



Chain Valley Colliery Monthly Website Report

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Department:	Technical Services
Report Title:	Monthly Environmental Website Report - September 2019
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Table of Contents

Introduction	3
Scope.....	4
Definitions	4
References	5
Monitoring Results.....	5
Water – Quality	5
Water – Volume.....	6
Depositional Dust	7
Weather Data	8

Introduction

Great Southern Energy Pty Ltd (trading as Delta Coal) 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:

-) Section 66(6) of the *Protection of the Environment Operations Act 1997*, to make monitoring data related to an Environment Protection Licence (EPL) publically available;
-) Conditions 8 & 11, Schedule 6, of Development Consent SSD-5465 (as modified), issued under the *Environmental Planning and Assessment Act 1979* to provide details of monitoring results and environmental performance;
-) An Environment Protection Licence (EPL 1770) issued under the *Protection of the Environment Operations Act 1997*; and
-) A Water Access Licence (WAL41508), Aquifer (Sydney Basin – North Coast Groundwater Source) for 4,443 unit shares (megalitres).

The above development consent and licences require various monitoring and reporting to be undertaken by Delta Coal for Chain Valley Colliery.

This report provides environmental monitoring data from Chain Valley Colliery for the period 1 to 30 September 2019.

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

Chain Valley Colliery Information	
Premises name	Chain Valley Colliery
Address	Construction Road, Chain Valley Bay, NSW, 2259
Licensee	Great Southern Energy 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 are presented monthly with annual data, averages and trends in data also shown where relevant.

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 Delta Coal 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 assess compliance. Monitoring results presented in this report include:

-) Water – quality;
-) Water – volume;
-) Depositional dust; and
-) 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 – kilolitre;

L_{Aeq} – the average A-weighted noise energy (in dB) for a measurement period;

ML – megalitre;

mg/L – milligrams per litre;

TSS – total suspended solids;

µg/L – micrograms per litre; and

µS/cm – microSiemens per centimetre.

Report

CVC Monthly Environmental Report

References

ALS Group - Monthly Water Monitoring Results **September 2019**

ALS Water - Report of Analysis

Steel River Testing - Dust Deposition Report **September 2019**

Development Consent SSD-5465 (as modified)

Environment Protection Licence (EPL) 1770 (Licence version date: 2 April 2019)

Monitoring Results

Water – Quality

Water quality results for September at Chain Valley Colliery are presented below.

September 2019			
EPL	1770		
Licensee	LakeCoal Pty Ltd		
Premises	Chain Valley Colliery		
Date Sampled	18-Sep-19		
Date Obtained	18-Sep-19		
Date Reported	September		
Sampling Point	1		
Parameter	Units	Limit	Result
Biochem. Oxygen Demand	mg/L	-	<2
Enterococci	col/100mL	-	170
Faecal Coliforms	CFU/100mL	200	420
pH	pH	6.5-8.5	7.84
Total Sus. Solids	mg/L	50	11

There was one exceedance of water quality criteria during the month from sampling undertaken on 18 September 2019. On 23 September 2019 the faecal coliform concentration was reported as 420 colony forming units (CFUs) per 100 millilitre (CFU/100mL). The faecal coliform concentration limit at EPA Point 1 (LDP1) and Point 27, as detailed in EPL 1770, is 200 CFU/100mL. This sample was taken during a rainfall event totalling 83.4 mm between 17 and 19 September. Of that, approximately 78 mm fell prior to sampling.

Underground mine discharge had been reduced during the rainfall event so as to avoid exceeding the total discharge volume limit. Discharge from LDP1 was therefore limited to surface runoff and dam contents.

The EPA was notified immediately after receiving lab results confirming that a faecal coliform exceedance had occurred on 18 September 2019. Notification was made via email at 12.08pm on 23 September 2019 to the EPA and DPIE Compliance mailboxes and also copied to Steve Clair (EPA) and Joel Curran (DPIE Compliance).

Report

CVC Monthly Environmental Report

A due diligence water sample was taken on the 23 September 2019 at 12.25pm from EPA ID Point 1. The faecal coliform concentration of ~40 CFU/100mL in the sample taken on 23 September 2019 was well below the limit specified in Condition L2.4 of EPL 1770.

Water – Volume

Monthly water volumes are summarised below.

September 2019	
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
01/09/2019	kL	4170
02/09/2019	kL	4943
03/09/2019	kL	4724
04/09/2019	kL	4453
05/09/2019	kL	3060
06/09/2019	kL	3120
07/09/2019	kL	1983
08/09/2019	kL	357
09/09/2019	kL	783
10/09/2019	kL	1621
11/09/2019	kL	258
12/09/2019	kL	209
13/09/2019	kL	3540
14/09/2019	kL	5821
15/09/2019	kL	5624
16/09/2019	kL	5951
17/09/2019	kL	5070
18/09/2019	kL	5536
19/09/2019	kL	6162
20/09/2019	kL	5609
21/09/2019	kL	5887
22/09/2019	kL	6077
23/09/2019	kL	6023
24/09/2019	kL	6079
25/09/2019	kL	5584
26/09/2019	kL	6158
27/09/2019	kL	6298
28/09/2019	kL	6204
29/09/2019	kL	6212
30/09/2019	kL	6085

Average	kL	4453
Minimum	kL	209
Maximum	kL	6298

There were no exceedances of the volumetric limits at the Licenced Discharge Point during the month.

Report

CVC Monthly Environmental Report

Depositional Dust

Monthly depositional dust results are shown below.

September 2019	
EPL	1770
Limit	4g/m ² /month
Sampling Date	07/08/2019 to 06/09/2019
Site	Insoluble Matter (g/m ² /month)
DDG001	0.7
DDG002	0.7
DDG003	0.8
DDG004	0.7
DDG005	2.0
Notes:	

There were no exceedances of the annual average air quality limits during the reporting period.

Report

CVC Monthly Environmental Report

Weather Data

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

Monthly Weather Data			
	2019		
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			
Month	Total Rainfall/Month mm	Min Temp	Max Temp
Jan-19	60.6	18.6	39.6
Feb-19	88.6	22.7	37.4
Mar-19	204	10.1	37.1
Apr-19	73.2	8.3	32.8
May-19	11.0	3.9	26.3
Jun-19	158.8	3.9	25.0
Jul-19	47.2	4.0	23.3
Aug-19	194.0	2.0	25.4
Sep-19	92	5.5	29.6
Oct-19			
Nov-19			
Dec-19			