

# LDO GROUP Report



<b>SITE:</b>	Chain Valley Colliery
<b>Department:</b>	HSEC
<b>REPORT TITLE:</b>	Monthly Environmental Report – October 2013
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## TABLE OF CONTENTS

Introduction .....	3
Scope .....	3
Definitions .....	4
References .....	4
Monitoring Results .....	5
Water – Quality .....	5
Water – Volume .....	6
Dispositional Dust .....	7
Operational Noise .....	8

## Introduction

LakeCoal Pty Ltd (LakeCoal) operates the Chain Valley Colliery, an underground coal mine at the southern end of Lake Macquarie.

Chain Valley Colliery operates under the following regulatory instruments;

- A Project Approval (MP 10\_0161) issued under the Environmental Planning and Assessment Act, 1979.
- An Environment Protection Licence (1770) issued under the Protection of the Environment Operations Act, 1997.
- A groundwater bore licence (20BL173107) issued under the Water Act, 1912.

The above legislation, licence and approval require various monitoring and reporting to be undertaken by LakeCoal for Chain Valley Colliery.

This report covers the requirements of the above and attempts to make the data as understandable and easy to interpret as possible for the general public.

The overall purpose of this report is to keep stakeholders informed of the environmental monitoring results at Chain Valley Colliery and maintain a transparent and accountable reporting system.

## Scope

This report presents the results from the various environmental monitoring undertaken for Chain Valley Colliery.

Results in this report are typically only a single month of data, which is due to a legislative requirement introduced by the *Protection of the Environment Legislation Amendment Act 2011*, which requires publishing data publically within 14 days of receipt. As LakeCoal is required to undertake monitoring on a monthly basis, each report generally cover a single month of environmental monitoring data.

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
- Depositional dust
- Operational noise

## Definitions

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

µg/L – micrograms per litre

µs/cm – microsiemens per centimetre

## References

ALS Group - Monthly Water Monitoring Results (October 2013 - Work Order ES1322910)

Steel River Testing - Dust Deposition Report October 2013 – Report 5287-0)

Project Approval 10\_0161 (as modified)

Environment Protection Licence 1770 (Licence version date: 20 August 2013)

## Monitoring Results

### Water – Quality

October 2013			
EPL	1770		
Licensee	LakeCoal Pty Ltd		
Premises	Chain Valley Colliery		
Date Sampled	23-Oct-13		
Date Obtained	30-Oct-13		
Date Reported	Refer report date		
Sampling Point	1		
Parameter	Units	Limit	Result
Aluminium (total)	µg/L		8
Aluminium (soluble)	µg/L		21
Ammonia as N	mg/L		0.06
Arsenic (total)	µg/L		<0.5
Arsenic (soluble)	µg/L		<0.5
Beryllium (total)	µg/L		<0.1
Beryllium (soluble)	µg/L		<0.1
Cadmium (total)	µg/L		<0.2
Cadmium (soluble)	µg/L		<0.2
Chromium (total)	µg/L		<0.5
Chromium (soluble)	µg/L		<0.5
Cobalt (total)	µg/L		<0.2
Cobalt (soluble)	µg/L		<0.2
Conductivity	µs/cm		34100
Copper (total)	µg/L		<1
Copper (soluble)	µg/L		<1
Faecal Coliforms	CFU/100mL	200	170
Lead (total)	µg/L		<0.2
Lead (soluble)	µg/L		<0.2
Mercury (total)	mg/L		<0.0001
Mercury (soluble)	mg/L		<0.0001
Molybdenum (total)	µg/L		1.9
Molybdenum (soluble)	µg/L		2
Nickel (total)	µg/L		0.9
Nickel (soluble)	µg/L		0.9
pH	pH	6.5-8.5	7.85
Selenium (total)	µg/L		<2
Selenium (soluble)	µg/L		<2
Silver (total)	µg/L		<0.1
Silver (soluble)	µg/L		<0.1
Total Sus. Solids	mg/L	50	<5
Vanadium (total)	µg/L		1.9
Vanadium (soluble)	µg/L		<0.5
Zinc (total)	µg/L		40
Zinc (soluble)	µg/L		36

**Title:** Monthly Environmental Report – October 2013

## Water – Volume

October 2013		
EPL	1770	
Licensee	LakeCoal Pty Ltd	
Premises	Chain Valley Colliery	
Date Sampled	Daily	
Date Reported	Refer report date	
Discharge volume limit	12161 kilolitres per day	
Sampling Point	1	
Date (24 hour period)	Unit	Volume
01/10/2013	kL	6341
02/10/2013	kL	6341
03/10/2013	kL	6340
04/10/2013	kL	6347
05/10/2013	kL	6341
06/10/2013	kL	5407
07/10/2013	kL	3181
08/10/2013	kL	6288
09/10/2013	kL	6312
10/10/2013	kL	6290
11/10/2013	kL	5160
12/10/2013	kL	4250
13/10/2013	kL	4905
14/10/2013	kL	4788
15/10/2013	kL	6332
16/10/2013	kL	6304
17/10/2013	kL	6277
18/10/2013	kL	1410
19/10/2013	kL	3676
20/10/2013	kL	6313
21/10/2013	kL	6318
22/10/2013	kL	5820
23/10/2013	kL	6451
24/10/2013	kL	6881
25/10/2013	kL	6340
26/10/2013	kL	8302
27/10/2013	kL	8953
28/10/2013	kL	8406
29/10/2013	kL	8665
30/10/2013	kL	11723
31/10/2013	kL	11390

## Dispositional Dust

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October 2013			
Sampling Date	13/09/2013	to	15/10/2013
Site	Insoluble Matter (g/m2/month)		
DDG001	1.6		
DDG002	1.3		
DDG003	3.8		
DDG004	2.70		
DDG005	0.80		

**Notes:**

- For site locations refer to Air Quality and Greenhouse Gas Management Plan

## Operational Noise

<b>LAeq (15 min) attended noise monitoring results – Quarter 3 2013</b>			
Location	Date / Time	Criteria LAeq dB	LAeq dB (from Colliery)
<b>Day</b>			
ATN001	04/09/2013 11:36	35	Inaudible
ATN002	04/09/2013 15:29	51	<40
ATN003	04/09/2013 15:09	37	Inaudible
ATN004	04/09/2013 14:47	36	Inaudible
ATN005	04/09/2013 14:20	36	Inaudible
ATN006	04/09/2013 13:55	40	Inaudible
ATN007 - Barn	04/09/2013 13:19	40	40
ATN007 - House	04/09/2013 12:58	40	38
<b>Evening</b>			
ATN001	18/09/2013 18:00	35	Inaudible
ATN002	18/09/2013 21:37	50	40
ATN003	18/09/2013 21:18	37	<35
ATN004	18/09/2013 20:57	36	<35
ATN005	18/09/2013 19:46	36	<20
ATN006	18/09/2013 19:23	40	39
ATN007 - Barn	18/09/2013 18:56	40	40
ATN007 - House	18/09/2013 18:35	40	35
<b>Night</b>			
ATN001	19/09/2013 0:45	35	Inaudible
ATN002	19/09/2013 0:19	50	41
ATN003	19/09/2013 0:00	37	<35
ATN004	18/09/2013 23:41	36	Inaudible
ATN005	18/09/2013 23:15	36	Inaudible
ATN006	18/09/2013 22:51	40	<40
ATN007 - Barn	18/09/2013 22:24	40	39
ATN007 - House	18/09/2013 22:05	40	35
<b>Notes:</b>			
For monitoring locations refer to Noise Management Plan			



<b>LA1 (1min) attended noise monitoring results – Quarter 3 2013</b>			
Location	Date / Time	Criteria LA1 dB	LA1 dB (from Colliery)
Day			
ATN001	19/09/2013 0:45	45	Inaudible
ATN002	19/09/2013 0:19	54	50
ATN003	19/09/2013 0:00	45	35
ATN004	18/09/2013 23:41	45	Inaudible
ATN005	18/09/2013 23:15	45	Inaudible
ATN006	18/09/2013 22:51	45	<40
ATN007 - Barn	18/09/2013 22:24	45	40
ATN007 - House	18/09/2013 22:05	45	36
Notes: For monitoring locations refer to Noise Management Plan			