

IED AR1

V.3.1 Dec 2015

IED Reporting - Energy Usage & Emissions for the year:

Q1 2018

Operator:

Dow Silicones UK Ltd

Site Location:

Barry Cogeneration Plant

Permit/Variation number:

EPR/JP3632ZH/V002

LCP:

60.

LCP Net Rated Thermal Input Capacity (MW):

Parameter	TOTAL	By Fuel							
		Coal	Lignite	Peat	Biomass	Other solid fuels	Liquid fuels	Natural gas	Other gases
Annual energy input (TJ)									
Total Annual SO ₂ emission (tonnes)	0.03								
Total Annual NO _x emission (tonnes)	12.31								
Total Annual Dust (PM) emission (tonnes)	0.00								

Signed on behalf of the Operator



Judith Sartor, Environmental Specialist

Date

12th April 2018

NOTES:

- (a) Annual energy input must be reported in TJ to 1 decimal places
- (b) Annual emissions to air must be reported to 2 decimal places and exclude start-up and shut-down
- (c) All forms must be saved in the format IED AR1—DEFRA IED LCP Number - Inventory Year i.e. IED AR1-XXX-2013
- (d) No PDF documents shall be accepted
- (e) Upload Forms held on GOV.UK will be accepted other variants of the forms will be automatically rejected which may impact their statutory obligations to report on time

IED RTA 1

V.3.1 Dec 2015

Releases of IED Pollutants to Air

Operational Summary for the year

Q1 2018

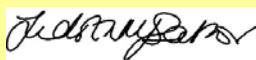
Operator: Dow Silicones UK Ltd**Site Location:** Barry Cogeneration Plant**Original permit number:** EPR/JP3632ZH **LCP:** 60.

Note: beginning 1 January 2016, a return is required for each LCP within 28 days of the end of each quarter

Emissions	SO2	NOx	Dust
	(tonnes)	(tonnes)	(tonnes)
January	0.01	10.09	
February	0.01	8.62	
March	0.01	6.16	
Total for Quarter 1	0.03	24.87	
April	0.00	-	
May	0.00	-	
June	0.00	-	
Total for Quarter 2	0.00	-	
July	0.00	-	
August	0.00	-	
September	0.00	-	
Total for Quarter 3	0.00	-	
October	0.00	-	
November	0.00	-	
December	0.00	-	
Total for Quarter 4	0.00	-	
Annual Total	0.03	24.87	

I confirm that this data is not knowingly reported with any omissions, errors or misrepresentation. All measurement equipment used to generate the data has been appropriately calibrated and maintained regularly; this includes calibration against traceable international measurement standards where available. The data is supported by appropriate record keeping. IT is designed, documented, tested, implemented, controlled and maintained to ensure reliable, accurate and timely processing of data; data handling and calculations have been appropriate; data has been checked for false and unusual measurements. The annual report of emissions for the above participating large combustion plant has been verified in accordance with the requirements of the Transitional National Plan Regulations.

Name of the operator staff responsible for the quality of data supplied to the Register in accordance with the principles above.



Judith Sartor, Environmental Specialist

Date 12th April 2018

**RELEASES TO AIR
QUARTERLY RETURN
MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS
OPERATING MODE:**

Operator: Dow Silicones UK Ltd

Form: IED CON 2 (Gas Turbines)

Location: Barry Cogeneration Plant

Version/date:

V.3.1 31 Dec 2015

Permit/Variation Number: EPR/JP3632ZH/V002

Year: 2018	A1 / LCP 60					
	NOx (mg/m3)			CO (mg/m3)		
Month	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean
January	61.06	64.74		2.7	9.2	15.9
February	63.58	65.84		5.4	12.1	43.8
March	52.77	63.76		11.4	55.1	126.3
April	-	-		-	-	-
May	-	-		-	-	-
June	-	-		-	-	-
July	-	-		-	-	-
August	-	-		-	-	-
September	-	-		-	-	-
October	-	-		-	-	-
November	-	-		-	-	-
December	-	-		-	-	-
Monthly ELV / Daily ELV (f)	125.	125.		80.	80.	80.
Annual 95th Percentile (h)	66.49(81)			19.9(81)		
Annual Percentile ELV (g)	125.			80.		

NOTES:

(a) All data based on validated hourly average concentrations, excluding start-up and shut-down and periods of malfunction or breakdown of abatement equipment, at 15% O₂, dry, 273.15K, 101.325 kPa

(b) Annual percentiles are submitted with the final return (Quarter 4)

(c) Extend report to cover the required number of LCP on each site and repeat report for each separately regulated Operating Mode as required, e.g., Combined Cycle, Open Cycle, Supplementary firing, Auxiliary firing

(d) Averages determined at loads in the range 70% < Load ≤ 100% ISO base load and above

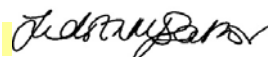
(e) Averages determined at loads in the range MSUL* < Load = 100% ISO base load and above (* For a 3 parameter approach, from the point of Start-Up to the point of Shut-down)

(f) Leave the Daily ELV blank if this is applied as a 95th percentile ELV within the Permit

(g) For each pollutant, report the Annual 95th percentile ELV for hourly averages in the first column and, if applicable, the Annual 95th percentile ELV for daily means in the second column

(h) For each pollutant, report the Annual 95th percentile of hourly averages in the first column and, if applicable, the Annual 95th percentile of daily means in the second column

Signed on behalf of the Operator by:



Judith Sartor, Environmental Specialist

Date of return:

12th April 2018

No confidence adjustment

**RELEASES TO AIR
QUARTERLY RETURN
MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS
OPERATING MODE:**

Operator: Dow Silicones UK Ltd

Form: IED CON 2 (Gas Turbines)

Location: Barry Cogeneration Plant

Version/date:

V.3.1 31 Dec 2015

Permit/Variation Number: EPR/JP3632ZH/V002

Year: 2018	A2 / LCP60					
	NOx (mg/m3)			CO (mg/m3)		
Month	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean
January	186.72	196.96		7.0	25.6	
February	193.71	202.79		3.9	13.1	
March	189.40	197.49		5.1	10.3	
April	-	-		-	-	
May	-	-		-	-	
June	-	-		-	-	
July	-	-		-	-	
August	-	-		-	-	
September	-	-		-	-	
October	-	-		-	-	
November	-	-		-	-	
December	-	-		-	-	
Monthly ELV / Daily ELV (f)	250.	250.		100.	110.	
Annual 95th Percentile (h)	199.64(26)			28.5(26)		
Annual Percentile ELV (g)	250.			200.		

NOTES:

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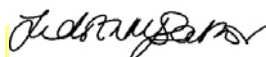
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Signed on behalf of the Operator by:



Judith Sartor, Environmental Specialist

Date of return:

12th April 2018

No confidence adjustment

**RELEASES TO AIR
QUARTERLY RETURN
MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS
OPERATING MODE:**

Operator: Dow Silicones UK Ltd

Form: IED CON 2 (Gas Turbines)

Location: Barry Cogeneration Plant

Version/date: V.3.1 31 Dec 2015

Permit/Variation Number: EPR/JP3632ZH/V002

Year: 2018	A3 / LCP60					
	NOx (mg/m3)			CO (mg/m3)		
Month	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean
January	59.92	86.17		2.0	15.0	33.1
February	60.04	77.33		3.5	8.8	9.7
March	63.50	80.74		3.8	10.7	18.8
April	-	-		-	-	-
May	-	-		-	-	-
June	-	-		-	-	-
July	-	-		-	-	-
August	-	-		-	-	-
September	-	-		-	-	-
October	-	-		-	-	-
November	-	-		-	-	-
December	-	-		-	-	-
Monthly ELV / Daily ELV (f)	125.	125.		80.	80.	80.
Annual 95th Percentile (h)	83.74(73)			11.1(73)		
Annual Percentile ELV (g)	125.			80.		

NOTES:

(a) All data based on validated hourly average concentrations, excluding start-up and shut-down and periods of malfunction or breakdown of abatement equipment, at 15% O₂, dry, 273.15K, 101.325 kPa

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Signed on behalf of the Operator by:



Judith Sartor, Environmental Specialist

Date of return:

12th April 2018

No confidence adjustment

CONTINUOUS MEASUREMENT SYSTEMS INVALIDATION LOG**QUARTERLY RETURN****Q1 2018****Year: 2018****Operator:****Dow Silicones UK Ltd****Form: IED CEM1****Monitor positioned on release point/LCP Number:****A1 / LCP 60****Version/Date: V 3.1 31 Dec 2016****Permit/Variation Number:****EPR/JP3632ZH/V002****Barry Cogeneration Plant**

Date	Period of invalidation (hours)	Invalidated days in year	Comments
20/03/2018	3.	1.	

NOTES:

(a) Compliance in Chapter III of the IED is on the basis of validated hourly averages, measured by continuous monitors (except where discontinuous exemption applies). And confidence intervals are incorporated to convert the measured hourly value into a validated measurement for the purpose of compliance assessment. However, any day in which more than 3 hourly average values are invalid (due to malfunction or maintenance of the continuous measurement system) shall be invalidated for the purpose of compliance assessment. If more than 10 days are invalid over a year the operator shall, within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and implement the approved proposals.

Signed on behalf of the Operator by: 

Judith Sartor, Environmental Specialist

Date of return: 12th April 2018

CONTINUOUS MEASUREMENT SYSTEMS INVALIDATION LOG**QUARTERLY RETURN****Q1 2018****Year: 2018****Operator:****Dow Silicones UK Ltd****Form: IED CEM1****Monitor positioned on release point/LCP Number:****A2 / LCP 60****Version/Date: V 3.1 31 Dec 2016****Permit/Variation Number:****EPR/JP3632ZH/V002****Barry Cogeneration Plant**

Date	Period of invalidation (hours)	Invalidated days in year	Comments
20/03/2018	3.	1.	

NOTES:

(a) Compliance in Chapter III of the IED is on the basis of validated hourly averages, measured by continuous monitors (except where discontinuous exemption applies). And confidence intervals are incorporated to convert the measured hourly value into a validated measurement for the purpose of compliance assessment. However, any day in which more than 3 hourly average values are invalid (due to malfunction or maintenance of the continuous measurement system) shall be invalidated for the purpose of compliance assessment. If more than 10 days are invalid over a year the operator shall, within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and implement the approved proposals.

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Judith Sartor, Environmental Specialist

Date of return: 12th April 2018

CONTINUOUS MEASUREMENT SYSTEMS INVALIDATION LOG**QUARTERLY RETURN****Q1 2018****Year: 2018****Operator:****Dow Silicones UK Ltd****Form: IED CEM1****Monitor positioned on release point/LCP Number:****A3 / LCP 60****Version/Date: V 3.1 31 Dec 2016****Permit/Variation Number:****EPR/JP3632ZH/V002****Barry Cogeneration Plant**

Date	Period of invalidation (hours)	Invalidated days in year	Comments
20/03/2018	3.	1.	

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