

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

Operator: Dow Silicones UK Ltd
Location: Barry Cogeneration Plant
Permit/Variation Number: EPR/JP3632ZH/V004

Form: IED CON 2 (Gas Turbines)
Version/date: V.3.1 31 Dec 2015

A1 / LCP 60						
Year: 2021	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	40.4	82.5		6.5	23.2	
February	42.5	48.3		6.	12.1	
March	42.2	46.7		6.9	15.5	
April	41.9	47.3		7.4	18.8	
May	44.5	76.9		5.7	12.	
June	56.7	74.6		4.5	9.6	
July						
August						
September						
October						
November						
December						
Monthly ELV / Daily ELV (f)	75.	82.5		80.	80.	
Annual 95th Percentile (h)						
Annual Percentile ELV (g)						

New permit limits from 1 July 2020

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:

21st July 2021

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/V004**

Year: 2021	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	215.6	221.8		7.8	10.5	
February	215.4	233.9		8.9	14.6	
March	187.4	187.4		8.4	8.4	
April	-	-		-	-	
May	-	-		-	-	
June	-	-		-	-	
July						
August						
September						
October						
November						
December						
Monthly ELV / Daily ELV (f)	100	110		100	110	
Annual 95th Percentile (h)						
Annual Percentile ELV (g)						

New permit limits from 1 July 2020

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

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Permit/Variation Number: EPR/JP3632ZH/V004

Form: IED CON 2 (Gas Turbines)
Version/date: V.3.1 31 Dec 2015

A3 / LCP60						
Year: 2021						
Month	NOx (mg/m3)			CO (mg/m3)		
	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean	Monthly Mean	Max Daily Mean	Part Load Max Daily Mean
January	28.5	72.4		7.8	23.6	
February	27.5	31.6		3.1	12.6	
March	23.	28.1		7.3	16.7	
April	22.4	28.1		9.2	15.7	
May	30.6	80.1		7.2	15.2	
June	-	-		-	-	
July						
August						
September						
October						
November						
December						
Monthly ELV / Daily ELV (f)	75.	82.5		80.	80.	
Annual 95th Percentile (h)						
Annual Percentile ELV (g)						

New permit limits from 1 July 2020

NOTES:

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Signed on behalf of the Operator by:



Judith Sartor, Environmental Specialist

Date of return:

21st July 2021

No confidence adjustment

**RELEASES TO AIR
RETURN OF DISCONTINUOUS MONITORING RESULTS**

Operator: Dow Silicones UK Ltd
Location: Barry Cogeneration Plant
Permit/Variation Number: EPR/JP3632ZH/V004

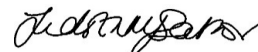
Form: IED PM1
Version: V.11 Mar 2016

Year - 2021	LCP 60 (A4 FB-002A)				
Six months to -30/06/21					
Measurement approach	NO _x	SO ₂	CO	Hg	Dust
Time	13:30		13:30		
Date	02/06/2021		02/06/2021		
Measurement 1 (mg/m ³) ^(b)	93.62		35.59		
Measurement 2 (mg/m ³) ^(b)					
Measurement 3 (mg/m ³) ^(b)					
Alternative approach ^(c)					
Method ^(d)		FS			DF
Calculation (mg/m ³)		0.72			0
Operational data ^(a)					
Load (%MCR)					
Fuel 1 Natural Gas (%)	100	100	100		100
Fuel 2 name (%)					
Fuel 3 name (%)					
Daily Emission Limit Value					
(mg/m ³)	110	38.5	100		5.5

NOTES:

- (a) Operational data for the test period (measurement approach) or the six month period to date (Alternative approach)
(b) Reference conditions for mg/m³ are 15% O₂ CCGT, 6% O₂ solid fuels, 3% O₂ for oil and gas, dry, 0°C, 101.325 kPa
(c) Alternative approach to discontinuous monitoring by agreement with the Competent Authority
(d) Use abbreviation: NF for agreed NO_x factor, FS for fuel sulphur content, CS for agreed CO factor, DF for agreed dust factor

Signed on behalf of the Operator by: Judith Sartor, Environmental Specialist



Date of return: 21st July 2021

RELEASES TO AIR
RETURN OF DISCONTINUOUS MONITORING RESULTS

Operator: Dow Silicones UK Ltd
Location: Barry Cogeneration Plant
Permit/Variation Number: EPR/JP3632ZH/V004

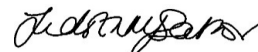
Form: IED PM1
Version: V.11 Mar 2016

Year - 2021	LCP 60 (A5 FB-002B)				
Six months to -30/06/21					
Measurement approach	NO _x	SO ₂	CO	Hg	Dust
Time	14:38		14:38		
Date	02/06/2021		02/06/2021		
Measurement 1 (mg/m ³) ^(b)	83.88		3.49		
Measurement 2 (mg/m ³) ^(b)					
Measurement 3 (mg/m ³) ^(b)					
Alternative approach ^(c)					
Method ^(d)		FS			DF
Calculation (mg/m ³)		0.72			0
Operational data ^(a)					
Load (%MCR)					
Fuel 1 Natural Gas (%)	100	100	100		100
Fuel 2 name (%)					
Fuel 3 name (%)					
Daily Emission Limit Value					
(mg/m ³)	110	38.5	100		5.5

NOTES:

- (a) Operational data for the test period (measurement approach) or the six month period to date (Alternative approach)
 (b) Reference conditions for mg/m³ are 15% O₂ CCGT, 6% O₂ solid fuels, 3% O₂ for oil and gas, dry, 0°C, 101.325 kPa
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