



WONGAWILLI COLLIERY

ENVIRONMENTAL MONITORING REPORT

ENVIRONMENTAL PROTECTION LICENCE NO: 1087



*Published
7 February 2020*

Site	Wongawilli Colliery	DOC ID	WWC EC RPT 003
Type	Report	Date Published	7/02/2020
Doc Title	WWC ENVIRONMENTAL MONITORING REPORT EPL NO.1087		

GLOSSARY OF TERMS AND ABBREVIATIONS

Abbreviations	
EPL	Environmental Protection Licence
KL/d	Kilolitres per day
mg/L	Milligrams per litre
BAM	Beta-Attenuation Monitor – Particulate Matter 10 µg

Term	Definition
Dry Weather Conditions	'Dry Weather Conditions' means less than ten millimetres of rain falling within a 24 hour period and is measured at a point on the premises.
Wet Weather Conditions	'Wet Weather Conditions' means anything other than Dry Weather Conditions.

LICENCE DETAILS

Licence Number 1087
 Licence Version Date 26/10/2018

Premises

Wongawilli Colliery
 Jersey Farm Road, West Dapto NSW 2530
 PO Box 924, Dapto NSW 2530

This document is developed and published in fulfilment of **section 66(6) of the Protection of the Environment Operations (POEO) Act 1997**, to make any of the monitoring data that relates to pollution, and the licensee's name, publicly and prominently available on their website in accordance with any requirements issued in writing by the EPA.

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1 WONGAWILLI COLLIERY EPL MONITORING LOCATION POINTS



Figure 1 - Licensed Monitoring and Discharge Points at Wongawilli

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2 WONGAWILLI COLLIERY EPL MONITORING LOCATION POINTS

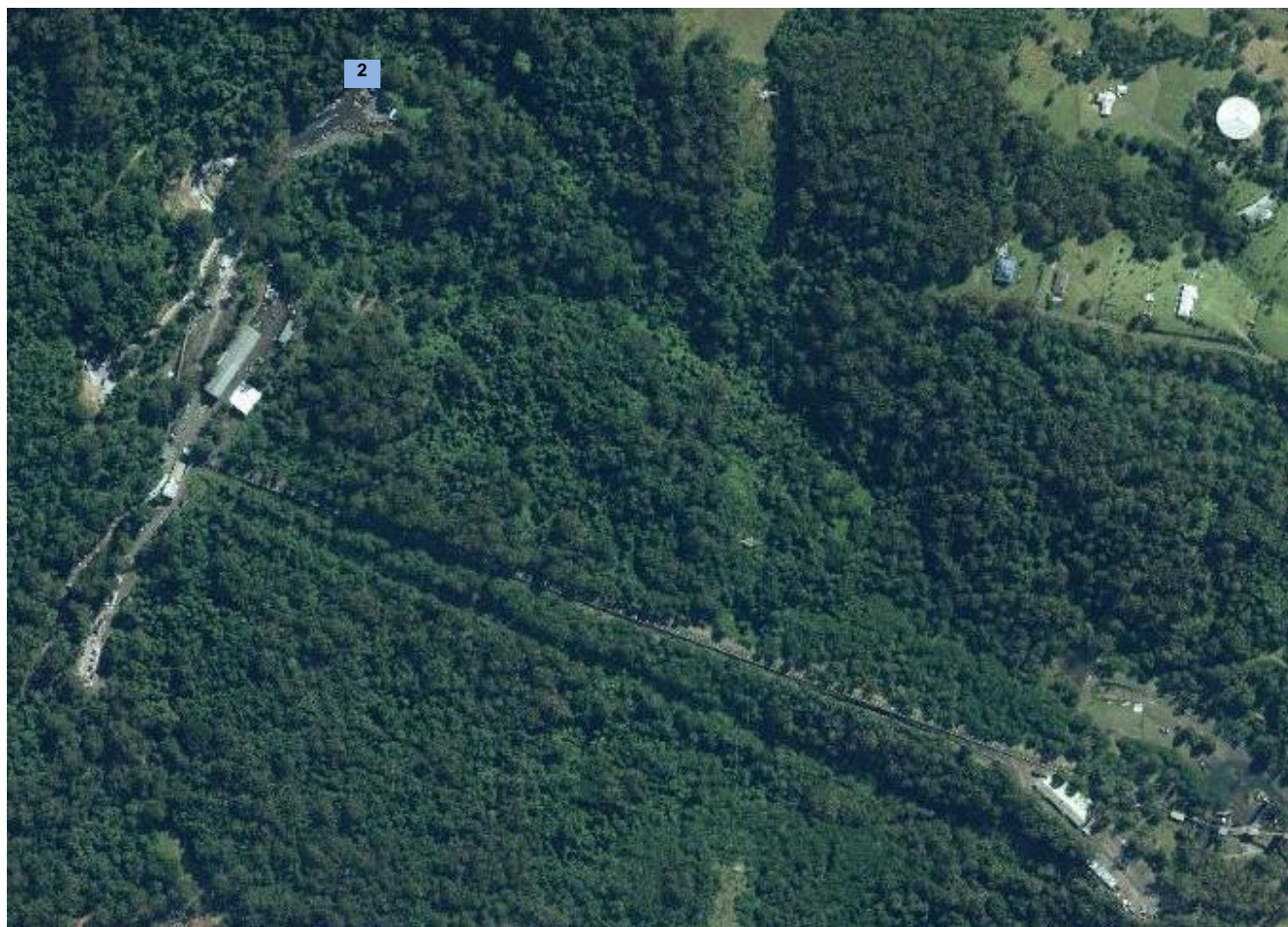


Figure 2 - Licensed Discharge Point 2 at Wongawilli Pit-Top Area

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3 WONGAWILLI COLLIERY EPL MONITORING LOCATION POINTS

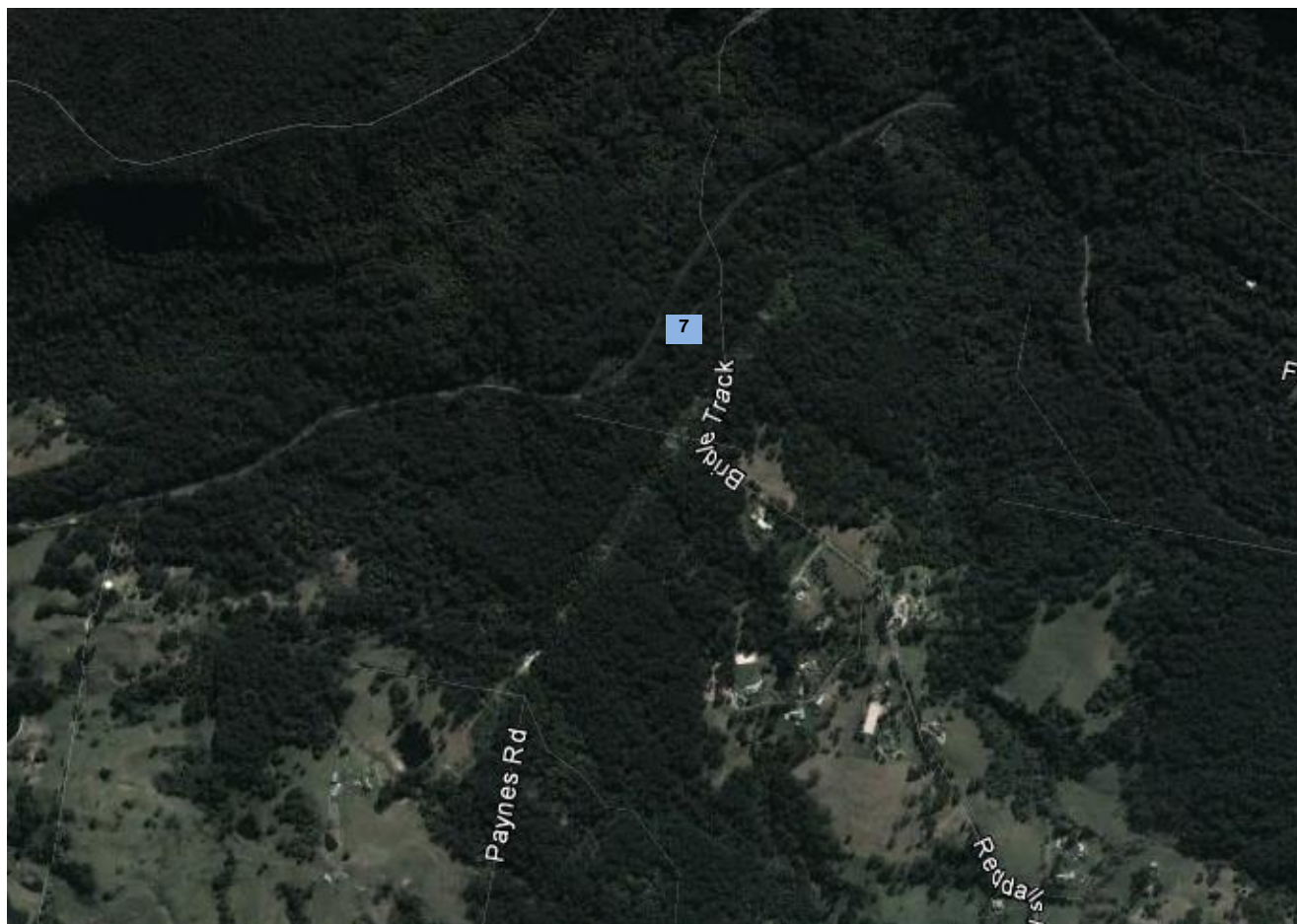


Figure 3 - Licensed Discharge Point 7 at Junction at Forest 11 Portal, Mt Kembla

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4 WATER QUALITY MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Discharge Point No: 1

Location: Secondary Stabilisation Lagoon; STP Discharge

Monitoring Frequency: Monthly during discharge

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

EPL 100 Percentile Concentration limits:

pH (pH units): 6.5 – 8.5

Total Suspended Solids (mg/L): 50

Oil & Grease (mg/L): 10

BOD (mg/L): 20

Date of Sampling	Date of results obtained	Date Published	Discharging	Time	BOD (mg/L)	TSS (mg/L)	pH (pH Units)	Oil & Grease (mg/L)	Comments
January	-	08/03/19	No	-	-	-	-	-	*
February	-	08/03/19	No	-	-	-	-	-	*
March	-	04/04/19	No	-	-	-	-	-	*
April	-	07/05/19	No	-	-	-	-	-	*
May	-	05/06/19	No	-	-	-	-	-	*
June	-	03/07/19	No	-	-	-	-	-	*
July	-	05/08/19	No	-	-	-	-	-	*
August	-	05/09/19	No	-	-	-	-	-	*
September	-	01/10/19	No	-	-	-	-	-	*
October	-	04/11/19	No	-	-	-	-	-	*
November	-	03/12/19	No	-	-	-	-	-	*
December	-	06/01/20	No	-	-	-	-	-	*

* Water was not discharged via this point during the period.

Site	Wongawilli Colliery	DOC ID	WWC EC RPT 003
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5 WATER QUALITY MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Discharge Point No: 2

Location: Mine-water discharge at Transport Portal

Monitoring Frequency: Once a month

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

EPL 100 Percentile Concentration limits:

pH (pH units): 6.5 – 8.5

Total Suspended Solids (mg/L): 50

Oil & Grease (mg/L):10

Date of Sampling	Time	Date of results obtained	Date Published	Discharging	TSS (mg/L)	pH (pH Units)	Oil & Grease (mg/L)	Comments
10/01/19	11:05am	20/03/19	04/04/19	Yes	8	7.9	<5	
05/02/19	02:50pm	20/03/19	04/04/19	Yes	27	7.7	<5	
08/03/19	01:45pm	10/04/19	11/04/19	Yes	29	7.6	<5	
18/04/19	12:44pm	-	07/05/19	No	-	-	-	*
09/05/19	12:20pm	-	05/06/19	No	-	-	-	*
07/06/19	11:55am	-	03/05/19	No	-	-	-	*
10/07/19	12:55pm	-	05/08/19	No	-	-	-	*
09/08/19	10:00am	10/09/19	27/09/19	Yes	26	8.4	<5	
09/09/19	10:00am	25/09/19	27/09/19	Yes	18	8.4**	<5	
16/10/19	12:00pm	29/10/19	04/11/19	Yes	6	8.5**	<5	
08/11/19	01:53pm	-	03/12/19	No	-	-	-	*
04/12/19	10:48am	-	06/01/20	No	-	-	-	*

* Unable to sample as the site was dry. The mine has not been operating since March 2019 and mine-water discharge has been very low to Nil.

**Lab result used.

*** Awaiting lab result.

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6 WATER QUALITY MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Discharge Point No: 7

Location: Junction at Forest 11 Portal – old portal

Monitoring Frequency: Monthly during discharge

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

EPL 100 Percentile Concentration limits:

pH (pH units): 6.5 – 8.5

Total Suspended Solids (mg/L): 50

Oil & Grease (mg/L):10

Date of Sampling	Date of results obtained	Date Published	Discharging	Time	TSS (mg/L)	pH (pH Units)	Oil & Grease (mg/L)	Comments
January	-	08/03/19	No	-	-	-	-	*
February	-	08/03/19	No	-	-	-	-	*
March	-	04/04/19	No	-	-	-	-	*
April	-	07/05/19	No	-	-	-	-	*
May	-	05/06/19	No	-	-	-	-	*
June	-	03/07/19	No	-	-	-	-	*
July	-	05/08/19	No	-	-	-	-	*
August	-	05/09/19	No	-	-	-	-	*
September	-	01/10/19	No	-	-	-	-	*
October	-	04/11/19	No	-	-	-	-	*
November	-	03/12/19	No	-	-	-	-	*
December	-	06/01/20	No	-	-	-	-	*

* Water was not discharged at this point during the period

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7 DUST MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Point No: 9

Location: South Western Boundary

Monitoring Frequency: Monthly

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

MONTHLY RESULTS (g/m²/month)

Sample Period	Date of results obtained	Date Published	Ash	Combustible Solids	Insoluble Solids	Comments
January	20/03/19	04/04/19	1.1	0.4	1.5	
February	29/04/19	08/05/19	1.0	0.3	1.3	
March	11/06/19	13/06/19	1.2	0.4	1.6	
April	01/07/19	03/07/19	0.3	0.3	0.6	
May	15/08/19	05/09/19	0.2	0.4	0.6	
June	24/07/19	05/08/19	0.1	<0.1	0.1	
July	10/09/19	27/09/19	0.1	0.1	0.2	
August	11/10/19	04/11/19	0.1	0.2	0.3	
September	29/10/19	04/11/19	0.2	0.2	0.4	
October	14/01/20	17/01/20	0.7	0.3	1.0	
November	14/01/20	17/01/20	1.0	0.4	1.4	
December	07/02/20	07/02/20	1.3	0.6	1.9	

* Awaiting lab results

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8 DUST MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Point No: 10

Location: Wongawilli Mine Bins

Monitoring Frequency: Monthly

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

MONTHLY RESULTS (g/m²/month)

Sample Period	Date of results obtained	Date Published	Ash	Combustible Solids	Insoluble Solids	Comments
January	20/03/19	04/04/19	1.3	0.7	2.0	
February	29/04/19	08/05/19	1.5	0.4	1.9	
March	11/06/19	13/06/19	1.0	0.7	1.7	
April	01/07/19	03/07/19	0.4	0.2	0.6	
May	15/08/19	05/09/19	0.6	0.8	1.4	
June	24/07/19	05/08/19	0.1	0.2	0.3	
July	10/09/19	27/09/19	0.2	0.5	0.7	
August	11/10/19	04/11/19	0.4	0.6	1.0	
September	29/10/19	04/11/19	0.6	0.6	1.2	
October	14/01/20	17/01/20	0.9	0.6	1.5	
November	14/01/20	17/01/20	1.5	0.7	2.2	
December	07/02/20	07/02/20	3.4	1.0	4.4	

* Awaiting lab results

Note: Due to the high depositional dust results in December, a visual analysis of the sample was conducted at the lab which determined that the result contained 85% dirt, <5% coal, <5% insects, 10% vegetation and 5% copper sludge.

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9 DUST MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Point No: 11

Location: Wongawilli Village (behind old school)

Monitoring Frequency: Monthly

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

MONTHLY RESULTS (g/m²/month)

Sample Period	Date of results obtained	Date Published	Ash	Combustible Solids	Insoluble Solids	Comments
January	20/03/19	04/04/19	3.2	2.6	5.8	
February	29/04/19	08/05/19	1.3	0.6	1.9	
March	11/06/19	13/06/19	1.5	1.1	2.6	
April	01/07/19	03/07/19	1.3	1.1	2.4	
May	15/08/19	05/09/19	0.5	0.6	1.1	
June	24/07/19	05/08/19	0.2	0.1	0.3	
July	10/09/19	27/09/19	0.4	0.6	1.0	
August	11/10/19	04/11/19	0.4	0.2	0.6	
September	29/10/19	04/11/19	0.3	0.3	0.6	
October	14/01/20	17/01/20	1.8	1.1	2.9	
November	14/01/20	17/01/20	1.5	0.8	2.3	
December	07/02/20	07/02/20	2.7	1.2	3.9	

* Awaiting lab results

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10 DUST MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Point No: 12

Location: Shone Ave

Monitoring Frequency: Monthly

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

MONTHLY RESULTS (g/m²/month)

Sample Period	Date of results obtained	Date Published	Ash	Combustible Solids	Insoluble Solids	Comments
January	20/03/19	04/04/19	0.7	0.4	1.1	
February	29/04/19	08/05/19	0.4	0.3	0.7	
March	11/06/19	13/06/19	1.2	1.0	2.2	
April	01/07/19	03/07/19	0.2	<0.1	0.2	
May	15/08/19	05/09/19	0.3	0.4	0.7	
June	24/07/19	05/08/19	0.1	0.2	0.3	
July	10/09/19	27/09/19	0.1	0.2	0.3	
August	11/10/19	04/11/19	0.4	0.3	0.7	
September	29/10/19	04/11/19	0.3	0.1	0.4	
October	14/01/20	17/01/20	0.8	0.4	1.2	
November	14/01/20	17/01/20	0.8	0.5	1.3	
December	07/02/20	07/02/20	1.1	0.8	1.9	

* Awaiting lab results

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11 DUST MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Point No: 13

Location: West Dapto Rd/Bong Bong Rd

Monitoring Frequency: Monthly

Name of Testing Laboratory: ALS Laboratory Group

Nata Registered: Yes

MONTHLY RESULTS (g/m²/month)

Sample Period	Date of results obtained	Date Published	Ash	Combustible Solids	Insoluble Solids	Comments
January	20/03/19	04/04/19	1.5	1.2	2.7	
February	29/04/19	08/05/19	1.5	1.0	2.5	
March	11/06/19	13/06/19	4.3	4.5	8.8	See note
April	01/06/19	03/07/19	0.7	0.3	1.0	
May	15/08/19	05/09/19	0.4	0.5	0.9	
June	24/07/19	05/08/19	0.2	0.3	0.5	
July	10/09/19	27/09/19	0.2	0.2	0.4	
August	11/10/19	04/11/19	0.3	0.2	0.5	
September	29/10/19	04/11/19	0.8	0.6	1.4	
October	14/01/20	17/01/20	1.3	0.8	2.1	
November	14/01/20	17/01/20	2.0	1.3	3.3	
December	07/02/20	07/02/20	2.1	0.9	3.0	

* Awaiting lab results

Note: Due to the high depositional dust results in April, a visual analysis of the sample was conducted at the lab which attributed 100% of the result to insect debris. It was difficult to determine if other analytes may have been present due to the large amount of insect debris found on the sample filter, precluding their identification. We are therefore unable to determine whether the high depositional dust results are due to anything other than insects (e.g. coal, dirt, vegetation).

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12 DUST MONITORING RESULTS

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

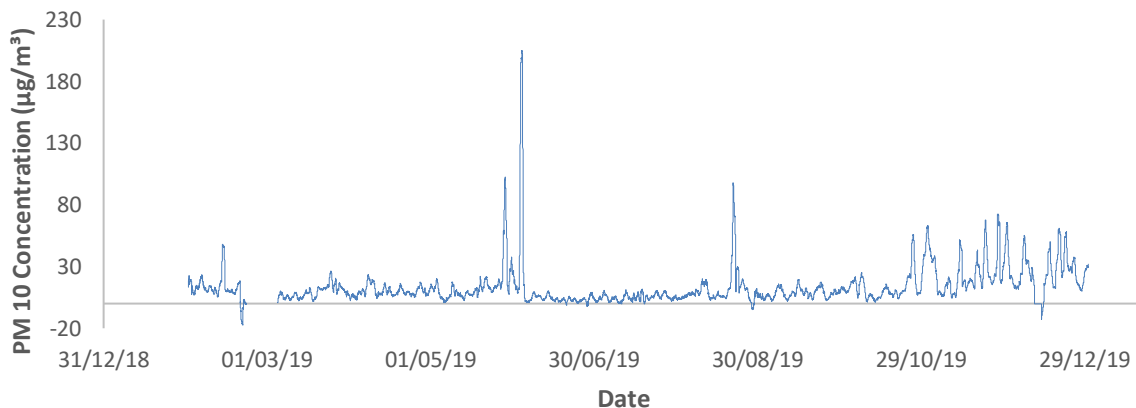
Licensed Point No: 14

Location: Jersey Farm Road

Type of Monitoring: Particulate Matter 10 $\mu\text{g}/\text{m}^3$

Monitoring Frequency: Continuous

Wongawilli BAM - PM10 Concentration Data for 2019



Please see Appendix A to view the above graph in a larger size

Note:

1 - 31/1/19 - No data available for this period due to power failure at the BAM site. Figure shows the 24 hour rolling average PM10 concentration in micrograms per meter cubed from the Wongawilli BAM.

27-28/5/19 - Data spike could be attributed to high W and WNW wind gusts at speeds of 85 and 93km/h respectively, and RFS hazard reduction burning which occurred on the escarpment at the time. Data recorded at Albion Park (www.bom.gov.au).

03-04/06/19 - Data spike could be attributed to high WSW and SSW wind gusts at speeds of 56 and 93km/h respectively, and RFS hazard reduction burning which occurred on the escarpment at the time. Data recorded at Albion Park (www.bom.gov.au).

As Wongawilli mine has not been operational since March 2019, the data spikes are likely to be attributed to external dust sources such as back burning on the escarpment on days before the spikes occurred (22 May - 26 May and 31 May – 2 June), large scale residential developments with unsealed ground and surrounding industrial sites all of which are compounded by excessive wind speeds recorded on those days.

Data from the NSW OEH PM10 monitoring website showed elevated levels of PM10 from its Kembla Grange monitoring location on the same dates suggestive of an air shared wide event (<https://www.environment.nsw.gov.au/aqms/aqi.htm>).



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29/10/19 – 31/12/19 – Increased levels of PM10 starting from late October 2019 coincide with the start of the NSW bushfires and as a result, the reduction in air quality in the Illawarra region.

Data from the NSW OEH PM10 monitoring website showed elevated levels of PM10 from its Kembla Grange monitoring location during the same period, suggestive of an air shared wide event (<https://www.environment.nsw.gov.au/aqms/aqi.htm>).

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13 LICENSED DISCHARGE VOLUMES

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Discharge Point No: 1

Location: Secondary Stabilisation Lagoon; STP Discharge

Type of Monitoring: Volume of liquid discharge

Monitoring Frequency: Continuous

EPL Volume and Mass limits: 30kL/d

Monitoring Period	Discharging	Date Published	Average Flow (kL/d)	Max Flow (kL/d)	Comments
January	No	08/03/19	-	-	*
February	No	08/03/19	-	-	*
March	No	04/04/19	-	-	*
April	No	07/05/19	-	-	*
May	No	06/06/19	-	-	*
June	No	03/07/19	-	-	*
July	No	05/08/19	-	-	*
August	No	05/09/19	-	-	*
September	No	01/10/19	-	-	*
October	No	04/11/19	-	-	*
November	No	03/12/19	-	-	*
December	No	06/01/20	-	-	*

* Water was not discharged via this point during the period

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14 LICENSED DISCHARGE VOLUMES

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Discharge Point No: 2

Location: Mine-water discharge at Transport Portal

Type of Monitoring: Volume of liquid discharge

Monitoring Frequency: Continuous

EPL Volume and Mass limits: 10,000kL/d

Monitoring Period	Discharging	Date Published	Average Flow (kL/d)	Max Flow (kL/d)	Comments
January	Yes	05/03/19	247.87	2205.02	
February	Yes	05/03/19	291.64	1491.14	
March	Yes	04/04/19	112.47	856.79	
April	Yes	07/05/19	0.003	0.036	
May	Yes	05/06/19	2.592	28.028	
June	No	03/07/19	0	0	
July	No	05/08/19	0	0	
August	Yes	05/09/19	8.40	32.00	
September	Yes	09/10/19	32.20	172.80	
October	Yes	05/11/19	22.74	173.00	
November	No	09/12/19	0	0	
December	No	06/01/20	0	0	

*Due to the mine no longer operating as of March 2019, mine-water discharge has been very low to Nil.

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15 LICENSED DISCHARGE VOLUMES

Name of Licensee: Wollongong Coal Limited

Address of Premises: Jersey Farm Road, West Dapto, NSW 2530

Environmental Protection Licence No: 1087

Licensed Discharge Point No: 8

Location: Hunter 2 Dam – old portal

Type of Monitoring: Volume of liquid discharge

Monitoring Frequency: Continuous

EPL Volume and Mass limits: 2500 kL/d

Monitoring Period	Discharging	Date Published	Average Flow (kL/d)	Max Flow (kL/d)	Comments
January	No	08/03/19	-	-	*
February	No	08/03/19	-	-	*
March	No	04/04/19	-	-	*
April	No	07/05/19	-	-	*
May	No	05/06/19	-	-	*
June	No	03/07/19	-	-	*
July	No	05/08/19	-	-	*
August	No	05/09/19	-	-	*
September	No	01/10/19	-	-	*
October	No	04/10/19	-	-	*
November	No	03/12/19	-	-	*
December	No	06/01/20	-	-	*

* Water was not discharged via this point during the period.



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APPENDIX A

Wongawilli BAM - PM10 Concentration Data for 2019

