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Wales

Notice of variation with introductory note

Environmental Permitting (England & Wales) Regulations 2010

Cabot Carbon Limited

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

Variation application number

EPR/BU2110IS/V007

Permit number

EPR/BU2110IS

Barry Silicon-Based Manufacturing Installation

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.

This variation allows the Operator to increase the nameplate capacity of the treated silica plant from 1,700 metric tonnes (MT) per annum to 3,500 MT per annum. The treated silica plant is a directly associated activity to the main fumed amorphous silica (silicon dioxide) manufacturing plant. The capacity increase will be introduced in a phased manner, with a final capacity of 3,500 MT per annum being achieved by 2018.

The increase in capacity will result in additional emissions to air which will be emitted through a new air emission point. Additional abatement equipment will be installed to control emissions to air and will include new bag filters to control releases of particulates and a new water scrubber to control releases of formaldehyde and siloxanes. The new abatement equipment incorporates best available techniques.

This variation also makes changes to the monitoring requirements for chlorine, chloromethanes and hydrogen chloride at emission point A1, which is associated with the main silicon dioxide production activity at the site.

The schedules specify the changes made to the original permit.

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

Status log of the permit		
Description	Date	Comments
Application BU2110IS received	17/08/05	
Further information requests	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	14/12/05	Request accepted 19/12/05
Permit determined	31/03/06	
Application RP3137UZ	Duly made 18/10/07	
Further information request	06/11/07	Response dated 08/11/07
Variation notice RP3137UZ issued	21/11/07	
Application EPR/BU2110IS/V003	Duly made 22/09/08	
Further information request	22/09/08, 13/10/08, 05/11/07	01/10/08, 18/11/07
Variation notice EPR/BU2110IS/V003 issued	22/12/08	
Application EPR/BU2110IS/V004	28/06/10	
Variation notice EPR/BU2110IS/V004 issued	07/07/10	
Application EPR/BU2110IS/V005	Duly made 18/05/11	
Further information request	07/07/11	Response dated 22/07/11
Further information request	14/09/11	Response dated 22/09/11
Variation notice EPR/BU2110IS/V005 issued	23/11/11	
Agency variation determined EPR/BU2110IS/V006	04/03/13	Agency variation to implement the changes introduced by IED
Application EPR/BU2110IS/V007	Duly Made 24/12/2014	
Application EPR/BU2110IS/V007 Determined	05/08/2015	

Other Part A installation permits relating to this installation

Operator	Permit number	Date of issue
Dow Corning Limited	BR9685IX	06/06/06
Npower Cogen Limited	BX4135IJ	30/06/06
Vopak Terminal Windmill Limited	KP3734SH	01/06/06

End of introductory note

Notice of variation

Environmental Permitting (England and Wales) Regulations 2010

The Natural Resources Body for Wales (“Natural Resources Wales”) in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies

Permit number
EPR/BU2110IS

issued to:
Cabot Carbon Limited (“the operator”)

whose registered office is

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

company registration number 00462857

to operate 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 5th August 2015

Name

Date

<i>A.M. Lewis</i>	05/08/2015
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Anna Lewis, Principal Permitting Officer, NRW Permitting Service

Authorised on behalf of Natural Resources Wales

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.

Table 2.1.1 of Condition 2.1.1 shall be amended to:

Table 2.1.1 : Operating techniques		
Description	Parts	Date Received
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	08/11/07
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	18/08/11
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
Variation application	The information provided in Section 4 of the variation application EPR/BU2110IS/V007	24/12/14

Table 2.2.1 of Condition 2.2.1.2 shall be amended to:

Table 2.2.1 : Emission points to air		
Emission point reference or description	Source	Location of emission point
A1	Silica production plant, acid recovery plant and vent scrubber discharges via 36m stack.	Point A1 on site plan in Application.
A2	Hydrogen production plant via 20m stack.	Point A2 on site plan in Application.
A3	Steam generation boilers via 17m stack.	Point A3 on site plan in Application.
A4	Fumed silica calciner A via 20m stack.	Point A4 on site plan in Application.
A5	Fumed silica calciner B via 20m stack.	Point A5 on site plan in Application.
A6	Central vacuum cleaning system for untreated silica via abatement.	Point A6 on site plan in Application.
A7	Central vacuum cleaning system for treated silica via abatement.	Point A7 on site plan in Application.
A8	De-aerator vent	Point A8 on site plan in Application.
A9	Silica feed tank TK26 vent via abatement.	Point A9 on site plan in Application.
A10	All bagging machines LEV via abatement.	Point A10 on site plan in Application.
A11	Treated plant silica feed tank and surge tank (until completion of IP20) vents via abatement.	Point A11 on site plan in Application.
A12	Treated silica product storage silo vent via abatement.	Point A12 on site plan in Application.
A13	Treated silica reactors 1 and 2, surge tank TK-24 and production separation conveying air via 12.75m stack.	Point A13 on site plan in Application.
A14	Treated plant bagging machine and JC9 vacuum pump vent via abatement.	Point A14 on site plan in Application.
A15	Untreated plant bagging machine and JC7 vacuum pump vent via abatement.	Point A15 on site plan in Application.
A16	Untreated silica bagging machines JC7, JC8, and JC12 exhaust to sweeps, treated bagging machine JC9 exhaust to sweeps, treated silica rework station to sweeps and big bagging machine LEV to sweeps vent via abatement.	Point A16 on site plan in Application.
A17	Untreated plant bagging machine JC8 vacuum pump vent via abatement.	Point A17 on site plan in Application.
A18	Untreated plant bagging machine JC12 vacuum pump vent via abatement.	Point A18 on site plan in Application.
A19	Untreated plant bagging machine JC4 vacuum pump vent via abatement.	Point A19 on site plan in Application.
A20	Untreated plant bagging machine JC5 vacuum pump vent via abatement.	Point A20 on site plan in Application.
A21	Denser JC1 vacuum pump vent via abatement.	Point A21 on site plan in Application.
A22	Denser JC6 vacuum pump vent via abatement.	Point A22 on site plan in Application.
A23	Combustion air dryer via 5m stack	Point A23 on Site plan in Variation application
A24	Treated silica reactor 3, surge tank TK-118 and production separation conveying air via 14.5m stack.	Point A24 in Variation application EPR/BU2110IS/V007.

Table 2.2.2 of Condition 2.2.1.3 shall be amended to:

Table 2.2.2 : Emission limits to air and monitoring				
Emission point reference	Parameter	Limit (including Reference Period)^{Note 1,3}	Monitoring frequency	Monitoring method
A1	Carbon monoxide	3500 mg/m ³ daily average ^{Note 2}	Continuous	BS EN15058, FTIR
A1	Oxides of nitrogen as NO ₂	50 mg/m ³ hourly average	Annually	BS EN14792, FTIR
A1	Hydrogen chloride	10 mg/m ³ hourly average	Quarterly	BS EN 1911 or TGN M22 (Extractive FTIR)
A1	Chlorine	10 mg/m ³ annual average ^{Note 6}	Quarterly ^{Note 5}	US EPA Method 26A
A1	Chloro-methanes ^{Note 4}	50 mg/m ³ hourly average	Quarterly	BS EN 13649
A2	Oxides of nitrogen as NO ₂	200 mg/m ³ hourly average	Annually	BS EN14792, FTIR
A2	Carbon monoxide	200 mg/m ³ hourly average	Annually	BS EN15058, FTIR
A13, A24	Formaldehyde	100 g/hour Combined mass emission from A13 and A24	Six monthly	BS EN13649, US EPA M18 ASTM (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, except as otherwise indicated in Note 5.

Note 4: Including CH₃Cl, CH₂Cl₂, CHCl₃ and CCl₄

Note 5: 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 6: For each calendar year, this result shall be calculated as the average of the previous 4 quarterly results (measured using the method described in Note 5).

Table S2 of Schedule 2 shall be amended to:

Table S2 : Reporting of monitoring data			
Parameter	Emission point	Reporting period	Period begins
Carbon monoxide, mg/m ³	A1	Every 3 months	01/04/06
Carbon monoxide, mg/m ³	A2, A3	Every 12 months	01/01/06
Oxides of nitrogen as NO ₂ , mg/m ³	A1, A2, A3	Every 12 months	01/01/06
Hydrogen chloride, mg/m ³	A1	Every 3 months	01/04/06
Chlorine, mg/m ³	A1	Every 3 months	05/08/15
Chlorine, mg/m ³	A1	Every 12 months as an average of the 4 quarterly averages for the calendar year	05/08/15
Chloromethanes, mg/m ³	A1	Every 3 months	01/04/06
Formaldehyde, mg/m ³	A13, A24	Every 12 months	05/08/15
BOD5 mg/l	W1, W2, W3	Every 3 months	01/04/06
Oil and grease, mg/l	W1, W2, W3	Every 3 months	01/04/06
pH	W1, W2, W3	Every 3 months	01/04/06
Water usage	Permitted installation	Every 12 months	01/04/06
Energy usage	Permitted installation	Every 12 months	01/04/06
Waste disposal and/or recovery	Permitted installation	Every 12 months	01/01/06

Schedule 3 – conditions to be added

None