

Reference Number: BU2110IS

Operator: Cabot Carbon Limited

Installation: Barry Silicon-Based Manufacturing Installation

Form Number: A1 / Form Dated 1st February 2006

Reporting of Emissions to Air for Carbon Monoxide for the period 1 January 2023 to 31 March 2023

Emission Point	Substance / Parameter	Emission Limit Value ^[6]	Result ^{[1][7]} [Note A]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/Certification ^[4]	Uncertainty +/- ^[5]
A1	Carbon monoxide	3500 mg/m ³	1906 mg/m ³	TGN M22	17.03.2023: 10:20-11:20, 11:21-12:21, 12:22-13:22	MCERTS / UKAS	+/- 147 mg/m 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.

[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 Agency is used, then the appropriate identifier is given. Please note TGN M22 method replacing ASTM D6348-03 in accordance with EA (NRW) Monitoring Standard.

[3] For non-continuous measurements the date and time of the sample that produced the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The basis of any other uncertainty figure needs to be stated. Where no figure is available the Agency will need to agree an appropriate uncertainty value.

[6] Corrected to 273K, 101.3Kpa.

[7] Inclusion of extractive test for CO which agrees to 6 monthly CO extractive sampling, but the CO process monitoring will be continued on a continuous basis for process control. Documented in CAR_NRW0035674.

[Note A]: Results are given as averages being more representative, as agreed with NRW.



Signed

Date: 27th April 2023

(authorised to sign as representative of the Operator)

Reference Number: BU2110IS

Operator: Cabot Carbon Limited

Installation: Barry Silicon-Based Manufacturing Installation

Form Number: A3 / Form Dated 1st February 2006

Reporting of Emissions to Air for the period 1 January 2023 to 31 March 2023

Emission Point	Substance / Parameter	Emission Limit Value ^[6]	Result ^{[1][7]} [Note A]	Test Method ^[2]	Sample Date and Times ^[3] ^[7]	Accreditation/Certification ^[4]	Uncertainty +/- ^[5]
A1	Chlorine	10mg/m ³ ^[8]	1.3 mg/m ³	US EPA Method 26A	17.03.23: 10:20-10:50, 10:55-11:25, 11:30-12:00, 12:05-12:35, 12:40-13:10	MCERTS / UKAS	+/- 0.21 mg/m ³
A1	Chloromethanes (as methyl chloride)	50mg/m ³	2.62 mg/m ³	BS EN 13649	17.03.2023: 10:20-11:20, 11:21-12:21, 12:22-13:22	MCERTS / UKAS	+/- 0.27 mg/m ³
A1	Hydrogen chloride	10mg/m ³	0.50 mg/m ³	TGN M22	17.03.2023: 10:20-11:20, 11:21-12:21, 12:22-13:22	MCERTS / UKAS	+/- 0.85 mg/m 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.

[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 Agency is used, then the appropriate identifier is given. Please note TGN M22 method replacing ASTM D6348-03 in accordance with EA (NRW) Monitoring Standard.

[3] For non-continuous measurements the date and time of the sample that produced the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The basis of any other uncertainty figure needs to be stated. Where no figure is available the Agency will need to agree an appropriate uncertainty value.

[6] Corrected to 273K, 101.3Kpa.

[7] The tests were carried out at scrubber pH (pH 8.8) to assist in maintaining the improvement in caustic scrubber efficiency to reduce chlorine emissions at A1 stack outlet.

[Note A]: Results are given as averages being more representative, as agreed with NRW.

Signed
(authorised to sign as representative of the Operator)

Date: 27th April 2023

Permit Reference Number: BU2110IS

Operator: Cabot Carbon Limited

Installation: Barry Silicon-Based Manufacturing Installation

Form Number: W1 / Form Dated 1st February 2006

Reporting of Emissions to Water (other than to Sewer) for the period from 1 January 2023 to 31 March 2023

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
W1	Oil and grease	5mg/l ^[6]	<0.60	IR Spectrometry - EA Test 362 ISBN 0117517283	08.03.23 @10:35hrs	UKAS	+/- 20.0%
	BOD ₅	20mg/l ^[6]	<1	ISBN 011 7522120	08.03.23 @10:35hrs	UKAS	+/- 23.6%
	pH	>5, <9 ^[7]	7.4	BS 6068-2.50:1995	08.03.23 @10:35hrs	UKAS	+/- 20.3%
W2	Oil and grease	5mg/l ^[6]	<0.60	IR Spectrometry - EA Test 362 ISBN 0117517283	08.03.23 @10:50hrs	UKAS	+/- 20.0%
	BOD ₅	20mg/l ^[6]	1	ISBN 011 7522120	08.03.23 @10:50hrs	UKAS	+/- 23.6%
	pH	>5, <9 ^[7]	7.7	BS 6068-2.50:1995	08.03.23 @10:50hrs	UKAS	+/- 20.3%
W3	Oil and grease	5mg/l ^[6]	<0.60	IR Spectrometry - EA Test 362 ISBN 0117517283	08.03.23 @11:00hrs	UKAS	+/- 20.0%
	BOD ₅	20mg/l ^[6]	2	ISBN 011 7522120	08.03.23 @11:00hrs	UKAS	+/- 23.6%
	pH	>5, <9 ^[7]	7.7	BS 6068-2.50:1995	08.03.23 @11:00hrs	UKAS	+/- 20.3%

[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 Agency is used, then the appropriate identifier is given.

[3] For non-continuous measurements the date and time of the sample that produced the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The basis of any other uncertainty figure needs to be stated. Where no figure is available the Agency will need to agree an appropriate uncertainty value.

[6] The emission limit value for Oil and grease, and BOD₅, is expressed as a maximum individual value.

[7] The emission limit values for pH are expressed as minimum and maximum individual values.

Signed
(authorised to sign as representative of the Operator)

Date: 27th April 2023