

# Notice of variation with introductory note

Environmental Permitting (England & Wales) Regulations 2010

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Barry Silicon Based Manufacturing  
Installation

Cabot Carbon Limited  
Sully Moors Road  
Sully  
Vale of Glamorgan  
CF64 5RP

Variation application number  
EPR/BU2110IS/V005

Permit number  
EPR/BU2110IS

# **Cabot Carbon Limited**

## **Permit number EPR/BU2110IS**

### **Introductory note**

**This introductory note does not form a part of the notice.**

The following notice gives notice of the variation of an environmental permit.

Cabot Carbon Limited has extended its contract with the adjacent Dow Corning Ltd manufacturing site to change and increase the quantities of the blend of chlorosilane by-products received for the production of fumed silica.

One of the two existing chlorosilane burner trains ('B' Unit) will be replaced with a new train employing the latest technology to accommodate the change in chlorosilane blend and enable a 15% increase in fumed silica production. The new technology features energy recovery and improved chlorine emissions reduction.

The opportunity has also been taken to temporarily increase the current site chlorine emission limit value to reflect operating experience obtained since permitting in 2006. The chlorine emission limit will be reduced upon completion of commissioning of the new burner train in late 2012.

The Schedules specify the changes made to the original permit.

Schedule 1 of the notice lists any conditions that have been deleted, Schedule 2 of the notice lists any amended conditions and Schedule 3 of the notice lists any conditions that have been added. It has not been necessary to incorporate a new site plan into Schedule 4 as part of this variation.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

<b>Status Log of permit</b>			
<b>Detail</b>	<b>Date</b>	<b>Response Date</b>	
Application BU2110IS	Received 17/08/05		
Response to request for information	Requests dated: 09/09/05, 22/09/05, 12/01/06, 16/01/06, 19/01/06, 10/03/06	Responses dated: 14/10/05, 26/10/05, 18/11/05, 23/11/05, 12/12/05, 19/12/05, 13/01/06, 09/02/06, 16/03/06	
Request to extend determination	Request dated 14/12/05	Request 19/12/05	accepted
Permit determined	Determined 31/03/06		
Application RP3137UZ	Duly made 18/10/07		
Further information request	6/11/07	8/11/07	
Variation notice RP3137UZ issued	21/11/07		
Application EA/EPR/BU2110IS/V003	Duly made 22/09/08		
Further information request	22/9/08, 13/10/08, 5/11/07	1/10/08, 18/11/07	
Variation notice EA/EPR/BU2110IS/V003 issued	22/12/08		
Application EPR/BU2110IS/V004	28/06/10		
Variation notice EPR/BU2110IS/V004 issued	7/07/10		
Application EPR/BU2110IS/V005	Duly made 18/05/11		
Further information request	7/07/11	22/07/11	
Further information request	14/09/11	22/09/11	
Variation notice EPR/BU2110IS/V005 issued	23/11/11		

<b>Other Part A installation permits relating to this installation</b>		
<b>Operator</b>	<b>Permit number</b>	<b>Date of issue</b>
Dow Corning Ltd.	BR9685IX	06/06/06
Npower Cogen Ltd.	BX4135IJ	30/06/06
Vopak Terminal Windmill Ltd.	KP3734SH	01/06/06

End of Introductory note

**Notice of variation**

Environmental Permitting (England and Wales) Regulations 2010

**Permit number**  
**EPR/BU2110IS**

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies the environmental permit issued to

**Cabot Carbon Limited** ("the operator")

whose registered office is

**Finance Department**  
**Sully Moors Road**  
**Sully**  
**Penarth**  
**Vale of Glamorgan**  
**CF64 5RP**

company registration number 00462857

to operate part of a regulated facility at

**Barry Silicon Based Manufacturing Installation**  
**Sully Moors Road**  
**Sully**  
**Vale of Glamorgan**  
**CF64 5RP**

to the extent set out in the schedules.

The notice shall take effect from 23/11/2011

Name

Date

M Bischer

23/11/2011

Authorised on behalf of the Environment Agency

## Schedule 1 – conditions to be deleted

None

## Schedule 2 – conditions to be amended

The following conditions are amended as a result of the application made by the operator:

### 1. Condition 1.4.1 is amended by the addition of the following improvement requirements to Table 1.4.1:

Table 1.4.1: Improvement programme		
Reference	Requirement	Date
IP24	The Operator shall notify the Environment Agency in writing upon completion of commissioning of the modifications described in the application for variation EPR/BU2110IS/V005 and the date from which the chlorine emission limit value for release point A1 shall revert to 10 mg/m <sup>3</sup> as an hourly average.	01/05/13
IP25	The Operator shall submit a report to the Environment Agency upon completion of commissioning of the modifications described in the application for variation EPR/BU2110IS/V005 confirming and quantifying the improvements in emissions performance and energy recovery achieved. The report shall also identify where projected improvements or impacts have not been achieved and steps to be taken to rectify performance shortfalls where this represents BAT.	01/06/13
IP26	The Operator shall submit a report to the Environment Agency comparing emissions data obtained using the permitted methods for monitoring emissions of chlorine and chloromethane species described in the variation EA/EPR/BU2110IS/V005. Preference shall be given to use of MCERT compliant methods. The preferred method identified in the report shall be adopted for compliance monitoring upon written approval by the Environment Agency.	01/08/13
IP27	The Operator shall undertake a BAT review for the facility, including replacement of 'A' Unit burner train with the technology described in the application for variation EA/EPR/BU2110IS/V005. A report including proposals for implementing any additional measures identified as representing BAT shall be submitted in writing to the Environment Agency for approval.	01/01/14

**2. Condition 2.1.1 is amended by the addition of the further operating techniques to Table 2.1.1:**

<b>Table 2.1.1: Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	The response to questions 2.1 and 2.2 given in pages 4 to 31 of the application	17/08/05
Further information	Revised plan and location of sewer emission point S1	19/12/05
Further information	Update to original improvement programme	27/01/05
Further information	Update to description of release points to air	06/02/06
Further information	Revised plan and location of effluent transfer point E1	16/03/06
Variation application	The information provided in Sections C2.1, C2.2 and C2.3 of the variation application.	01/10/07
Further information	Dehumidifier design	8/11/07
Variation application	The information provided in Sections 1, 2, 3 and 4 of the variation application EA/EPR/BU2110IS/V003.	29/08/08
Variation application	The information provided in Sections 2, 3, 4 and 7 of the variation application EPR/BU2110IS/V005.	18/05/11
Further information	The information provided in Sections 2.3, 4.1 and 4.6 of the further information for variation application EPR/BU2110IS/V005.	22/07/11

### 3. Condition 2.2.1.3 is amended to:

2.2.1.3 The limits for emissions to air for the parameters and emission points set out in Table 2.2.2 shall not be exceeded.

<b>Table 2.2.2 : Emission limits to air and monitoring</b>				
<b>Emission point reference</b>	<b>Parameter</b>	<b>Limit (including Reference Period)<sup>Note1,3</sup></b>	<b>Monitoring frequency</b>	<b>Monitoring method</b>
A1	Carbon monoxide	3500 mg/m <sup>3</sup> daily average <sup>Note 2</sup>	Continuous	BS EN15058, FTIR
A1	Oxides of nitrogen as NO <sub>2</sub>	50 mg/m <sup>3</sup> hourly average	Annually	BS EN14792, FTIR
A1	Hydrogen chloride	10 mg/m <sup>3</sup> hourly average	Quarterly	BS EN 1911:1998 Parts 1 to 3, US EPA 26 or 26A, FTIR
A1	Chlorine <sup>Note 5</sup>	20 mg/m <sup>3</sup> hourly average	Quarterly	US EPA Method 26 or 26A, UV/IR DOAS, Mass Spectroscopy
A1	Chlorine <sup>Note 5</sup>	10 mg/m <sup>3</sup> hourly average <sup>Note 6</sup>	Quarterly	US EPA Method 26 or 26A, UV/IR DOAS, Mass Spectroscopy
A1	Chloro-methanes <sup>Note 4, 5</sup>	50 mg/m <sup>3</sup> hourly average	Quarterly	BS EN 13649, FTIR, UV/IR DOAS, Mass Spectroscopy
A2	Oxides of nitrogen as NO <sub>2</sub>	200 mg/m <sup>3</sup> hourly average	Annually	BS EN14792, FTIR
A2	Carbon monoxide	200 mg/m <sup>3</sup> hourly average	Annually	BS EN15058, FTIR
A13	Formaldehyde	150 g/hour	Six monthly	BS EN13649, US EPA M18, FTIR
A6, A7, A9, A10, A11, A12, A14, A15, A16, A17, A18, A19, A20, A21, A22	Particulate	No visible releases of dust with no evidence of deposition in vicinity of stack discharge	None	Not applicable

Note 1: See Section 6 for reference conditions

Note 2: Not more than one calendar monthly average during any rolling twelve month period shall exceed the limit value by more than 10%. Not more than one half hour period (commencing on the hour or half hour) during any 24 hour period shall exceed the limit value by more than 50%.

Note 3: Where spot tests are employed the above limit shall be applied over the period of the test which shall not be less than 1 hour.

Note 4: Including CH<sub>3</sub>Cl, CH<sub>2</sub>Cl<sub>2</sub>, CHCl<sub>3</sub> and CCl<sub>4</sub>

Note 5: Preferred monitoring method for chlorine and chloromethanes to be determined upon completion of improvement condition item reference IC26.

Note 6: 10 mg/m<sup>3</sup> emission limit value for chlorine shall apply from the date agreed upon completion of improvement condition item reference IC24.

**Schedule 3 – conditions to be added**

None