



Report

Site:	Chain Valley Colliery
Department:	HSEC
Report Title:	Monthly Environmental Report - December 2015
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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 December 2015 to 31 December 2015.

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 (November 2015 - Work Order ES1536426)

ALS Water - Report of Analysis (HWA-15/09597)

Steel River Testing - Dust Deposition Report December 2015 (Report 10242-0)

Development Consent SSD-5465 (as modified)

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

Monitoring Results

Water – Quality

December 2015			
EPL	1770		
Licensee	LakeCoal Pty Ltd		
Premises	Chain Valley Colliery		
Date Sampled	24-Nov-15		
Date Obtained	08-Jan-16		
Date Reported	Refer report date		
Sampling Point	1		
Parameter	Units	Limit	Result
Biochem. Oxygen Demand	mg/L		<2
Enterococci	CFU/100mL		18
Faecal Coliforms	CFU/100mL	200	20
pH	pH	6.5-8.5	7.74
Total Sus. Solids	mg/L	50	7

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

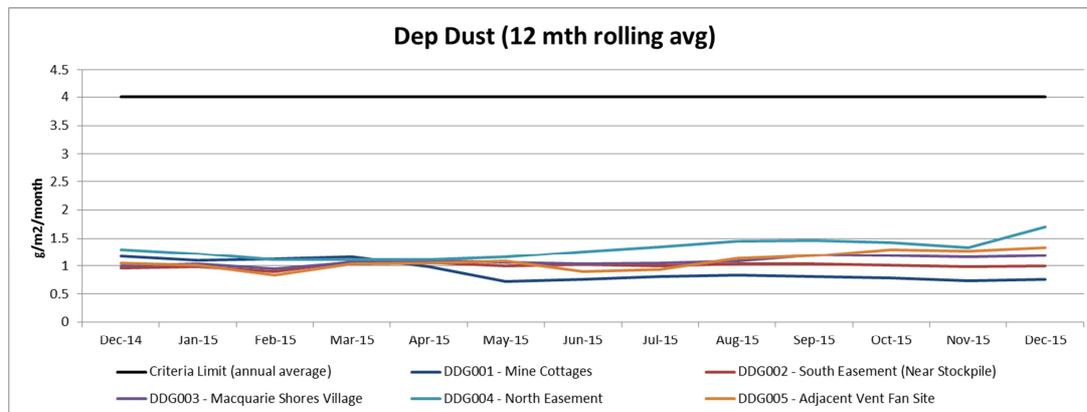
Water – Volume

December 2015		
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
01/12/2015	kL	5583
02/12/2015	kL	6568
03/12/2015	kL	6959
04/12/2015	kL	9000
05/12/2015	kL	9793
06/12/2015	kL	8402
07/12/2015	kL	8609
08/12/2015	kL	6273
09/12/2015	kL	5694
10/12/2015	kL	4866
11/12/2015	kL	5018
12/12/2015	kL	5244
13/12/2015	kL	4628
14/12/2015	kL	3678
15/12/2015	kL	4088
16/12/2015	kL	5793
17/12/2015	kL	5858
18/12/2015	kL	5138
19/12/2015	kL	5147
20/12/2015	kL	5144
21/12/2015	kL	5991
22/12/2015	kL	8387
23/12/2015	kL	3444
24/12/2015	kL	1011
25/12/2015	kL	1496
26/12/2015	kL	1854
27/12/2015	kL	2286
28/12/2015	kL	718
29/12/2015	kL	3866
30/12/2015	kL	3114
31/12/2015	kL	3525

There was no exceedance of the 12,161 kL/day volumetric discharge limit during the month.

Depositional Dust

December 2015	
Sampling Date	10/11/2015 to 11/12/2015
Site	Insoluble Matter (g/m ² /month)
DDG001	1.4
DDG002	1.6
DDG003	3.0
DDG004	2.0
DDG005	c36.5
c = Sample contaminated	
Notes:	
- For site locations refer to Air Quality Management Plan - DDG005 was heavily contaminated with bird droppings as identified in the field sheet at the time of sampling.	



Operational Noise

Q3 Noise monitoring report was finalised in December. No non compliances recorded. A summary of the results is provided below.

Q3 2015

LAeq (15min) attended noise monitoring results - Quarter 3 2015			
Location	Date / Time	Criteria LAeq dB	LAeq dB (from Colliery)
Day			
ATN001	10:47 21/09/2015	35	Inaudible
ATN002	13:02 21/09/2015	49	31
ATN003	12:00 21/09/2015	36	Inaudible
ATN004	11:33 21/09/2015	35	Inaudible
ATN005	13:44 21/09/2015	35	Inaudible
ATN006	14:09 21/09/2015	37	Inaudible
ATN007	15:23 21/09/2015	46	46
R12	13:02 21/09/2015	49	31
R13	12:43 21/09/2015	43	Inaudible
Evening			
ATN001	18:00 21/09/2015	35	Inaudible
ATN002	18:00 28/09/2015	49	32
ATN003	19:10 21/09/2015	36	Inaudible
ATN004	18:48 21/09/2015	35	Inaudible
ATN005	18:52 28/09/2015	35	Inaudible
ATN006	19:17 28/09/2015	37	Inaudible
ATN007	19:46 28/09/2015	46	46
R12	18:00 28/09/2015	49	31
R13	18:23 28/09/2015	43	NM
Night			
ATN001	02:30 30/09/2015	35	Inaudible
ATN002	01:45 29/09/2015	49	Inaudible
ATN003	01:00 29/09/2015	36	Inaudible
ATN004	02:07 29/09/2015	35	Inaudible
ATN005	01:00 30/09/2015	35	Inaudible
ATN006	01:26 30/09/2015	37	Inaudible
ATN007	01:56 30/09/2015	46	45
R12	01:45 29/09/2015	49	Inaudible
R13	01:24 29/09/2015	43	Inaudible
Notes: For monitoring locations refer to Noise Management Plan and Appendix 6 of the Development Consent.			

LA1 (1min) attended noise monitoring results - Quarter 3 2015			
Location	Date / Time	Criteria LA1 dB	LA1 dB (from Colliery)
Night			
ATN001	02:30 30/09/2015	45	Inaudible
ATN002	01:45 29/09/2015	54	Inaudible
ATN003	01:00 29/09/2015	45	Inaudible
ATN004	02:07 29/09/2015	45	Inaudible
ATN005	01:00 30/09/2015	45	Inaudible
ATN006	01:26 30/09/2015	45	Inaudible
ATN007	01:56 30/09/2015	46	46
R12	01:45 29/09/2015	53	Inaudible
R13	01:24 29/09/2015	49	Inaudible
Notes: For monitoring locations refer to Noise Management Plan and Appendix 6 of the Development Consent.			

The noise monitoring for Quarter 4 2015 was undertaken in December 2015. There were no non compliances were recorded during the monitoring. Results will be uploaded once the report has been finalised.

Weather Data

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

