



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: January 2016

Publication Date: 15th February 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 15/01/16 | 25/01/16 | - | - | - | 2.8 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 6 | Various | 10/02/16 | 1.5 | 12.16 | 10.4 | 28.1 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 10/02/16 | 0.4 | 10.66 | 10.2 | 21.9 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |



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| 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 or Only Value |
|--------|-----------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | pH | pH | | 0 | - | - | - | - | - | - |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | 0 | - | - | - | - | - | - |
| | Calcium | mg/L | | 0 | - | - | - | - | - | - |
| | Chloride | mg/L | | 0 | - | - | - | - | - | - |
| | Conductivity | µs/cm | | 0 | - | - | - | - | - | - |
| | Lead | mg/L | | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | | 0 | - | - | - | - | - | - |
| | Standing Water Level | m | | 0 | - | - | - | - | - | - |
| | Sulphate | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 9 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | 0 | - | - | - | - | - | - |
| | Calcium | mg/L | | 0 | - | - | - | - | - | - |
| | Chloride | mg/L | | 0 | - | - | - | - | - | - |



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| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|----------------------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Conductivity | µs/cm | | 0 | - | - | - | - | - | - |
| | Lead | mg/L | | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | | 0 | - | - | - | - | - | - |
| | Standing Water Level | m | | 0 | - | - | - | - | - | - |
| | Sulphate | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| | 10 | Ammonia | | mg/L | Quarterly | 0 | - | - | - | - |
| Bicarbonate | | mg/L | 0 | - | | - | - | - | - | - |
| Calcium | | mg/L | 0 | - | | - | - | - | - | - |
| Chloride | | mg/L | 0 | - | | - | - | - | - | - |
| Conductivity | | µs/cm | 0 | - | | - | - | - | - | - |
| Lead | | mg/L | 0 | - | | - | - | - | - | - |
| Magnesium | | mg/L | 0 | - | | - | - | - | - | - |
| Nitrate | | mg/L | 0 | - | | - | - | - | - | - |
| Potassium | | mg/L | 0 | - | | - | - | - | - | - |
| Sodium | | mg/L | 0 | - | | - | - | - | - | - |
| Standing Water Level | | m | 0 | - | | - | - | - | - | - |
| Sulphate | | mg/L | 0 | - | | - | - | - | - | - |
| pH | | pH | 0 | - | | - | - | - | - | - |



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Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: February 2016

Publication Date: 18th March 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 16-2-16 | 22-2-16 | - | - | - | 2.4 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 14-3-16 | 11.2 | 18.6 | 18.4 | 30.7 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 14-3-16 | 7.6 | 14.3 | 14.0 | 27.6 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 1 | 4-2-16 | 12-2-16 | - | - | - | 2250 |
| | Oil and Grease | mg/L | | 1 | 4-2-16 | 12-2-16 | - | - | - | <5 |
| | Total Organic Carbon | mg/L | | 1 | 4-2-16 | 12-2-16 | - | - | - | 3 |
| | Total Suspended Solids | mg/L | | 1 | 4-2-16 | 12-2-16 | - | - | - | 26 |



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| 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 or Only Value |
|--------|-----------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | pH | pH | | 1 | 4-2-16 | 12-2-16 | - | - | - | 8.47 |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | 0 | - | - | - | - | - | - |
| | Calcium | mg/L | | 0 | - | - | - | - | - | - |
| | Chloride | mg/L | | 0 | - | - | - | - | - | - |
| | Conductivity | µs/cm | | 0 | - | - | - | - | - | - |
| | Lead | mg/L | | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | | 0 | - | - | - | - | - | - |
| | Standing Water Level | m | | 0 | - | - | - | - | - | - |
| | Sulphate | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 9 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | 0 | - | - | - | - | - | - |
| | Calcium | mg/L | | 0 | - | - | - | - | - | - |
| | Chloride | mg/L | | 0 | - | - | - | - | - | - |



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| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|----------------------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 10 | Conductivity | µs/cm | Quarterly | 0 | - | - | - | - | - | - |
| | Lead | mg/L | | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | | 0 | - | - | - | - | - | - |
| | Standing Water Level | m | | 0 | - | - | - | - | - | - |
| | Sulphate | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | 0 | - | - | - | - | - | - |
| | Calcium | mg/L | | 0 | - | - | - | - | - | - |
| | Chloride | mg/L | | 0 | - | - | - | - | - | - |
| | Conductivity | µs/cm | | 0 | - | - | - | - | - | - |
| | Lead | mg/L | | 0 | - | - | - | - | - | - |
| | Magnesium | mg/L | | 0 | - | - | - | - | - | - |
| | Nitrate | mg/L | | 0 | - | - | - | - | - | - |
| | Potassium | mg/L | | 0 | - | - | - | - | - | - |
| | Sodium | mg/L | | 0 | - | - | - | - | - | - |
| Standing Water Level | m | 0 | - | - | - | - | - | - | | |
| Sulphate | mg/L | 0 | - | - | - | - | - | - | | |
| pH | pH | 0 | - | - | - | - | - | - | | |



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Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: March 2016

Obtained Date: 7th April, 2016

Publication Date: 11th April, 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 17/03/16 | 1/04/16 | - | - | - | 0.8 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 7/4/16 | 9.4 | 16.76 | 11.0 | 34.2 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 7/4/16 | 7.4 | 16.18 | 15.7 | 24.8 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 0 | | | | | | |
| | Oil and Grease | mg/L | | 0 | | | | | | |
| | Total Organic Carbon | mg/L | | 0 | | | | | | |



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| 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 or Only Value |
|--------|------------------------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Total Suspended Solids | mg/L | | 0 | | | | | | |
| | pH | pH | | 0 | | | | | | |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 1 | 23/03/16 | 1/04/16 | - | - | - | 0.02 |
| | Bicarbonate | mg/L | | | | | - | - | - | 1390 |
| | Calcium | mg/L | | | | | - | - | - | 35 |
| | Chloride | mg/L | | | | | - | - | - | 1190 |
| | Conductivity | µs/cm | | | | | - | - | - | 7410 |
| | Lead | mg/L | | | | | - | - | - | <0.001 |
| | Magnesium | mg/L | | | | | - | - | - | 117 |
| | Nitrate | mg/L | | | | | - | - | - | 0.63 |
| | Potassium | mg/L | | | | | - | - | - | 19 |
| | Sodium | mg/L | | | | | - | - | - | 1480 |
| | Standing Water Level | m | | | | | - | - | - | 8.39 |
| | Sulphate | mg/L | | | | | - | - | - | 709 |
| pH | pH | - | - | - | 8.3 | | | | | |
| 9 | Ammonia | mg/L | Quarterly | 1 | 23/03/16 | 1/04/16 | - | - | - | 0.07 |
| | Bicarbonate | mg/L | | | | | - | - | - | 927 |



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| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Calcium | mg/L | | | | | - | - | - | 248 |
| | Chloride | mg/L | | | | | - | - | - | 1060 |
| | Conductivity | µs/cm | | | | | - | - | - | 5940 |
| | Lead | mg/L | | | | | - | - | - | <0.001 |
| | Magnesium | mg/L | | | | | - | - | - | 224 |
| | Nitrate | mg/L | | | | | - | - | - | 0.09 |
| | Potassium | mg/L | | | | | - | - | - | 114 |
| | Sodium | mg/L | | | | | - | - | - | 633 |
| | Standing Water Level | m | | | | | - | - | - | 2.15 |
| | Sulphate | mg/L | | | | | - | - | - | 763 |
| | pH | pH | | | | | - | - | - | 7.1 |
| 10 | Ammonia | mg/L | Quarterly | 1 | 23/03/16 | 1/04/16 | - | - | - | 0.02 |
| | Bicarbonate | mg/L | | | | | - | - | - | 697 |
| | Calcium | mg/L | | | | | - | - | - | 178 |
| | Chloride | mg/L | | | | | - | - | - | 1290 |
| | Conductivity | µs/cm | | | | | - | - | - | 5910 |
| | Lead | mg/L | | | | | - | - | - | 0.003 |
| | Magnesium | mg/L | | | | | - | - | - | 205 |
| | Nitrate | mg/L | | | | | - | - | - | 14.1 |
| | Potassium | mg/L | | | | | - | - | - | 54 |
| | Sodium | mg/L | | | | | - | - | - | 634 |
| | Standing Water Level | m | | | | | - | - | - | 1.55 |
| | Sulphate | mg/L | | | | | - | - | - | 272 |
| | pH | pH | | | | | - | - | - | 7.2 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|----------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | 22-03-16 | 7:25pm | 15 min | - | 27 | 35 | 3.8/119 | - | No |
| | 23-03-16 | 6:20am | 15 min | - | 32 | 35 | 3.8/112 | - | |
| | 23-03-16 | 7:08am | 15 min | - | 31 | 35 | 3.0/105 | - | |
| | 23-03-16 | 6:20am | 1 min | 37 | - | 45 | 3.8/112 | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

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Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: April 2016

Obtained Date: 11th May, 2016

Publication Date: 16th May 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 18/04/16 | 27/04/16 | - | - | - | 1.8 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 5 | 23/04/16 | 11/05/16 | 9.4 | 27.2 | 23.2 | 48.5 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | 23/04/16 | 11/05/16 | 7.3 | 20.9 | 23.2 | 31.7 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 0 | | | | | | |
| | Oil and Grease | mg/L | | 0 | | | | | | |
| | Total Organic Carbon | mg/L | | 0 | | | | | | |



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| 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 or Only Value |
|--------|------------------------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Total Suspended Solids | mg/L | | 0 | | | | | | |
| | pH | pH | | 0 | | | | | | |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |
| 9 | Ammonia | mg/L | Quarterly | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |
| 10 | Ammonia | mg/L | Quarterly | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |



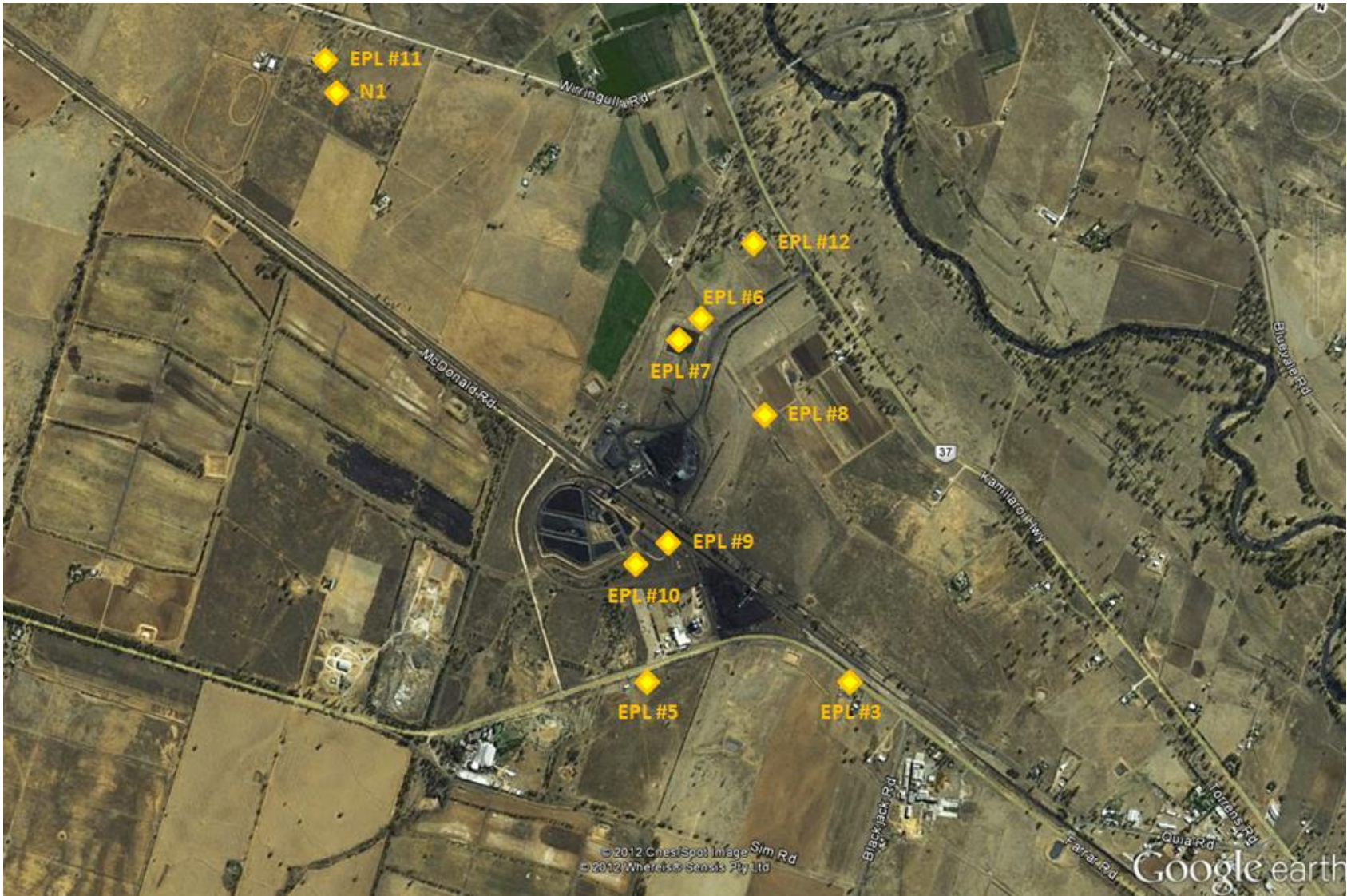
WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: May 2016

Obtained Date: 10th June, 2016

Publication Date: 21st June 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 18-05-16 | 24-05-16 | - | - | - | 1.1 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 10-05-16 | 1.3 | 36.9 | 27.9 | 92.8 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 10-05-16 | <0.1 | 16.0 | 18.4 | 27.0 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 1 | 12-05-16 | 19-05-16 | - | - | - | 2180 |
| | Oil and Grease | mg/L | | 1 | 12-05-16 | 19-05-16 | - | - | - | <5 |
| | Total Organic Carbon | mg/L | | 1 | 12-05-16 | 19-05-16 | - | - | - | 4 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|------------------------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Total Suspended Solids | mg/L | | 1 | 12-05-16 | 19-05-16 | - | - | - | 38 |
| | pH | pH | | 1 | 12-05-16 | 19-05-16 | - | - | - | 8.4 |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 1 | 12-05-16 | 17-05-16 | - | - | - | 0.6 |
| | Bicarbonate | mg/L | | | | | - | - | - | 1360 |
| | Calcium | mg/L | | | | | - | - | - | 31 |
| | Chloride | mg/L | | | | | - | - | - | 1190 |
| | Conductivity | µs/cm | | | | | - | - | - | 7320 |
| | Lead | mg/L | | | | | - | - | - | <0.001 |
| | Magnesium | mg/L | | | | | - | - | - | 107 |
| | Nitrate | mg/L | | | | | - | - | - | 0.65 |
| | Potassium | mg/L | | | | | - | - | - | 31 |
| | Sodium | mg/L | | | | | - | - | - | 1710 |
| | Standing Water Level | m | | | | | - | - | - | 8.36 |
| | Sulphate | mg/L | | | | | - | - | - | 624 |
| pH | pH | - | - | - | 8.5 | | | | | |
| 9 | Ammonia | mg/L | Quarterly | 1 | 12-05-16 | 17-05-16 | - | - | - | 0.16 |
| | Bicarbonate | mg/L | | | | | - | - | - | 883 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Calcium | mg/L | | | | | - | - | - | 258 |
| | Chloride | mg/L | | | | | - | - | - | 1060 |
| | Conductivity | µs/cm | | | | | - | - | - | 5930 |
| | Lead | mg/L | | | | | - | - | - | 0.002 |
| | Magnesium | mg/L | | | | | - | - | - | 239 |
| | Nitrate | mg/L | | | | | - | - | - | 0.56 |
| | Potassium | mg/L | | | | | - | - | - | 123 |
| | Sodium | mg/L | | | | | - | - | - | 791 |
| | Standing Water Level | m | | | | | - | - | - | 2.35 |
| | Sulphate | mg/L | | | | | - | - | - | 697 |
| | pH | pH | | | | | - | - | - | 7.10 |
| 10 | Ammonia | mg/L | Quarterly | 1 | 12-05-16 | 17-05-16 | - | - | - | 0.05 |
| | Bicarbonate | mg/L | | | | | - | - | - | 721 |
| | Calcium | mg/L | | | | | - | - | - | 206 |
| | Chloride | mg/L | | | | | - | - | - | 1290 |
| | Conductivity | µs/cm | | | | | - | - | - | 5830 |
| | Lead | mg/L | | | | | - | - | - | 0.005 |
| | Magnesium | mg/L | | | | | - | - | - | 224 |
| | Nitrate | mg/L | | | | | - | - | - | 14.5 |
| | Potassium | mg/L | | | | | - | - | - | 62 |
| | Sodium | mg/L | | | | | - | - | - | 789 |
| | Standing Water Level | m | | | | | - | - | - | 1.62 |
| | Sulphate | mg/L | | | | | - | - | - | 228 |
| | pH | pH | | | | | - | - | - | 7.2 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: June 2016

Obtained Date: 8th July 2016

Publication Date: 14th July 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 16/06/16 | 27/06/16 | - | - | - | 0.6 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 8/07/16 | <0.1 | 7.3 | 1.6 | 30.3 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 8/07/16 | 0.2 | 5 | 3.6 | 12.0 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|------------------------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Total Suspended Solids | mg/L | | - | - | - | - | - | - | - |
| | pH | pH | | - | - | - | - | - | - | - |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |
| 9 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |
| 10 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|---------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | 8/06/16 | 9:01am | 15 min | - | <20 | 35 | 1.2/313 | - | No |
| | 8/06/16 | 9:39pm | 15 min | - | 25 | 35 | 1.2/142 | - | |
| | 8/06/16 | 10:00pm | 15 min | - | 25 | 35 | 1.5/122 | - | |
| | 8/06/16 | 10:00pm | 1 min | 29 | - | 45 | 1.5/122 | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: July 2016

Obtained Date: 9th August 2016

Publication Date: 10th August 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 14-07-16 | 21-07-16 | - | - | - | 0.7 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 09-08-16 | 2.2 | 8.5 | 8.3 | 16.4 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 09-08-16 | 4.8 | 11.9 | 8.8 | 23.9 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|------------------------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Total Suspended Solids | mg/L | | - | - | - | - | - | - | - |
| | pH | pH | | - | - | - | - | - | - | - |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |
| 9 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |
| 10 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | 15 min | - | - | - | - | - | |
| | - | - | 15 min | - | - | - | - | - | |
| | - | - | 15 min | - | - | - | - | - | |
| | - | - | 1 min | - | - | - | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: August 2016

Obtained Date: 15th September 2016

Publication Date: 16th September 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 15/08/16 | 29/08/16 | - | - | - | 0.5 |
| 5 | Solid Particles | g/m ² /month | Continuous | 0 | - | - | - | - | - | - |
| | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 15/09/16 | 3.7 | 12.7 | 8.6 | 23.3 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 15/09/16 | 3.0 | 11 | 9.9 | 19.0 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 1 | 8/08/16 | 15/08/16 | - | - | - | 2180 |
| | Oil and Grease | mg/L | | 1 | 8/08/16 | 15/08/16 | - | - | - | 6 |
| | Total Organic Carbon | mg/L | | 1 | 8/08/16 | 15/08/16 | - | - | - | 3 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|------------------------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Total Suspended Solids | mg/L | | 1 | 8/08/16 | 15/08/16 | - | - | - | 24 |
| | pH | pH | | 1 | 8/08/16 | 15/08/16 | - | - | - | 8.5 |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 1 | 24/08/16 | 30/08/16 | - | - | - | 0.2 |
| | Bicarbonate | mg/L | | | | | - | - | - | 1200 |
| | Calcium | mg/L | | | | | - | - | - | 39 |
| | Chloride | mg/L | | | | | - | - | - | 1330 |
| | Conductivity | µs/cm | | | | | - | - | - | 7600 |
| | Lead | mg/L | | | | | - | - | - | 0.002 |
| | Magnesium | mg/L | | | | | - | - | - | 119 |
| | Nitrate | mg/L | | | | | - | - | - | 1.18 |
| | Potassium | mg/L | | | | | - | - | - | 20 |
| | Sodium | mg/L | | | | | - | - | - | 1610 |
| | Standing Water Level | m | | | | | - | - | - | 8.25 |
| | Sulphate | mg/L | | | | | - | - | - | 729 |
| pH | pH | - | - | - | 8.5 | | | | | |
| 9 | Ammonia | mg/L | Quarterly | 1 | 24/08/16 | 30/08/16 | - | - | - | <0.01 |
| | Bicarbonate | mg/L | | | | | - | - | - | 836 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Calcium | mg/L | | | | | - | - | - | 271 |
| | Chloride | mg/L | | | | | - | - | - | 1150 |
| | Conductivity | µs/cm | | | | | - | - | - | 6170 |
| | Lead | mg/L | | | | | - | - | - | 0.005 |
| | Magnesium | mg/L | | | | | - | - | - | 234 |
| | Nitrate | mg/L | | | | | - | - | - | 0.11 |
| | Potassium | mg/L | | | | | - | - | - | 122 |
| | Sodium | mg/L | | | | | - | - | - | 757 |
| | Standing Water Level | m | | | | | - | - | - | 1.88 |
| | Sulphate | mg/L | | | | | - | - | - | 782 |
| | pH | pH | | | | | - | - | - | 7.0 |
| 10 | Ammonia | mg/L | Quarterly | 1 | 24/08/16 | 30/08/16 | - | - | - | 0.07 |
| | Bicarbonate | mg/L | | | | | - | - | - | 632 |
| | Calcium | mg/L | | | | | - | - | - | 189 |
| | Chloride | mg/L | | | | | - | - | - | 1450 |
| | Conductivity | µs/cm | | | | | - | - | - | 6010 |
| | Lead | mg/L | | | | | - | - | - | <0.001 |
| | Magnesium | mg/L | | | | | - | - | - | 209 |
| | Nitrate | mg/L | | | | | - | - | - | 15.0 |
| | Potassium | mg/L | | | | | - | - | - | 61 |
| | Sodium | mg/L | | | | | - | - | - | 742 |
| | Standing Water Level | m | | | | | - | - | - | 1.29 |
| | Sulphate | mg/L | | | | | - | - | - | 271 |
| | pH | pH | | | | | - | - | - | 7.4 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | 15 min | - | - | - | - | - | |
| | - | - | 15 min | - | - | - | - | - | |
| | - | - | 15 min | - | - | - | - | - | |
| | - | - | 1 min | - | - | - | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: September 2016

Obtained Date: 10th October 2016

Publication Date: 17th October 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 19/09/16 | 27/09/16 | - | - | - | 1.2 |
| 5 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 10/10/16 | 6.3 | 13.0 | 7.2 | 32.7 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 10/10/16 | 5.1 | 8.9 | 8.2 | 14.6 |
| 6 | Conductivity | ms/cm | Each overflow event | 1 | 15/09/16 | 21/09/16 | - | - | - | 721 |
| | Oil and Grease | mg/L | | 1 | 15/09/16 | 21/09/16 | - | - | - | <5 |
| | Total Organic Carbon | mg/L | | 1 | 15/09/16 | 21/09/16 | - | - | - | 14 |
| | Total Suspended Solids | mg/L | | 1 | 15/09/16 | 21/09/16 | - | - | - | 94 |
| | pH | pH | | 1 | 15/09/16 | 21/09/16 | - | - | - | 7.4 |
| 7 | Conductivity | ms/cm | Quarterly | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|-----------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | pH | pH | | 0 | - | - | - | - | - | - |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |
| 9 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |
| 10 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|---------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | 7/09/16 | 9:28 am | 15 min | - | 39 | 35 | 2.4m/s, 87° | CHPP noise level 25dB(A) | No |
| | 7/09/16 | 9:40 pm | 15 min | - | 41 | 35 | 1.9m/s, 109° | CHPP noise level 23dB(A) | |
| | 7/09/16 | 10:07pm | 15 min | - | 36 | 35 | 1.6m/s, 112° | CHPP noise level 23dB(A) | |
| | 7/09/16 | 10:07 pm | 1 min | 36 | - | 45 | 1.6m/s, 112° | CHPP noise level 26dB(A) | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: October 2016

Obtained Date: 4th November 2016

Publication Date: 14th November 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 18/10/16 | 26/10/16 | - | - | - | 0.5 |
| 5 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 4/11/16 | 8.8 | 16.8 | 11.8 | 27.8 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 4/11/16 | 5.0 | 9.6 | 10.4 | 15.4 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | | | - | - | - | |
| | Oil and Grease | mg/L | | 0 | | | - | - | - | |
| | Total Organic Carbon | mg/L | | 0 | | | - | - | - | |
| | Total Suspended Solids | mg/L | | 0 | | | - | - | - | |
| | pH | pH | | 0 | | | - | - | - | |
| 7 | Conductivity | ms/cm | Quarterly | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|-----------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | pH | pH | | 0 | - | - | - | - | - | - |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |
| 9 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |
| 10 | Ammonia | mg/L | Quarterly | 0 | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |



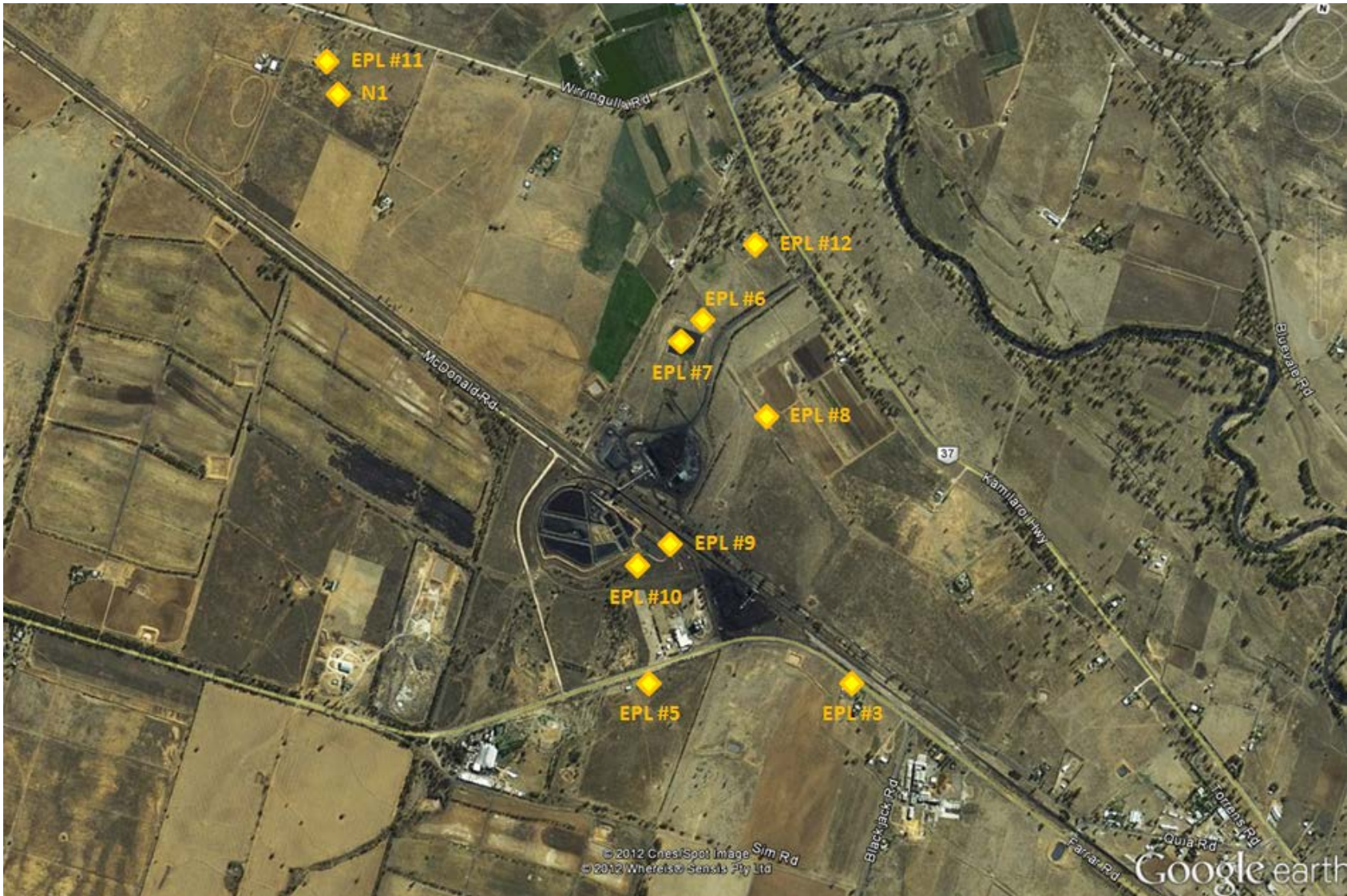
WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | - | - | - | 35 | - | - | - |
| | - | - | - | - | - | 35 | - | - | |
| | - | - | - | - | - | 35 | - | - | |
| | - | - | - | - | - | 45 | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: November 2016

Obtained Date: 9 December 2016

Publication Date: 14 December 2016

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 17/11/16 | 23/11/16 | - | - | - | 1.1 |
| 5 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 9/12/16 | 7.3 | 20.9 | 24.0 | 28.0 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 9/12/16 | 9.9 | 17.1 | 15.3 | 26.0 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | | | - | - | - | |
| | Oil and Grease | mg/L | | 0 | | | - | - | - | |
| | Total Organic Carbon | mg/L | | 0 | | | - | - | - | |
| | Total Suspended Solids | mg/L | | 0 | | | - | - | - | |
| | pH | pH | | 0 | | | - | - | - | |
| 7 | Conductivity | ms/cm | Quarterly | 1 | 1/11/16 | 7/11/16 | - | - | - | 2240 |
| | Oil and Grease | mg/L | | 1 | 1/11/16 | 7/11/19 | - | - | - | <5 |
| | Total Organic Carbon | mg/L | | 1 | 1/11/16 | 7/11/16 | - | - | - | 5 |
| | Total Suspended Solids | mg/L | | 1 | 1/11/16 | 7/11/16 | - | - | - | 25 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|-----------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | pH | pH | | 1 | 1/11/16 | 7/11/16 | - | - | - | 8.4 |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | Quarterly | 1 | 29/11/16 | 5/12/16 | - | - | - | <0.01 |
| | Bicarbonate | mg/L | | | | | - | - | - | 1240 |
| | Calcium | mg/L | | | | | - | - | - | 36 |
| | Chloride | mg/L | | | | | - | - | - | 1270 |
| | Conductivity | µs/cm | | | | | - | - | - | 6940 |
| | Lead | mg/L | | | | | - | - | - | 0.001 |
| | Magnesium | mg/L | | | | | - | - | - | 117 |
| | Nitrate | mg/L | | | | | - | - | - | 1.48 |
| | Potassium | mg/L | | | | | - | - | - | 22 |
| | Sodium | mg/L | | | | | - | - | - | 1620 |
| | Standing Water Level | m | | | | | - | - | - | 7.89 |
| | Sulphate | mg/L | | | | | - | - | - | 692 |
| pH | pH | - | - | - | 8.5 | | | | | |
| 9 | Ammonia | mg/L | Quarterly | 1 | 29/11/16 | 5/12/16 | - | - | - | <0.01 |
| | Bicarbonate | mg/L | | | | | - | - | - | 850 |
| | Calcium | mg/L | | | | | - | - | - | 271 |
| | Chloride | mg/L | | | | | - | - | - | 1110 |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Conductivity | µs/cm | | | | | - | - | - | 5700 |
| | Lead | mg/L | | | | | - | - | - | <0.001 |
| | Magnesium | mg/L | | | | | - | - | - | 234 |
| | Nitrate | mg/L | | | | | - | - | - | 0.21 |
| | Potassium | mg/L | | | | | - | - | - | 122 |
| | Sodium | mg/L | | | | | - | - | - | 721 |
| | Standing Water Level | m | | | | | - | - | - | 1.69 |
| | Sulphate | mg/L | | | | | - | - | - | 744 |
| | pH | pH | | | | | - | - | - | 7.0 |
| 10 | Ammonia | mg/L | Quarterly | 1 | 29/11/16 | 5/12/16 | - | - | - | <0.01 |
| | Bicarbonate | mg/L | | | | | - | - | - | 660 |
| | Calcium | mg/L | | | | | - | - | - | 204 |
| | Chloride | mg/L | | | | | - | - | - | 1340 |
| | Conductivity | µs/cm | | | | | - | - | - | 5510 |
| | Lead | mg/L | | | | | - | - | - | <0.001 |
| | Magnesium | mg/L | | | | | - | - | - | 218 |
| | Nitrate | mg/L | | | | | - | - | - | 14.8 |
| | Potassium | mg/L | | | | | - | - | - | 60 |
| | Sodium | mg/L | | | | | - | - | - | 732 |
| | Standing Water Level | m | | | | | - | - | - | 1.04 |
| | Sulphate | mg/L | | | | | - | - | - | 246 |
| pH | pH | - | - | - | 7.3 | | | | | |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|--------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | - | - | - | | - | 35 | - | - | - |
| | - | - | - | | - | 35 | - | - | |
| | - | - | - | | - | 35 | - | - | |
| | - | - | - | - | | 45 | - | - | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations





WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Site Information

EPL No: 3637

EPA Website Link: <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

EPL Monitoring Points: See Figure 1 below

Sampling Period: December 2016

Obtained Date: 13 January 2017

Publication Date: 18 January 2017

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 or Only Value |
|--------|------------------------|-------------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 3 | Solid Particles | g/m ² /month | Continuous | 1 | 20/12/16 | 30/12/16 | - | - | - | 1.3 |
| 5 | PM ₁₀ | µg/m ³ | Every 6 days | 6 | Various | 13/01/17 | 5.3 | 22.4 | 25.1 | 46.3 |
| 11 | PM ₁₀ | µg/m ³ | Every 6 days | 0 | - | - | - | - | - | - |
| 12 | PM ₁₀ | µg/m ³ | Every 6 days | 5 | Various | 13/01/16 | 11.0 | 19.7 | 18.9 | 29.3 |
| 6 | Conductivity | ms/cm | Each overflow event | 0 | | | - | - | - | |
| | Oil and Grease | mg/L | | 0 | | | - | - | - | |
| | Total Organic Carbon | mg/L | | 0 | | | - | - | - | |
| | Total Suspended Solids | mg/L | | 0 | | | - | - | - | |
| | pH | pH | | 0 | - | - | - | - | - | - |
| 7 | Conductivity | ms/cm | Quarterly | 0 | - | - | - | - | - | - |
| | Oil and Grease | mg/L | | 0 | - | - | - | - | - | - |
| | Total Organic Carbon | mg/L | | 0 | - | - | - | - | - | - |
| | Total Suspended Solids | mg/L | | 0 | - | - | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| 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 or Only Value |
|--------|-----------|------------------|----------------------|-----------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | pH | pH | | 0 | - | - | - | - | - | - |

Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| 8 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |
| 9 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

| EPL ID | Pollutant | Units of Measure | Monitoring Frequency | No. of Samples for the Period | Date Sampled | Date Obtained | Min Value | Mean Value | Median Value | Max or Only Value |
|--------|----------------------|------------------|----------------------|-------------------------------|--------------|---------------|-----------|------------|--------------|-------------------|
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| | pH | pH | | | | | - | - | - | - |
| 10 | Ammonia | mg/L | - | - | - | - | - | - | - | - |
| | Bicarbonate | mg/L | | | | | - | - | - | - |
| | Calcium | mg/L | | | | | - | - | - | - |
| | Chloride | mg/L | | | | | - | - | - | - |
| | Conductivity | µs/cm | | | | | - | - | - | - |
| | Lead | mg/L | | | | | - | - | - | - |
| | Magnesium | mg/L | | | | | - | - | - | - |
| | Nitrate | mg/L | | | | | - | - | - | - |
| | Potassium | mg/L | | | | | - | - | - | - |
| | Sodium | mg/L | | | | | - | - | - | - |
| | Standing Water Level | m | | | | | - | - | - | - |
| | Sulphate | mg/L | | | | | - | - | - | - |
| pH | pH | - | - | - | - | | | | | |



WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

| EPL ID | Date | Start Time | Measurement Period | Measured levels – All sources – dB(A) | | Limit(s) | Weather (wind speed/direction) | Observations | (Potential) Non-compliance /breach |
|--------|----------|------------|--------------------|---------------------------------------|-----------------------------|----------|--------------------------------|----------------|------------------------------------|
| | | | | L _{A1, 1} Minute | L _{Aeq, 15} Minute | | | | |
| N1 | 13/12/16 | 2:05pm | 15 min | | - | 35 | 1.9/320 | CHPP inaudible | No |
| | 13/12/16 | 9:45pm | 15 min | | - | 35 | 0.8/231 | CHPP inaudible | |
| | 13/12/16 | 10:00pm | 15 min | | - | 35 | 0.8/238 | CHPP inaudible | |
| | 13/12/16 | 10:00pm | 1 min | - | | 45 | 0.8/238 | CHPP inaudible | |

WHITEHAVEN CHPP – MONTHLY MONITORING SUMMARY

Figure 1 – EPL 3637 Monitoring Locations

