

## 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 August 2022 to July 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

July 2023



**Table 1** Depositional Dust Monitoring Results: July 2023

<b>Obtained:</b> 7/11/2023		<b>Premise:</b> Invincible Colliery		
<b>Published:</b> 9/11/2023		<b>Licensee:</b> Shoalhaven Coal		
		<b>EPL number:</b> 1095		
		<b>Exposure Period:</b> 32 days		
Sampling Point	Start Date	End Date	Insoluble Solids (g/m <sup>2</sup> /month)	Rolling Annual Average (g/m <sup>2</sup> /month)
IDD1 (EPA Point 3)	3/07/2023	4/08/2023	0.4	0.7
IDD2 (EPA Point 4)	3/07/2023	4/08/2023	0.7	0.8
IDD3 (EPA Point 5)	3/07/2023	4/08/2023	0.1	0.5
IDD4 (EPA Point 6)	3/07/2023	4/08/2023	0.3	0.6
IDD5 (EPA Point 7)	3/07/2023	4/08/2023	0.3	0.5
IDD6 (EPA Point 8)	3/07/2023	4/08/2023	0.3	0.3
<b>Annual Average Limit</b>				<b>4.0</b>

Required Frequency: Monthly - exposure period 30 ± 2 days

## 3.2 PM<sub>10</sub> AND TSP (HIGH VOLUME AIR SAMPLER)

The 24-hour maximum PM<sub>10</sub> particulate matter concentration less than 10 microns (PM<sub>10</sub>) was not measured during July 2023 due to contractual issues. The total suspended particulate (TSP) and PM<sub>10</sub> annual average results are in compliance with the annual average limit for the period August 2022 to July 2023.

PM<sub>10</sub> and TSP results for July 2023 are presented in **Table 2**.

**Table 2** High Volume Air Sampler Monitoring Results: July 2023

<b>Obtained:</b> 7/11/2023		<b>Premise:</b> Invincible Colliery		
<b>Published:</b> 9/11/2023		<b>Licensee:</b> Shoalhaven Coal		
		<b>EPL number:</b> 1095		
Sampling Point	Run Date	PM <sub>10</sub> (µg/m <sup>3</sup> )	TSP* (µg/m <sup>3</sup> )	
HVAS1 (EPA Point 3)	4-Jul-23	NR	NR	
	10-Jul-23	NR	NR	
	16-Jul-23	NR	NR	
	22-Jul-23	NR	NR	
	28-Jul-23	NR	NR	
Rolling Annual Average (Calculation period August 2022 to July 2023)		6.8	15.1	
<b>24 Hour Limit</b>		50	--	
<b>Annual Average Limit</b>		30	90	

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

-- No Limit \*TSP result is an estimate obtained from a calculation of the PM<sub>10</sub> concentration.

#### 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 was observed from the Main Dam during the site visit on 31 July 2023. A sample was collected from Main Dam. Water quality results are presented in **Table 3**.

**Table 3** Discharge Water Quality Results: July 2023

<b>Sampled:</b>	31/07/2023	<b>Premise:</b>	Invincible Colliery	
<b>Obtained:</b>	7/11/2023	<b>Licensee:</b>	Shoalhaven Coal	
<b>Published:</b>	9/11/2023	<b>EPL number:</b>	1095	
Sampling Point	Frequency	Pollutant	100 Percentile Concentration Limit ^	Sample Concentration
Main Dam <sup>1</sup>	Monthly (for due diligence)	pH (pH unit)	--	8.2
		TSS (mg/L)	--	7
		Oil & Grease (mg/L)	--	<5
Discharge Point 2 <sup>1</sup> (EPA Point 2)	Weekly during discharge	pH (pH unit)	6.5 – 8.5	NA
		TSS (mg/L)	30	NA
		Oil & Grease (mg/L)	10	NA

<sup>1</sup> – 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/](http://www.ccoal.com.au/environmental-reporting-compliance/)

#### 6 BLASTING

No blasting was undertaken during July 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**