

Permit Number: EPR/VP3736EF

Operator: The BOC Group Limited

Facility: Newport Steam Reforming Plant

Form Number: Air1 01/04/15

Reporting of emissions to air for the period from 01/01/2018 to 31/12/2018

Emission							
Emission Point	Substance / Parameter	Limit Value	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
Reformer Furnace Flue Gas Stack	Nitrogen Oxides as NO <sub>2</sub>	140mg/m <sup>3</sup>	Spot sample	59.5mgm <sup>-3</sup>	BS EN 14792 or as agreed in writing with Natural Resources Wales	02/08/2018 10:40 – 12:40	±6.2
	Carbon Monoxide	25mg/m <sup>3</sup>	Spot sample	5.7mgm <sup>-3</sup>	BS EN 15058 or as agreed in writing with Natural Resources Wales	02/08/2018 10:40 – 12:40	±2.5
Vent Gas Header Stack	Hydrogen	No limit set	Spot sample	599000 (ppm)	As agreed in writing with Natural Resources Wales	09/08/2018	
	Carbon Monoxide	No limit set	Spot sample	17.0 (ppm)	BS EN 15058 or as agreed in writing with Natural Resources Wales	09/08/2018	

Emission							
Emission Point	Substance / Parameter	Limit Value	Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
	Methane	No limit set	Spot sample	<1.0 (ppm)	TGN M22 or as agreed in writing with Natural Resources Wales	09/08/2018	

[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 Natural Resources Wales 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 R Warren (SHEQ Manager).....  
(Authorised to sign as representative of Operator)

Date...25<sup>th</sup> January 2019.....

Permit Number: EPR/VP3736EF

Operator: The BOC Group Limited

Facility: Newport Steam Reforming Plant

Form Number: WaterUsage1 01/04/15

Reporting of Water Usage for the year 2018

Water Source	Usage (m <sup>3</sup> /year)	Specific Usage (m <sup>3</sup> /unit output)
Water Usage - Mains water	2938 m <sup>3</sup> /year	
Water Usage – Other (please specify)		
<b>TOTAL WATER USAGE</b>	<b>2938m<sup>3</sup>/year</b>	<b>t/year</b>

Operator's comments : Following the increase in hydrogen produced there is an increase in water usage from the previous year.

Signed R Warren (SHEQ Manager).....  
(authorised to sign as representative of Operator)

Date 25<sup>th</sup> January 2019

Permit Number: EPR/VP3736EF

Operator: The BOC Group Limited

Facility: Newport Steam Reforming Plant

Form Number: Energy1 01/04/15

Reporting of Energy Usage for the year 2018

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	1712 MWh		
NG Burner fuel	5326 MWh		
TOTAL	7038.46 MWH		

\* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments: There is a slight decrease in the amount of energy used during the reporting period.

Signed R Warren (SHEQ Manager).....  
(Authorised to sign as representative of Operator)

Date 25/01/2019.....

Permit Number: EPR/VP3736EF

Operator: The BOC Group Limited

Facility: Newport Steam Reforming Plant

Form Number: Performance1 2015

Reporting of other performance indicators for the period 01/01/2018 to 31/12/2018

Parameter	Units
Total amount of Hydrogen produced	370 tonnes

Operator's comments :The plant has produced 100tonnes more hydrogen this year due to customer demand and improved plant reliability.

Signed R Warren (SHEQ Manager).....  
(Authorised to sign as representative of Operator)

Date 25/01/19.....