

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 01/01/2021 to 31/12/2021

Emission							
Emission Point	Substance / Parameter	Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Reformer Furnace Flue Gas Stack	Nitrogen Oxides as NO ₂	140mg/m ³	Spot sample	82.9mgm ⁻³	BS EN 14792 or as agreed in writing with Natural Resources Wales	05/05/2021 11:38 – 13:38	±2.65
	Carbon Monoxide	25mg/m ³	Spot sample	3.57mgm ⁻³	BS EN 15058 or as agreed in writing with Natural Resources Wales	05/05/2021 11:38 – 13:38	±3.75
Vent Gas Header Stack	Hydrogen	No limit set	Spot sample	5500 (ppm)	As agreed in writing with Natural Resources Wales	05/05/2021	
	Carbon Monoxide	No limit set	Spot sample	10 (ppm)	BS EN 15058 or as agreed in writing with Natural Resources Wales	05/05/2021	

Emission							
Emission Point	Substance / Parameter	Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
	Methane	No limit set	Spot sample	1000 (ppm)	TGN M22 or as agreed in writing with Natural Resources Wales	05/05/2021	

[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: **S. Roberts (Regional SHEQ Advisor)**.....
(Authorised to sign as representative of Operator)

Date...**25th January 2022**.....

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 2021

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)
Water Usage - Mains water	3372 m ³ /year	
Water Usage – Other (please specify)		
TOTAL WATER USAGE	3372 m³/year	t/year

Operator's comments: Water usage is in line with production rate.

Signed: S. Roberts (Regional SHEQ Advisor).....
(Authorised to sign as representative of Operator)

Date 25th January 2022

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 2021

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	1653 MWh		
NG Burner fuel	6303 MWh		
TOTAL	7956 MWh		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments: Energy usage is in line with other plant performance parameters.

Signed S. Roberts (Regional SHEQ Advisor).....
(Authorised to sign as representative of Operator)

Date 25/01/2022.....

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 01/01/2021 to 31/12/2021

Parameter	Units
Total amount of Hydrogen produced	483.7 tonnes

Operator's comments:

Signed S. Roberts (Regional SHEQ Advisor).....
(Authorised to sign as representative of Operator)

Date 25/01/2022...