



# Chain Valley Colliery Monthly Website Report

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<b>Site:</b>	Chain Valley Colliery
<b>Department:</b>	Technical Services
<b>Report Title:</b>	Monthly Environmental Website Report - December 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 .....	7

### 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 31 December 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	<a href="http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50980&amp;SYSUID=1&amp;LICID=1770">http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50980&amp;SYSUID=1&amp;LICID=1770</a>

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/m<sup>2</sup>/month – grams per square metre per month;

kL – kilolitre;

L<sub>Aeq</sub> – 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 **December 2019**

ALS Water - Report of Analysis

Steel River Testing - Dust Deposition Report **December 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 October at Chain Valley Colliery are presented below.

<b>December 2019</b>	
EPL	1770
Licensee	LakeCoal Pty Ltd
Premises	Chain Valley Colliery
Date Sampled	
Date Obtained	
Date Reported	November
Sampling Point	1

<b>Parameter</b>	<b>Units</b>	<b>Limit</b>	<b>Result</b>
Biochem. Oxygen Dem.	mg/L	-	2
Enterococci	col/100mL	-	160
Faecal Coliforms	CFU/100mL	200	260
pH	pH	6.5-8.5	7.70
Total Sus. Solids	mg/L	50	10

There was 1 exceedance of water quality criteria during the month, due to exceedance in Faecal Coliforms at Licence Discharge Point 1.

# Report

## CVC Monthly Environmental Report

### Water – Volume

Monthly water volumes are summarised below.

December 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
01/12/2019	kL	2435
02/12/2019	kL	3450
03/12/2019	kL	2508
04/12/2019	kL	1928
05/12/2019	kL	2003
06/12/2019	kL	3309
07/12/2019	kL	4693
08/12/2019	kL	5622
09/12/2019	kL	5512
10/12/2019	kL	3316
11/12/2019	kL	4147
12/12/2019	kL	5726
13/12/2019	kL	5778
14/12/2019	kL	5718
15/12/2019	kL	5726
16/12/2019	kL	5498
17/12/2019	kL	5652
18/12/2019	kL	5207
19/12/2019	kL	5331
20/12/2019	kL	2995
21/12/2019	kL	5791
22/12/2019	kL	6050
23/12/2019	kL	5276
24/12/2019	kL	5060
25/12/2019	kL	4222
26/12/2019	kL	2762
27/12/2019	kL	2656
28/12/2019	kL	1963
29/12/2019	kL	2255
30/12/2019	kL	5118
31/12/2019	kL	4221

Average	kL	4256
Minimum	kL	1928
Maximum	kL	6050

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.

December 2019	
EPL	1770
Limit	4g/m <sup>2</sup> /month
Sampling	05/11/2019 to 05/12/2019
Site	Insoluble Matter (g/m <sup>2</sup> /month)
DDG001	2.3
DDG002	1.7
DDG003	2.9
DDG004	3.0
DDG005	27.6
Notes:	

There was an exceedance of insoluble matter during the sampling period for DDG005. The EPA, DPIE- Compliance Division and Resource Regulator were notified and an incident report was completed. It was identified that the dust gauge sample funnel was contaminated. Compliance division accepted that contamination of the sample had occurred.

There were 8 exceedances of the 24hr average PM10. The exceedances were caused by bushfire smoke and dust storms. The DPIE consider this to be an extraordinary event as per Schedule 3, Condition 11, Tables 3 to 5, Note D of SSD 5465. No formal incident report was required

### 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	57	9.1	34.9
Nov-19	25	10.5	36.7
Dec-19	1.6	13.6	41.4