



Report

Site:	Chain Valley Colliery
Department:	HSEC
Report Title:	Monthly Environmental Report - June 2016
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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 Development Consent, SSD-5465 (as modified) 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 development consent/approval and licences require various monitoring and reporting to be undertaken by LakeCoal for Chain Valley Colliery.

This report provides environmental monitoring data from Chain Valley Colliery for the period 1 June 2016 to 30 June 2016.

Details of the Chain Valley Colliery and EPL 1770 are provided below.

Chain Valley Colliery Information	
Premises name	Chain Valley Colliery
Address	Construction Road, Chain Valley Bay, NSW, 2259
Licensee	LakeCoal Pty Ltd
EPL #	1770
EPL location	http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50980&SYSUID=1&LICID=1770

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 programs 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. 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 Development Consent) to determine compliance.

Monitoring results presented include;

- Water – quality
- Water – volume
- Depositional dust
- Operational noise
- Weather data

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/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

µg/L – micrograms per litre

µS/cm – microSiemens per centimetre

References

ALS Group - Monthly Water Monitoring Results (May 2016 - Work Order ES1613553)

ALS Water - Report of Analysis (WN1601964)

Steel River Testing - Dust Deposition Report May 2016 (Report 11477-0)

Development Consent SSD-5465 (as modified)

Environment Protection Licence 1770 (Licence version date: 30 October 2015)

Monitoring Results

Water – Quality

June 2016			
EPL	1770		
Licensee	LakeCoal Pty Ltd		
Premises	Chain Valley Colliery		
Date Sampled	22-Jun-16		
Date Obtained	24-Jun-16		
Date Reported	Refer report date		
Sampling Point	1		
Parameter	Units	Limit	Result
Biochem. Oxygen Dema	mg/L	-	<2
Enterococci	col/100mL	-	89
Faecal Coliforms	CFU/100mL	200	11
pH	pH	6.5-8.5	7.69
Total Sus. Solids	mg/L	50	<5

There was no exceedance of water quality criteria during the month.

Water – Volume

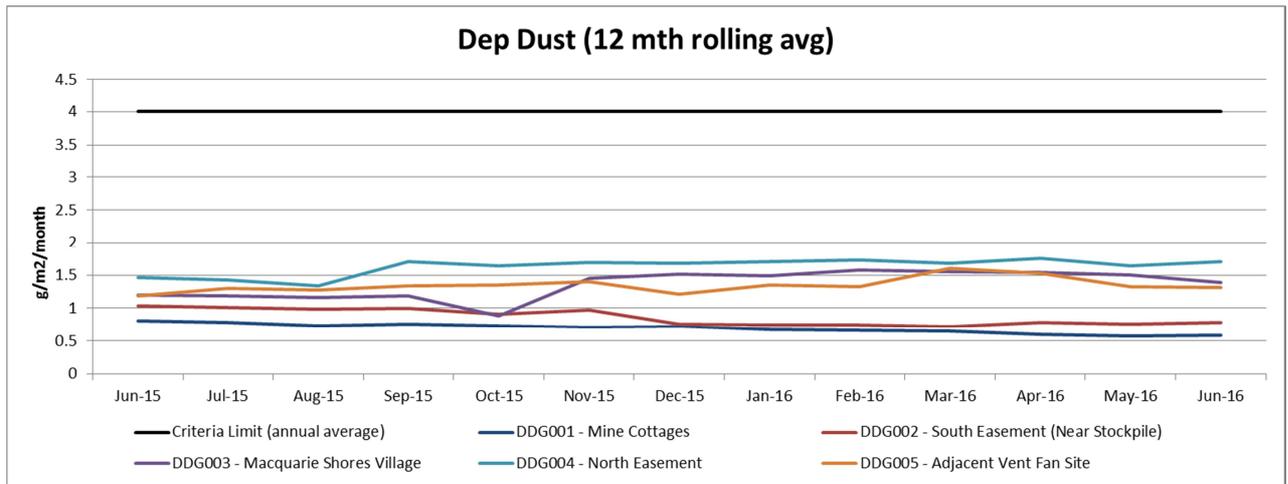
June 2016		
EPL	1770	
Licensee	LakeCoal Pty Ltd	
Premises	Chain Valley Colliery	
Date Sampled	Daily	
Date Reported	Refer report date	
Discharge volume limit	12161 kilolitres per day	
Sampling Point	1	
Date (24 hour period)	Unit	Volume
1/06/2016	kL	9336
2/06/2016	kL	7185
3/06/2016	kL	6967
4/06/2016	kL	4430
5/06/2016	kL	16391
6/06/2016	kL	4834
7/06/2016	kL	6518
8/06/2016	kL	7523
9/06/2016	kL	7276
10/06/2016	kL	6955
11/06/2016	kL	6955
12/06/2016	kL	6948
13/06/2016	kL	7000
14/06/2016	kL	6900
15/06/2016	kL	6928
16/06/2016	kL	6887
17/06/2016	kL	6929
18/06/2016	kL	6857
19/06/2016	kL	5151
20/06/2016	kL	3590
21/06/2016	kL	7030
22/06/2016	kL	7100
23/06/2016	kL	6896
24/06/2016	kL	6909
25/06/2016	kL	6960
26/06/2016	kL	7014
27/06/2016	kL	6944
28/06/2016	kL	6958
29/06/2016	kL	6267
30/06/2016	kL	6314

There was once exceedance in the volumetric limits at Licenced Discharge Point 1 on 5/6/16. The exceedance was reported to both the EPA and Department of Planning and Environment. The exceedance was related to a significant rainfall event.

Depositional Dust

June 2016	
Sampling Date	13/05/2016 to 14/06/2016
Site	Insoluble Matter (g/m ² /month)
DDG001	0.4
DDG002	0.6
DDG003	0.6
DDG004	1.3
DDG005	0.8

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



Operational Noise

Q2 Noise monitoring was completed in June.

Advised verbally by monitoring consultant there were two exceedances of the night time LA1 1 Min criteria at locations R13 and ATN004 (both at Kingfisher Shores). A summary of the non-compliances are shown below.

Table 1.1 :L_{A1,1min} GENERATED BY CVC AGAINST IMPACT ASSESSMENT CRITERIA

Location	Date and Time	Wind Speed (m/s)	VTG (deg/C per 100m) ¹	L _{A1,1min} Criterion dB	Criterion Applies? ^{2,3}	CVC L _{A1,1min} dB ⁴	Exceedance
ATN4	28/06/16 2319	1.0	0.5	45	Yes	51	6
R13	28/06/16 2340	1.2	3.0	49	Yes	56	7

- 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 Chain Valley Colliery (CVC) in the absence of all other noise sources; and
 4. Bolded results in red are those greater than the relevant criterion (if applicable).

A summary of the noise monitoring results will be provided once the report has been finalised.

Weather Data

A summary of weather data recorded by an adjacent site meteorological monitoring station at the Colliery is presented below for the year to date.

Monthly Weather Data			
Jun-16			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery (adj CVC)		
Location	W1 (on-site weather station)		
Date published:	Refer report date		
Date sampled:	Daily		
Date obtained:	14/06/2016		
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
Jun-16	248.2	3.4	21.4