

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 (2012)*.

2 ENVIRONMENT PROTECTION LICENCE DETAILS

Invincible Colliery (EPL 1095)

Licensee: Shoalhaven Coal Pty Ltd

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

Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=50798&SYSUID=1&LICID=1095>

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 November 2021 to October 2022. 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**.

Table 1 Depositional Dust Monitoring Results: October 2022

Obtained: 25/11/2022		Premise: Invincible Colliery		
Published: 25/11/2022		Licensee: Shoalhaven Coal		
		EPL number: 1095		
		Exposure Period: 31 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)	4/10/2022	4/11/2022	0.6	0.4*
ID-D2 (EPA Point 4)	4/10/2022	4/11/2022	1.9	0.6
ID-D3 (EPA Point 5)	4/10/2022	4/11/2022	0.5	0.3
ID-D4 (EPA Point 6)	4/10/2022	4/11/2022	0.3	0.4
ID-D5 (EPA Point 7)	4/10/2022	4/11/2022	0.3	0.3
Annual Average Limit				4.0

Required Frequency: Monthly - exposure period 30 ± 2 days

* Excludes November 2021 result based on organic matter content.

3.2 PM10 AND TSP (HIGH VOLUME AIR SAMPLER)

The 24-hour maximum PM10 particulate matter concentration less than 10 microns (PM10) criterion of 50µg/m³ was not exceeded during October 2022. The total suspended particulate (TSP) and PM10 annual average results were in compliance with the annual average limit for the period November 2021 to October 2022.

PM₁₀ and TSP results for October 2022 are presented in **Table 2**.

Table 2 High Volume Air Sampler Monitoring Results: October 2022

Obtained: 25/11/2022		Premise: Invincible Colliery	
Published: 25/11/2022		Licensee: Shoalhaven Coal	
		EPL number: 1095	
Sampling Point	Run Date	PM ₁₀ (µg/m ³)	TSP (µg/m ³) [^]
HVAS 1 (EPA Point 3)	1-Oct-22	3.8	10.9
	7-Oct-22	2.4	5.5
	13-Oct-22	4.2	10.1
	19-Oct-22	6.3	16.3
	25-Oct-22	4.0	9.6
	31-Oct-22	4.7	11.2
Rolling Annual Average (Calculation period November 2021 to October 2022)		4.0	10.4
24 Hour Limit		50	--
Annual Average Limit		30	90

Note: Results in *italics* indicates the results were less than laboratory detection limit.

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

-- No Limit

MONTHLY ENVIRONMENTAL MONITORING DATA

October 2022

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. Water was observed to be discharging from the Main Dam during the site visit on 12 October 2022. A sample was collected at Discharge Point 2 (EPA Point 2). Water quality results are presented in **Table 3**.

Table 3 Discharge Water Quality Results: October 2022

Sampled:	12/10/2022	Premise:	Invincible Colliery	
Obtained:	25/11/2022	Licensee:	Shoalhaven Coal	
Published:	25/11/2022	EPL number:	1095	
Sampling Point	Frequency	Pollutant	100 Percentile Concentration Limit ^	Sample Concentration
Main Dam ¹	Monthly (for due diligence)	pH (pH unit)	--	NA
		TSS (mg/L)	--	NA
		Oil & Grease (mg/L)	--	NA
Discharge Point 2 ¹ (EPA Point 2)	Weekly during discharge	pH (pH unit)	6.5 – 8.5	7.1
		TSS (mg/L)	30	11
		Oil & Grease (mg/L)	10	<5

¹ – sample collected from Main Dam only when no discharge is occurring.

--No limit applies

The pH, total suspended solids (TSS) and oil and grease concentrations were all compliant with the EPL limits.

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: www.ccoal.com.au/environmental-reporting-compliance/

6 BLASTING

No blasting was undertaken during October 2022.

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