

Permit Number: EPR/ZP3032KQ

Operator:

Dwr Cymru Cyfyngedig

Facility: Afan CHP Facility

Form Number: [Air1 / 11/02/2021](#)**Reporting of emissions to air for the period from 01/01/2020 to 31/12/2020**

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
A1	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	500 mg/m <sup>3</sup>	Hourly average	481.08 mg/m <sup>3</sup>	BS EN 14792	14/01/2021 12:05 – 13:05	2%
A1	Carbon Monoxide	1400 mg/m <sup>3</sup>	Hourly average	755.14 mg/m <sup>3</sup>	BS EN 15058	14/01/2021 12:05 – 13:05	2%
A1	Sulphur Dioxide	339 mg/m <sup>3</sup>	Hourly average	5.73 mg/m <sup>3</sup>	BS EN 14791	14/01/2021 12:05 – 13:05	13%
A2	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	500 mg/m <sup>3</sup>	Hourly average	432.34 mg/m <sup>3</sup>	BS EN 14792	03/11/2020 14:00 – 15:00	2%
A2	Carbon Monoxide	1400 mg/m <sup>3</sup>	Hourly average	1060.14 mg/m <sup>3</sup>	BS EN 15058	03/11/2020 14:00 – 15:00	2%
A2	Sulphur Dioxide	339 mg/m <sup>3</sup>	Hourly average	15.18 mg/m <sup>3</sup>	BS EN 14791	03/11/2020 14:00 – 15:00	13%
A3 (Boiler1)	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	170 mg/m <sup>3</sup>	Hourly average	136.68 mg/m <sup>3</sup>	BS EN 14792	14/01/2021 16:05 – 17:05	2%
A3 (Boiler1)	Carbon Monoxide	75 mg/m <sup>3</sup>	Hourly average	8.10 mg/m <sup>3</sup>	BS EN 15058	14/01/2021 16:05 – 17:05	2%
A3 (Boiler1)	Sulphur Dioxide	160 mg/m <sup>3</sup>	Hourly average	5.09 mg/m <sup>3</sup>	BS EN 14791	14/01/2021 16:05 – 17:05	3%
A4 (Boiler 2)	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	170 mg/m <sup>3</sup>	Hourly average	165.09 mg/m <sup>3</sup>	BS EN 14792	03/11/2020 16:30 – 17:30	3%
A4 (Boiler 2)	Carbon Monoxide	75 mg/m <sup>3</sup>	Hourly average	64.94 mg/m <sup>3</sup>	BS EN 15058	03/11/2020 16:30 – 17:30	5%
A4 (Boiler 2)	Sulphur Dioxide	160 mg/m <sup>3</sup>	Hourly average	1.25 mg/m <sup>3</sup>	BS EN 14791	03/11/2020 16:30 – 17:30	3%

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....Andrew Dixon.....  
(Authorised to sign as representative of Operator)

Date 11/02/2021

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Form Number: [Performance1 / 11/02/2021](#)

Parameter	Units
Fuel input to installation (biogas)	5,313,279 m3
Fuel input to installation (Natural Gas)	16,108 MWh
Total biogas to boilers	838 m3
Power output - heat	20,208 MWh
Power output- electricity	11,346 MWh
Energy Efficiency	0.006 MWh/m <sup>3</sup>
Hours of operation for CHP engines.	CHP 1: 6635 h CHP 2: 5288 h
Water usage	-
Water generated	-
Operational hours of boilers fired on biogas	81 h
Operational hours of waste gas burner	1,131 h > 10% of time > 876 Hours
Biogas burnt by waste gas burner	2,020,716 m3
Abnormal operation of pressure release valves	No data is available for this parameter.

Operator's comments:

The issues with the bursting disc activations that commenced in 2017 have been mitigated and the site specific management actions have prevented any further activations during 2020. As part of the management of these issues, both engines continue to run at a lower power load than before 2017. Welsh Water generation figures have improved thanks to these improvements with electricity generation up by 10% compared to 2019. Boilers and CHPs continue to operate with Emission Limit Values stipulated.

Signed Andrew Dixon, Energy Ops Manager.....

Date 31/03/2021

(Authorised to sign as representative of Operator)