

INVINCIBLE COLLIERY

Monthly Environmental Monitoring Data

for

Castlereagh Coal

1 INTRODUCTION

Castlereagh Coal owns and operates Invincible Colliery 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 publishing pollution monitoring data (2013).

2 ENVIRONMENTAL PROTECTION LICENCE DETAILS

Licensee: Shoalhaven Coal Pty Ltd

Address: Invincible Colliery, Castlereagh Highway, Cullen Bullen, NSW 2790

Link: <https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=287085&SYSUID=1&LICID=1095>

3 ENVIRONMENTAL PROTECTION LICENCE DETAILS

3.1 DEPOSITIONAL DUST

All depositional dust sampling locations were in compliance with the rolling annual average limit (4 g/m² /month) for the period September 2024 to August 2025. The maximum annual increase in deposited dust levels is also below the criteria limit of 2 g/m² /month.

Depositional dust monitoring results are presented in **Table 1**.

Table 1: Depositional Dust Monitoring Results: August 2025

Obtained: 04/11/2025 Published: 25/11/2025		Premise: Invincible Colliery Licensee: Shoalhaven EPL Number: 1095 Exposure Period: 28 days		
Sampling Point	Start Date	End Date	Insoluble Solids (g/m ² /month)	Rolling Annual Average (g/m ² /month)
ID-D1 (EPA Point 3)	04/08/2025	01/09/2025	0.2	0.93
ID-D2 (EPA Point 4)	04/08/2025	01/09/2025	0.2	1.26
ID-D3 (EPA Point 5)	04/08/2025	01/09/2025	2.6	1.04
ID-D4 (EPA Point 6)	04/08/2025	01/09/2025	0.3	1.19
ID-D5 (EPA Point 7)	04/08/2025	01/09/2025	0.5	1.03
ID-D6 (EPA Point 8)	04/08/2025	01/09/2025	0.4	0.93
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) criterion of 50 µg/m³ was exceeded on one occasion during August 2025, being on 21st August. Investigation into the exceedance was determined to be a testing anomaly.

The TSP and PM₁₀ annual rolling average results were calculated with the available data for the period of September 2024 to August 2025.

The average values were less than the annual average EPL limit as presented in **Table 2**.

Table 2: High Volume Air Sampler Monitoring Results: August 2025

Obtained: 21/11/2025 Published: 25/11/2025		Premise: Invincible Colliery Licensee: Shoalhaven EPL Number: 1095	
Sampling Point	Run Date	PM ₁₀ (µg/m ³)	TSP (µg/m ³)
HVAS1 (EPA Point 3)	07/08/2025	Invalid	11
	12/08/2025	3	6
	13/08/2025	5	9
	14/08/2025	7	22
	15/08/2025	1	5
	18/08/2025	7	20
	19/08/2025	5	5
	20/08/2025	6	5
	21/08/2025	180	180
	25/08/2025	3	5
	26/08/2025	2	13
	27/08/2025	1	7
	28/08/2025	1	4
Rolling Annual Average (Calculation period September 2024 to August 2025)		16	24
24 Hour Limit		50	--
Annual Average Limit		30	90

Required Frequency: Weekly – High Volume Air Sample run events occur every six days for 24 hours.

-- No Limit

Invalid runs due to machinery breakdown and sampling error. Catchup runs completed in August/September 2025

4 SURFACE WATER QUALITY

A discharge event is deemed to occur when water leaves the site either through the overflow channel of the Main Dam or as a result of actively pumping water. No discharge occurred from the Main Dam Discharge Point 2 (LD002) during August 2025. A monthly sample was collected from the Main Dam for due diligence purposes only.

Water quality results are presented in **Table 3**.

Table 3: Discharge Water Quality Results – August 2025

Sampled: 18/08/2025 Obtained: 04/11/2025 Published: 25/11/2025		Premise: Invincible Colliery Licensee: Shoalhaven EPL Number: 1095		
Sampling Point	Frequency	Pollutant	100 Percentile Concentration Limit	Sample Concentration
Main Dam	Monthly (for due diligence)	pH (pH unit)	--	6.6
		TSS (mg/L)	--	10
		Oil & Grease (mg/L)	--	<5
		Conductivity (µs/cm)	--	1,100
		Cobalt (dissolved) (mg/L)	--	18
		Copper (dissolved) (mg/L)	--	<1
		Manganese (dissolved) (mg/L)	--	2,600
		Nickel (dissolved) (mg/L)	--	73
		Iron (Total) (mg/L)	--	260
		Zinc (Total) (mg/L)	--	130
Discharge Point 2 (LD002) (EPA Point 2)	Weekly during discharge	pH (pH unit)	6.5 – 8.5	N/A
		TSS (mg/L)	30	N/A
		Oil & Grease (mg/L)	10	N/A
		Conductivity (µs/cm)	650	N/A
		Cobalt (dissolved) (mg/L)	0.0014	N/A
		Copper (dissolved) (mg/L)	0.0014	N/A
		Manganese (dissolved) (mg/L)	1.9	N/A
		Nickel (dissolved) (mg/L)	0.011	N/A
		Iron (Total) (mg/L)	0.3	N/A
		Zinc (Total) (mg/L)	0.008	N/A

--No limit applies

5 NOISE LIMITS

Attended noise monitoring is required to be undertaken on a quarterly frequency. Noise Monitoring reports for previous quarters are available on the Castlereagh Coal website: <https://ccoal.com.au/environmental-reporting-compliance/>

6 BLASTING

No blasting was undertaken during August 2025.

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