



# 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 - April 2020
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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 .....	8
Weather Data .....	8

# Report

## CVC Monthly Environmental Report

### 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 requirements to be undertaken by Delta Coal for Chain Valley Colliery.

This report provides environmental monitoring data from Chain Valley Colliery for the period of May2020.

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 monthly report is to keep stakeholders informed of the environmental monitoring results at Chain Valley Colliery and maintain a transparent and accountable reporting system.

# Report

## CVC Monthly Environmental Report

### Scope

This report presents the results from the various environmental monitoring programs undertaken for Chain Valley Colliery. Results are presented monthly with annual data and averages.

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

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

kL – kilolitre;

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 **May 2020**

ALS Water - Report of Analysis **May 2020**

Steel River Testing - Dust Deposition Report **May 2020**

Development Consent SSD-5465 (as modified)

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

## Monitoring Results

Water – Quality

May 2020	
EPL	1770
Licensee	Great Southern Energy Pty Ltd
Premises	Chain Valley Colliery
Date Sampled	19-May-20
Date Obtained	26-May-20
Date Reported	May
Sampling Point	1

Parameter	Units	Limit	Result
Biochem. Oxygen Demand	mg/L	-	3
Enterococci	col/100mL	-	660
Faecal Coliforms	CFU/100mL	200	~20
pH	pH	6.5-8.5	7.68
Total Sus. Solids	mg/L	50	7

Water quality results for May at Chain Valley Colliery at EPA Discharge Point 1 are presented below.

As detailed above, results for monthly sampling were below the relevant limits where applicable.

# Report

## CVC Monthly Environmental Report

### Water – Volume

Monthly water volumes are summarised below.

May 2020		
EPL	1770	
Licensee	Great Southern Energy 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
01/05/2020	kL	5461.86
02/05/2020	kL	5150.76
03/05/2020	kL	4403.22
04/05/2020	kL	5595.18
05/05/2020	kL	5820.73
06/05/2020	kL	5699.95
07/05/2020	kL	5637.99
08/05/2020	kL	5538.50
09/05/2020	kL	5608.99
10/05/2020	kL	5558.59
11/05/2020	kL	5517.43
12/05/2020	kL	5513.98
13/05/2020	kL	5556.41
14/05/2020	kL	5686.03
15/05/2020	kL	5792.94
16/05/2020	kL	5638.05
17/05/2020	kL	5880.62
18/05/2020	kL	5581.56
19/05/2020	kL	8518.62
20/05/2020	kL	8768.82
21/05/2020	kL	9373.43
22/05/2020	kL	8571.08
23/05/2020	kL	6910.86
24/05/2020	kL	7371.24
25/05/2020	kL	8136.95
26/05/2020	kL	9045.96
27/05/2020	kL	6910.42
28/05/2020	kL	6600.14
29/05/2020	kL	6599.60
30/05/2020	kL	5260.87
31/05/2020	kL	5165.83
Average	kL	6351
Minimum	kL	4403
Maximum	kL	9373

The daily water volumes at EPA Discharge Point 1 during May 2020 were below the relevant limit.

# Report

## CVC Monthly Environmental Report

### Water – Groundwater Discharge

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Groundwater discharged from underground workings to the CVC Pollution Control Dams within the surface operational area has been detailed below. Chain Valley Colliery operates Water Access License permitting the extraction of 4,443 megalitres per financial year.

<b>CVC Groundwater to Surface Totals FY2019-2020</b>		
<b>Date (month)</b>	<b>Discharge (ML)</b>	<b>Discharge (ML YTD)</b>
Jul-19	168.1	168.1
Aug-19	147.7	315.8
Sep-19	123.9	439.7
Oct-19	163.9	603.6
Nov-19	111.0	714.6
Dec-19	127.7	842.3
Jan-20	251.0	1093.3
Feb-20	235.9	1329.2
Mar-20	210.4	1539.6
Apr-20	172.8	1712.4
May-20	178.6	1891.0
Jun-20		

# Report

## CVC Monthly Environmental Report

### Air Quality - Depositional Dust

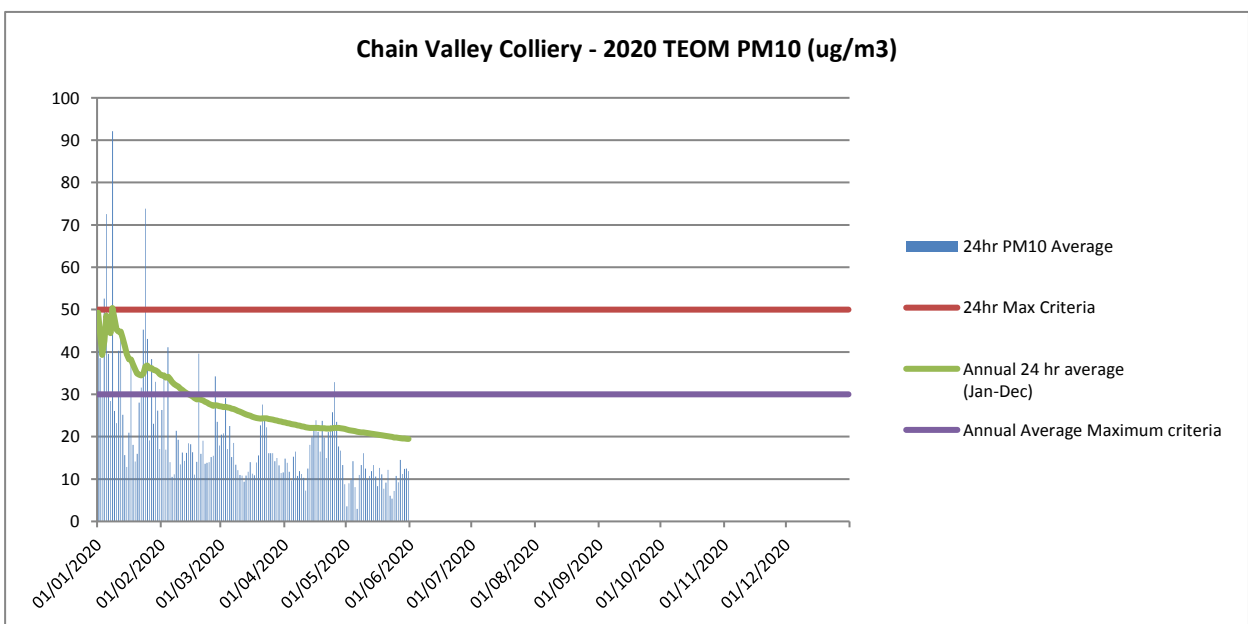
Monthly depositional dust results are shown below. Dust deposition gauges were sampled and analysed in accordance with the project approval, CVC Air Quality Management Plan and relevant Australian Standards.

May 2020	
<b>EPL</b>	1770
<b>Limit</b>	4g/m <sup>2</sup> /month
<b>Sampling Date</b>	09/04/2020 to 08/05/2020
<b>Site</b>	Insoluble Matter (g/m <sup>2</sup> /month)
DDG001	0.6
DDG002	0.5
DDG003	1.3
DDG004	1.0
DDG005	2.1
Notes: - For site locations refer to Air Quality Management Plan	

All results for depositional dust monitoring for the month of May 2020 were within prescribed limits for the site.

### Air Quality – PM<sub>10</sub>

The 24hr PM<sub>10</sub> average from CVC's Tapered Element Oscillating Microbalance (TEOM) is presented below for the year to date.



Annual 24hr PM<sub>10</sub> average maximum criteria for May 2020 is below the annual average maximum criteria limit.



# Report

## CVC Monthly Environmental Report

A summary of valid data for CVC's TEOM is presented below for the year to date.

Variable	May	Total	Valid
A/C Temp	100%	8928	8927
A1	100%	8928	8927
A1_Scaled	100%	8928	8927
Bypass Flow	100%	8928	8927
Cap Temp	100%	8928	8927
Case Temp	100%	8928	8927
Config	100%	8928	8927
Dew Point	100%	8928	8927
Dig-In	100%	8928	8927
Dig-Latch	100%	8928	8927
ESN	100%	8928	8927
Filter Freq	100%	8928	8927
Filter Load	100%	8928	8927
Humidity	100%	8928	8927
MC	100%	8928	8927
MC 12Hr	100%	8928	8927
MC 1Hr	100%	8928	8927
MC 24Hr	100%	8928	8927
MC 30min	100%	8928	8927
MC 8Hr	100%	8928	8927
MC Total	100%	8928	8927
Mobile Signal	100%	8928	8927
Noise	100%	8928	8927
PM10 Flow	100%	8928	8927
Pressure	100%	8928	8927
Site	0.0%	8928	0
Temperature	100%	8928	8927
Tube Temp	100%	8928	8927
Vac Pressure	100%	8928	8927
Volts	100%	8928	8927

# Report

## CVC Monthly Environmental Report

### Weather Data

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A summary of weather data recorded by a meteorological monitoring station at the adjacent Mannering Colliery is presented below for the year to date. (EPA ID no. 26).

Monthly Weather Data			
Licensee	Great Southern Energy Pty Ltd		
Location	Mannering Colliery Meteorological station		
Date published	Refer report date		
Date sampled	Daily		
Date obtained	01/06/2020		
Month	Total Rainfall/Month mm	Min Temp	Max Temp
Jan-20	28	18	44
Feb-20	350	16	37
Mar-20	159	12	38
Apr-20	46	9	28
May-20	88	5	27