

**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/V002

Form: IED CON 2 (Gas Turbines)

Version/date: V.3.1 31 Dec 2015

Year: 2020	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	56.85	75.76		10.5	27	50.7
February	67.16	83.61		5.4	11.6	17.7
March	81.93	97.15		3.9	7.7	16.2
April	73.43	94.45		7.2	22.5	50.1
May	65.65	70.79		8.1	17.5	36.2
June	68.4	77.91		5.5	12.4	35.8
July	-	-		-	-	-
August	-	-		-	-	-
September	-	-		-	-	-
October	-	-		-	-	-
November	-	-		-	-	-
December	-	-		-	-	-
Monthly ELV / Daily ELV (f)	125.	125.		80.	80.	80.
Annual 95th Percentile (h)	92.91(189)			19.3(189)		
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:

28th July 2020

No confidence adjustment

**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/V002

Form: IED CON 2 (Gas Turbines)

Version/date: V.3.1 31 Dec 2015

Year: 2020	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	-	-		-	-	
February	-	-		-	-	
March	200.81	217.31		15.4	19.2	
April	208.98	218.51		11.3	25.4	
May	224.36	240.01		8.4	11.1	
June	218.01	233.57		8.2	12.3	
July	-	-		-	-	
August	-	-		-	-	
September	-	-		-	-	
October	-	-		-	-	
November	-	-		-	-	
December	-	-		-	-	
Monthly ELV / Daily ELV (f)	250	250		100	110	
Annual 95th Percentile (h)	239.29(83)			17.9(83)		
Annual Percentile ELV (g)	250			200		

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)

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(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)

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Location: Barry Cogeneration Plant
Permit/Variation Number: EPR/JP3632ZH/V002

Form: IED CON 2 (Gas Turbines)

Version/date: V.3.1 31 Dec 2015

Year: 2020	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	82.62	89.08		0.3	1.5	17.3
February	78.13	88.05		0.3	1.8	6.1
March	71.65	78.52		0	0.1	3.1
April	70.75	77.66		0	0.2	18
May	74.09	81.84		0	0.1	9.7
June	55.83	71.3		0.7	5.8	11
July	-	-		-	-	-
August	-	-		-	-	-
September	-	-		-	-	-
October	-	-		-	-	-
November	-	-		-	-	-
December	-	-		-	-	-
Monthly ELV / Daily ELV (f)	125.	125.		80.	80.	80.
Annual 95th Percentile (h)	88.67(119)			1.6(119)		
Annual Percentile ELV (g)	125.			80.		

NOTES:

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Date of return:

28th July 2020

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/V002

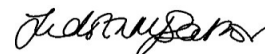
Form: IED PM1
Version: V.11 Mar 2016

Year - 2020	LCP 60 (A1 & A3 HR-001A & B)				
Six months to -30/06/20					
Measurement approach	NO _x	SO ₂	CO	Hg	Dust
Time					
Date					
Measurement 1 (mg/m ³) ^(b)					
Measurement 2 (mg/m ³) ^(b)					
Measurement 3 (mg/m ³) ^(b)					
Alternative approach ^(c)					
Method ^(d)		FS			DF
Calculation (mg/m ³)		0.24			0
Operational data ^(a)					
Load (%MCR)					
Fuel 1 Natural Gas (%)		100			100
Fuel 2 name (%)					
Fuel 3 name (%)					
Daily Emission Limit Value					
(mg/m ³)					

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: 28th July 2020

RELEASES TO AIR
RETURN OF DISCONTINUOUS MONITORING RESULTS

Operator: Dow Silicones UK Ltd
Location: Barry Cogeneration Plant
Permit/Variation Number: EPR/JP3632ZH/V002

Form: IED PM1
Version: V.11 Mar 2016

Year - 2020	LCP 60 (A2 FB-001)				
Six months to -30/06/20					
Measurement approach	NO _x	SO ₂	CO	Hg	Dust
Time					
Date					
Measurement 1 (mg/m ³) ^(b)					
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
Fuel 2 name (%)					
Fuel 3 name (%)					
Daily Emission Limit Value					
(mg/m ³)					

NOTES:

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 (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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Permit/Variation Number: EPR/JP3632ZH/V002

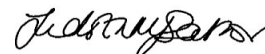
Form: IED PM1
Version: V.11 Mar 2016

Year - 2020	LCP 60 (A4 FB-002A)				
Six months to -30/06/20					
Measurement approach	NO _x	SO ₂	CO	Hg	Dust
Time	12:55-13:55		12:55-13:55		
Date	26/06/2020		26/06/2020		
Measurement 1 (mg/m ³) ^(b)	98.18		40.19		
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)	135	38.5	200		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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 (d) Use abbreviation: NF for agreed NO_x factor, FS for fuel sulphur content, CS for agreed CO factor, DF for agreed dust factor

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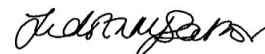
Form: IED PM1
Version: V.11 Mar 2016

Year - 2020	LCP 60 (A5 FB-002B)				
Six months to -30/06/20					
Measurement approach	NO _x	SO ₂	CO	Hg	Dust
Time	14:05-15:05		14:05-15:05		
Date	26/06/2020		26/06/2020		
Measurement 1 (mg/m ³) ^(b)	90.99		5.56		
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)	135	38.5	200		5.5

NOTES:

- (a) Operational data for the test period (measurement approach) or the six month period to date (Alternative approach)
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