

## 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>

## 3 AIR QUALITY

### 3.1 DEPOSITIONAL DUST

Depositional dust gauges for the April 2020 monitoring period were collected on 5 May 2020. All depositional dust sampling locations were in compliance with the annual average limit (4g/m<sup>2</sup>/month) for the month of April 2020. Maximum annual increase in deposited dust levels are also below the criteria limit of 2 g/m<sup>2</sup>/month. Depositional dust monitoring results are presented in **Table 1**.

# MONTHLY ENVIRONMENTAL MONITORING DATA

April 2020

**Table 1** *Depositional Dust Monitoring Results*

| <b>Obtained:</b> 11/05/2020  |            | <b>Premise:</b>         | Invincible Colliery                        |                                                  |
|------------------------------|------------|-------------------------|--------------------------------------------|--------------------------------------------------|
| <b>Published:</b> 19/05/2020 |            | <b>Licensee:</b>        | Shoalhaven Coal                            |                                                  |
|                              |            | <b>EPL number:</b>      | 1095                                       |                                                  |
|                              |            | <b>Exposure Period:</b> | 28 days                                    |                                                  |
| Sampling Point               | Start Date | End Date                | Insoluble Solids (g/m <sup>2</sup> /month) | Rolling Annual Average (g/m <sup>2</sup> /month) |
| ID-D1 (EPA Point 3)          | 7/04/2020  | 5/05/2020               | 0.5                                        | 1.5                                              |
| ID-D2 (EPA Point 4)          | 7/04/2020  | 5/05/2020               | 0.2                                        | 1.1                                              |
| ID-D3 (EPA Point 5)          | 7/04/2020  | 5/05/2020               | 0.5                                        | 1.8                                              |
| ID-D4 (EPA Point 6)          | 7/04/2020  | 5/05/2020               | 1.4                                        | 1.2                                              |
| ID-D5 (EPA Point 7)          | 7/04/2020  | 5/05/2020               | 0.4                                        | 1.0                                              |
| <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 SAMPLERS)

Monitoring of particulate concentrations less than ten (10) micrometres (PM<sub>10</sub>) was undertaken using High Volume Air Sampler (HV01) on a six (6) day, 24 hour run cycle. The total suspended particulate (TSP) concentration was determined from the PM<sub>10</sub> concentrations. Annual average concentrations for TSP and PM<sub>10</sub> were in compliance with the annual average limit. The 24-hour PM<sub>10</sub> concentrations for April did not exceed the 24-hour average maximum allowable limit of 50µg/m<sup>3</sup>.

PM<sub>10</sub> and TSP results for April 2020 are presented in **Table 2**.

**Table 2** *High Volume Air Sampler Monitoring Results*

| <b>Obtained:</b> 11/05/2020  |           | <b>Premise:</b>                       | Invincible Colliery                   |  |
|------------------------------|-----------|---------------------------------------|---------------------------------------|--|
| <b>Published:</b> 19/05/2020 |           | <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> ) <sup>^</sup> |  |
| HVAS1 (EPA Point 3)          | 2-Apr-20  | 7                                     | 17.5                                  |  |
|                              | 8-Apr-20  | 3                                     | 7.5                                   |  |
|                              | 14-Apr-20 | 5                                     | 12.5                                  |  |
|                              | 20-Apr-20 | 8                                     | 20                                    |  |
|                              | 26-Apr-20 | 12                                    | 30                                    |  |
| Annual Average               |           | 20.9                                  | 52.3                                  |  |
| <b>24 Hour Limit</b>         |           | <b>50</b>                             | <b>--</b>                             |  |
| <b>Annual Average Limit</b>  |           | <b>30</b>                             | <b>90</b>                             |  |

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

April 2020

### 4 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. A discharge event was observed during the site visit on the 7 April 2020; water was observed to be flowing through the overflow channel of the Main Dam, as such, a sample was collected from Discharge Point 2 (EPA Point 2). A sample at Main Dam was collected for due diligence purposes only. Water quality results are presented in Table 3.

**Table 3** Discharge Water Quality Results

| <b>Sampled:</b>                 | 7/04/2020                   | <b>Premise:</b>     | Invincible Colliery                  |                      |
|---------------------------------|-----------------------------|---------------------|--------------------------------------|----------------------|
| <b>Obtained:</b>                | 11/05/2020                  | <b>Licensee:</b>    | Shoalhaven Coal                      |                      |
| <b>Published:</b>               | 19/05/2020                  | <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)        | --                                   | 7.43                 |
|                                 |                             | TSS (mg/L)          | --                                   | 8                    |
|                                 |                             | Oil & Grease (mg/L) | --                                   | <5                   |
| Discharge Point 2 (EPA Point 2) | Monthly during discharge    | pH (pH unit)        | 6.5 – 8.5                            | 7.12                 |
|                                 |                             | TSS (mg/L)          | 30                                   | 6                    |
|                                 |                             | Oil & Grease (mg/L) | 10                                   | <5                   |

NS – no sample, no discharge event.

<sup>1</sup> – sample collected for due diligence purposes only.

--No limit applies

Water quality within LD002 was noted to be compliant with the 100 percentile concentration limits.

### 5 NOISE LIMITS

Attended noise monitoring is required to be undertaken on a quarterly frequency. Environmental Noise Monitoring results for previous quarters are available on the Castlereagh Coal website: [http://www.castlereaghcoal.com.au/?page\\_id=1101](http://www.castlereaghcoal.com.au/?page_id=1101)

### 6 BLASTING

No blasting was undertaken during April 2020.

### 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**