

CULLEN VALLEY MINE

Monthly Environmental Monitoring Data

for

Castlereagh Coal

1 INTRODUCTION

Castlereagh Coal owns and operates Cullen Valley Mine located near Cullen Bullen in the Central West district of New South Wales. This report has been prepared pursuant to Chapter 2, Part 3.5, Condition 66(6) of the *Protection of the Environment operations Act 1997* for the publication of results of monitoring and the NSW Environmental Protection Authority guideline titled *Requirements for publish pollution monitoring data (2012)*.

2 ENVIRONMENT PROTECTION LICENCE DETAILS

Cullen Valley Mine (EPL 10341)

Licensee: Shoalhaven Coal Pty Ltd

Address: Cullen Valley Mine, Portland Road, Cullen Bullen NSW 2790

Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50797&SYSUID=1&LICID=10341>

3 AIR QUALITY

3.1 DEPOSITIONAL DUST

All depositional dust sampling locations were in compliance with the rolling annual average limit ($4\text{g}/\text{m}^2/\text{month}$) for the period January 2023 to December 2023. Maximum annual increase in deposited dust levels are also below the criteria limit of $2\text{g}/\text{m}^2/\text{month}$. Depositional dust monitoring results are presented in **Table 1**.

MONTHLY ENVIRONMENTAL MONITORING DATA

December 2023

Table 1 Depositional Dust Monitoring Results: December 2023

Obtained: 27/02/2024		Premise: Cullen Valley Mine		
Published: 27/02/2024		Licensee: Shoalhaven Coal		
		EPL number: 10341		
		Exposure Period: 31 days		
Sampling Point	Start Date	End Date	Insoluble Solids (g/m ² /month)	Rolling Annual Average
CDD1 (Railway)	8/12/2023	8/01/2024	0.8	0.6
CDD2 (Hillcroft)	8/12/2023	8/01/2024	0.4	0.5
CDD3 (Office)	8/12/2023	8/01/2024	0.9	0.7
CDD4 (Cranes)	8/12/2023	8/01/2024	2.0	1.0
CDD5 (Doble)	8/12/2023	8/01/2024	0.7	0.6
Annual Average Limit				4.0

Required Frequency: Monthly - exposure period 30 ± 2 days.

3.2 PM₁₀ AND TSP

The 24-hour maximum PM₁₀ particulate matter concentration less than 10 microns (PM₁₀) was not exceeded during December 2023. The total suspended particulate (TSP) and PM₁₀ annual average results are in compliance with the annual average limit for the period January 2023 to December 2023.

PM₁₀ and TSP monitoring results are presented in **Table 2**.

Table 2 High Volume Air Sampler Monitoring Results: December 2023

Premise:		Cullen Valley Mine	
Obtained:	06/02/2024	Licensee:	Shoalhaven Coal
Published:	27/02/2024	EPL number:	10341
Sampling Point	Run Date	PM ₁₀ (µg/m ³)	TSP (µg/m ³)^
HVAS1	01-Dec-23	11.2	28.0
	07-Dec-23	15.7	39.3
	13-Dec-23	16.7	41.8
	19-Dec-23	19.2	48.0
	25-Dec-23	4.2	10.5
	30-Dec-23	1.2	3.0
Rolling Annual Average (Calculation period January 2023 to December 2023)		9.0	22.6
24 Hour Limit		50	--
Annual Average Limit		30	90

Required Frequency: High Volume Air Sample run event every six days for 24 hours

-- No Limit ^ TSP result is an estimate obtained from a calculation of the PM₁₀ concentration.

4 SURFACE WATER QUALITY

A discharge event is deemed to occur when water leaves the site either through the overflow channel of either Dam 3 or Dam 4, or as a result of actively pumping water. No discharge was observed at Dam 3 during the site visit on 21 December 2023 therefore, a sample was not required to be collected at Dam 3 (EPA Point 1). A sample was collected from Dam 3 for due diligence purposes only. Discharge was observed at Dam 4 (EPA Point 4) during the site visit on 21 December 2023. A discharge sample was collected from Dam 4. Water quality results are presented in **Table 3**.

Table 3 Monthly Surface Water Quality Results: December 2023

Sampled:	21/12/2023	Premise:	Cullen Valley Mine	
Obtained:	06/02/2024	Licensee:	Shoalhaven Coal	
Published:	27/02/2024	EPL number:	10341	
Sampling Point	Frequency	Pollutant	Limit	Measurement
Dam 3 (EPA Point 1) ¹	Weekly during discharge	pH (pH unit)	6.5 – 8.5	7.1
		TSS (mg/L)	50	31
		Oil & Grease (mg/L)	10	<5
		Conductivity (µS/cm)*	--	418
		Total Iron (mg/L)*	--	0.41
		Total Manganese (mg/L)*	--	0.327
Dam 4 (EPA Point 4)	Weekly during discharge	pH (pH unit)	6.5 – 8.5	6.3
		TSS (mg/L)	50	74
		Oil & Grease (mg/L)	10	<5
		Conductivity (µS/cm)*	--	489
		Total Iron (mg/L)*	--	1.29
		Total Manganese (mg/L)*	--	0.141

¹ – sample collected for due diligence purposes only.

-- No limit provided in EPL 10341

The pH and total suspended solids (TSS) and oil and grease concentration were compliant with the EPL limits at Dam 3. Dam 3 was sampled for due diligence purposes only. The pH and TSS were non-compliant with the EPL limits at Dam 4. Oil and grease concentration was compliant with the EPL limit at Dam 4. Heavy rainfall (32.4mm) was recorded at the time of sampling on 21 December 2023. Dam 4 was sampled the following week (29 December 2023) with pH and TSS found to be compliant with the EPL limits.

5 NOISE LIMITS

Attended noise monitoring is undertaken on a quarterly frequency. Noise monitoring reports are available on the Castlereagh Coal website: www.ccoal.com.au/environmental-reporting-compliance/

6 BLASTING

No blasting was undertaken during December 2023.

7 DISCLAIMER

This report is considered accurate at the date of issue with regard to current environmental conditions. Monitoring results may vary from those presented in this report following further assessment. This report must not be reproduced except in full. Results or figures from this report must not be used without acknowledgment.

Yours faithfully,

CASTLEREAGH COAL