

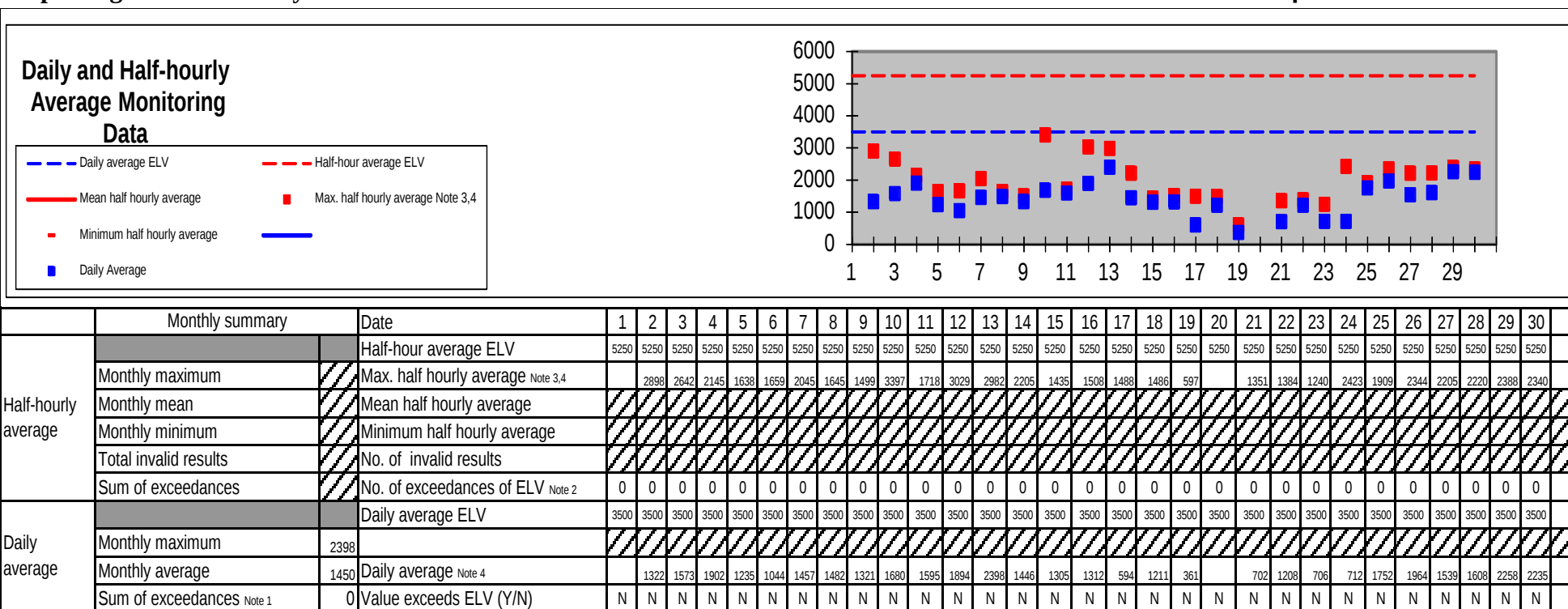
Reference Number: BU2110IS

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 April 2017



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: 01.04.17 A&B down 24hr. ANHCL limitations 19.04.17 plant down D36 PRV replacement

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

Date: 12th July 2017

Reference Number: BU2110IS

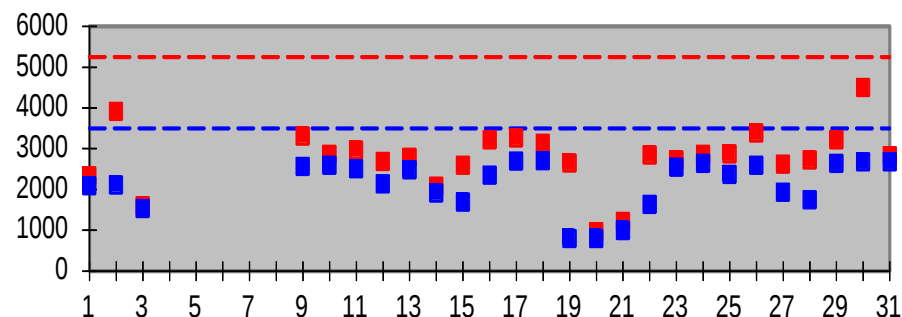
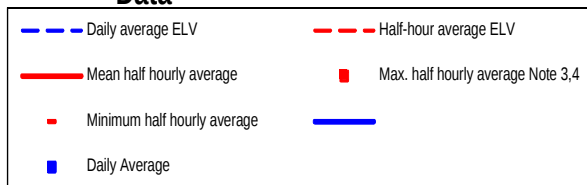
Operator: Cabot Carbon Limited

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 May 2017

Daily and Half-hourly Average Monitoring Data



	Monthly summary		Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Half-hourly average			Half-hour average ELV	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250	5250
	Monthly maximum	///	Max. half hourly average Note 3,4	2334	3910	1590						3304	2863	2962	2687	2783	2075	2589	3216	3262	3127	2644	965	1216	2842	2719	2862	2867	3378	2620	2716	3212	4498	2821
	Monthly mean	///	Mean half hourly average	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
	Monthly minimum	///	Minimum half hourly average	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
	Total invalid results	///	No. of invalid results	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
	Sum of exceedances	///	No. of exceedances of ELV Note 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily average			Daily average ELV	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
	Monthly maximum	2697		///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
	Monthly average	2129	Daily average Note 4	2083	2110	1532						2564	2588	2508	2136	2474	1911	1689	2348	2695	2697	798	795	984	1629	2546	2639	2367	2594	1927	1741	2639	2678	2671
	Sum of exceedances Note 1	0	Value exceeds ELV (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

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: plant down 03.05.17-08.05.17 AMUF repair in gas compartment

Signed

(authorised to sign as representative of Operator)

Date: 12th July 2017

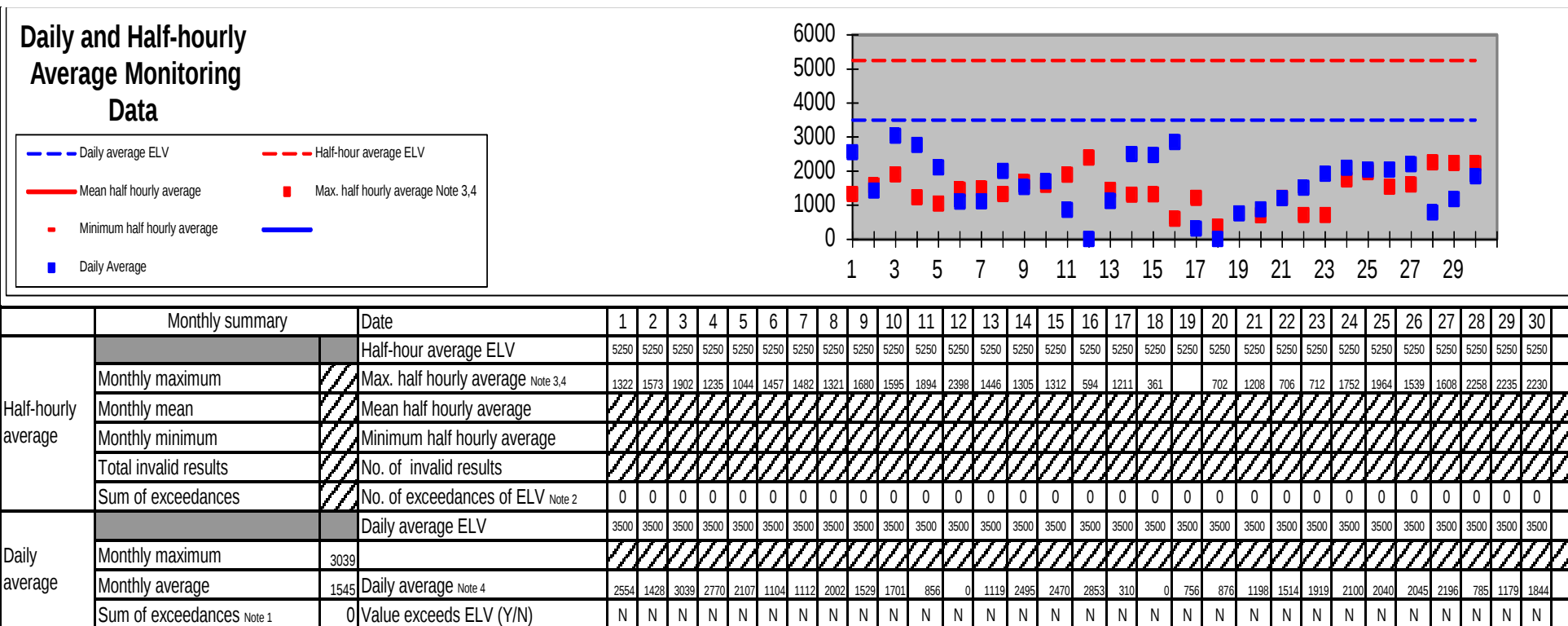
Reference Number: BU2110IS

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 June 2017



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: 12th 8hrs down A&B unit, 18th June A&B units ANHCL limitations

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

Date: 12th July 2017

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 April 2017 to 30 June 2017

Emission Point	Substance / Parameter	Emission Limit Value ^{[6] [7]}	Result ^[1] [Note A]	Test Method ^[2]	Sample Date and Times ^{[3] [8]}	Accreditation / Certification ^[4]	Uncertainty ^{+/- [5]}
A1	Chlorine	10mg/m ³	3.5 mg/m ³	US EPA Method 26A	Q2 31.05.2017 11:11-11:41, 11:46-12:16, 12:25-12:55, 13:00-13:30, 13:35-14:05hrs	MCERTS / UKAS	+/- 0.5 mg/m3
A1	Chlorine	10mg/m ³	6.1 mg/m ³	US EPA Method 26A	Annual average of CY16Q3(8.9), CY16Q4(2.7), CY17Q1(9.5) CY17Q2 (3.5)	MCERTS / UKAS	+/- 0.8 mg/m3
A1	Chloromethanes (as methyl chloride)	50mg/m ³	10.2 mg/m ³	BS EN 13649	31.05.17 11:11:11:16, 12:26-12:31,13:35-14:05hrs	MCERTS / UKAS	+/- 2.4 mg/m3
A1	Hydrogen chloride	10mg/m ³	2.0 mg/m ³	TGN M22	31.05.17 11:45-12:45, 12:46-13:46, 13:47-14:47hrs	MCERTS / UKAS	+/- 1.6 mg/m3

[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] Reversion to 10mg/m3 chlorine emission limit as documented in EPR/BU2110IS/V007. Results calculated as the average of 5 consecutive, 30 minute samples taken every quarter.

[8] Annual Average reported.

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



Signed
(authorised to sign as representative of the Operator)

Date: 12th July 2017

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 April 2017 to 30 June 2017

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]	<0.2	IR Spectrometry - EA Test 362 ISBN 0117517283	12/05/16@06:00	UKAS	±8.13%
	BOD ₅	20mg/l ^[6]	6.3	ISBN 011 7522120	12/05/16@06:00	UKAS	±15.97%
	pH	>5, <9 ^[7]	7.59	BS 6068-2.50:1995	12/05/16@06:00	UKAS	±0.95 %
W2	Oil and grease	5mg/l ^[6]	<0.2	IR Spectrometry - EA Test 362 ISBN 0117517283	12/05/16@06:00	UKAS	±8.13%
	BOD ₅	20mg/l ^[6]	<2.75	ISBN 011 7522120	12/05/16@06:00	UKAS	±15.97%
	pH	>5, <9 ^[7]	7.54	BS 6068-2.50:1995	12/05/16@06:00	UKAS	±0.95 %
W3	Oil and grease	5mg/l ^[6]	<0.2	IR Spectrometry - EA Test 362 ISBN 0117517283	12/05/16@06:00	UKAS	±8.13%
	BOD ₅	20mg/l ^[6]	1.90	ISBN 011 7522120	12/05/16@06:00	UKAS	±15.97%
	pH	>5, <9 ^[7]	7.08	BS 6068-2.50:1995	12/05/16@06:00	UKAS	±0.95 %

[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.

[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: 12th July 2017