

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 annual average limit ($4\text{g}/\text{m}^2/\text{month}$) for the month of May 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: May 2022

Obtained: 23/06/2022		Premise: Invincible Colliery		
Published: 23/06/2022		Licensee: Shoalhaven Coal		
		EPL number: 1095		
		Exposure Period: 32 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)	2/05/2022	3/06/2022	0.3	0.2*
ID-D2 (EPA Point 4)	2/05/2022	3/06/2022	0.3	0.3
ID-D3 (EPA Point 5)	2/05/2022	3/06/2022	0.4	0.5
ID-D4 (EPA Point 6)	2/05/2022	3/06/2022	0.5	0.5
ID-D5 (EPA Point 7)	2/05/2022	3/06/2022	0.5	0.2
Annual Average Limit				4.0

Required Frequency: Monthly - exposure period 30 ± 2 days

* Excludes the November 2021 result based on the combustible matter content.

3.2 PM₁₀ AND TSP (HIGH VOLUME AIR SAMPLER)

Monitoring of particulate concentrations less than ten (10) micrometres (PM₁₀) is undertaken using High Volume Air Sampler (HV01) on a six (6) day, 24 hour run cycle. The total suspended particulate (TSP) concentration is determined from the PM₁₀ concentrations. Annual average concentrations for TSP and PM₁₀ are in compliance with the annual average limit. The 24-hour PM₁₀ concentrations for 4, 10 and 16 May were not recorded due to the HVAS unit malfunctioning. The HVAS unit was replaced and recommenced operation from 22 May 2022.

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

Table 2 High Volume Air Sampler Monitoring Results: May 2022

Obtained: 23/06/2022		Premise: Invincible Colliery		
Published: 23/06/2022		Licensee: Shoalhaven Coal		
		EPL number: 1095		
Sampling Point	Run Date	PM ₁₀ (µg/m ³)	TSP (µg/m ³) [^]	
HVAS 1 (EPA Point 3)	4-May-22	NR	NR	
	10-May-22	NR	NR	
	16-May-22	NR	NR	
	22-May-22	0.1	0.3	
	28-May-22	0.1	0.3	
Rolling Annual Average (calculation period June 2021 to May 2022)		4.6	11.5	
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

NR – no results recorded due to HVAS unit malfunction

MONTHLY ENVIRONMENTAL MONITORING DATA

May 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 26 May 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: May 2022

Sampled:	26/05/2022	Premise:	Invincible Colliery	
Obtained:	23/06/2022	Licensee:	Shoalhaven Coal	
Published:	23/06/2022	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	7.0
		TSS (mg/L)	30	7
		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 concentration was 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 May 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