



Chain Valley Colliery Monthly Website Report – May 2025

Site:	Chain Valley Colliery
Department:	Health Safety and Environment
Report Title:	Monthly Environmental Website Report – May 2025
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Monthly Website Report

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Summary

Environmental monitoring results are presented in this report for monitoring undertaken during the period of May 2025.

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) publicly available;
- 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 month of May 2025.

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	EPL 1770 – April 2025

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.

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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;
- Air Quality – Depositional Dust
- Air Quality – PM₁₀
- Air Quality – PM_{2.5}; and
- Meteorological data.

Definitions

g/m²/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.

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References

ALS Group - Monthly Water Monitoring Results **May 2025**

ALS Group - Dust Deposition Report **May 2025**

Development Consent SSD-5465 (as modified)

Environment Protection Licence (EPL) 1770 (Licence version date: 9 April 2025)

Monitoring Results

Water – Quality

Water quality results for May 2025 monthly surface water and Spillway event sampling at Chain Valley Colliery, Licensed Discharge Points (LDP 1 and LDP27) are presented below.

LDP1 May 2025			
EPL	1770		
Licensee	Great Southern Energy Pty Ltd		
Premises	Chain Valley Colliery		
Date Sampled	13-05-2025		
Date Obtained	19-05-2025		
Sampling Point	LDP 1		
Parameter	Units	Limit	Result
Biochem. Oxygen Demand	mg/L	-	4
pH	pH	6.5-8.5	7.65
Total Sus. Solids (TSS)	mg/L	50	<5
Electrical Conductivity	µS/cm	-	28400

LDP27 May 2025				
EPL	1770			
Licensee	Great Southern Energy Pty Ltd			
Premises	Chain Valley Colliery			
Date Sampled	18-05-2025 and 23-05-2025			
Date Obtained	28-05-2025			
Sampling Point	LDP 27			
Parameter	Units	Limit	Result: 18-05	Result: 23-05
pH	pH	6.5-8.5	7.70	7.76
Total Sus. Solids (TSS)	mg/L	50	206	33
Electrical Conductivity	µS/cm	-	4780	1330
Oil & Grease	mg/L		<5	<5

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Water – Volume

Monthly water volumes discharged from the site are summarised below. There was no exceedance of volumetric discharge recorded at CVC for the period of May 2025.

EPL	1770
Licensee	Great Southern Energy Pty Ltd
Premises	Chain Valley Colliery
Date Sampled	Daily
Date Reported	Refer report date
Discharge volume limit	12,161 kilolitres per day
Sampling Point	1 and 27

Date (24 hour period)	LDP 1 Volume (kL)	LDP 27 Volume (kL)	Total Discharged	Rainfall (mm)
01/05/2025	5828	0	5828	11.8
02/05/2025	10456	0	10456	8.2
03/05/2025	6031	0	6031	2.6
04/05/2025	5746	0	5746	2.4
05/05/2025	6021	0	6021	0.8
06/05/2025	6285	0	6285	0
07/05/2025	5736	0	5736	0
08/05/2025	6479	0	6479	6.2
09/05/2025	6115	0	6115	1.6
10/05/2025	5953	0	5953	11.2
11/05/2025	7329	0	7329	14.4
12/05/2025	7882	0	7882	28
13/05/2025	9478	0	9478	0.2
14/05/2025	5614	0	5614	0.2
15/05/2025	6735	0	6735	16
16/05/2025	7455	0	7455	5.2
17/05/2025	5836	0	5836	0.2
18/05/2025	10434	758	11192	82.6
19/05/2025	9880	0	9880	45.4
20/05/2025	2752	0	2752	7.2
21/05/2025	2699	0	2699	29.6
22/05/2025	6497	0	6497	52.8
23/05/2025	9983	148	10131	46
24/05/2025	4237	0	4237	0
25/05/2025	10427	0	10427	0
26/05/2025	5402	0	5402	2
27/05/2025	6476	0	6476	2.4
28/05/2025	4759	0	4759	0
29/05/2025	2548	0	2548	1.8
30/05/2025	2053	0	2053	0
31/05/2025	5416	0	5416	0.2

Average	6405	29	6434	12
Minimum	2053	0	2053	0
Maximum	10456	758	11192	83

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Water – Groundwater Discharge

Groundwater discharged from underground workings to the CVC sedimentation ponds within the surface operational area has been detailed below. Chain Valley Colliery operates Water Access License (WAL 41508) permitting the extraction of 4,443 megalitres per water year (financial year calendar) with a roll-over entitlement up to a maximum of 8,886 megalitres.

CVC Groundwater to Surface Totals FY2024-2025		
Date (month)	GW Discharge (ML/Month)	GW Discharge (Cumulative ML YTD)
July 2024	207	207
August 2024	210	416
September 2024	193	609
October 2024	197	806
November 2024	182	988
December 2024	198	1186
January 2025	192	1378
February 2025	186	1564
March 2025	192	1756
April 2025	193	1949
May 2025	171	2121

Air Quality - Depositional Dust

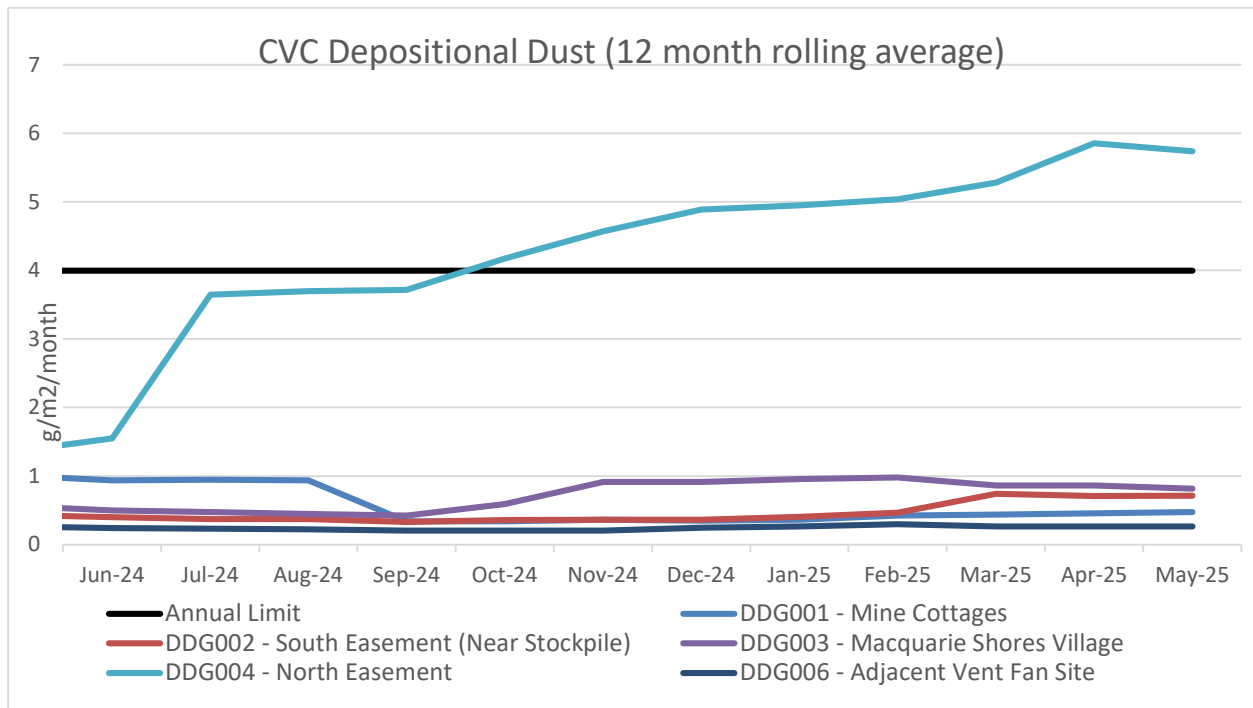
Monthly depositional dust results are shown below. Dust deposition gauges were sampled and analysed in accordance with Development Consent SSD-5465 (as modified), Delta Coal Air Quality and Greenhouse Gas Management Plan, and relevant Australian Standards.

May 2025	
EPL	1770
Limit	4g/m ² /month / Annum 2g/m ² /month increase from previous result
Sampling Date	04/04/2025 – 6/05/2025
Site	Insoluble Matter (g/m ² /month)
DDG001	0.5
DDG002	0.3
DDG003	0.1
DDG004	1.5
DDG006	0.1
Notes: For site locations refer to the Delta Coal Air Quality and Greenhouse Gas Management Plan.	

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The 12 month rolling average results for DDG001, DDG002, DDG003 and DDG006 remain within the depositional dust limit of 4g/m²/month (annual average). The 12 month rolling average result for DDG004 was 5.74g/m² /month against the limit of 4g/m² /month.



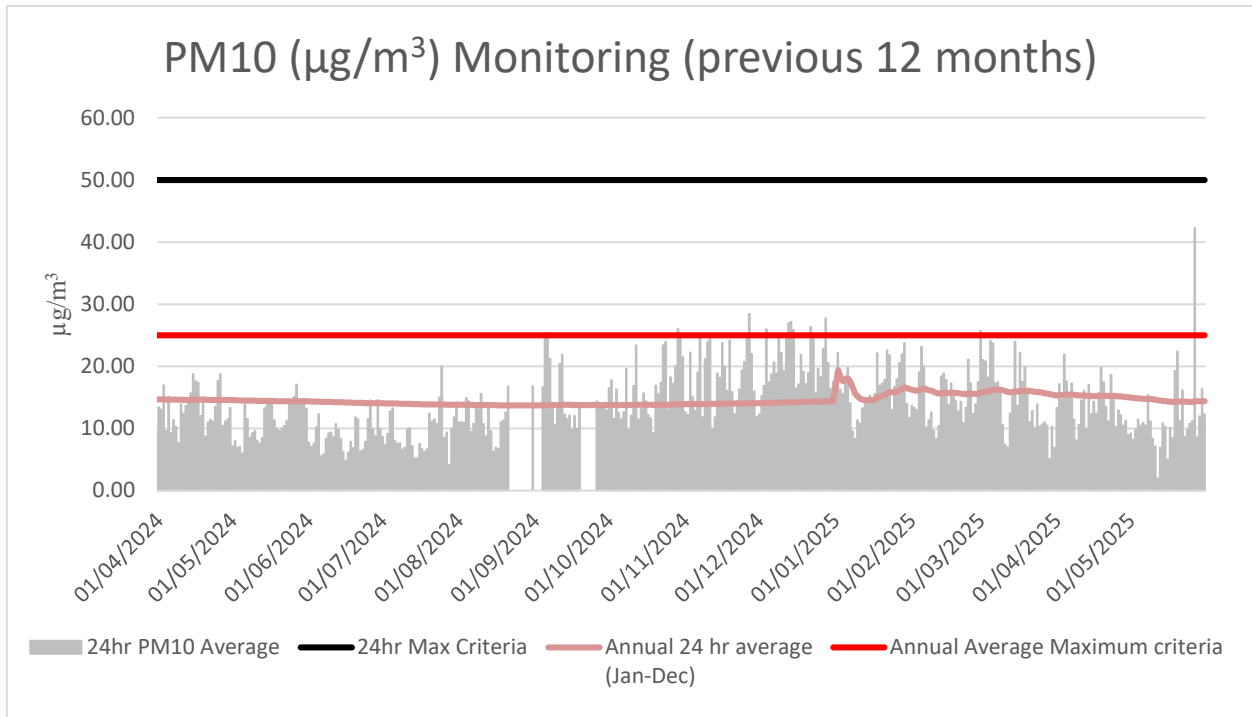
A 12-month rolling average of depositional dust concentrations has been presented above. Dust Gauges DDG001, DDG002, DDG003 and DDG004 are located within a closer proximity to Chain Valley Colliery and DDG006 is positioned in a location representative of the Chain Valley Colliery ventilation fan site at Summerland Point.

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Air Quality – PM₁₀

The 24hr PM₁₀ average from Delta Coal's Tapered Element Oscillating Microbalance (TEOM), located at the Mannering Park Sewage Treatment Plant, is presented below for the previous 12 months.



Annual 24hr PM₁₀ average maximum criteria for May 2025 was below the annual average maximum criteria limit. A summary of data availability for Delta Coal's TEOM is presented below for the reporting period. Delta Coals TEOM had a data availability of 100% for the month of May 2025.

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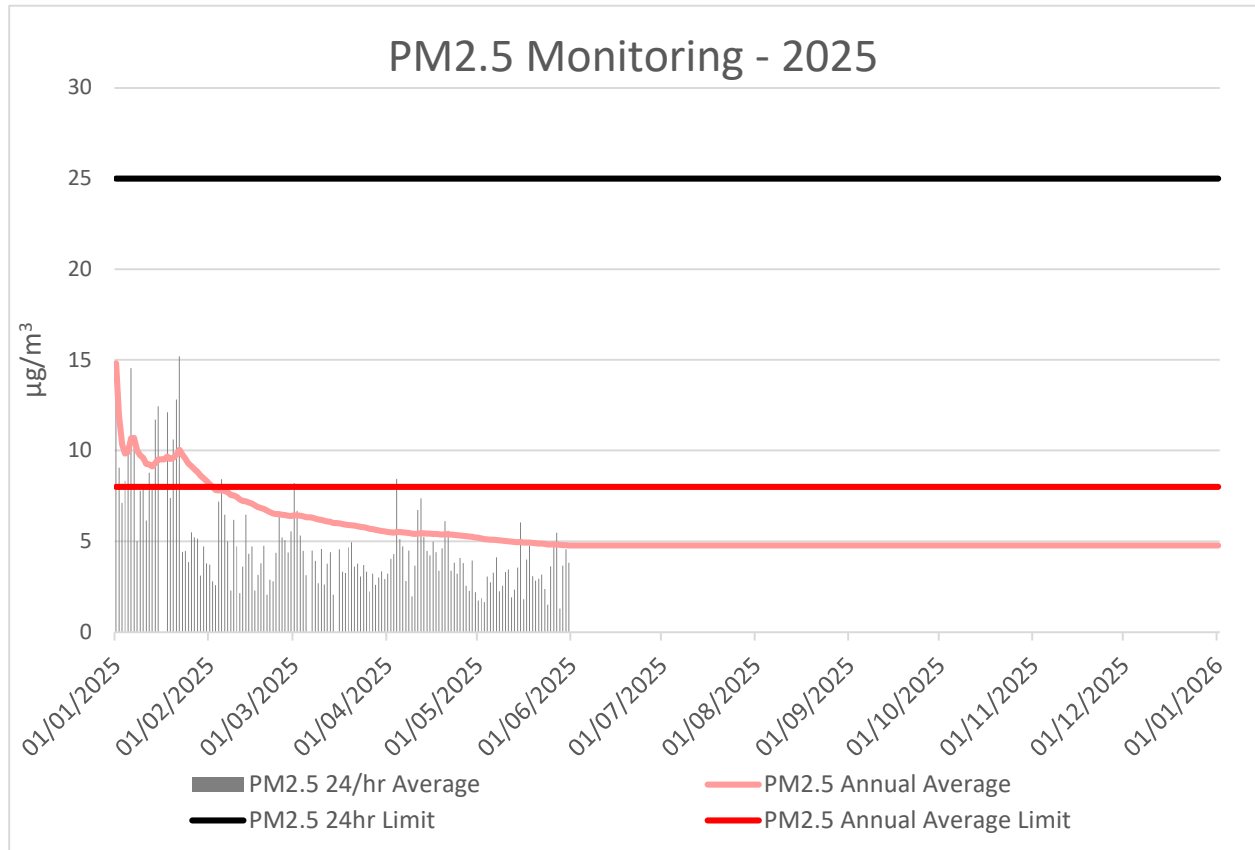
Variable	May	Total	Valid
A/C Temp	100%	8928	8928
A1_Scaled	100%	8928	8928
Band	100%	8928	8928
Bypass Flow	100%	8928	8928
Cap Temp	100%	8928	8928
Case Temp	100%	8928	8928
Config	100%	8928	8928
Dew Point	100%	8928	8928
Dig-In	100%	8928	8928
Dig-Latch	100%	8928	8928
ESN	100%	8928	8928
Filter Freq	100%	8928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

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Air Quality – PM_{2.5}

Delta Coal utilises PM_{2.5} data obtained from Delta Electricity owned and operated beta attenuation monitor (BAM). The PM_{2.5} monitor is located on Tingley Road, Wyee.



There were no exceedances of the PM_{2.5} daily average limit in May 2025. The 12-month rolling average PM_{2.5} value on 31 May was 4.78 µg/m³. PM_{2.5} data availability in May was 99%. The 2025 year to date PM_{2.5} data availability is 92.96%.

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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. (EPA ID no. 26).

Monthly Weather Data 2025			
Licensee	Great Southern Energy Pty Ltd		
Location	Mannering Colliery Meteorological station		
Date published	Refer report date		
Date sampled	Daily		
Date obtained	10 June 2025		
Month	Total Rainfall/Month (mm)	Min Temp	Max Temp
Jan-25	237	11.9	41.3
Feb-25	31	12.5	33.8
Mar-25	138	15.4	36.3
Apr-25	232	11	29.4
May-25	387	7.5	26

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Variable	May	Total	Valid
Baro (Corrected)	95.3%	2976	2835
10m Temp	95.3%	2976	2835
2m Temp	95.3%	2976	2835
A1	95.3%	2976	2835
A1_Scaled	95.3%	2976	2835
Assumed Temp	95.3%	2976	2835
Barometric	95.3%	2976	2835
Config	95.3%	2976	2835
Daily Evap	95.3%	2976	2835
Daily Rain	95.3%	2976	2835
Delta T	95.3%	2976	2835
Dew Point	95.3%	2976	2835
Dig-In	95.3%	2976	2835
Dig-Latch	95.3%	2976	2835
ESN	95.3%	2976	2835
FDI	95.3%	2976	2835
Heat Index	95.3%	2976	2835
Humidity	95.3%	2976	2835
Mobile Signal	95.3%	2976	2835
Rain	95.3%	2976	2835
Raw Evap	95.3%	2976	2835
S Class	95.3%	2976	2835
Scalar WS	95.3%	2976	2835
Sigma	95.3%	2976	2835
Site	0.0%	2976	0
Solar Radiation	95.3%	2976	2835
Vector WD	95.3%	2976	2835
Vector WS	95.3%	2976	2835
Volts	95.3%	2976	2835
Wind Chill	95.3%	2976	2835
Wind Direction	95.3%	2976	2835
Wind Speed	95.3%	2976	2835
WS Avg	95.3%	2976	2835
WS Gust	95.3%	2976	2835