

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

Invincible Colliery (EPL 1095)

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 February 2023 to January 2024. Maximum annual increase in deposited dust levels are 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: January 2024

Obtained:	27/02/2024	Premise:	Invincible Colliery	
Published:	25/06/2024	Licensee:	Shoalhaven	
		EPL Number:	1095	
		Exposure Period:	29 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)	08/01/2024	06/02/2024	0.5	0.76
ID-D2 (EPA Point 4)	08/01/2024	06/02/2024	0.3	0.69
ID-D3 (EPA Point 5)	08/01/2024	06/02/2024	0.9	0.90
ID-D4 (EPA Point 6)	08/01/2024	06/02/2024	0.2	0.65
ID-D5 (EPA Point 7)	08/01/2024	06/02/2024	0.1	0.57
ID-D6 (EPA Point 8)	08/01/2024	06/02/2024	1.7	0.85
Annual Average Limit				4.0

Required Frequency: Monthly - exposure period 30 ± 2 days

3.2 PM10 AND TSP

The particulate matter (PM₁₀) and total suspended particulate (TSP) were not recorded for the month of January 2024 due to engaging a new laboratory contractor. The TSP and PM₁₀ annual rolling average results were calculated with the available data for the period of February 2023 to January 2024. The average values were less than the annual average EPL limit as presented in **Table 2**.

Table 2: High Volume Air Sampler Monitoring Results: January 2024

Obtained: N/A		Premise: Invincible Colliery	
Published: 25/06/2024		Licensee: Shoalhaven	
		EPL Number: 1095	
Sampling Point	Run Date	PM ₁₀ (µg/m ³)	TSP (µg/m ³) ^
HVAS1 (EPA Point 3)	05/01/2024	NR	NR
	11/01/2024	NR	NR
	17/01/2024	NR	NR
	23/01/2024	NR	NR
	31/01/2024	NR	NR
Rolling Annual Average (Calculation period February 2023 to January 2024)		9.09	17.37
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

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. Site observed a discharge event from the Main Dam Discharge Point 2 (LD002) from the 5-23 January 2024. A total of 16 samples were collected from LD002 during this period. Water quality results are presented in **Table 3**.

Table 3: Discharge Water Quality Results – January 2024

Obtained: 19/02/24 Published: 25/06/24		Premise: Invincible Colliery Licensee: Shoalhaven EPL Number: 1095			
Sampling Point	Frequency	Pollutant	100 Percentile Concentration Limit [^]	Date	Sample Concentration
Main Dam	Monthly (for due diligence)	pH (pH unit)	--	24/01/24	7.6
		TSS (mg/L)	--	24/01/24	20
		Oil & Grease (mg/L)	--	24/01/24	<5
Discharge Point 2 (LD002) (EPA Point 2)	Weekly during discharge	pH (pH unit)	6.5 – 8.5	5/01/24	6.9
		TSS (mg/L)	30	5/01/24	<5
		Oil & Grease (mg/L)	10	5/01/24	<5
		pH (pH unit)	6.5 – 8.5	8/01/24	6.7
		TSS (mg/L)	30	8/01/24	6
		Oil & Grease (mg/L)	10	8/01/24	<5
		pH (pH unit)	6.5 – 8.5	9/01/24	6.4
		TSS (mg/L)	30	9/01/24	<5
		Oil & Grease (mg/L)	10	9/01/24	<5
		pH (pH unit)	6.5 – 8.5	10/01/24	6.59
		TSS (mg/L)	30	10/01/24	<5
		Oil & Grease (mg/L)	10	10/01/24	<5
		pH (pH unit)	6.5 – 8.5	11/01/24	6.4
		TSS (mg/L)	30	11/01/24	18
		Oil & Grease (mg/L)	10	11/01/24	<5
		pH (pH unit)	6.5 – 8.5	12/01/24	6.5
		TSS (mg/L)	30	12/01/24	5
		Oil & Grease (mg/L)	10	12/01/24	<5
		pH (pH unit)	6.5 – 8.5	13/01/24	6.58
		TSS (mg/L)	30	13/01/24	11
		Oil & Grease (mg/L)	10	13/01/24	<5
		pH (pH unit)	6.5 – 8.5	14/01/24	6.79
		TSS (mg/L)	30	14/01/24	6
		Oil & Grease (mg/L)	10	14/01/24	<5
		pH (pH unit)	6.5 – 8.5	15/01/24	6.75
		TSS (mg/L)	30	15/01/24	<5
		Oil & Grease (mg/L)	10	15/01/24	<5
		pH (pH unit)	6.5 – 8.5	16/01/24	6.39
		TSS (mg/L)	30	16/01/24	<5
		Oil & Grease (mg/L)	10	16/01/24	<5
		pH (pH unit)	6.5 – 8.5	18/01/24	6.65
		TSS (mg/L)	30	18/01/24	<5
		Oil & Grease (mg/L)	10	18/01/24	<5

		pH (pH unit)	6.5 – 8.5	19/01/24	6.56
		TSS (mg/L)	30	19/01/24	<5
		Oil & Grease (mg/L)	10	19/01/24	<5
		pH (pH unit)	6.5 – 8.5	20/01/24	6.6
		TSS (mg/L)	30	20/01/24	<5
		Oil & Grease (mg/L)	10	20/01/24	<5
		pH (pH unit)	6.5 – 8.5	21/01/24	6.46
		TSS (mg/L)	30	21/01/24	<5
		Oil & Grease (mg/L)	10	21/01/24	<5
		pH (pH unit)	6.5 – 8.5	22/01/24	6.5
		TSS (mg/L)	30	22/01/24	<5
		Oil & Grease (mg/L)	10	22/01/24	<5
		pH (pH unit)	6.5 – 8.5	23/01/24	6.43
		TSS (mg/L)	30	23/01/24	<5
		Oil & Grease (mg/L)	10	23/01/24	<5

--No limit applies

The pH, total suspended solids (TSS) and oil and grease concentrations were all compliant with the EPL limits, with the exception of the 9th, 11th, 16th, 21st and 23rd pH results which were slightly below 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: <https://ccoal.com.au/environmental-reporting-compliance/>

6 BLASTING

No blasting was undertaken during January 2024.

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