

## Monthly Data Summary

Environmental Protection Licence 2122

AGL Macquarie - Liddell Power Station

Monitoring Period

NOVEMBER 2021



EPA Identification Number 3

Air emission monitoring - Combined air emissions from boiler 1 via Points 7 and 8 to Point 1

| Pollutant       | Unit of measure   | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample values | Highest sample value | 100th percentile concentration limits |
|-----------------|-------------------|------------------------------------|----------------|---------------------|-----------------------|----------------------|---------------------------------------|
| Nitrogen Oxides | mg/m <sup>3</sup> | Continuous                         | 100.00%        | 335.1               | 538.8                 | 969.8                | 1500 mg/m <sup>3</sup>                |
| Sulfur Dioxide  | mg/m <sup>3</sup> | Continuous                         | 100.00%        | 712.7               | 1005.5                | 1273.9               | 1900 mg/m <sup>3</sup>                |

In addition to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m<sup>3</sup> and 1400 mg/m<sup>3</sup> apply to Nitrogen oxides and Sulfur dioxide, respectively.

| Pollutant  | Unit of measure   | No. of samples required by licence | Date of sample | Most recent result | 100th percentile concentration limits |
|--|-------------------|------------------------------------|----------------|--------------------|---------------------------------------|
| Cadmium  | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 0.0001             | 0.2 mg/m <sup>3</sup>                 |
| Chlorine   | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 0.13               | 20 mg/m <sup>3</sup>                  |
| Fluorine   | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 12.0               | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride  | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 19                 | 50 mg/m <sup>3</sup>                  |
| Mercury  | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 0.0008             | 0.05 mg/m <sup>3</sup>                |
| Solid Particles  | mg/m <sup>3</sup> | Quarterly                          | 17/11/2020     | 45.3               | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur trioxide (as SO <sub>3</sub> ) | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 1.2                | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate                    | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 0.04               | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as n-propane equivalent           | mg/m <sup>3</sup> | Six monthly                        | 31/08/2020     | 0.16               | 10 mg/m <sup>3</sup>                  |

Measured concentrations from the boiler's A and B ducts are used to calculate the concentrations from the boiler. Some of the duct concentrations for some substances may be reported as less than the relevant Limit of Detection, in which case the calculation uses 50% of the Limit of Detection value, in accordance with LBL Protocol rules.

The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

**EPA Identification Number 4**

**Air emission monitoring - Combined air emissions from boiler 2 via Points 9 and 10 to Point 1**

| Pollutant       | Unit of measure   | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value | 100th percentile concentration limits |
|-----------------|-------------------|------------------------------------|----------------|---------------------|----------------|----------------------|---------------------------------------|
| Nitrogen Oxides | mg/m <sup>3</sup> | Continuous                         | 100.00%        | 326.3               | 413.9          | 562.5                | 1500 mg/m <sup>3</sup>                |
| Sulfur Dioxide  | mg/m <sup>3</sup> | Continuous                         | 100.00%        | 577.8               | 836.4          | 1171.2               | 1900 mg/m <sup>3</sup>                |

In addition to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m<sup>3</sup> and 1400 mg/m<sup>3</sup> apply to Nitrogen oxides and Sulfur dioxide, respectively .

| Pollutant  | Unit of measure   | No. of samples required by licence | Date of sample | Most recent result | 100th percentile concentration limits |
|--|-------------------|------------------------------------|----------------|--------------------|---------------------------------------|
| Cadmium  | mg/m <sup>3</sup> | Six monthly                        | 15/09/2020     | 0.00010            | 0.2 mg/m <sup>3</sup>                 |
| Chlorine   | mg/m <sup>3</sup> | Six monthly                        | 10/03/2020     | 0.04               | 20 mg/m <sup>3</sup>                  |
| Fluorine   | mg/m <sup>3</sup> | Six monthly                        | 10/03/2020     | 7.5                | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride  | mg/m <sup>3</sup> | Six monthly                        | 10/03/2020     | 5.8                | 50 mg/m <sup>3</sup>                  |
| Mercury  | mg/m <sup>3</sup> | Six monthly                        | 15/09/2020     | 0.00014            | 0.05 mg/m <sup>3</sup>                |
| Solid Particles  | mg/m <sup>3</sup> | Quarterly                          | 15/09/2020     | 57.4               | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur trioxide (as SO <sub>3</sub> ) | mg/m <sup>3</sup> | Six monthly                        | 10/03/2020     | 1.4                | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate                    | mg/m <sup>3</sup> | Six monthly                        | 15/09/2020     | 0.03               | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as n-propane equivalent           | mg/m <sup>3</sup> | Six monthly                        | 10/03/2020     | 0.02               | 10 mg/m <sup>3</sup>                  |

Measured concentrations from the boiler's A and B ducts are used to calculate the concentrations from the boiler. Some of the duct concentrations for some substances may be reported as less than the relevant Limit of Detection, in which case the calculation uses 50% of the Limit of Detection value, in accordance with LBL Protocol rules.

The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

**EPA Identification Number 5**

**Air emission monitoring - Combined air emissions from boiler 3 via Points 11 and 12 to Point 2**

| Pollutant       | Unit of measure   | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value | 100th percentile concentration limits |
|-----------------|-------------------|------------------------------------|----------------|---------------------|----------------|----------------------|---------------------------------------|
| Nitrogen Oxides | mg/m <sup>3</sup> | Continuous                         | 100.0%         | 283.4               | 504.6          | 626.2                | 1500 mg/m <sup>3</sup>                |
| Sulfur Dioxide  | mg/m <sup>3</sup> | Continuous                         | 100.0%         | 867.3               | 1050.8         | 1194.9               | 1900 mg/m <sup>3</sup>                |

In addition to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m<sup>3</sup> and 1400 mg/m<sup>3</sup> apply to Nitrogen oxides and Sulfur dioxide, respectively .

| Pollutant  | Unit of measure   | No. of samples required by licence | Date of sample | Most recent result | 100th percentile concentration limits |
|--|-------------------|------------------------------------|----------------|--------------------|---------------------------------------|
| Cadmium  | mg/m <sup>3</sup> | Six monthly                        | 15/09/2020     | 0.00012            | 0.2 mg/m <sup>3</sup>                 |
| Chlorine   | mg/m <sup>3</sup> | Six monthly                        | 28/05/2020     | 0.008              | 20 mg/m <sup>3</sup>                  |
| Fluorine   | mg/m <sup>3</sup> | Six monthly                        | 28/05/2020     | 9.0                | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride  | mg/m <sup>3</sup> | Six monthly                        | 28/05/2020     | 13.0               | 50 mg/m <sup>3</sup>                  |
| Mercury  | mg/m <sup>3</sup> | Six monthly                        | 15/09/2020     | 0.00015            | 0.05 mg/m <sup>3</sup>                |
| Solid Particles  | mg/m <sup>3</sup> | Quarterly                          | 15/09/2020     | 44.2               | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur trioxide (as SO <sub>3</sub> ) | mg/m <sup>3</sup> | Six monthly                        | 28/05/2020     | 3.4                | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate                    | mg/m <sup>3</sup> | Six monthly                        | 15/09/2020     | 0.008              | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as n-propane equivalent           | mg/m <sup>3</sup> | Six monthly                        | 28/05/2020     | 0.02               | 10 mg/m <sup>3</sup>                  |

Measured concentrations from the boiler's A and B ducts are used to calculate the concentrations from the boiler. Some of the duct concentrations for some substances may be reported as less than the relevant Limit of Detection, in which case the calculation uses 50% of the Limit of Detection value, in accordance with LBL Protocol rules.

The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

EPA Identification Number 6

Air emission monitoring - Combined air emissions from boiler 4 via Points 13 and 14 to Point 2

| Pollutant       | Unit of measure   | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value | 100th percentile concentration limits |
|-----------------|-------------------|------------------------------------|----------------|---------------------|----------------|----------------------|---------------------------------------|
| Nitrogen Oxides | mg/m <sup>3</sup> | Continuous                         | 99.7%          | 353.6               | 547.1          | 671.6                | 1500 mg/m <sup>3</sup>                |
| Sulfur Dioxide  | mg/m <sup>3</sup> | Continuous                         | 99.7%          | 762.2               | 983.4          | 1243.2               | 1900 mg/m <sup>3</sup>                |

In addition to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m<sup>3</sup> and 1400 mg/m<sup>3</sup> apply to Nitrogen oxides and Sulfur dioxide, respectively .

| Pollutant  | Unit of measure   | No. of samples required by licence | Date of sample | Most recent result | 100th percentile concentration limits |
|--|-------------------|------------------------------------|----------------|--------------------|---------------------------------------|
| Cadmium  | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 0.00010            | 0.2 mg/m <sup>3</sup>                 |
| Chlorine   | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 0.069              | 20 mg/m <sup>3</sup>                  |
| Fluorine   | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 11.0               | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride  | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 17.0               | 50 mg/m <sup>3</sup>                  |
| Mercury  | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 0.001              | 0.05 mg/m <sup>3</sup>                |
| Solid Particles  | mg/m <sup>3</sup> | Quarterly                          | 18/11/2020     | 10.5               | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur trioxide (as SO <sub>3</sub> ) | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 47.0               | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate                    | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 0.011              | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as n-propane equivalent           | mg/m <sup>3</sup> | Six monthly                        | 16/09/2020     | 0.16               | 10 mg/m <sup>3</sup>                  |

Measured concentrations from the boiler's A and B ducts are used to calculate the concentrations from the boiler. Some of the duct concentrations for some substances may be reported as less than the relevant Limit of Detection, in which case the calculation uses 50% of the Limit of Detection value, in accordance with LBL Protocol rules.

The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

EPA Identification Number 7

Air emission monitoring - Boiler number 1 exhaust - duct A

| Pollutant       | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-----------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Nitrogen Oxides | mg/m <sup>3</sup>       | Continuous                         | 100.0%         | 335.1               | 538.8          | 969.8                |
| Sulfur Dioxide  | mg/m <sup>3</sup>       | Continuous                         | 100.0%         | 712.7               | 1005.5         | 1273.9               |
| Flow            | cubic metres per second | Continuous                         |                |                     |                |                      |
| Moisture        | percent                 | Continuous                         |                |                     |                |                      |
| Oxygen          | percent                 | Continuous                         |                |                     |                |                      |
| Temperature     | degrees Celsius         | degrees Celsius                    |                |                     |                |                      |

| Pollutant  | Unit of measure   | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|--|-------------------|------------------------------------|---|----------------|--------------------|
| Cadmium  | mg/m <sup>3</sup> | Six monthly                        | 2                                       | 11/03/2021     | <0.0003            |
| Chlorine   | mg/m <sup>3</sup> | Six monthly                        | 1                                       | 17/11/2020     | 0.13000            |
| Fluorine   | mg/m <sup>3</sup> | Six monthly                        | 1                                       | 9/10/2018      | 12.00000           |
| Hydrogen chloride  | mg/m <sup>3</sup> | Six monthly                        | 1                                       | 17/11/2020     | 19.00000           |
| Mercury  | mg/m <sup>3</sup> | Six monthly                        | 2                                       | 11/03/2021     | <0.0004            |
| Solid Particles  | mg/m <sup>3</sup> | Quarterly                          | 3                                       | 11/03/2021     | 120.0              |
| Sulfuric acid mist and sulfur trioxide (as SO <sub>3</sub> ) | mg/m <sup>3</sup> | Six monthly                        | 1                                       | 17/11/2020     | 1.20000            |
| Type 1 and Type 2 substances in aggregate                    | mg/m <sup>3</sup> | Six monthly                        | 2                                       | 11/03/2021     | <0.021             |
| Volatile organic compounds as n-propane equivalent           | mg/m <sup>3</sup> | Six monthly                        | 1                                       | 17/11/2020     | 0.16000            |
| Carbon dioxide   | percent           | Six monthly                        | 2                                       | 11/03/2021     | 7.7                |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 8

Air emission monitoring - Boiler number 1 exhaust - duct B

| Pollutant   | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Flow        | cubic metres per second | Continuous                         |                |                     |                |                      |
| Moisture    | percent                 | Continuous                         |                |                     |                |                      |
| Oxygen      | percent                 | Continuous                         |                |                     |                |                      |
| Temperature | degrees Celsius         | Continuous                         |                |                     |                |                      |

| Pollutant                                 | Unit of measure | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 2                                       | 22/10/2019     | <0.0002            |
| Mercury                                   | mg/m3           | Six monthly                        | 2                                       | 11/03/2021     | <0.0002            |
| Solid Particles                           | mg/m3           | Quarterly                          | 3                                       | 11/03/2021     | 15.0               |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 2                                       | 11/03/2021     | <0.016             |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 9

Air emission monitoring - Boiler number 2 exhaust - duct A

| Pollutant   | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Flow        | cubic metres per second | Continuous                         |                |                     |                |                      |
| Moisture    | percent                 | Continuous                         |                |                     |                |                      |
| Oxygen      | percent                 | Continuous                         |                |                     |                |                      |
| Temperature | degrees Celsius         | Continuous                         |                |                     |                |                      |

| Pollutant                                 | Unit of measure | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 2                                       | 4/04/2019      | <0.0002            |
| Mercury                                   | mg/m3           | Six monthly                        | 2                                       | 10/03/2021     | 0.00180            |
| Solid Particles                           | mg/m3           | Quarterly                          | 3                                       | 2/06/2021      | 46.0               |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 2                                       | 10/03/2021     | <0.028             |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 10

Air emission monitoring - Boiler number 2 exhaust - duct B

| Pollutant       | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-----------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Nitrogen Oxides | mg/m3                   | Continuous                         | 100.0%         | 326.3               | 413.9          | 562.5                |
| Sulfur Dioxide  | mg/m3                   | Continuous                         | 100.0%         | 577.8               | 779.3          | 1171.2               |
| Flow            | cubic metres per second | Continuous                         | -              |                     |                |                      |
| Moisture        | percent                 | Continuous                         | -              |                     |                |                      |
| Oxygen          | percent                 | Continuous                         | -              |                     |                |                      |
| Temperature     | degrees Celsius         | Continuous                         | -              |                     |                |                      |

| Pollutant  | Unit of measure | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|--|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium  | mg/m3           | Six monthly                        | 2                                       | 10/03/2020     | <0.0002            |
| Chlorine   | mg/m3           | Six monthly                        | 1                                       | 2/06/2021      | 0.01200            |
| Fluorine   | mg/m3           | Six monthly                        | 1                                       | 2/06/2021      | 9.30000            |
| Hydrogen chloride                                  | mg/m3           | Six monthly                        | 1                                       | 2/06/2021      | 14.00000           |
| Mercury  | mg/m3           | Six monthly                        | 2                                       | 10/03/2020     | <0.0002            |
| Solid Particles                                    | mg/m3           | Quarterly                          | 3                                       | 2/06/2021      | 34.0               |
| Sulfuric acid mist and sulfur trioxide (as SO3)    | mg/m3           | Six monthly                        | 1                                       | 2/06/2021      | 2.30000            |
| Type 1 and Type 2 substances in aggregate          | mg/m3           | Six monthly                        | 2                                       | 10/03/2021     | <0.021             |
| Volatile organic compounds as n-propane equivalent | mg/m3           | Six monthly                        | 1                                       | 2/06/2021      | <0.1               |
| Carbon dioxide                                     | percent         | Six monthly                        | 2                                       | 2/06/2021      | 9.5                |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 11

Air emission monitoring - Boiler number 3 exhaust - duct A

| Pollutant       | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-----------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Nitrogen Oxides | mg/m3                   | Continuous                         | 100.0%         | 283.4               | 504.6          | 626.2                |
| Sulfur Dioxide  | mg/m3                   | Continuous                         | 100.0%         | 867.3               | 1050.8         | 1194.9               |
| Flow            | cubic metres per second | Continuous                         |                |                     |                |                      |
| Moisture        | percent                 | Continuous                         |                |                     |                |                      |
| Oxygen          | percent                 | Continuous                         |                |                     |                |                      |
| Temperature     | degrees Celsius         | Continuous                         |                |                     |                |                      |

| Pollutant  | Unit of measure | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|--|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium  | mg/m3           | Six monthly                        | 1                                       | 15/09/2020     | <0.0003            |
| Chlorine   | mg/m3           | Six monthly                        | 1                                       | 3/06/2021      | <0.01              |
| Fluorine   | mg/m3           | Six monthly                        | 1                                       | 3/06/2021      | 11.00000           |
| Hydrogen chloride                                  | mg/m3           | Six monthly                        | 1                                       | 3/06/2021      | 14.00000           |
| Mercury  | mg/m3           | Six monthly                        | 1                                       | 15/09/2020     | <0.0003            |
| Solid Particles                                    | mg/m3           | Quarterly                          | 2                                       | 3/06/2021      | 28.0               |
| Sulfuric acid mist and sulfur trioxide (as SO3)    | mg/m3           | Six monthly                        | 1                                       | 3/06/2021      | 2.20000            |
| Type 1 and Type 2 substances in aggregate          | mg/m3           | Six monthly                        | 1                                       | 15/09/2020     | <0.02              |
| Volatile organic compounds as n-propane equivalent | mg/m3           | Six monthly                        | 1                                       | 3/06/2021      | <0.09              |
| Carbon dioxide                                     | percent         | Six monthly                        | 1                                       | 3/06/2021      | 10.4               |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 12

Air emission monitoring - Boiler number 3 exhaust - duct B

| Pollutant   | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Flow        | cubic metres per second | Continuous                         |                |                     |                |                      |
| Moisture    | percent                 | Continuous                         |                |                     |                |                      |
| Oxygen      | percent                 | Continuous                         |                |                     |                |                      |
| Temperature | degrees Celsius         | Continuous                         |                |                     |                |                      |

| Pollutant                                 | Unit of measure | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 1                                       | 26/03/2019     | <0.0002            |
| Mercury                                   | mg/m3           | Six monthly                        | 1                                       | 15/09/2020     | <0.0003            |
| Solid Particles                           | mg/m3           | Quarterly                          | 2                                       | 3/06/2021      | 42.0               |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 1                                       | 15/09/2020     | <0.014             |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 13

Air emission monitoring - Boiler number 4 exhaust - duct A

| Pollutant   | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Flow        | cubic metres per second | Continuous                         |                |                     |                |                      |
| Moisture    | percent                 | Continuous                         |                |                     |                |                      |
| Oxygen      | percent                 | Continuous                         |                |                     |                |                      |
| Temperature | degrees Celsius         | Continuous                         |                |                     |                |                      |

| Pollutant                                 | Unit of measure | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 2                                       | bh             | <0.0003            |
| Mercury                                   | mg/m3           | Six monthly                        | 2                                       | 9/03/2021      | <0.0003            |
| Solid Particles                           | mg/m3           | Quarterly                          | 4                                       | 1/06/2021      | 9.9                |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 2                                       | 9/03/2021      | <0.023             |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 14

Air emission monitoring - Boiler number 4 exhaust - duct B

| Pollutant       | Unit of measure         | No. of samples required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-----------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| Nitrogen Oxides | mg/m3                   | Continuous                         | 99.7%          | 353.6               | 547.1          | 671.6                |
| Sulfur Dioxide  | mg/m3                   | Continuous                         | 99.7%          | 762.2               | 983.4          | 1243.2               |
| Flow            | cubic metres per second | Continuous                         |                |                     |                |                      |
| Moisture        | percent                 | Continuous                         |                |                     |                |                      |
| Oxygen          | percent                 | Continuous                         |                |                     |                |                      |
| Temperature     | degrees Celsius         | Continuous                         |                |                     |                |                      |

| Pollutant  | Unit of measure | No. of samples required by licence | # No. of samples collected and analysed | Date of sample | Most recent result |
|--|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium  | mg/m3           | Six monthly                        | 2                                       | 9/03/2021      | <0.0003            |
| Chlorine   | mg/m3           | Six monthly                        | 2                                       | 1/06/2021      | 0.03900            |
| Fluorine   | mg/m3           | Six monthly                        | 2                                       | 1/06/2021      | 8.30000            |
| Hydrogen chloride                                  | mg/m3           | Six monthly                        | 2                                       | 1/06/2021      | 12.00000           |
| Mercury  | mg/m3           | Six monthly                        | 2                                       | 9/03/2021      | <0.0003            |
| Solid Particles                                    | mg/m3           | Quarterly                          | 4                                       | 1/06/2021      | 5.0                |
| Sulfuric acid mist and sulfur trioxide (as SO3)    | mg/m3           | Six monthly                        | 2                                       | 1/06/2021      | 3.20000            |
| Type 1 and Type 2 substances in aggregate          | mg/m3           | Six monthly                        | 2                                       | 9/03/2021      | <0.037             |
| Volatile organic compounds as n-propane equivalent | mg/m3           | Six monthly                        | 2                                       | 1/06/2021      | 0.20000            |
| Carbon dioxide                                     | percent         | Six monthly                        | 2                                       | 1/06/2021      | 108.0              |

A less than sign, "<", before a result in the table above indicates that the measured result was less than the relevant Limit of Detection for that test. The Station's Environment Protection Licence requires that Solid Particles are sampled from the A and B ducts 4 times per year each (once in each quarter). Other substances listed in the table are sampled twice per year. The table includes the most recent results available.

# Number of samples from the duct in the year to date

EPA Identification Number 16

Discharge to waters - Discharge quality monitoring

Discharge of cooling water from the cooling water outlet canal to Lake Liddell

| Pollutant                     | Unit of measure | No. of samples required by licence | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------------|-----------------|------------------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Ammonia                       | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.02           | 0.03                 |
| Antimony                      | mg/L            | Fortnightly                        | 3                                     | 0.008               | 0.01           | 0.012                |
| Arsenic                       | mg/L            | Fortnightly                        | 3                                     | 0.007               | 0.01           | 0.013                |
| Barium                        | mg/L            | Fortnightly                        | 3                                     | 0.099               | 0.10           | 0.106                |
| Beryllium                     | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | <0.001               |
| Boron                         | mg/L            | Fortnightly                        | 3                                     | 1.11                | 1.20           | 1.26                 |
| Cadmium                       | mg/L            | Fortnightly                        | 3                                     | <0.0001             | 0.00           | <0.0001              |
| Chlorine                      | mg/L            | Fortnightly                        | 3                                     | 0.03                | 0.04           | 0.05                 |
| Chromium (trivalent)          | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | <0.01                |
| Chromium (VI) compounds       | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | <0.01                |
| Cobalt                        | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | <0.001               |
| Conductivity                  | µS/cm           | Fortnightly                        | 3                                     | 2750                | 2793           | 2850                 |
| Copper                        | mg/L            | Fortnightly                        | 3                                     | 0.004               | 0.00           | 0.005                |
| Fluoride                      | mg/L            | Fortnightly                        | 3                                     | 0.567               | 1.27           | 1.74                 |
| Lead                          | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | <0.001               |
| Manganese                     | mg/L            | Fortnightly                        | 3                                     | 0.011               | 0.01           | 0.015                |
| Mercury                       | mg/L            | Fortnightly                        | 3                                     | <0.0001             | 0.00           | <0.0001              |
| Methyl Blue Active Substances | mg/L            | Fortnightly                        | 3                                     | <0.1                | 0.05           | <0.1                 |
| Molybdenum                    | mg/L            | Fortnightly                        | 3                                     | 0.123               | 0.13           | 0.127                |
| Nickel                        | mg/L            | Fortnightly                        | 3                                     | 0.005               | 0.01           | 0.005                |
| Nitrogen                      | mg/L            | Fortnightly                        | 3                                     | 0.4                 | 0.40           | 0.4                  |
| Oil and Grease                | mg/L            | Weekly during any discharge        | 5                                     | <2                  | 1              | <2                   |
| pH                            |                 | Daily during any discharge         | 23                                    | 8.2                 | 8.3            | 8.4                  |
| Phosphorus                    | mg/L            | Fortnightly                        | 3                                     | 0.01                | 0.03           | 0.05                 |
| Selenium                      | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | 0.01                 |
| Sulfur                        | mg/L            | Fortnightly                        | 3                                     | 690                 | 750.00         | 810                  |
| Temperature                   | °C              | Fortnightly                        | 3                                     | 24.5                | 25.6           | 27.7                 |
| Tin                           | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | <0.001               |
| Total dissolved solids        | mg/L            | Fortnightly                        | 3                                     | 1760                | 1867           | 1940                 |
| Total organic carbon          | mg/L            | Fortnightly                        | 3                                     | 7                   | 7              | 8                    |
| Total suspended solids        | mg/L            | Fortnightly                        | 3                                     | <5                  | 4              | 7                    |
| Vanadium                      | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | 0.01                 |
| Zinc                          | mg/L            | Fortnightly                        | 3                                     | <0.005              | 0.00           | <0.005               |

EPA Identification Number 17

Discharge to waters - Discharge quality monitoring

Discharge from oil and grit trap weir overflow to Lake Liddell

| Pollutant                     | Unit of measure | No. of samples required by licence | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------------|-----------------|------------------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Ammonia                       | mg/L            | Fortnightly                        | 3                                     | 0.01                | 0.02           | 0.04                 |
| Antimony                      | mg/L            | Fortnightly                        | 3                                     | 0.008               | 0.01           | 0.008                |
| Arsenic                       | mg/L            | Fortnightly                        | 3                                     | 0.007               | 0.01           | 0.008                |
| Barium                        | mg/L            | Fortnightly                        | 3                                     | 0.092               | 0.10           | 0.102                |
| Beryllium                     | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | 0.001                |
| Boron                         | mg/L            | Fortnightly                        | 3                                     | 1.15                | 1.17           | 1.21                 |
| Cadmium                       | mg/L            | Fortnightly                        | 3                                     | <0.0001             | 0.00           | <0.0001              |
| Chlorine                      | mg/L            | Fortnightly                        | 3                                     | 0.02                | 0.05           | 0.08                 |
| Chromium (trivalent)          | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | <0.01                |
| Chromium (VI) compounds       | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | <0.01                |
| Cobalt                        | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | <0.001               |
| Conductivity                  | µS/cm           | Fortnightly                        | 3                                     | 2620                | 2690           | 2730                 |
| Copper                        | mg/L            | Fortnightly                        | 3                                     | 0.005               | 0.01           | 0.006                |
| Fluoride                      | mg/L            | Fortnightly                        | 3                                     | 0.398               | 1.07           | 1.69                 |
| Lead                          | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | <0.001               |
| Manganese                     | mg/L            | Fortnightly                        | 3                                     | 0.011               | 0.01           | 0.019                |
| Mercury                       | mg/L            | Fortnightly                        | 3                                     | <0.0001             | 0.00           | <0.0001              |
| Methyl Blue Active Substances | mg/L            | Fortnightly                        | 3                                     | <0.1                | 0.05           | <0.1                 |
| Molybdenum                    | mg/L            | Fortnightly                        | 3                                     | 0.118               | 0.12           | 0.121                |
| Nickel                        | mg/L            | Fortnightly                        | 3                                     | 0.005               | 0.01           | 0.006                |
| Nitrogen                      | mg/L            | Fortnightly                        | 3                                     | 0.4                 | 0.40           | 0.4                  |
| Oil and Grease                | mg/L            | Weekly during any discharge        | 5                                     | <2                  | 1              | <2                   |
| pH                            |                 | Daily during any discharge         | 30                                    | 8.2                 | 8.4            | 8.5                  |
| Phosphorus                    | mg/L            | Fortnightly                        | 3                                     | 0.02                | 0.03           | 0.04                 |
| Selenium                      | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | 3                    |
| Sulfur                        | mg/L            | Fortnightly                        | 3                                     | 700                 | 743.33         | 820                  |
| Temperature                   | °C              | Fortnightly                        | 3                                     | 19.7                | 21.3           | 22.3                 |
| Tin                           | mg/L            | Fortnightly                        | 3                                     | <0.001              | 0.00           | <0.001               |
| Total dissolved solids        | mg/L            | Fortnightly                        | 3                                     | 1400                | 1650           | 1790                 |
| Total organic carbon          | mg/L            | Fortnightly                        | 3                                     | 7                   | 7.33           | 8                    |
| Total suspended solids        | mg/L            | Fortnightly                        | 3                                     | 5                   | 6.67           | 8                    |
| Vanadium                      | mg/L            | Fortnightly                        | 3                                     | <0.01               | 0.01           | 0.01                 |
| Zinc                          | mg/L            | Fortnightly                        | 3                                     | <0.005              | 0.01           | 0.007                |

EPA Identification Number 18

Discharge to waters - Discharge quality monitoring and Volume monitoring

Discharge from skimmer dam overflow spillway to Lake Liddell

| Pollutant               | Unit of measure    | No. of samples required by licence | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------|--------------------|------------------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Arsenic                 | mg/L               | Weekly during any discharge        | 5                                     | 0.05                | 0.059          | 0.072                |
| Boron                   | mg/L               | Weekly during any discharge        | 5                                     | 1.39                | 1.63           | 1.83                 |
| Cadmium                 | mg/L               | Weekly during any discharge        | 5                                     | <0.0001             | 0.00006        | 0.0001               |
| Chromium (trivalent)    | mg/L               | Weekly during any discharge        | 5                                     | <0.01               | 0.005          | <0.01                |
| Chromium (VI) compounds | mg/L               | Weekly during any discharge        | 5                                     | <0.01               | 0.005          | <0.01                |
| Copper                  | mg/L               | Weekly during any discharge        | 5                                     | 0.002               | 0.002          | 0.003                |
| Electrical conductivity | µS/cm              | Weekly during any discharge        | 5                                     | 2480                | 2690           | 2960                 |
| Fluoride                | mg/L               | Weekly during any discharge        | 5                                     | 1.9                 | 2.26           | 2.5                  |
| Lead                    | mg/L               | Weekly during any discharge        | 5                                     | <0.001              | 0.0006         | 0.001                |
| Mercury                 | mg/L               | Weekly during any discharge        | 5                                     | <0.0001             | 0.00005        | <0.0001              |
| Oil and Grease          | mg/L               | Weekly during any discharge        | 5                                     | <2                  | 1              | <2                   |
| pH                      |                    | Weekly during any discharge        | 5                                     | 8.1                 | 8.2            | 8.3                  |
| Selenium                | mg/L               | Weekly during any discharge        | 5                                     | 0.03                | 0.042          | 0.06                 |
| Total suspended solids  | mg/L               | Weekly during any discharge        | 5                                     | <5                  | 8.1            | 15                   |
| Zinc                    | mg/L               | Weekly during any discharge        | 5                                     | <0.005              | 0.003          | <0.005               |
| Volume                  | kilolitres per day | Daily                              | 30                                    | 85000               | 207500         | 449000               |



EPA Identification Number 19

Discharge utilisation area - Volume monitoring

Discharge of effluent from the final pond of the sewage treatment system adjacent to utilisation area.

| Pollutant | Unit of measure    | No. of samples required by licence | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-----------|--------------------|------------------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Volume    | kilolitres per day | Daily                              | 0                                     | 0.33                | 54.66          | 181.72               |

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|--|
| <b>Details of Non-Compliance with Licence Conditions</b>   |
| Licence condition number not complied with   |
| N/A  |
| Summary of particulars of the non-compliance <b>(NO MORE THAN 50 WORDS)</b>  |
| If required, further details on particulars of non-compliance  |
| Date(s) when the non-compliance occurred, if applicable  |
| If relevant, precise location where the non-compliance occurred (attach a map or diagram)                                    |
| If applicable, registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-compliance |
| Cause of non-compliance  |
| Action taken or that will be taken to mitigate any adverse effects of the non-compliance                                     |
| Action taken or that will be taken to prevent a recurrence of the non-compliance   |