



Report

Site:	Chain Valley Colliery
Department:	HSEC
Report Title:	Monthly Environmental Report - March 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 March 2016 to 31 March 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 (March 2016 - Work Order ES1606380)

ALS Water - Report of Analysis (HWA-16/02253)

Steel River Testing - Dust Deposition Report March 2016 (Report 10866-0)

Steel River Testing - Dust Deposition Report March 2016 (Report 10983-0) (DDG002)

Development Consent SSD-5465 (as modified)

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

Monitoring Results

Water – Quality

March 2016	
EPL	1770
Licensee	LakeCoal Pty Ltd
Premises	Chain Valley Colliery
Date Sampled	
Date Obtained	
Date Reported	Refer report date
Sampling Point	1

Parameter	Units	Limit	Result
Biochem. Oxygen Demand	mg/L	-	<2
Enterococci	col/100mL	-	280
Faecal Coliforms	CFU/100mL	200	40
pH	pH	6.5-8.5	7.45
Total Sus. Solids	mg/L	50	7

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

Water – Volume

March 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
1/03/2016	kL	5087
2/03/2016	kL	4957
3/03/2016	kL	5626
4/03/2016	kL	5781
5/03/2016	kL	3290
6/03/2016	kL	3973
7/03/2016	kL	3978
8/03/2016	kL	9162
9/03/2016	kL	6681
10/03/2016	kL	7646
11/03/2016	kL	5259
12/03/2016	kL	8002
13/03/2016	kL	5085
14/03/2016	kL	5947
15/03/2016	kL	8270
16/03/2016	kL	8492
17/03/2016	kL	5837
18/03/2016	kL	5911
19/03/2016	kL	6935
20/03/2016	kL	7218
21/03/2016	kL	7523
22/03/2016	kL	5748
23/03/2016	kL	6563
24/03/2016	kL	8009
25/03/2016	kL	6887
26/03/2016	kL	7014
27/03/2016	kL	7049
28/03/2016	kL	7007
29/03/2016	kL	3139
30/03/2016	kL	8283
31/03/2016	kL	7480

Depositional Dust

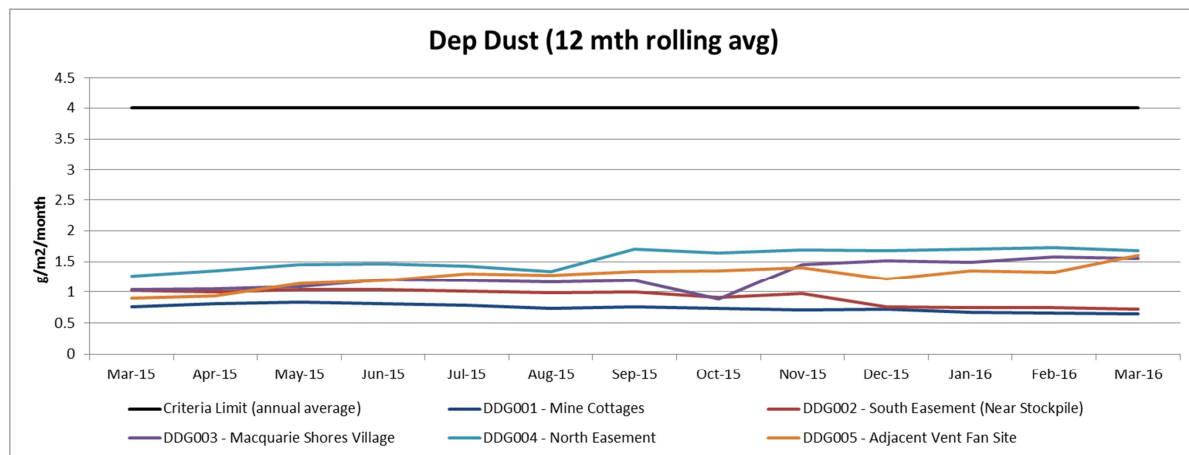
March 2016

Sampling Date 12/02/2016 to 15/03/2016

Site	Insoluble Matter (g/m ² /month)
DDG001	0.6
DDG002	0.7
DDG003	0.4
DDG004	1.4
DDG005	3.5

Notes:

- For site locations refer to Air Quality Management Plan



Operational Noise

Q4 attended noise monitoring results below:

Table 4.2: *L_{Aeq,15minute}* GENERATED BY CVC AGAINST IMPACT ASSESSMENT CRITERIA – QUARTER 4 2015

Location	Date and Time	Wind Speed (m/s)	VTG (°C per 100m) ¹	L _{Aeq} Criterion dB	Criterion Applies? ²	CVC L _{Aeq} dB ^{3,4,5}	Exceedance ^{4,5}
Day							
ATN001	24/12/2015 13:25	2.7	-2.0	35	Yes	IA	Nil
ATN002	24/12/2015 15:00	1.8	-2.0	49	Yes	IA	Nil
ATN003	24/12/2015 14:13	2.8	-2.0	36	Yes	IA	Nil
ATN004	24/12/2015 15:44	1.9	-2.0	35	Yes	IA	Nil
ATN005	24/12/2015 16:12	2.3	-2.0	35	Yes	IA	Nil
ATN006	24/12/2015 16:38	1.5	-2.0	37	Yes	IA	Nil
ATN007	24/12/2015 17:07	3.4	-2.0	46	No	38	NA
R12	24/12/2015 15:00	1.8	-2.0	49	Yes	IA	Nil
R13	24/12/2015 15:21	2.0	-2.0	43	Yes	IA	Nil
Evening							
ATN001	28/12/2015 18:00	2.9	-1.0	35	Yes	IA	Nil
ATN002	28/12/2015 19:47	3.7	-1.0	49	No	IA	NA
ATN003	28/12/2015 18:45	2.5	3.0	36	Yes	IA	Nil
ATN004	28/12/2015 20:11	3.2	3.0	35	No	IA	NA
ATN005	28/12/2015 20:38	2.5	-1.0	35	Yes	IA	Nil
ATN006	28/12/2015 21:03	2.7	3.0	37	Yes	IA	Nil
ATN007	28/12/2015 21:41	1.5	3.0	46	Yes	42	Nil
R12	28/12/2015 19:47	3.7	-1.0	49	No	IA	NA
R13	28/12/2015 19:26	2.4	-1.0	43	Yes	IA	Nil
Night							
ATN001	09/12/2015 01:31	0.5	0.5	35	Yes	IA	Nil
ATN002	28/12/2015 02:32	1.0	3.0	49	Yes	IA	Nil
ATN003	28/12/2015 01:22	2.9	0.5	36	Yes	IA	Nil
ATN004	28/12/2015 02:55	2.4	-1.0	35	Yes	IA	Nil
ATN005	28/12/2015 03:22	2.3	3.0	35	Yes	IA	Nil
ATN006	28/12/2015 04:08	3.2	0.5	37	No	IA	NA
ATN007	09/12/2015 01:00	0.9	3.0	46	Yes	41	Nil
R12	28/12/2015 02:32	1.0	3.0	49	Yes	IA	Nil
R13	28/12/2015 02:11	0.7	3.0	43	Yes	IA	Nil

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 3°C/100m;*

No non-compliances identified from the attended monitoring.

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			
Mar-16			
EPL	191		
Licensee	LakeCoal Pty Ltd		
Premises	Mannering Colliery W1 (on-site weather station)		
Location	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