

| | | | |
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| Site | Wongawilli Colliery | DOC ID | |
| Type | Report | Date Published | 25/04/2017 |
| Doc Title | WWC EPL 1087 MONTHLY MONITORING REPORT | | |

WONGAWILLI COLLIERY

MONTHLY MONITORING REPORT

ENVIRONMENTAL PROTECTION LICENCE NO: 1087



GLOSSARY OF TERMS AND ABBREVIATIONS

| Abbreviations | |
|---------------|----------------------------------|
| EPL | Environmental Protection Licence |
| KL/d | Kilolitres per day |
| mg/L | Milligrams per litre |

| 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. |

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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

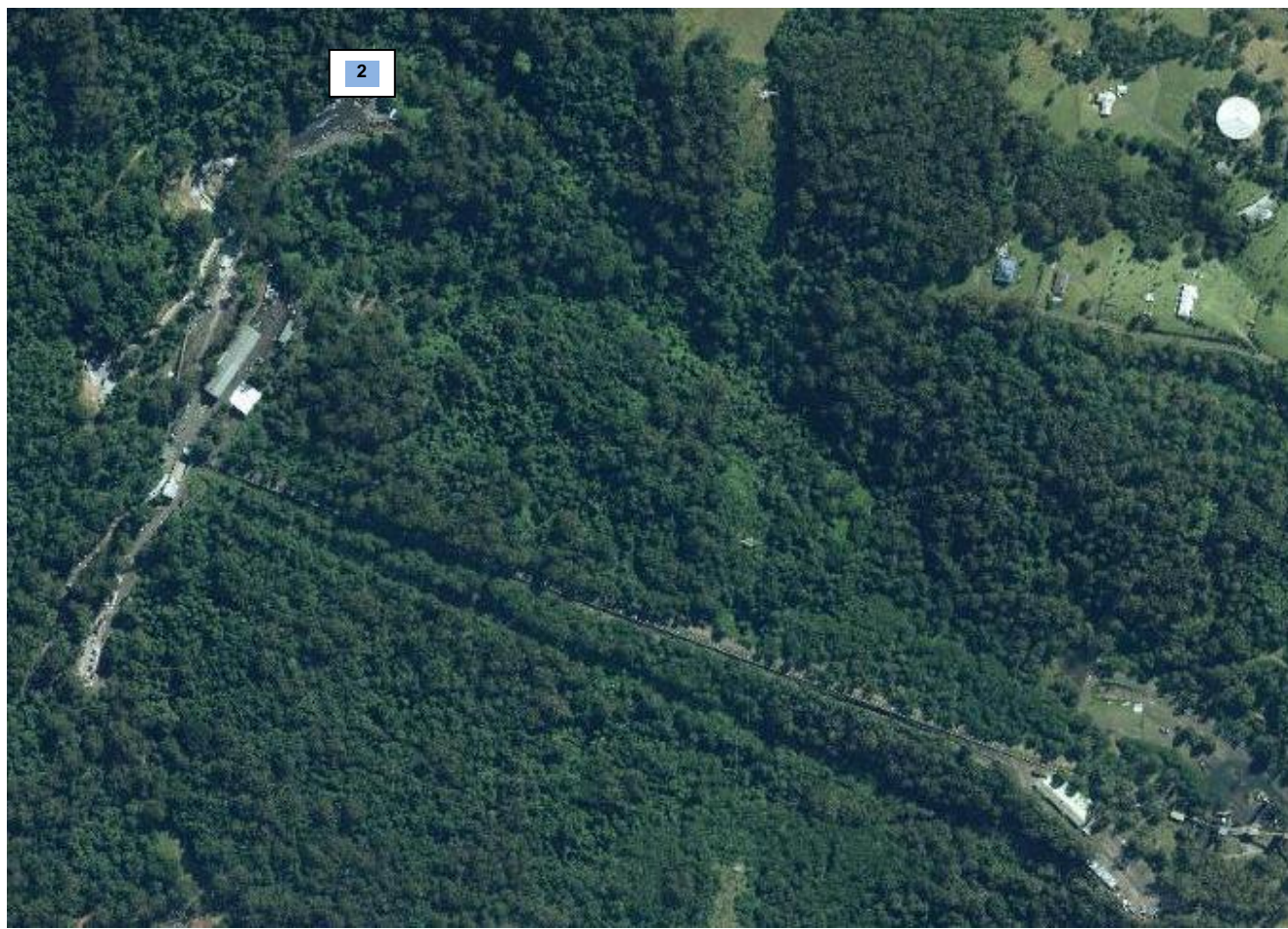


Figure 2 - Licensed Discharge Point 2 at Wongawilli Pit-Top Area

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3 WONGAWILLI COLLIERY EPL MONITORING LOCATION POINTS

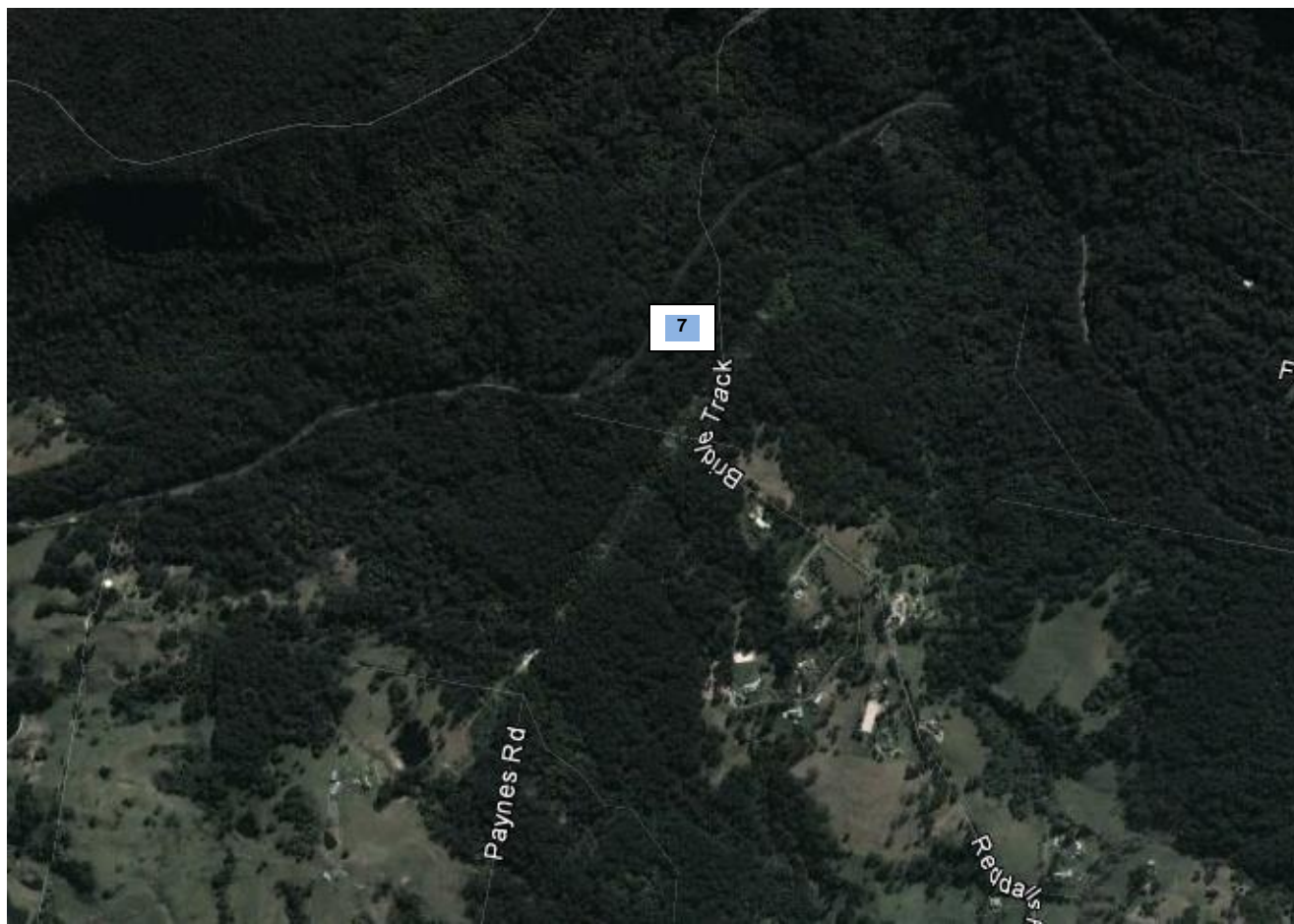


Figure 3 - Licensed Discharge Point 7 at Junction at Forest 11 Portal, Mt Kembla

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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

Person Sampling: D. Clarkson, K. Prajapati

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 | | | No | | | | | | * |
| February | | | No | | | | | | * |
| March | | | No | | | | | | * |
| April | | | No | | | | | | * |
| May | | | No | | | | | | * |
| June | | | No | | | | | | * |
| July | | | No | | | | | | * |
| August | | | No | | | | | | * |
| September | | | No | | | | | | * |
| October | | | No | | | | | | * |
| November | | | No | | | | | | * |
| December | | | No | | | | | | * |

* Water was not discharged via this point during the period

| | | | |
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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

Person Sampling: D. Clarkson, K. Prajapati

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 |
|------------------|--------------------------|----------------|-------------|----------|------------|---------------|---------------------|----------|
| 29/01/16 | 03/05/16 | 04/05/16 | Yes | 10.00 AM | 21 | 8.6 | <5 | * |
| 25/02/16 | 03/05/16 | 04/05/16 | Yes | 08.00 AM | 21 | 8.0 | <5 | |
| 22/03/16 | 13/06/16 | 28/06/16 | Yes | 10:30 AM | 70 | 8.2 | 6 | ** |
| 22/04/16 | 13/06/16 | 28/06/16 | Yes | 08:45 AM | <5 | 7.5 | <5 | |
| 23/05/16 | 06/07/16 | 11/07/16 | Yes | 09:00 AM | 28 | 7.4 | <5 | |
| 23/06/16 | 26/07/16 | 08/08/16 | Yes | 09:40 AM | <5 | 7.7 | <5 | |
| 14/07/16 | 03/08/16 | 08/08/16 | Yes | 11:00 AM | 79 | 7.4 | <5 | *** |
| 19/08/16 | 19/10/16 | 31/10/16 | Yes | 11:15 AM | 10 | 7.5 | <5 | |
| 05/09/16 | 19/10/16 | 31/10/16 | Yes | 01:00 PM | 5 | 7.2 | <5 | |
| 06/10/16 | 14/11/16 | 18/11/16 | Yes | 12:20 PM | 15 | 7.5 | <5 | |
| 04/11/16 | 22/11/16 | 05/12/16 | Yes | 07:30 AM | <5 | 7.6 | <5 | |
| 06/12/16 | 04/01/17 | 04/01/17 | Yes | 11:40 AM | 41 | 7.6 | <5 | |

*pH result higher than the EPL 100 Percentile Concentration limits

**TSS result remains within relative percentage deviation for the analysis

***TSS result higher than the EPL 100 Percentile Concentration limits

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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: 3

Location: Underflow from Filter Pond

Monitoring Frequency: Monthly during discharge

Person Sampling: D. Clarkson, K. Prajapati

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 | | | No | | | | | * |
| February | | | No | | | | | * |
| March | | | No | | | | | * |
| April | | | No | | | | | * |
| May | | | No | | | | | * |
| June | | | No | | | | | * |
| July | | | No | | | | | * |
| August | | | No | | | | | * |
| September | | | No | | | | | ** |
| October | | | | | | | | ** |
| November | | | | | | | | ** |
| December | | | | | | | | ** |

* Water was not discharged via this point during the period. This discharge point has been capped

** EPA approved Licensed Discharge Point 3 removal from EPL on 14/09/16

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7 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

Person Sampling: D. Clarkson, K. Prajapati

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 | | | No | | | | | * |
| February | | | No | | | | | * |
| March | | | No | | | | | * |
| April | | | No | | | | | * |
| May | | | No | | | | | * |
| June | | | No | | | | | * |
| July | | | No | | | | | * |
| August | | | No | | | | | * |
| September | | | No | | | | | * |
| October | | | No | | | | | * |
| November | | | No | | | | | * |
| December | | | No | | | | | * |

* Water was not discharged at this point during the period

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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: 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 | 03/05/16 | 04/05/16 | 0.3 | 0.4 | 0.7 | |
| February | 03/05/16 | 04/05/16 | 0.3 | 0.4 | 0.7 | |
| March | 13/06/16 | 28/06/16 | 0.5 | 0.9 | 1.4 | |
| April | 06/07/16 | 11/07/16 | 0.3 | 0.5 | 0.8 | |
| May | 26/07/16 | 08/08/16 | 0.2 | 0.3 | 0.5 | |
| June | 03/08/16 | 08/08/16 | 0.2 | 0.7 | 0.9 | |
| July | 19/10/16 | 31/10/16 | 0.2 | 0.2 | 0.4 | |
| August | 14/11/16 | 16/11/16 | <0.1 | 0.2 | 0.2 | |
| September | 14/11/16 | 16/11/16 | 0.2 | <0.1 | 0.2 | |
| October | 04/01/17 | 04/01/17 | 0.8 | 0.2 | 1.0 | |
| November | 04/01/17 | 04/01/17 | 0.4 | 0.3 | 0.7 | |
| December | 12/04/17 | 25/04/17 | 0.2 | 0.3 | 0.5 | |

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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: 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 | 03/05/16 | 04/05/16 | 0.8 | 0.6 | 1.4 | |
| February | 03/05/16 | 04/05/16 | 0.5 | 0.4 | 0.9 | |
| March | 13/06/16 | 28/06/16 | 0.6 | 0.4 | 1.0 | |
| April | 06/07/16 | 11/07/16 | 0.4 | <0.1 | 0.4 | |
| May | 26/07/16 | 08/08/16 | 0.3 | <0.1 | 0.3 | |
| June | 03/08/16 | 08/08/16 | 0.1 | 0.5 | 0.6 | |
| July | 19/10/16 | 31/10/16 | 0.2 | 0.4 | 0.6 | |
| August | 14/11/16 | 16/11/16 | 0.1 | 0.2 | 0.3 | |
| September | 14/11/16 | 16/11/16 | 0.4 | 0.5 | 0.9 | |
| October | 04/01/17 | 04/01/17 | 0.3 | 0.4 | 0.7 | |
| November | 04/01/17 | 04/01/17 | 0.8 | 0.6 | 1.4 | |
| December | 12/04/17 | 25/04/17 | 0.2 | 0.1 | 0.3 | |

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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: 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 | 03/05/16 | 04/05/16 | 1.4 | 1.1 | 2.5 | |
| February | 03/05/16 | 04/05/16 | 0.5 | 0.4 | 0.9 | |
| March | 13/06/16 | 28/06/16 | 0.6 | 0.3 | 0.9 | |
| April | 06/07/16 | 11/07/16 | 0.4 | 0.2 | 0.6 | |
| May | 26/07/16 | 08/08/16 | 0.7 | 0.3 | 1.0 | |
| June | 03/08/16 | 08/08/16 | 0.2 | 0.2 | 0.4 | |
| July | 19/10/16 | 31/10/16 | 0.2 | 0.2 | 0.4 | |
| August | 14/11/16 | 16/11/16 | 0.2 | 0.2 | 0.4 | |
| September | 14/11/16 | 16/11/16 | 0.6 | 0.6 | 1.2 | |
| October | 04/01/17 | 04/01/17 | 0.4 | 0.4 | 0.8 | |
| November | 04/01/17 | 04/01/17 | 1.2 | 1.5 | 2.7 | |
| December | 12/04/17 | 25/04/17 | 0.8 | 0.5 | 1.3 | |

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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: 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 | 03/05/16 | 04/05/16 | 0.7 | 0.3 | 1.0 | |
| February | 03/05/16 | 04/05/16 | 0.6 | 0.4 | 1.0 | |
| March | 13/06/16 | 28/06/16 | 0.4 | 0.2 | 0.6 | |
| April | 06/07/16 | 11/07/16 | 0.3 | 0.1 | 0.4 | |
| May | 26/07/16 | 08/08/16 | 0.1 | <0.1 | 0.1 | |
| June | 03/08/16 | 08/08/16 | 0.2 | 0.2 | 0.4 | |
| July | 19/10/16 | 31/10/16 | 0.3 | 0.4 | 0.7 | |
| August | 14/11/16 | 16/11/16 | 0.1 | 0.1 | 0.2 | |
| September | 14/11/16 | 16/11/16 | 0.2 | 0.2 | 0.4 | |
| October | 04/01/17 | 04/01/17 | 0.2 | 0.1 | 0.3 | |
| November | 04/01/17 | 04/01/17 | 0.7 | 0.4 | 1.1 | |
| December | 12/04/17 | 25/04/17 | 0.5 | 0.3 | 0.8 | |

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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: 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 | 03/05/16 | 04/05/16 | 0.9 | 0.5 | 1.4 | |
| February | 03/05/16 | 04/05/16 | 1.9 | 2.2 | 4.1 | * |
| March | 13/06/16 | 28/06/16 | 0.8 | 0.6 | 1.4 | |
| April | 06/07/16 | 11/07/16 | 0.5 | 0.3 | 0.8 | |
| May | 26/07/16 | 08/08/16 | 0.3 | 0.1 | 0.4 | |
| June | 03/08/16 | 08/08/16 | 0.3 | 0.2 | 0.5 | |
| July | 19/10/16 | 31/10/16 | 0.2 | 0.2 | 0.4 | |
| August | 14/11/16 | 16/11/16 | 0.8 | 0.7 | 1.5 | |
| September | 14/11/16 | 16/11/16 | 0.9 | 0.9 | 1.8 | |
| October | 04/01/17 | 04/01/17 | 0.1 | 0.2 | 0.3 | |
| November | 04/01/17 | 04/01/17 | 0.8 | 1.2 | 2.0 | |
| December | 12/04/17 | 25/04/17 | 0.5 | 0.5 | 1.0 | |

*Results were higher due to insects and dirt. Confirmed during visual analysis of dust



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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 | | | | * |
| February | No | | | | * |
| March | No | | | | * |
| April | No | | | | * |
| May | No | | | | * |
| June | No | | | | * |
| July | No | | | | * |
| August | No | | | | * |
| September | No | | | | * |
| October | No | | | | * |
| November | No | | | | * |
| December | No | | | | * |

* 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 | 04/05/16 | 2606.42 | 5142.20 | |
| February | Yes | 04/05/16 | 3020.81 | 4985.27 | |
| March | Yes | 04/05/16 | 2862.70 | 4912.57 | |
| April | Yes | 04/05/16 | 2863.76 | 4648.54 | |
| May | Yes | 28/06/16 | 3077.43 | 5110.86 | |
| June | Yes | 11/07/16 | 2021.47 | 4952.50 | |
| July | Yes | 08/08/16 | 2366.60 | 4876.95 | |
| August | Yes | 31/10/16 | 2463.20 | 3806.52 | |
| September | Yes | 31/10/16 | 2486.81 | 2696.73 | |
| October | Yes | 16/11/16 | 2459.57 | 3543.75 | |
| November | Yes | 05/12/16 | 2764.84 | 3867.29 | |
| December | Yes | 04/01/17 | 425.76 | 1625.23 | |



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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 | | | | * |
| February | No | | | | * |
| March | No | | | | * |
| April | No | | | | * |
| May | No | | | | * |
| June | No | | | | * |
| July | No | | | | * |
| August | No | | | | * |
| September | No | | | | * |
| October | No | | | | * |
| November | No | | | | * |
| December | No | | | | * |

* Water was not discharged via this point during the period. This discharge point has been capped