2</sup> /month)		
DG1 (EPA ID # 3)	0.4		
DG2 (EPA ID # 4)	0.4		
DG3 (EPA ID # 5)	0.2		
DG4 (EPA ID # 6)	0.4		
DG5 (EPA ID # 7)	0.2		

Notes:

- For site locations refer to Air Quality Management Plan

### Rolling annual average depositional dust results



## Operational Noise

Quarter 2 2015 attended noise monitoring has been undertaken, however monitoring results have not yet been received from the noise monitoring consultants.

Results will be published once the monitoring results become available.

## 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			
Jun-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:	01/07/2015		
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

