

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 publish 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>

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3 AIR QUALITY

3.1 DEPOSITIONAL DUST

Depositional dust gauges for the July monitoring period was collected on 6 August 2018. All depositional dust sampling locations were in compliance with the annual average limit (4g/m²/month) for the month of July 2018. 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*

Obtained: 10/8/2018		Premise: Invincible Colliery		
Published: 24/8/2018		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)	5/07/2018	6/08/2018	0.3	1.1
ID-D2 (EPA Point 4)	5/07/2018	6/08/2018	0.5	1.0
ID-D3 (EPA Point 5)	5/07/2018	6/08/2018	1.0	0.9
ID-D4 (EPA Point 6)	5/07/2018	6/08/2018	0.8	0.6
ID-D5 (EPA Point 7)	5/07/2018	6/08/2018	2.9	1.0
Annual Average Limit				4.0

Required Frequency: Monthly - exposure period 30 ± 2 days

3.2 PM₁₀ AND TSP (HIGH VOLUME AIR SAMPLERS)

The 24 hour maximum PM₁₀ allowable limit of 50µg/m³ was not exceeded during July 2018. The TSP and PM₁₀ annual average results were in compliance with the annual average limit for the month of July 2018. An elevated PM₁₀ and TSP result was recorded at HV01 on 18 July 2018. Following an investigation, it was determined that two active bushfires were occurring to the south and south west of the site which is likely to have contributed to the elevated particulate results. It is noted that elevated particulate concentrations were also recorded by other air quality monitors in the Lithgow region on 18 July.

PM₁₀ and TSP results for July 2018 are presented in **Table 2**.

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Table 2 High Volume Air Sampler Monitoring Results

Obtained: 24/8/2018		Premise: Invincible Colliery	
Published: 24/8/2018		Licensee: Shoalhaven Coal	
		EPL number: 1095	
Sampling Point	Run Date	PM ₁₀ (µg/m³)	TSP (µg/m³)^
HVAS1 (EPA Point 3)	6-Jul-18	4	10
	12-Jul-18	4	10
	18-Jul-18	49	122.5
	24-Jul-18	12	30
	30-Jul-18	5	12.5
Annual Average		8.4	20.9
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 event every six days for 24 hours.

-- No Limit

4 WATER QUALITY

No discharge events occurred at LD002 during July 2018. The sample at Main Dam was collected for due diligence purposes only. Water quality results received during July 2018 are presented in **Table 3**.

Table 3 Discharge Water Quality Results

Sampled: 4/07/2018		Premise: Invincible Colliery		
Obtained: 25/07/2018		Licensee: Shoalhaven Coal		
Published: 24/08/2018		EPL number: 1095		
Sampling Point	Frequency	Pollutant	100 Percentile Concentration Limit ^	Sample Concentration
Main Dam ¹	Monthly (for due diligence)	pH (pH unit)	--	7.62
		TSS (mg/L)	--	16
		Oil & Grease (mg/L)	--	<5
Discharge Point 2 (EPA Point 2)	Monthly during discharge	pH (pH unit)	6.5 – 8.5	NS
		TSS (mg/L)	30	NS
		Oil & Grease (mg/L)	10	NS

NS – no sample, no discharge event.

¹ – sample collected for due diligence purposes only.

--No limit applies

5 NOISE LIMITS

The Quarter 3, 2018 Noise monitoring has not yet been completed. All previous Environmental Noise Monitoring Results are available on the Castlereagh Coal website:

http://www.castlereaghcoal.com.au/?page_id=1101

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6 BLASTING

No blasting was undertaken during July 2018.

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