

Site Information

EPL No.: 12290

EPA Website Link: <u>http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31280&SYSUID=1&LICID=12290</u>

Licensee: Werris Creek Coal Pty Limited

Premises: Werris Creek Coal, 1435 Werris Creek Road, WERRIS CREEK NSW 2341

EPL Monitoring Points: See figure at end of document

Sampling Period: January 2019

Obtained Date: 21 March 2019

Publication Date: 29 March 2019

Table 1 - No Pollutant Limits Apply

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Month | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|-----------|----------------------------|---------------------|-------------------------|---|-----------------|------------------|--------------|---------------|-----------------|--------------|
| 28 | PM10 | μg/m³ | Every 6 days | 5 | 26/1/2019 | 4/2/2019 | 20.7 | 22.8 | 21.9 | 28.3 |
| 20 | Solid Particles | g/m²/month | Continuous | 1 | 18/1/2019 | 1/2/2019 | 1.5 | 1.5 | 1.5 | 1.5 |
| 29 | PM10 | µg/m³ | Every 6 days | 5 | 26/1/2019 | 4/2/2019 | 21.5 | 27.8 | 28.8 | 33.6 |
| 29 | Solid Particles | g/m²/month | Continuous | 1 | 18/1/2019 | 1/2/2019 | 2.7 | 2.7 | 2.7 | 2.7 |
| 30 | PM10 | µg/m³ | Continuous | Continuous | 31/1/2019 | 1/2/2019 | 12.1 | 29.4 | 30.0 | 50.9 |
| 50 | Solid Particles | g/m²/month | Continuous | 1 | 18/1/2019 | 1/2/2019 | 2.0 | 2.0 | 2.0 | 2.0 |
| | Conductivity | μS/cm | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| 10 | Nitrogen (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| 12 | Nitrogen (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| 14 | Conductivity | μS/cm | Special Frequency 1 | 0 | - | - | - | - | - | - |
| 14 | Nitrate | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Month | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|-----------|----------------------------|---------------------|-------------------------|---|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Nitrogen (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| 32 | рН | рН | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | Special Frequency 1 | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| 23 | рН | pН | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | I | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 2 | 0 | - | - | - | I | - | - |
| | Total Suspended Solids | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| 24 | Oil and Grease | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | рН | рН | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Month | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|-----------|----------------------------|---------------------|-------------------------|---|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Total Suspended Solids | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| 25 | рН | рН | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| 26 | рН | рН | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | Special Frequency 2 | 0 | - | - | - | - | - | - |
| | Aluminium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Arsenic (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| 33* | Barium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| 22. | Beryllium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | BOD | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Cadmium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Chromium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Month | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|-----------|--------------------------|---------------------|-------------------------|---|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Cobalt (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Copper (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Iron (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Lead (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | Special Frequency 3 | 0 | - | - | - | I | - | - |
| | Manganese (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Nickel (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Selenium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Total dissolved solids | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Vanadium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Zinc (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Aluminium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Arsenic (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | I | - | - |
| | Barium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Beryllium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | BOD | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| 34 | Cadmium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Chromium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Cobalt (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Copper (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Iron (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Lead (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Month | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|-----------|--------------------------|---------------------|-------------------------|---|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Manganese (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Nickel (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Selenium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Total dissolved solids | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Vanadium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Zinc (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Aluminium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Arsenic (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Barium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Beryllium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | BOD | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Cadmium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Chromium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Cobalt (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| 35 | Copper (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Iron (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Lead (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Manganese (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Nickel (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Selenium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Month | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|-----------|------------------------|---------------------|-------------------------|---|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Total dissolved solids | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Vanadium (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |
| | Zinc (dissolved) | mg/L | Special Frequency 3 | 0 | - | - | - | - | - | - |

*Dust gauge sample contaminated with glass. Broken funnel noted on field sheet.

No. of EPL Units of Monitoring samples Date Date Min Max 100%ile Exceedance Pollutant Sampled (Yes/No) ID Frequency for the Obtained Value Value Limit Measure Month **Total Suspended Solids** mg/L Special Frequency 1 50* 0 ----No mg/L Special Frequency 1 0 10 Oil and Grease 10 No ---pН pН Special Frequency 1 0 6.5-8.5 No _ ---**Total Suspended Solids** mg/L Special Frequency 1 0 No 50* --_ _ 0 **Oil and Grease** mg/L Special Frequency 1 12 10 No ---_ pН Special Frequency 1 0 6.5-8.5 pН No ---_ 50* **Total Suspended Solids** mg/L Special Frequency 1 0 No _ --_ 14 **Oil and Grease** mg/L Special Frequency 1 0 No 10 --_ pН **Special Frequency 1** 0 6.5-8.5 pН No --_ _ **Total Suspended Solids** mg/L Special Frequency 1 0 50* No ----**Oil and Grease** 32 mg/L **Special Frequency 1** 0 10 No _ --pН pН **Special Frequency 1** 0 6.5-8.5 No ---4 4/1/2019, 4/1/2019, 10/1/2019, 10/1/2019, **Special Frequency 4 Electrical Conductivity** mg/L 1240 1330 2000 No 17/1//2019, 17/1//2019, 33* 25/1/2019 25/1/2019 **Oil and Grease** mg/L **Special Frequency 3** 0 10 ----No **Special Frequency 4** 4/1/2019, 4/1/2019, 7.7 8.1 pН pН 4 9 No

Table 2 - Pollutant Limits Apply



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of samples for the Month | Date Sampled | Date Obtained | Min Value | Max Value | 100%ile Limit | Exceedance (Yes/No) |
|-----------|--------------------------------|---------------------|-------------------------|---------------------------------------|-----------------|------------------|--------------|--------------|------------------|------------------------|
| | | | | | 10/1/2019, | 10/1/2019, | | | | |
| | | | | | 17/1//2019, | 17/1//2019, | | | | |
| | | | | | 25/1/2019 | 25/1/2019 | | | | |
| | Electrical Conductivity | mg/L | Special Frequency 4 | 0 | - | - | - | - | 2000 | No |
| 34 | Oil and Grease | mg/L | Special Frequency 3 | 0 | - | - | - | - | 10 | No |
| | рН | рН | Special Frequency 4 | 0 | - | - | - | - | 9 | No |
| | Electrical Conductivity | mg/L | Special Frequency 4 | 0 | - | - | - | - | 2000 | No |
| 35 | Oil and Grease | mg/L | Special Frequency 3 | 0 | - | - | - | - | 10 | No |
| | рН | рН | Special Frequency 4 | 0 | - | - | - | - | 9 | No |

* EPL ID Point 33 is the point of discharge for discharge sampling

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|--------|----------------------------|---------------------|-------------------------|--|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Conductivity | μS/cm | Every 3 Months | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| 16 | рН | рН | Every 3 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| 27 | Conductivity | μS/cm | Every 3 Months | 0 | - | - | - | - | - | - |



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|--------|----------------------------|---------------------|-------------------------|--|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Nitrate | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | Every 3 Months | 0 | - | - | - | - | - | I |
| | рН | рН | Every 3 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | Every 3 Months | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Every 6 Months | 0 | - | - | - | - | - | I |
| | Nitrate | mg/L | Every 6 Months | 0 | - | - | - | - | - | I |
| | Nitrogen (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | I |
| 17 | рН | рН | Every 6 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Standing Water Level | Metres | Every 6 Months | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| 18 | рН | рН | Every 6 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Standing Water Level | Metres | Every 6 Months | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| 19 | Nitrogen (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| 19 | рН | рН | Every 6 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |



| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Measurements for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max Value |
|--------|----------------------------|---------------------|-------------------------|--|-----------------|------------------|--------------|---------------|-----------------|--------------|
| | Standing Water Level | Metres | Every 6 Months | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Every 6 Months | 0 | - | - | - | - | - | I |
| | Nitrogen (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | I |
| 20 | рН | рН | Every 6 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Standing Water Level | Metres | Every 6 Months | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| 21 | рН | рН | Every 6 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Standing Water Level | Metres | Every 6 Months | 0 | - | - | - | - | - | - |
| | Conductivity | μS/cm | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Nitrogen (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| 22 | рН | рН | Every 6 Months | 0 | - | - | - | - | - | - |
| | Phosphorus (Total) | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Reactive Phosphorus | mg/L | Every 6 Months | 0 | - | - | - | - | - | - |
| | Standing Water Level | Metres | Every 6 Months | 0 | - | - | - | - | - | - |

TLTS- Too low to sample



Table 4 – Monitoring (Noise – Limits Apply)

| Location | Date | Measurement Period | Start Time | | ed levels – 3(A) | Limit(s) | Weather (inversion | Observations | (Potential) Non- | Date Obtained |
|----------|-----------|-----------------------|------------|------------------|---------------------|----------|---------------------------------------|--|-----------------------|------------------|
| | | T Chou | | LA1, 1 Minute | LAeq, 15 Minute | | oC/100m, wind m/s & °) | | compliance /breach | obtained |
| R24 | 17/1/2019 | 60 minutes | 2:49 pm | N/A | 33 | Day 37 | NA, 1.9m/s, 265 degrees | Traffic (33), WCC (<20) | No | 21/3/2019 |
| R12 | 17/1/2019 | 60 minutes | 7:34 am | N/A | 57 | Day 38 | NA, 1.5m/s, 357 degrees | Train (57), traffic (41), WCC (<20) | No | 21/3/2019 |
| R96 | 17/1/2019 | 60 minutes | 1:13 pm | N/A | 38 | Day 38 | NA, 2.5m/s, 273 degrees | Birds (37), traffic (28), WCC (24) | No | 21/3/2019 |
| R98 | 17/1/2019 | 60 minutes | 2:23 pm | N/A | 38 | Day 36 | NA, 1.8m/s, 229 degrees | Generator (35), birds (34), plane (24), WCC (<20) | No | 21/3/2019 |
| R57 | 17/1/2019 | 60 minutes | 7:22 am | N/A | 45 | Day 35 | NA, 1.8m/s, 5 degrees | Traffic (43), Birds (39), plane (28), WCC (<20) | No | 21/3/2019 |
| R24 | 17/1/2019 | 60 minutes | 7:45 pm | 40 | 37 | Night 37 | NA, 2.1m/s, 286 degrees. | Birds (38), traffic (34), WCC (<20) | No | 21/3/2019 |
| R12 | 17/1/2019 | 60 minutes | 9:40 pm | 46 | 38 | Night 38 | 3.9º/100m, 1.4m/s, 120 degrees. | Crickets (45), traffic (36), WCC (<20) | No | 21/3/2019 |
| R96 | 17/1/2019 | 60 minutes | 7:10 pm | 41 | 38 | Night 38 | 0.4º/100m, 1.8m/s, 222 degrees. | Birds (39), traffic (29), cattle (28), WCC (<20) | No | 21/3/2019 |
| R98 | 17/1/2019 | 60 minutes | 8:13 pm | 38 | 40 | Night 38 | 2.6°/100m, 2.2m/s, 297 degrees. | Cattle (37), traffic (27), WCC (<20) | No | 21/3/2019 |



| Location | Date | Measurement | Start Time | Measured levels – | | Limit(s) | Weather | Observations | (Potential) | Date |
|----------|-----------|-------------|------------|-------------------|----------|----------|---------------|--|-------------|-----------|
| | | Period | | dB(A) | | | (inversion | | Non- | Obtained |
| | | | | LA1, 1 | LAeq, 15 | | oC/100m, | | compliance | |
| | | | | Minute | Minute | | wind m/s & °) | | /breach | |
| | | | | | | | 6.6°/100m, | Traffic (42), wind (32), birds (30), WCC | | |
| R57 | 17/1/2019 | 60 minutes | 10:06 pm | 43 | 35 | Night 35 | 0.9m/s, 102 | (<20) | No | 21/3/2019 |
| | | | | | | | degrees. | | | |

NM = Not Measurable. This denotes noise from the mine was audible at low levels however cannot be quantified.

IA = Inaudible.



Table 5 – Monitoring (Blasts – Limits Apply)

| Location | Parameter | Units of Measure | Frequency | No. of Blasts for the Month | Average Value | Max Value | 100%ile Limit | (Potential) Non- compliance /breach | Date Obtained |
|----------|------------------------|---------------------|-------------|--------------------------------|------------------|--------------|------------------|--|------------------|
| R11 | Blast Noise | dB (Lin Peak) | Every Blast | 9 | 97.3 | 99.4 | 120.0 | No | 1/2/2019 |
| | Blast Vibration | mm/s | Every Blast | 9 | 0.09 | 0.13 | 10.0 | No | 1/2/2019 |
| R98 | Blast Noise | dB (Lin Peak) | Every Blast | 9 | 97.7 | 100.9 | 120.0 | No | 1/2/2019 |
| | Blast Vibration | mm/s | Every Blast | 9 | 0.58 | 1.56 | 10.0 | No | 1/2/2019 |
| R62 | Blast Noise | dB (Lin Peak) | Every Blast | 9 | 96.4 | 100.4 | 120.0 | No | 1/2/2019 |
| | Blast Vibration | mm/s | Every Blast | 9 | 0.36 | 0.56 | 10.0 | No | 1/2/2019 |
| R92 | Blast Noise | dB (Lin Peak) | Every Blast | 9 | 96.2 | 100.4 | 120.0 | No | 1/2/2019 |
| | Blast Vibration | mm/s | Every Blast | 9 | 0.18 | 0.34 | 10.0 | No | 1/2/2019 |



