



Chain Valley Colliery Monthly Website Report – April 2025

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

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 **April 2025**

ALS Group - Dust Deposition Report **April 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 April 2025 monthly surface water sampling at Chain Valley Colliery, Licensed Discharge Point (LDP 1) are presented below.

April 2025			
EPL	1770		
Licensee	Great Southern Energy Pty Ltd		
Premises	Chain Valley Colliery		
Date Sampled	15-04-2025		
Date Obtained	9-05-2025		
Sampling Point	LDP 1		
Parameter	Units	Limit	Result
Biochem. Oxygen Demand	mg/L	-	<2
pH	pH	6.5-8.5	7.66
Total Sus. Solids (TSS)	mg/L	50	<5
Electrical Conductivity	µS/cm	-	31600

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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 April 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)
01/04/2025	9492	0	9492	0.8
02/04/2025	4378	0	4378	0
03/04/2025	4167	0	4167	0
04/04/2025	6495	0	6495	0
05/04/2025	5924	0	5924	0
06/04/2025	6506	0	6506	0
07/04/2025	5972	0	5972	0
08/04/2025	6608	0	6608	5.8
09/04/2025	6143	0	6143	0.2
10/04/2025	6600	0	6600	0
11/04/2025	6411	0	6411	0.2
12/04/2025	6076	0	6076	0
13/04/2025	9489	0	9489	0.2
14/04/2025	6341	0	6341	3.4
15/04/2025	6153	0	6153	4.6
16/04/2025	6134	0	6134	2.4
17/04/2025	6182	0	6182	6.4
18/04/2025	2907	0	2907	0.2
19/04/2025	3282	0	3282	0
20/04/2025	6726	0	6726	0
21/04/2025	10397	0	10397	0
22/04/2025	6826	0	6826	27.6
23/04/2025	6077	0	6077	1.4
24/04/2025	6273	0	6273	0
25/04/2025	6588	0	6588	9.4
26/04/2025	7824	0	7824	2
27/04/2025	10406	1279	11685	111.6
28/04/2025	8617	0	8617	18.8
29/04/2025	10327	0	10327	11.8
30/04/2025	7810	0	7810	25.2
31/03/2025	9492	0	9492	0.8

Average	6771	41.25	6900	8
Minimum	2907	0	2907	0
Maximum	10406	1278.9	11685	112

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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

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.

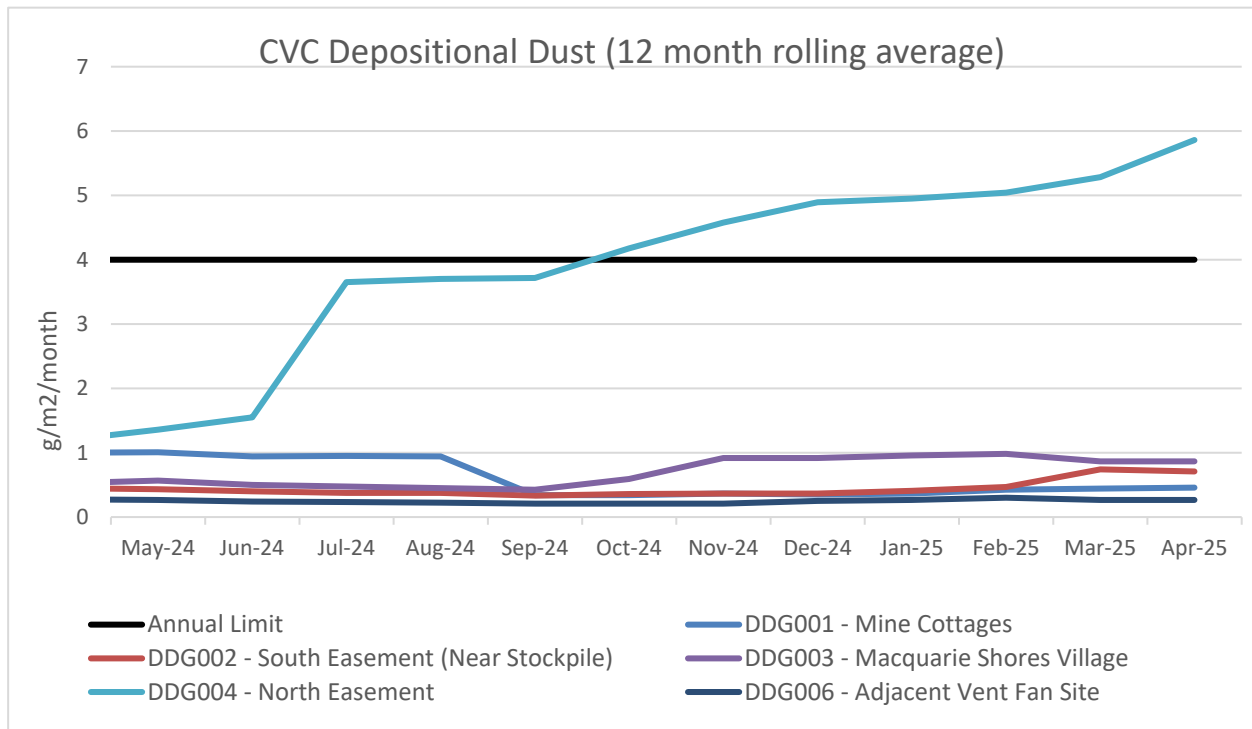
April 2025	
EPL	1770
Limit	4g/m ² /month / Annum 2g/m ² /month increase from previous result
Sampling Date	05/03/2025 – 04/04/2025
Site	Insoluble Matter (g/m ² /month)
DDG001	0.5
DDG002	0.2
DDG003	0.2
DDG004	7.4
DDG006	0.1
Notes: For site locations refer to the Delta Coal Air Quality and Greenhouse Gas Management Plan.	

The April DDG004 result increased by more than 2g/m²/month from the previous month. DDG004 was 7.4g/m²/month, compared to 3.8g/m²/month the previous month.

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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 5.86g/m² /month against the limit of 4g/m² /month.



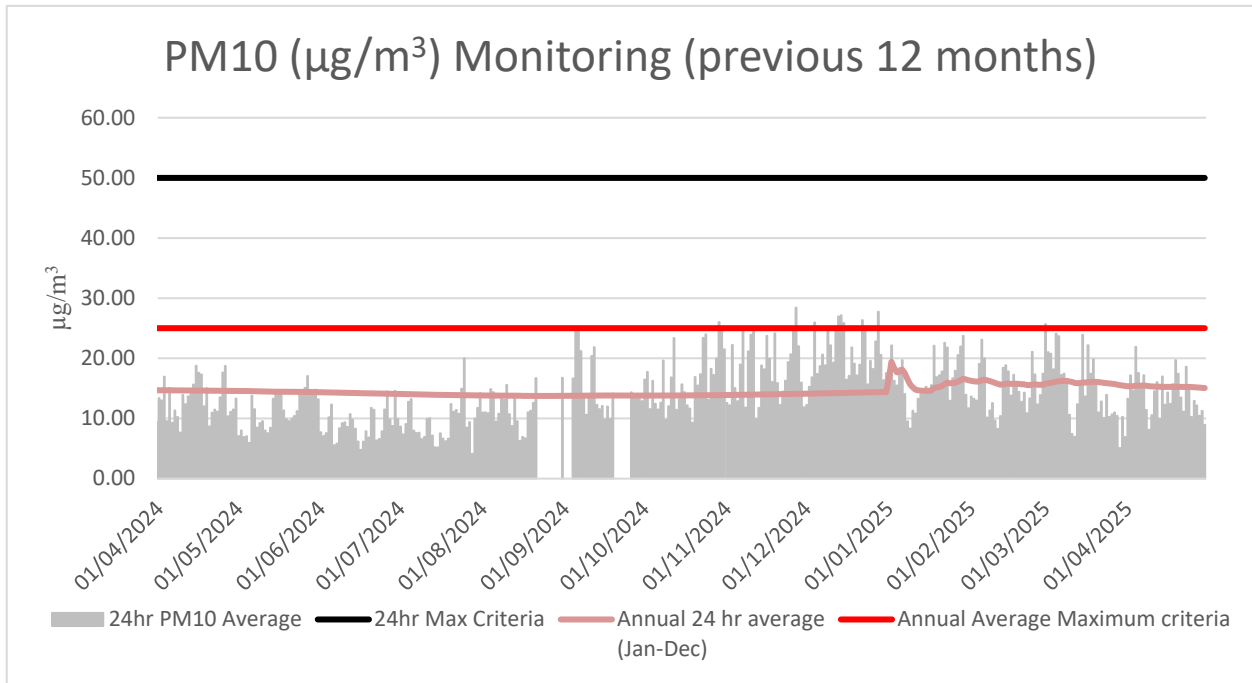
A 12-month rolling average of depositional dust concentrations has been presented above. Dust Gauges DDG001, DDG002, DDG003 and DDG004 are located within a closer proximity to Chain Valley Colliery and DDG006 is positioned in a location representative of the Chain Valley Colliery ventilation fan site 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 April 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 April 2025.

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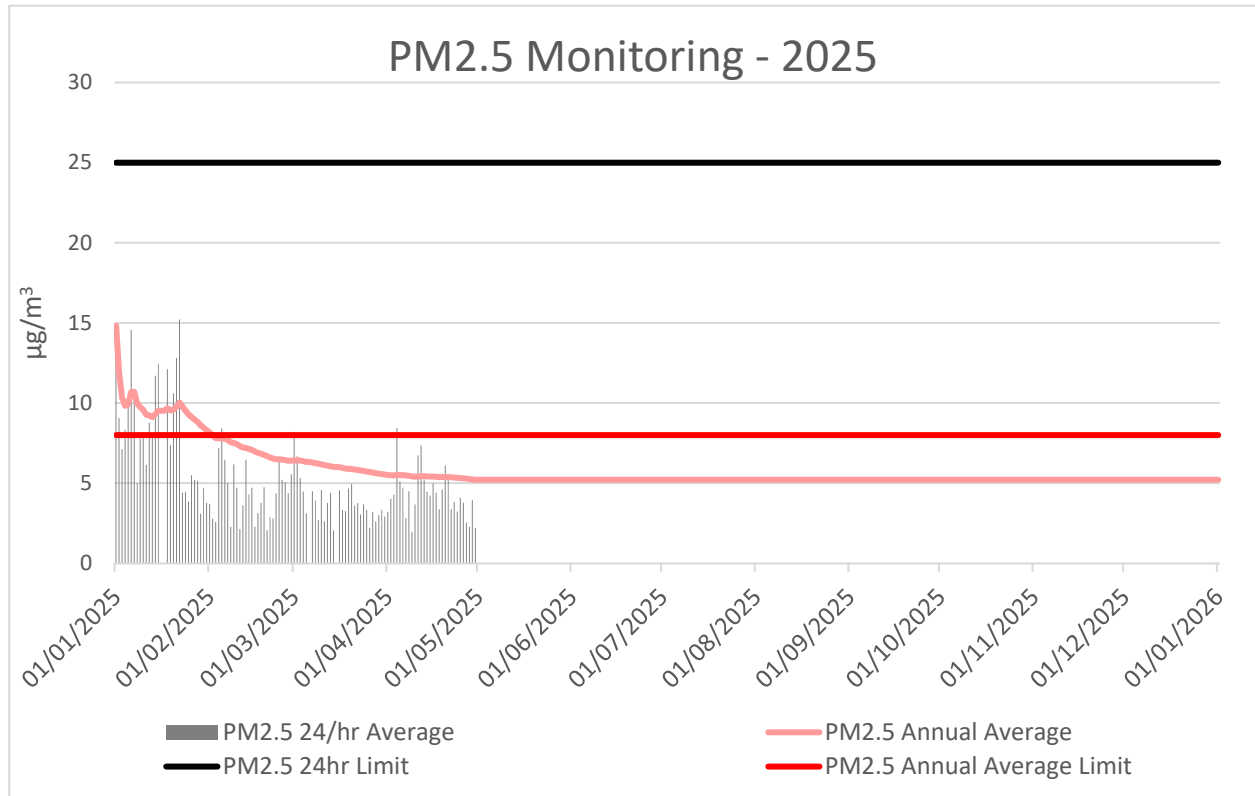
Variable	April	Total	Valid
A/C Temp	100%	8640	8640
A1_Scaled	100%	8640	8640
Band	100%	8640	8640
Bypass Flow	100%	8640	8640
Cap Temp	100%	8640	8640
Case Temp	100%	8640	8640
Config	100%	8640	8640
Dew Point	100%	8640	8640
Dig-In	100%	8640	8640
Dig-Latch	100%	8640	8640
ESN	100%	8640	8640
Filter Freq	100%	8640	8640
Filter Load	100%	8640	8640
Humidity	100%	8640	8640
MC	100%	8640	8640
MC 12Hr	100%	8640	8640
MC 1Hr	100%	8640	8640
MC 24Hr	100%	8640	8640
MC 30min	100%	8640	8640
MC 8Hr	100%	8640	8640
MC Total	100%	8640	8640
Mobile Signal	100%	8640	8640
Noise	100%	8640	8640
PM10 Flow	100%	8640	8640
Pressure	100%	8640	8640
Site	0.0%	8640	0
Temperature	100%	8640	8640
Tube Temp	100%	8640	8640
Vac Pressure	100%	8640	8640
Volts	100%	8640	8640

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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 April 2025. The 12-month rolling average PM_{2.5} value on 30 April was 5.21 µg/m³. PM_{2.5} data availability in April was 98%. The 2025 year to date PM_{2.5} data availability is 91.42%.

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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	12 May 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
May-25	232	11	29.4

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Variable	April	Total	Valid
Baro (Corrected)	100%	2880	2879
10m Temp	100%	2880	2879
2m Temp	100%	2880	2879
A1	100%	2880	2879
A1_Scaled	100%	2880	2879
Assumed Temp	100%	2880	2879
Barometric	100%	2880	2879
Config	100%	2880	2879
Daily Evap	100%	2880	2879
Daily Rain	100%	2880	2879
Delta T	100%	2880	2879
Dew Point	100%	2880	2879
Dig-In	100%	2880	2879
Dig-Latch	100%	2880	2879
ESN	100%	2880	2879
FDI	100%	2880	2879
Heat Index	100%	2880	2879
Humidity	100%	2880	2879
Mobile Signal	100%	2880	2879
Rain	100%	2880	2879
Raw Evap	100%	2880	2879
S Class	100%	2880	2879
Scalar WS	100%	2880	2879
Sigma	100%	2880	2879
Site	0.0%	2880	0
Solar Radiation	100%	2880	2879
Vector WD	100%	2880	2879
Vector WS	100%	2880	2879
Volts	100%	2880	2879
Wind Chill	100%	2880	2879
Wind Direction	100%	2880	2879
Wind Speed	100%	2880	2879
WS Avg	100%	2880	2879
WS Gust	100%	2880	2879