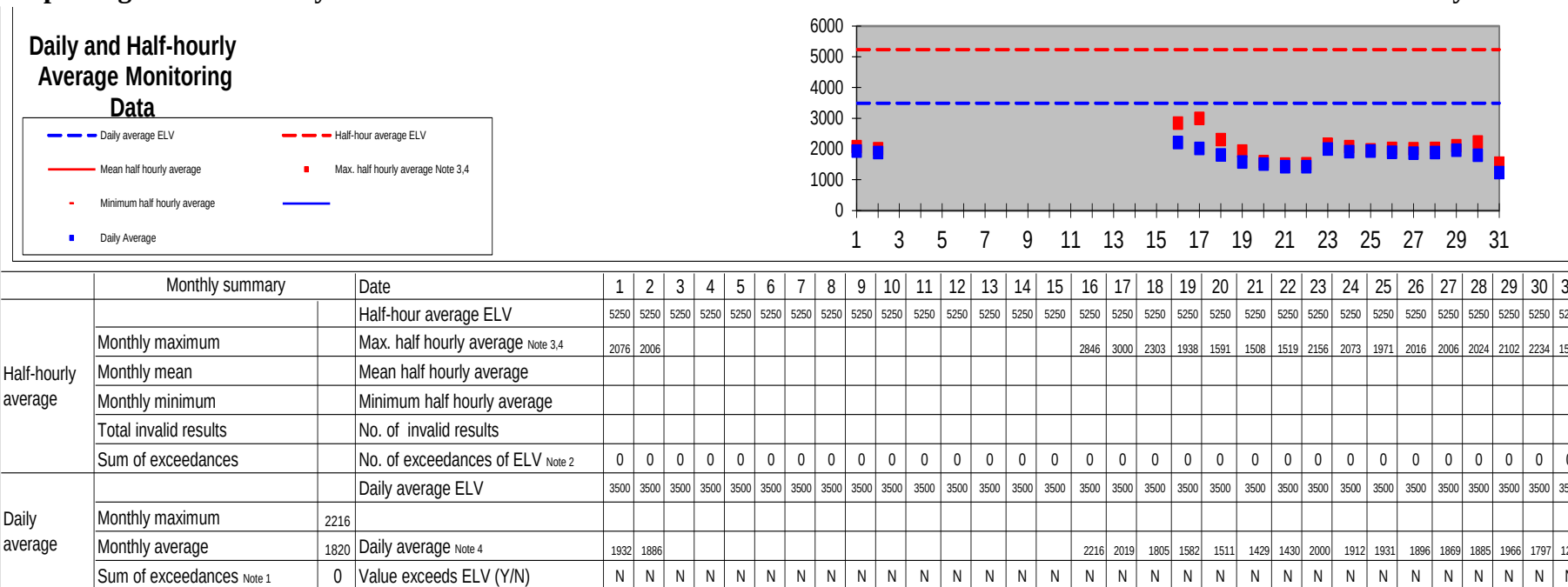


Reference Number: BU2110IS

Operator: Cabot Carbon Limited

Installation: Barry Silicon-Based Manufacturing Installation

Form Number: A1 / Form Dated 1st February 2006**Reporting of Continuously Monitored Emissions to Air for Carbon Monoxide Emission Point A1 for the month of January 2019**

Note 1: Not more than one calendar monthly average during any rolling twelve month period shall exceed the limit value by more than 10%.

Note 2: Not more than one half hour period (commencing on the hour or half hour) during any 24 hour period shall exceed the daily average limit value of 3500mg/m³ by more than 50%.Note 3: Max. half hourly averages to be reported in the event of an exceedance of 3500mg/m³.

Note 4: All results corrected to 273K, 101.3kPa.

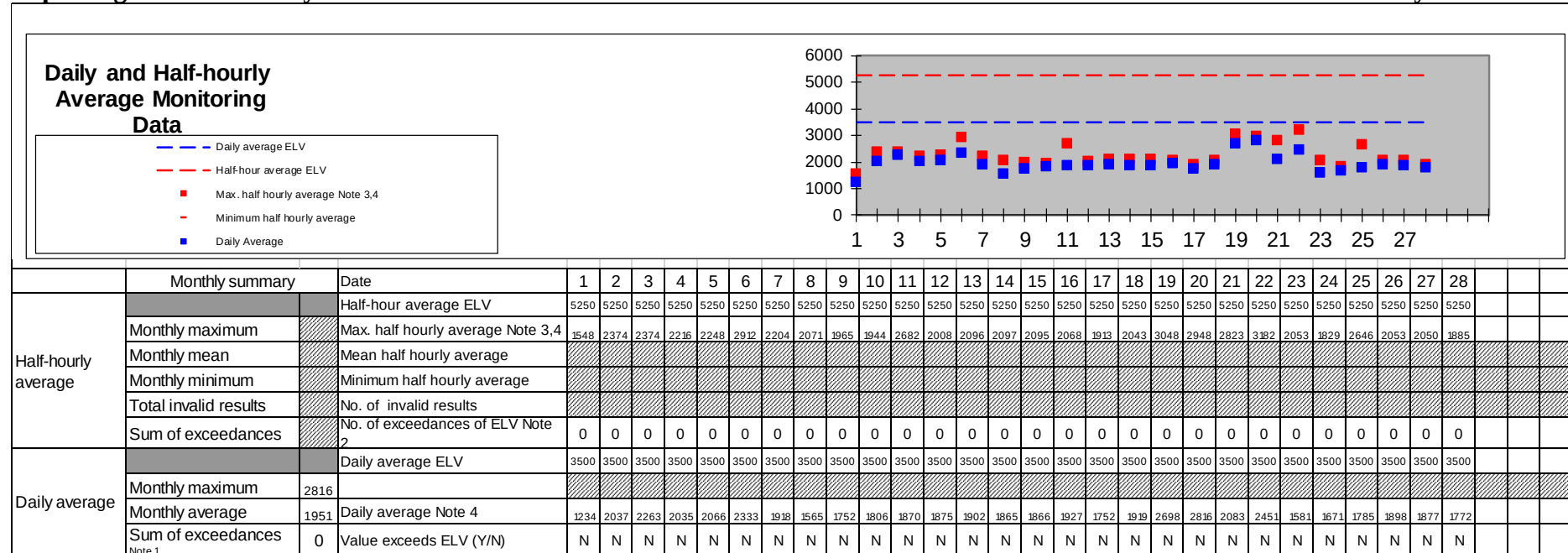
Note 5: 3rd -15th Jan Both units down Dow Mono shortage.Signed *PS Lord* Date: 29th April 2019

(authorised to sign as representative of Operator)

Operator: Cabot Carbon Limited

Form Number: A1 / Form Dated 1st February 2006

Reporting of Continuously Monitored Emissions to Air for Carbon Monoxide Emission Point A1 for the month of February 2019



Note 1: Not more than one calendar monthly average during any rolling twelve month period shall exceed the limit value by more than 10%.

Note 2: Not more than one half hour period (commencing on the hour or half hour) during any 24 hour period shall exceed the daily average limit value of 3500mg/m³ by more than 50%.

Note 3: Max. half hourly averages to be reported in the event of an exceedance of 3500mg/m³.

Note 4: All results corrected to 273K, 101.3kPa.

Note 5 A & B unit down 15hrs on Feb 7th, maint/repair

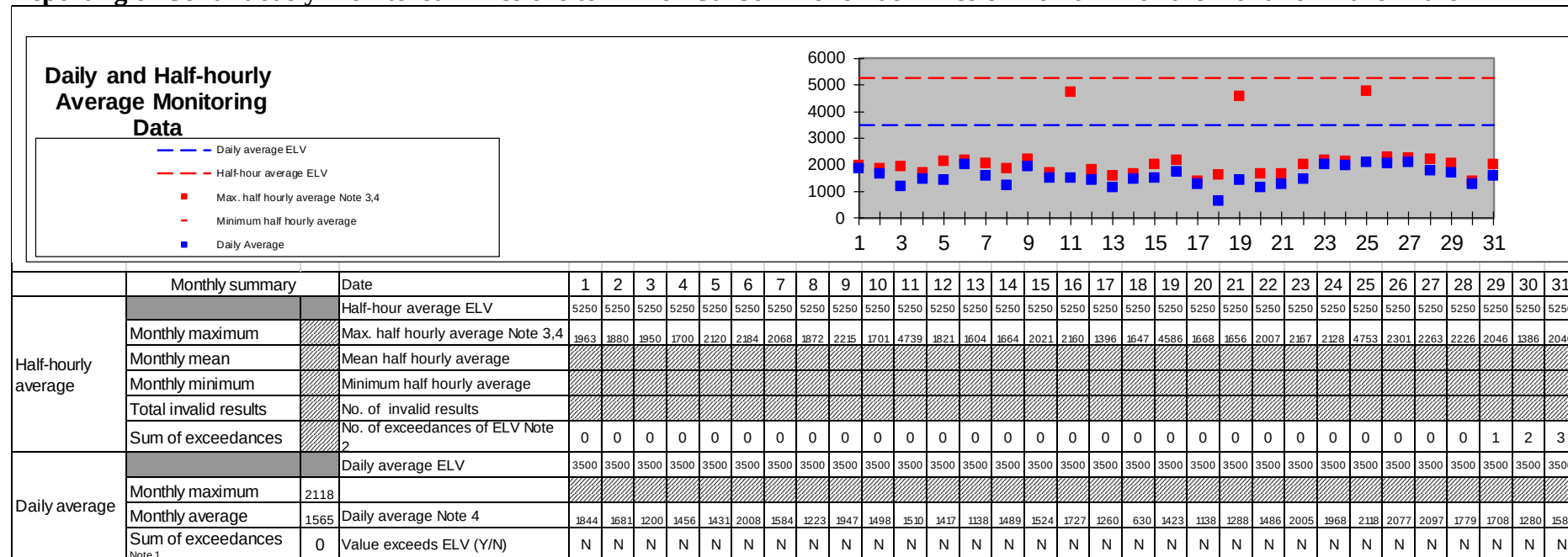
Signed *PS Lloyd*
(authorised to sign as representative of Operator)

Date: 29th April 2019

Reference Number: BU2110IS

Operator: Cabot Carbon Limited

Installation: Barry Silicon-Based Manufacturing Installation

Form Number: A1 / Form Dated 1st February 2006**Reporting of Continuously Monitored Emissions to Air for Carbon Monoxide Emission Point A1 for the month of March 2019**

Note 1: Not more than one calendar monthly average during any rolling twelve month period shall exceed the limit value by more than 10%.

Note 2: Not more than one half hour period (commencing on the hour or half hour) during any 24 hour period shall exceed the daily average limit value of 3500mg/m³ by more than 50%.Note 3: Max. half hourly averages to be reported in the event of an exceedance of 3500mg/m³.

Note 4: All results corrected to 273K, 101.3kPa.

Note 5: No downtime. Calibration spike observed 11th, 19th, 25th

Signed *PS Lloyd*
 (authorised to sign as representative of Operator)

Date: 29th April 2019

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 to 31 March 2019

Emission Point	Substance / Parameter	Emission Limit Value ^[6]	Result ^[1] [Note A]	Test Method ^[2]	Sample Date and Times ^[3] ^[7]	Accreditation/ Certification ^[4]	Uncertainty +/- ^[5]
A1	Chlorine	10 mg/m ³ ^[8]	2.1mg/m ³	US EPA Method 26A	14/02/2019 0905-0935,0950-1020,1025-1055,1100-1130,1135-1205hrs	MCERTS / UKAS	+/- 0.3 mg/m ³
A1	Chloromethanes (as methyl chloride)	50 mg/m ³	3.9 mg/m ³	BS EN 13649	14/02/2019 0855-0955, 0957-1057,1100-1200hrs	MCERTS / UKAS	+/- 0.8 mg/m ³
A1	Hydrogen chloride	10 mg/m ³	0.04 mg/m ³	TGN M22	14/02/2019 0855-0955, 0957-1057,1100-1200hrs	MCERTS / UKAS	+/- 0.9 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.

[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.

[8] Calculated as the average of 5 consecutive 30 minute samples taken every quarter. Results above 14.6mg/m³ shall be removed from these calculations.

[Note A]: Results are given as averages being more representative, as agreed with NRW. Running 1 unit only due to feed supply issue.



Signed
(authorised to sign as representative of the Operator)

Date: 29th April 2019

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 to 31 March 2019

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]	<0.6	IR Spectrometry - W-TEC-IR	07/03/2019 0730hrs	UKAS	+/- 20.0%
	BOD ₅	20mg/l ^[6]	1	ISBN 011 7522120	07/03/2019 0730hrs	UKAS	+/- 23.6%
	pH	>5, <9 ^[7]	7.5	ISBN: 011 7514284	07/03/2019 0730hrs	UKAS	+/- 20.3%
W2	Oil and grease	5mg/l ^[6]	<0.6	IR Spectrometry - W-TEC-IR	06/03/2019 0945hrs	UKAS	+/- 20.0%
	BOD ₅	20mg/l ^[6]	<1	ISBN 011 7522120	06/03/2019 0945hrs	UKAS	+/- 23.6%
	pH	>5, <9 ^[7]	8.1	ISBN: 011 7514284	06/03/2019 0945hrs	UKAS	+/- 20.3%
W3	Oil and grease	5mg/l ^[6]			No Sample	UKAS	
	BOD ₅	20mg/l ^[6]			No Sample	UKAS	
	pH	>5, <9 ^[7]			No sample	UKAS	

[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.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. W3 No samples could be taken due to river level above outfall point

[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.

[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.

[8] The Environment Agency National Testing Laboratory at Shawcross in Exeter has obtained UKAS accreditation for the oil and grease test method.



Signed
(authorised to sign as representative of the Operator)

Date: 29th April 2019