Permit Number: EPR/BX7282IS

Operator: AB InBev UK Limited

Facility: Magor Brewery

Form Number: Air1 / 27/09/2022

Reporting of emissions to air for the period from 01/01/2023 to 31/12/2023

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
A1	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	220 mg/Nm^3	Periodic	199	BS EN 14792	20.12.23	4.2
	Carbon monoxide	No limit set	Periodic	691	ISO 12039	23.6.23	83.1
A2	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	220 mg/Nm^3	Periodic	180.9	BS EN 14792	21.6.23	10.5
	Carbon monoxide	No limit set	Periodic	33.9	ISO 12039	21.6.23	2
A3	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	140 mg/Nm^3	Periodic	108	BS EN 14792	21.6.23	9.7
	Carbon monoxide	No limit set	Periodic	13.6	ISO 12039	21.6.23	1.4
A4	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	140 mg/Nm^3	Periodic	99.4	BS EN 14792	21.6.23	4.9
	Carbon monoxide	No limit set	Periodic	16.6	ISO 12039	21.6.23	1.2
A8	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	500 mg/Nm^3	Periodic	357	BS EN 14792	22.6.23	13

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
	Carbon monoxide	650 mg/Nm^3	Periodic	583	BS EN 15058	30.3.23	21.8
	Sulphur dioxide	80 mg/Nm^3	Periodic	**447**	BS EN 14791	30.3.23	25.7
A9	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	220 mg/Nm^3	Periodic	199	BS EN 14792	20.12.23	4.2

[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 …[redacted]……. Date……31/01/24……..

(Authorised to sign as representative of Operator)

Permit Number: EPR/BX7282IS Operator: AB InBev UK Limited

Facility: Magor Brewery Form Number: Water1 / 04/12/2023

Reporting of emissions to water for the period from 01/01/2023 to 31/12/2023

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
Final Effluent Sample Point ST 4369 8494	Flow	10,000 m^3/day	Continuous	5407	To a relevant EN, BS, ISO standard as agreed in IP2	15.11.23	+/- 1.04 %
	Flow	126 l/s	Continuous	62.58	To a relevant EN, BS, ISO standard as agreed in IP2	16.11.23	+/- 1.04 %
	pH	>5 <9	Continuous	9.0		8.9.23	+/- 0.05 pH
	Temperature	30 °C	Continuous	26.6		22.6.23	+/- 1 degree C
	Biochemical Oxygen Demand (BOD)	200 mg/l	Weekly composite	81	BS EN 1899-1	15.10.23	20.1%
	Chemical Oxygen Demand (COD)	100 mg/l	Weekly composite	**103**	BS 6068-2	15.10.23	5.8%
	Suspended Solids	50 mg/l	Weekly	20	BS EN 872	15.10.23	19.7%
	Total copper & its compounds	0.01 mg/l as annual average	Monthly composite	0.00311	BS EN ISO 11885:1998, BS 6068-2.60:1998	15.1.23	9.03%
	Total cadmium & its compounds	0.005 mg/l as annual average	Monthly composite	0.0006	BS EN ISO 5961:1995, BS 6068-2.21:1995	1.1.23	7.83%

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
	Total chromium & its compounds	0.015 mg/l as annual average	Monthly composite	0.00547	BS EN ISO 11885:1998, BS 6068-2.60:1998	1.1.23	7.93%
	Total mercury & its compounds	0.0005 mg/l as annual average	Monthly composite	0.00008	BS EN ISO 11885:1998, BS 6068-2.60:1998	31.12.23	11.5%
	Total nickel & its compounds	0.03 mg/l as annual average	Monthly composite	0.01381	BS EN ISO 11885:1998, BS 6068-2.60:1998	22.1.23	8.82%
	Total zinc & its compounds	0.07 mg/l as annual average	Monthly composite	0.0402	BS EN ISO 11885:1998, BS 6068-2.60:1998	1.1.23	9.85%
	Total arsenic & its compounds	0.025 mg/l as annual average	Monthly composite	0.0005	BS EN 26595:1993, BS 6068-2.1:1983, ISO 6595-1985	1.1.23	10.04%
	Total nitrogen	20 mg/l	Daily composite	32.5	EN 12260 or EN ISO 11905-1	27.12.23	
	Total phosphorous	2 mg/l	Daily composite	7.98	EN ISO 6878 or EN ISO 15681-1 and EN ISO 15681-2 or EN ISO 11885	12.12.23	
	Chloride	No limit set	Monthly composite		EN ISO 10304-1 or EN ISO 15682		
	Total mercury and its compounds	915 g in a year		112		2023 total	11.5%

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
	Total cadmium and its compounds	9150 g in a year		823		2023 total	7.83%

[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 … [redacted] ……. Date……31.01.24……..

(Authorised to sign as representative of Operator)

Permit Number: EPR/BX7282IS Operator: AB InBev UK Limited

Facility: Magor Brewery Form Number: WaterUsage1 / 27/09/2022

Reporting of Water Usage for the year 2023

Water Source	Usage (m^3/year)	Specific Usage (m^3/unit output)
Spring water	1,667,290	3.11
Mains water	32,772	0.06
TOTAL WATER USAGE	1,700,062	3.17

Operator's comments:

Water usage is one of the global better world agendas.
Site water KPI's are reduced on an annual basis in line with global goals.

Signed …… [redacted] ……. Date…06/02/24……..

(authorised to sign as representative of Operator)

Permit Number: EPR/BX7282IS Operator: AB InBev UK Limited

Facility: Magor Brewery Form Number: Energy1 / 27/09/2022

Reporting of Energy Usage for the year 2023

Energy Source	Energy Usage Quantity	Primary Energy (MWh)	Specific Usage (MWh/unit output)
Electricity *	30789 MWh	73894	0.057
Natural Gas	106385 MWh	106385	0.198
Fuel oil	0 tonnes	00	0
Wind Electricity	9292 MWh	22300	0.017
TOTAL	146466 MWh	202579	0.273

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

The site is heavily focussed on better world targets including electricity, water and heat.
Wind Turbine brought online in 2021 for direct supply to Brewery.

Specific Usage in MWh per Hl P

Signed …… [redacted] ……. Date……07/02/24……..

(Authorised to sign as representative of Operator)

Permit Number: EPR/BX7282IS Operator: AB InBev UK Limited

Facility: Magor Brewery Form Number: Performance1 / 27/09/2022

Reporting of other performance indicators for the period 01/01/2023 to 31/12/2023

Parameter	Result
Production of beers and lagers (tonnes)	536,325
BOD (BOD/t)	0.02
COD (COD/t)	0.15
Carbon dioxide (tonne/tonne)	0.049
Ammonia (kg/year)	0
Gas engine energy generated, electricity and heat (MWth)	3305
Hydrogen sulphide concentration (ppm)	535
Hydrogen sulphide mass emission (g/s)	0.01436
Waste disposal and/or recovery(tonnes/year)	21676.68

Operator's comments:
Beer Volume from PG-K0110
H2S to CHP (column BZ on daily sheet)

This waste is inclusive of sludge from our WWTP and onsite waste kiesulguhr tanks. (= PG-R5607 + PG-R5605). Hazardous Waste is PG-R5634 and/or incinerated PG-R5632

Signed …… [redacted] ……. Date……07/02/24……..

(Authorised to sign as representative of Operator)