# **Monthly Data Summary**

# **Environmental Protection Licence 779**

# **AGL Macquarie - Bayswater Power Station**

**Monitoring Period** 

**JULY 2021** 



#### Discharge & Monitoring Point 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 | Dat a capture % | Lowest sample value | Mean of sample values | Highest sample value | 100th percentile concentration limits |
|-----------------|-----------------|------------------------------------|-----------------|---------------------|-----------------------|----------------------|---------------------------------------|
| Nitrogen Oxides | mg/m3           | Continuous                         | 99.3%           | 215.5               | 568.7                 | 787.9                | 1500 mg/m <sup>3</sup>                |
| Sulfur dioxide  | mg/m3           | Continuous                         | 100.0%          | 626.8               | 918.9                 | 1180.0               | 1700 mg/m <sup>3</sup>                |

in addtion to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m3 and 1400 mg/m3 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/m3           | Six monthly                        | 22/09/2020     | 0.000128           | 0.2 mg/m <sup>3</sup>                 |
| Chlorine  | mg/m3           | Six monthly                        | 22/09/2020     | 0.058000           | 20 mg/m <sup>3</sup>                  |
| Fluorine  | mg/m3           | Six monthly                        | 22/09/2020     | 11.0               | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride                                     | mg/m3           | Six monthly                        | 22/09/2020     | 15.0               | 50 mg/m <sup>3</sup>                  |
| Mercury   | mg/m3           | Six monthly                        | 22/09/2020     | 0.0017             | 0.05 mg/m <sup>3</sup>                |
| Solid Particles                                       | mg/m3           | Quarterly                          | 22/09/2020     | 3.53               | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur<br>trioxide (as SO3)    | mg/m3           | Six monthly                        | 22/09/2020     | 5.70               | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate             | mg/m3           | Six monthly                        | 22/09/2020     | 0.007              | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as<br>n-propane equivalent | mg/m3           | Six monthly                        | 22/09/2020     | 0.42               | 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 Indentifcation Number 4

Air emission monitoring - Combined air emissions from boiler 2 via Points9 and 10 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/m3           | Continouus                         | 100.00%        |                     |                       |                      | 1500 mg/m <sup>3</sup>                |
| Suflur Dioxide  | mg/m3           | Continuous                         | 100.00%        |                     |                       |                      | 1700 mg/m <sup>3</sup>                |

In addtion to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m3 and 1400 mg/m3 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/m3           | Six monthly                        | 23/09/2020     | 0.000123           | 0.2 mg/m <sup>3</sup>                 |
| Chlorine  | mg/m3           | Six monthly                        | 23/09/2020     | 0.140000           | 20 mg/m <sup>3</sup>                  |
| Fluorine  | mg/m3           | Six monthly                        | 23/09/2020     | 4.7                | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride                                     | mg/m3           | Six monthly                        | 23/09/2020     | 14.0               | 50 mg/m <sup>3</sup>                  |
| Mercury   | mg/m3           | Six monthly                        | 23/09/2020     | 0.0019             | 0.05 mg/m <sup>3</sup>                |
| Solid Particles                                       | mg/m3           | Quarterly                          | 23/09/2020     | 13.45              | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur trioxide (as SO3)       | mg/m3           | Six monthly                        | 23/09/2020     | 2.40               | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate             | mg/m3           | Six monthly                        | 23/09/2020     | 0.0099             | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as<br>n-propane equivalent | mg/m3           | Six monthly                        | 23/09/2020     | 0.18               | 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 Indentifcation 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 values | Highest sample value | 100th percentile concentration limits |
|-----------------|-----------------|------------------------------------|----------------|---------------------|-----------------------|----------------------|---------------------------------------|
| Nitrogen Oxides | mg/m3           | Continouus                         | 98.50%         | 208.7               | 349.4                 | 497.7                | 1500 mg/m <sup>3</sup>                |
| Suflur Dioxide  | mg/m3           | Continuous                         | 99.46%         | 306.5               | 532.8                 | 703.6                | 1700 mg/m <sup>3</sup>                |

In addtion to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m3 and 1400 mg/m3 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/m3           | Six monthly                        | 1/10/2019      | <0.3               | 0.2 mg/m <sup>3</sup>                 |
| Chlorine   | mg/m3           | Six monthly                        | 25/11/2020     | 0.030000           | 20 mg/m <sup>3</sup>                  |
| Fluorine   | mg/m3           | Six monthly                        | 25/11/2020     | 9.4                | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride                                  | mg/m3           | Six monthly                        | 25/11/2020     | 18.0               | 50 mg/m <sup>3</sup>                  |
| Mercury  | mg/m3           | Six monthly                        | 1/10/2019      | 0.0002             | 0.05 mg/m <sup>3</sup>                |
| Solid Particles                                    | mg/m3           | Quarterly                          |                | 15.00              | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur trioxide (as SO3)    | mg/m3           | Six monthly                        | 25/11/2020     | 4.90               | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate          | mg/m3           | Six monthly                        | 1/10/2019      | <0.0082            | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as n-propane equivalent | mg/m3           | Six monthly                        | 25/11/2020     | 0.10               | 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 Indentifcation 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 values | Highest sample value | 100th percentile concentration limits |
|-----------------|-----------------|------------------------------------|----------------|---------------------|-----------------------|----------------------|---------------------------------------|
| Nitrogen Oxides | mg/m3           | Continouus                         | 100.00%        | 385.2               | 948.2                 | 1253.5               | 1500 mg/m <sup>3</sup>                |
| Suflur Dioxide  | mg/m3           | Continuous                         | 100.00%        | 770.0               | 1003.0                | 1273.8               | 1700 mg/m <sup>3</sup>                |

In addtion to the 100th percentile concentration limits, 99th percentile concentration limits of 1100 mg/m3 and 1400 mg/m3 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/m3           | Six monthly                        | 22/09/2020     | 0.000123           | 0.2 mg/m <sup>3</sup>                 |
| Chlorine   | mg/m3           | Six monthly                        | 3/10/2019      | 0.020000           | 20 mg/m <sup>3</sup>                  |
| Fluorine   | mg/m3           | Six monthly                        | 3/10/2019      | 8.4                | 20 mg/m <sup>3</sup>                  |
| Hydrogen chloride                                  | mg/m3           | Six monthly                        | 3/10/2019      | 12.0               | 50 mg/m <sup>3</sup>                  |
| Mercury  | mg/m3           | Six monthly                        | 22/09/2020     | 0.0021             | 0.05 mg/m <sup>3</sup>                |
| Solid Particles                                    | mg/m3           | Quarterly                          | 22/09/2020     | 19.33              | 50 mg/m <sup>3</sup>                  |
| Sulfuric acid mist and sulfur trioxide (as SO3)    | mg/m3           |                                    | 3/10/2019      | 3.10               | 100 mg/m <sup>3</sup>                 |
| Type 1 and Type 2 substances in aggregate          | mg/m3           | Six monthly                        | 22/09/2020     | 0.008              | 0.75 mg/m <sup>3</sup>                |
| Volatile organic compounds as n-propane equivalent | mg/m3           | Six monthly                        | 3/10/2019      | 0.00               | 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 Indentifcation Number 7

# Air emission monitoring - Boiler number 1 exhaust - duct A

| Pollutant       | Unit of measure         | No. of samples<br>required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-----------------|-------------------------|---------------------------------------|----------------|---------------------|----------------|----------------------|
| Nitrogen Oxides | mg/m3                   | Continouus                            | 99.31%         | 215.5               | 568.7          | 787.9                |
| Suflur Dioxide  | mg/m3                   | Continuous                            | 100.00%        | 626.8               | 918.9          | 1180.0               |
| Flow            | cubic metres per second | Continuous                            |                |                     |                |                      |
| Moisture        | percent                 | Continuous                            |                |                     |                |                      |
| Oxygen          | percent                 | Continouus                            |                |                     |                |                      |
| Temperature     | percent                 | degrees Celsius                       |                |                     |                |                      |

| Pollutant   | Unit of measure | No. of samples required by licence | # No. of samples<br>collected and<br>analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium   | mg/m3           | Six monthly                        | 2   | 23/10/2018     | <0.0002            |
| Chlorine  | mg/m3           | Six monthly                        | 2   | 4/05/2021      | 0.018              |
| Fluorine  | mg/m3           | Six monthly                        | 2   | 4/05/2021      | 9.3                |
| Hydrogen chloride                                     | mg/m3           | Six monthly                        | 2   | 4/05/2021      | 16                 |
| Mercury   | mg/m3           | Six monthly                        | 2   | 3/03/2021      | 0.0015             |
| Solid Particles                                       | mg/m3           | Quarterly                          | 4   | 3/03/2021      | 6.5                |
| Sulfuric acid mist and sulfur trioxide (as SO3)       | mg/m3           | Six monthly                        | 2   | 4/05/2021      | 2.4                |
| Type 1 and Type 2 substances in aggregate             | mg/m3           | Six monthly                        | 2   | 3/03/2021      | <0.018             |
| Volatile organic compounds as<br>n-propane equivalent | mg/m3           | Six monthly                        | 2   | 4/05/2021      | <0.09              |
| Carbon dioxide  | percent         | Six monthly                        | 2   | 4/05/2021      | 11.1               |

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 Indentifcation 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<br>second | Continuous                         |                |                     |                |                      |
| Moisture    | percent                    | Continuous                         |                |                     |                |                      |
| Oxygen      | percent                    | Continouus                         |                |                     |                |                      |
| Temperature | degrees Celsius            | Continuous                         |                |                     |                |                      |

| Pollutant                                 | Unit of measure | No. of samples required by licence | No. of samples<br>collected and<br>analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 2   | 3/03/2021      | <0.0002            |
| Mercury                                   | mg/m3           | Six monthly                        | 2   | 3/03/2021      | 0.0016             |
| Solid Particles                           | mg/m3           | Quarterly                          | 4   | 4/05/2021      | 17                 |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 2   | 3/03/2021      | <0.018             |

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 Indentifcation Number 9

# Air emission monitoring - Boiler number 2 exhaust - duct A

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

| Pollutant                                 | Unit of measure | No. of samples required by licence | No. of samples<br>collected and<br>analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 2   | 2/03/2021      | <0.0003            |
| Mercury                                   | mg/m3           | Six monthly                        | 2   | 2/03/2021      | 0.002              |
| Solid Particles                           | mg/m3           | Quarterly                          | 4   | 2/03/2021      | 6.7                |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 2   | 2/03/2021      | <0.017             |

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 Indentification 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                      | Continouus                         | 100.00%        |                     |                |                      |
| Suflur Dioxide  | mg/m3                      | Continuous                         | 100.00%        |                     |                |                      |
| Flow            | cubic metres per<br>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<br>collected and<br>analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium   | mg/m3           | Six monthly                        | 2   | 23/09/2020     | <0.0003            |
| Chlorine  | mg/m3           | Six monthly                        | 2   | 26/11/2020     | 0.14               |
| Fluorine  | mg/m3           | Six monthly                        | 2   | 26/11/2020     | 4.7                |
| Hydrogen chloride                                     | mg/m3           | Six monthly                        | 2   | 26/11/2020     | 14                 |
| Mercury   | mg/m3           | Six monthly                        | 2   | 2/03/2021      | 0.00077            |
| Solid Particles                                       | mg/m3           | Quarterly                          | 4   | 3/03/2021      | 10                 |
| Sulfuric acid mist and sulfur trioxide (as SO3)       | mg/m3           | Six monthly                        | 2   | 26/11/2020     | 2.4                |
| Type 1 and Type 2 substances in aggregate             | mg/m3           | Six monthly                        | 2   | 2/03/2021      | <0.014             |
| Volatile organic compounds as<br>n-propane equivalent | mg/m3           | Six monthly                        | 2   | 26/11/2020     | 0.18               |
| Carbon dioxide  | percent         | Six monthly                        | 2   | 2/03/2021      | 9.2                |

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 Indentifcation Number 11

# Air emission monitoring - Boiler number 3 exhaust - duct A

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|--------------------------------|-------------------------|------------------------------------|----------------|---------------------|----------------|----------------------|
| 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                   | Continouus                         | 98.50%         | 208.7               | 349.4          | 497.7                |
| Suflur Dioxide                 | mg/m3                   | Continuous                         | 99.46%         | 306.5               | 532.8          | 703.6                |
| 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<br>collected and<br>analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium   | mg/m3           | Six monthly                        | 2   | 2/04/2019      | <0.0002            |
| Chlorine  | mg/m3           | Six monthly                        | 2   | 5/05/2021      | 0.04               |
| Fluorine  | mg/m3           | Six monthly                        | 2   | 5/05/2021      | 9                  |
| Hydrogen chloride                                     | mg/m3           | Six monthly                        | 2   | 5/05/2021      | 15                 |
| Mercury   | mg/m3           | Six monthly                        | 2   | 5/03/2021      | 0.0023             |
| Solid Particles                                       | mg/m3           | Quarterly                          | 4   | 5/05/2021      | 7.3                |
| Sulfuric acid mist and sulfur trioxide (as SO3)       | mg/m3           | Six monthly                        | 2   | 5/05/2021      | 4                  |
| Type 1 and Type 2 substances in aggregate             | mg/m3           | Six monthly                        | 2   | 5/03/2021      | <0.032             |
| Volatile organic compounds as<br>n-propane equivalent | mg/m3           | Six monthly                        | 2   | 5/05/2021      | <0.1               |
| Carbon dioxide  | percent         | Six monthly                        | 2   | 5/05/2021      | 11.2               |

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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 Indentification Number 12

Air emission monitoring - Boiler number 3 exhaust - duct B

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|------------------------------------|----------------------------|---------------------------------------|----------------|---------------------|----------------|----------------------|
| Pollutant                          | Unit of measure            | No. of samples<br>required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
| Flow                               | cubic metres per<br>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<br>collected and<br>analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 2   | 26/05/2020     | <0.0002            |
| Mercury                                   | mg/m3           | Six monthly                        | 2   | 5/03/2021      | 0.0031             |
| Solid Particles                           | mg/m3           | Quarterly                          | 4   | 25/11/2020     | 13                 |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 2   | 5/03/2021      | <0.015             |

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

#### **EPA Indentifcation Number 13**

Air emission monitoring - Boiler number 4 exhaust - duct A

| 7th Chinosion monitoring Don | a consistent member in contains a |                                       |                |                     |                |                      |  |
|------------------------------|--|---------------------------------------|----------------|---------------------|----------------|----------------------|--|
| Pollutant                    | Unit of measure  | No. of samples<br>required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |  |
| Flow                         | cubic metres per<br>second   | Continouus                            |                |                     |                |                      |  |
| Moisture                     | percent  | Continouus                            |                |                     |                |                      |  |
| Oxygen                       | percent  | Continouus                            |                |                     |                |                      |  |
| Temperature                  | degrees Celsius  | Continouus                            |                |                     |                |                      |  |

| Pollutant                                 | Unit of measure | No. of samples required by licence | No. of samples<br>collected and<br>analysed | Date of sample | Most recent result |
|---|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium                                   | mg/m3           | Six monthly                        | 2   | 4/03/2021      | < 0.0003           |
| Mercury                                   | mg/m3           | Six monthly                        | 2   | 4/03/2021      | 0.0033             |
| Solid Particles                           | mg/m3           | Quarterly                          | 4   | 6/05/2021      | 8.9                |
| Type 1 and Type 2 substances in aggregate | mg/m3           | Six monthly                        | 2   | 4/03/2021      | <0.019             |

A less than sign, "c", 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 Indentifcation Number 14

| Pollutant       | Unit of measure            | No. of samples<br>required by licence | Data capture % | Lowest sample value | Mean of sample | Highest sample value |
|-----------------|----------------------------|---------------------------------------|----------------|---------------------|----------------|----------------------|
| Nitrogen Oxides | mg/m3                      | Continouus                            | 100.00%        | 385.2               | 948.2          | 1253.5               |
| Suflur Dioxide  | mg/m3                      | Continuous                            | 100.00%        | 770.0               | 1003.0         | 1273.8               |
| Flow            | cubic metres per<br>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<br>collected and<br>analysed | Date of sample | Most recent result |
|--|-----------------|------------------------------------|---|----------------|--------------------|
| Cadmium  | mg/m3           | Six monthly                        | 2   | 22/09/2020     | < 0.0003           |
| Chlorine   | mg/m3           | Six monthly                        | 2   | 6/05/2021      | 0.036              |
| Fluorine   | mg/m3           | Six monthly                        | 2   | 6/05/2021      | 9.9                |
| Hydrogen chloride                                  | mg/m3           | Six monthly                        | 2   | 6/05/2021      | 14                 |
| Mercury  | mg/m3           | Six monthly                        | 2   | 4/03/2021      | 0.0024             |
| Solid Particles                                    | mg/m3           | Quarterly                          | 4   | 6/05/2021      | 9.8                |
| Sulfuric acid mist and sulfur trioxide (as SO3)    | mg/m3           | Six monthly                        | 2   | 6/05/2021      | 3.8                |
| Type 1 and Type 2 substances in aggregate          | mg/m3           | Six monthly                        | 2   | 4/03/2021      | <0.016             |
| Volatile organic compounds as n-propane equivalent | mg/m3           | Six monthly                        |   | 6/05/2021      | 0.99               |
| Carbon dioxide                                     | percent         | Six monthly                        | 2   | 6/05/2021      | 12                 |

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

# Discharge & Monitoring Point 19

Discharge to waters - Discharge quality monitoring, Volume monitoring

Discharge from cooling towers to Tinkers Creek, marked and shown as EPL Monitors ID No. 19 on The Plans

| Pollutant        | Unit of measure      | Sampling /<br>measurment<br>frequency | Samples collected and analysed | Lowest sample value | Mean of samples | Highest sample value | 100th percentile concentration limits |
|------------------|----------------------|---------------------------------------|--------------------------------|---------------------|-----------------|----------------------|---------------------------------------|
| Conductivity     | uS/cm                | Continuous during discharge           | 99.98%                         | 1437                | 3272            | 4005                 | 4500 uS/cm                            |
| Oil and Grease   | mg/L                 | Fortnightly                           | 2                              | <2                  | 2               | 3                    | 10 mg/L                               |
| pH               | pH Units             | Continuous                            | 99.96%                         | 7.8                 | 8.1             | 8.6                  | 6.5 - 9.0                             |
| Volume discharge | Megalitres per month | Continuous during discharge           | 4                              |                     | 466.5           |                      | 840 ML                                |

# Discharge & Monitoring Point 20

Discharge to waters - Discharge quality monitoring, Volume monitoring

Discharge from main station oil and water separator holding basin to Tinkers Creek marked and shown as EPL Monitors ID No. 20 on The Plans

| Pollutant              | Unit of measure     | Sampling /<br>measurment<br>frequency | Samples collected and analysed | Lowest sample value | Mean of samples | Highest sample value | 100th percentile concentration limits |
|------------------------|---------------------|---------------------------------------|--------------------------------|---------------------|-----------------|----------------------|---------------------------------------|
| Oil and Grease         | mg/L                | Fortnightly                           | 3                              | <2                  | 1               | <2                   | 10 mg/L                               |
| Total suspended solids | mg/L                | Fortnightly                           | 3                              | <5                  | 4               | 7                    | 30 mg/L                               |
| Volume discharge       | kilolitres per week | Continuous during discharge           | 4                              | 0                   | 9,842           | 10,984               | 36,400 kL                             |

# Discharge & Monitoring Point 21

Discharge to waters - Discharge quality monitoring, Volume monitoring

Discharge from Bayswater Ash Dam unlined flood spillway (located near left abutment ) to Chilcotts Creek marked and shown as EPL Monitors ID No. 21 on The Plans

| Pollutant        | Unit of measure    | Sampling /<br>measurment<br>frequency | Samples collected and<br>analysed | Lowest sample value | Mean of samples | Highest sample value | 100th percentile concentration limits |
|------------------|--------------------|---------------------------------------|-----------------------------------|---------------------|-----------------|----------------------|---------------------------------------|
| Boron            | mg/L               | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| Cadmium          | mg/L               | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| Conductivity     | uS/cm              | Continuous during discharge           | 0                                 |                     |                 |                      | -                                     |
| Copper           | mg/L               | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| Iron             | mg/L               | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| Molybdenum       | mg/L               | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| Nickel           | mg/L               | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| рН               | pH Units           | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| Silver           | mg/L               | Weekly duirng any discharge           | 0                                 |                     |                 |                      |                                       |
| Volume discharge | Megalitres per day | Daily during any discharge            | 0                                 |                     |                 |                      |                                       |

# Discharge & Monitoring Point 22

Discharge to waters - Volume monitoring

Discharge of recirculated water from the Hunter River to Lake Liddell marked and shown as EPL Monitors ID No. 22 on The Plans

| Pollutant        | Unit of measure    | Sampling /<br>measurment<br>frequency | Samples collected and analysed | Lowest sample value | Mean of samples | Highest sample value | 100th percentile concentration limits |
|------------------|--------------------|---------------------------------------|--------------------------------|---------------------|-----------------|----------------------|---------------------------------------|
| Volume discharge | kilolitres per day | Continuous during discharge           | 6                              | 10                  | 37              | 57                   |                                       |
|                  |                    |                                       |                                |                     |                 |                      |                                       |

# Discharge & Monitoring Point 23

Discharge of saline water under the Hunter River Salinity Trading Scheme, Discharge water quality monitoring, Volume monitoring

Discharge of saline wates from discharge pipe from the Lake Liddell dam wall marked and shown as EPL Monitors ID No. 23 on The Plans

| Pollutant              | Unit of measure    | Sampling /<br>measurment<br>frequency | Samples collected and<br>analysed | Lowest sample value | Mean of samples | Highest sample value | 100th percentile concentration limits |
|------------------------|--------------------|---------------------------------------|-----------------------------------|---------------------|-----------------|----------------------|---------------------------------------|
| Conductivity           | uS/cm              | Continuous during discharge           | 0                                 |                     |                 |                      | -                                     |
| рН                     | pH Units           | Weekly duirng any discharge           | 0                                 |                     |                 |                      | 6.5 - 8.5                             |
| Total suspended solids | mg/L               | Monthly during discharge              | 0                                 |                     |                 |                      | 30 mg/L                               |
| Volume discharge       | Megalitres per day | Continuous during discharge           | 0                                 |                     |                 |                      | 700 ML                                |

# Discharge & Monitoring Point 24

Discharge of saline waters from inlet pipe located at the Void 4 pontoon pump system marked and shown as EPL Monitors ID NO. 24 on The Plans

Discharge of saline wates from discharge pipe from the Lake Liddell dam wall marked and shown as EPL Monitors ID No. 23 on The Plans

| Pollutant              | Unit of measure    | Sampling /<br>measurment<br>frequency | Samples collected and analysed | Lowest sample value | Mean of samples | Highest sample value | 100th percentile concentration limits |
|------------------------|--------------------|---------------------------------------|--------------------------------|---------------------|-----------------|----------------------|---------------------------------------|
| Boron                  | mg/L               | Weekly duirng any discharge           | 0                              |                     |                 |                      | 0.81 mg/L                             |
| Cadmium                | mg/L               | Weekly duirng any discharge           | 0                              |                     |                 |                      | 0.0003 mg/L                           |
| Copper                 | mg/L               | Weekly duirng any discharge           | 0                              |                     |                 |                      | 0.001 mg/L                            |
| Conductivity           | uS/cm              | Continuous during discharge           | 0                              |                     |                 |                      | -                                     |
| Iron                   | mg/L               | Weekly duirng any discharge           | 0                              |                     |                 |                      | 0.27 mg/L                             |
| Molybdenum             | mg/L               | Weekly duirng any discharge           | 0                              |                     |                 |                      | 0.29 mg/L                             |
| Nickel                 | mg/L               | Weekly duirng any discharge           | 0                              |                     |                 |                      | 0.019 mg/L                            |
| рН                     | pH Units           | Weekly duirng any discharge           | 0                              |                     |                 |                      | 6.5 - 9.5                             |
| Silver                 | mg/L               | Weekly duirng any discharge           | 0                              |                     |                 |                      | 0.0005 mg/L                           |
| Total suspended solids | mg/L               | Monthly during discharge              | 0                              |                     |                 |                      | 30 mg/L                               |
| Volume discharge       | Megalitres per day | Continuous during discharge           | 0                              |                     |                 |                      | 20 ML                                 |

# Discharge did not occur **Details of Non-Compliance with Licence Conditions** Licence condition number not complied with L3.5 Summary of particulars of the non-compliance (NO MORE THAN 50 WORDS) Exceedance of NOx 99th percentile limit If required, further details on particulars of non-compliance Continuous emissions monitoring data indicates that the Unit 4 NOx emissions exceeded the 99th percentile limit for nitrogen oxides of 1100 mg/m3 on a number of occasions during July 2021. Date(s) when the non-compliance occurred, if applicable Currently being confirmed. If relevant, precise location where the non-compliance occurred (attach a map or diagram) Unit 4 If applicable, registration numbers of any vehicles or the chassis number of any mobile plant involved in the non-complianceN/A Cause of non-compliance The cause of the exceedance is currently being confirmed. Action taken or that will be taken to mitigate any adverse effects of the non-compliance No adverse effects resulted from the temporary exceedances of the 99th percentile limit for nitrogen oxides. Action taken or that will be taken to prevent a recurrence of the non-compliance Once the cause of the exceedance has been confirmed, any actions required to mitigate against reoccurrence will be identified.