RELEASES TO AIR

QUARTERLY RETURN

MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS

OPERATING MODE:

Operator:	**Dow Silicones UK Ltd**	**Form:**	**IED/LCPBREF CON2 (Gas Turbines)**
Location:	**Barry Cogeneration Plant**	**Vers/date:**	**V3.0 Mar 2021**
Permit/Variation Number:	**EPR/JP3632ZH/V004**		

Year: 2024	**A1 / LCP 60 - TEG MODE**					
	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	56.96	65.28		14.86	48.39	
February	55.11	60.17		14.78	46.	
March	58.07	60.88		7.35	24.26	
April	58.65	65.38		17.9	45.7	
May	56.18	60.33		17.78	44.53	
June	57.35	69.68		15.17	37.92	
July	57.36	77.14		12.61	36.64	
August	19.86	19.81		8.09	23.4	
September	18.04	19.81		3.55	14.95	
October						
November						
December	15.46	16.76		11.49	21.28	
Monthly ELV & Daily ELVs: (Period 1) (f)	75.	80.		80.	80.	
Monthly ELV & Daily ELVs: (Period 2) (f)						
	Annual Mean (d)	Annual ELV		Annual Mean (d)	Annual ELV	
Annual Mean & ELV (g)	52.63	55.		13.28	30.	
	Annual Percentile (d)	Annual ELV		Annual Percentile (d)	Annual ELV	
Annual 95th Percentile (h)	62.68	125.		41.08	80.	

NOTES:

(a) All concentration data, at 15% O2, dry, 273K, 101.3 kPa, are based on validated hourly mean concentrations, excluding start-up and shut-down, periods of Malfunction or Breakdown of abatement equipment or Black Start operation.

(b) Daily, Monthly and Annual means, and Annual percentile concentrations, are calculated from the validated hourly means defined in (a). CCGT qualifying periods for Hourly, Daily, Monthly and Annual averages are 40m, 6h, 72h or 3d, and 500h, respectively. OCGT qualifying periods are the same apart from the Hourly qualifying period which is reduced to 20m of normal operation. Annual averages, for plants with an Annual ELV, and Annual percentile concentrations, 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 E-DLN < Load ≤ 100% ISO base load and above (where E-DLN is the Effective-DLN load point).

(e) Averages determined 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) When there is an in-year change of ELV, record both ELVs in consecutive rows. For example, compliance with the LCP BREF begins in August 2021 therefore replace 'Period 1' with 'Jan - Jul' and 'Period 2' with 'Aug - Dec'. Otherwise, replace 'Period 1' with 'Jan - Dec' and delete or blank out the row containing 'Period 2'.

(g) For plants with an Annual ELV, for each pollutant, report the Annual mean in the first column and the Annual ELV in the second column. Annual ELVs are not applicable, and are not entered on the form, when the plant operates less than 1500 hours within the reporting year or for plant with a 1500 h/yr five-year rolling average derogation. Otherwise, reporting of the Annual mean begins in 2021 but compliance assessment with the Annual ELV begins in 2022 (incorporating plant operation from 1 January 2022); the Annual ELV is therefore not entered on the form for 2021 reporting.

(h) For each pollutant, report the Annual 95th percentile of hourly means in the first column and the Annual 95th percentile ELV in the second column. However, if there is an in-year reduction of the percentile ELV then it is not mandatory to enter the ELV as compliance assessment will commence in the following year.

Signed on behalf of the Operator by: [redacted] ……..

Date of return: 21st October 2024 ……..

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/LCPBREF CON2 (Gas Turbines)**
Location:	**Barry Cogeneration Plant**	**Vers/date:**	**V3.0 Mar 2021**
Permit/Variation Number:	**EPR/JP3632ZH/V004**		

Year: 2024	**A1 / LCP 60 - FD MODE**					
	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	84.08	86.03		43.8	70.27	
February	88.51	91.86		23.26	40.8	
March	93.52	93.52		4.51	4.51	
April	90.78	92.98		13.88	22.24	
May	91.45	97.84		9.83	17.66	
June	-	-		-	-	
July	93.77	94.25		6.87	12.83	
August	85.86	85.86		13.43	13.43	
September	44.77	45.87		0.28	0.6	
October						
November	44.11	46.82		29.4	410.28	
December	44.88	46.75		32.59	201.43	
Monthly ELV & Daily ELVs: (Period 1) (f)	100.	110.		100.	110.	
Monthly ELV & Daily ELVs: (Period 2) (f)						
	Annual Mean (d)	Annual ELV		Annual Mean (d)	Annual ELV	
Annual Mean & ELV (g)	57.44	100.		24.95	40.	
	Annual Percentile (d)	Annual ELV		Annual Percentile (d)	Annual ELV	
Annual 95th Percentile (h)	93.69	200.		77.96	200.	

NOTES:

(a) All concentration data, at 15% O2, dry, 273K, 101.3 kPa, are based on validated hourly mean concentrations, excluding start-up and shut-down, periods of Malfunction or Breakdown of abatement equipment or Black Start operation.

(b) Daily, Monthly and Annual means, and Annual percentile concentrations, are calculated from the validated hourly means defined in (a). CCGT qualifying periods for Hourly, Daily, Monthly and Annual averages are 40m, 6h, 72h or 3d, and 500h, respectively. OCGT qualifying periods are the same apart from the Hourly qualifying period which is reduced to 20m of normal operation. Annual averages, for plants with an Annual ELV, and Annual percentile concentrations, 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 E-DLN < Load ≤ 100% ISO base load and above (where E-DLN is the Effective-DLN load point).

(e) Averages determined 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) When there is an in-year change of ELV, record both ELVs in consecutive rows. For example, compliance with the LCP BREF begins in August 2021 therefore replace 'Period 1' with 'Jan - Jul' and 'Period 2' with 'Aug - Dec'. Otherwise, replace 'Period 1' with 'Jan - Dec' and delete or blank out the row containing 'Period 2'.

(g) For plants with an Annual ELV, for each pollutant, report the Annual mean in the first column and the Annual ELV in the second column. Annual ELVs are not applicable, and are not entered on the form, when the plant operates less than 1500 hours within the reporting year or for plant with a 1500 h/yr five-year rolling average derogation. Otherwise, reporting of the Annual mean begins in 2021 but compliance assessment with the Annual ELV begins in 2022 (incorporating plant operation from 1 January 2022); the Annual ELV is therefore not entered on the form for 2021 reporting.

(h) For each pollutant, report the Annual 95th percentile of hourly means in the first column and the Annual 95th percentile ELV in the second column. However, if there is an in-year reduction of the percentile ELV then it is not mandatory to enter the ELV as compliance assessment will commence in the following year.

Signed on behalf of the Operator by: [redacted] ……..

Date of return: 21st October 2024 ……..

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
Location: Barry Cogeneration Plant Vers/date: V3.0 Mar 2021
Permit/Variation Number: EPR/JP3632ZH/V004

Year: 2024	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	43.3	49.49		15.7	44.1	
February	43.84	48.87		34.1	54.1	
March	-	43.21		-	18.4	
April	-	54.37		-	18.6	
May	-	0		-	0	
June	-	0		-	0	
July	-	0		-	0	
August	-	0		-	0	
September	-	0		-	0	
October	-	0		-	0	
November	-	0		-	0	
December	-	0		-	0	
Monthly ELV / Daily ELV (f)	100	110		100	110	
Annual 95th Percentile (h)	44.17	100		19.2	40	
Annual Percentile ELV (g)	50.77(30)	200		58.4(30)	200	

NOTES:

(a) All concentration data, at 15% O2, dry, 273K, 101.3 kPa, are based on validated hourly mean concentrations, excluding start-up and shut-down, periods of Malfunction or Breakdown of abatement equipment or Black Start operation.

(b) Daily, Monthly and Annual means, and Annual percentile concentrations, are calculated from the validated hourly means defined in (a). CCGT qualifying periods for Hourly, Daily, Monthly and Annual averages are 40m, 6h, 72h or 3d, and 500h, respectively. OCGT qualifying periods are the same apart from the Hourly qualifying period which is reduced to 20m of normal operation. Annual averages, for plants with an Annual ELV, and Annual percentile concentrations, 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 E-DLN < Load ≤ 100% ISO base load and above (where E-DLN is the Effective-DLN load point).

(e) Averages determined 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) When there is an in-year change of ELV, record both ELVs in consecutive rows. For example, compliance with the LCP BREF begins in August 2021 therefore replace 'Period 1' with 'Jan - Jul' and 'Period 2' with 'Aug - Dec'. Otherwise, replace 'Period 1' with 'Jan - Dec' and delete or blank out the row containing 'Period 2'.

(g) For plants with an Annual ELV, for each pollutant, report the Annual mean in the first column and the Annual ELV in the second column. Annual ELVs are not applicable, and are not entered on the form, when the plant operates less than 1500 hours within the reporting year or for plant with a 1500 h/yr five-year rolling average derogation. Otherwise, reporting of the Annual mean begins in 2021 but compliance assessment with the Annual ELV begins in 2022 (incorporating plant operation from 1 January 2022); the Annual ELV is therefore not entered on the form for 2021 reporting.

(h) For each pollutant, report the Annual 95th percentile of hourly means in the first column and the Annual 95th percentile ELV in the second column. However, if there is an in-year reduction of the percentile ELV then it is not mandatory to enter the ELV as compliance assessment will commence in the following year.

Signed on behalf of the Operator by: [redacted]

[redacted] Environmental Specialist

Date of return: 28th January 2025

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: 2024	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	-	0		-	0	
February	68.13	72.66		0.1	1.3	
March	71.42	79.49		0	0.2	
April	58.83	69.11		2.2	30.9	
May	38.98	54.99		3.5	13.5	
June	32.67	52.01		4.6	22.7	
July	25.26	49.79		5.3	15.2	
August	19.24	21.47		3.4	3.5	
September	29.91	43.81		2.4	10.2	
October	-	0		-	0	
November	42.85	49.46		34.3	243.9	
December	41.89	54.69		3.3	23.1	
Monthly ELV / Daily ELV (f)	75	80		80	80	
Annual 95th Percentile (h)	46.87	55		6.5	30	
Annual Percentile ELV (g)	75.04(172)	125		21.3(171)	80	

NOTES:

(a) All concentration data, at 15% O2, dry, 273K, 101.3 kPa, are based on validated hourly mean concentrations, excluding start-up and shut-down, periods of Malfunction or Breakdown of abatement equipment or Black Start operation.

(b) Daily, Monthly and Annual means, and Annual percentile concentrations, are calculated from the validated hourly means defined in (a). CCGT qualifying periods for Hourly, Daily, Monthly and Annual averages are 40m, 6h, 72h or 3d, and 500h, respectively. OCGT qualifying periods are the same apart from the Hourly qualifying period which is reduced to 20m of normal operation. Annual averages, for plants with an Annual ELV, and Annual percentile concentrations, 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 E-DLN < Load ≤ 100% ISO base load and above (where E-DLN is the Effective-DLN load point).

(e) Averages determined 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) When there is an in-year change of ELV, record both ELVs in consecutive rows. For example, compliance with the LCP BREF begins in August 2021 therefore replace 'Period 1' with 'Jan - Jul' and 'Period 2' with 'Aug - Dec'. Otherwise, replace 'Period 1' with 'Jan - Dec' and delete or blank out the row containing 'Period 2'.

(g) For plants with an Annual ELV, for each pollutant, report the Annual mean in the first column and the Annual ELV in the second column. Annual ELVs are not applicable, and are not entered on the form, when the plant operates less than 1500 hours within the reporting year or for plant with a 1500 h/yr five-year rolling average derogation. Otherwise, reporting of the Annual mean begins in 2021 but compliance assessment with the Annual ELV begins in 2022 (incorporating plant operation from 1 January 2022); the Annual ELV is therefore not entered on the form for 2021 reporting.

(h) For each pollutant, report the Annual 95th percentile of hourly means in the first column and the Annual 95th percentile ELV in the second column. However, if there is an in-year reduction of the percentile ELV then it is not mandatory to enter the ELV as compliance assessment will commence in the following year.

Signed on behalf of the Operator by: [redacted]

[redacted], Environmental Specialist

Date of return: 28th January 2025

No confidence adjustment

CONTINUOUS MEASUREMENT SYSTEMS INVALIDATION LOG

QUARTERLY RETURN	**Q4**		**Year: 2024**
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/V004**	**Barry Cogeneration Plant**

Date	Period of invalidation (hours)	Invalidated days in year	Comments
26/01/2024	2 hrs	0	
27/01/2024	2 hrs	0	
30/01/2024	3 hrs	0	
31/01/2024	2 hrs	0	
01/02/2024	4 hrs	1	
02/02/2024	2 hrs	1	
03/02/2024	3 hrs	1	
05/02/2024	1 hrs	1	
07/02/2024	1 hrs	1	
09/04/2024	2 hrs	1	
10/04/2024	8 hrs	2	
01/05/2024	1 hrs	2	
07/05/2024	1 hrs	2	
07/08/2024	2 hrs	2	
07/12/2024	9 hrs	3	
22/12/2024	1 hrs	3	

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: ..... [redacted] .....

[redacted], Environmental Specialist

Date of return: ..... 28th January 2025

CONTINUOUS MEASUREMENT SYSTEMS INVALIDATION LOG

QUARTERLY RETURN	**Q4**		**Year: 2024**
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/V004**	**Barry Cogeneration Plant**

Date	Period of invalidation (hours)	Invalidated days in year	Comments
22/01/2024	1 hrs	0	

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: … [redacted] ……..

[redacted], Environmental Specialist

Date of return: …… 28th January 2025

CONTINUOUS MEASUREMENT SYSTEMS INVALIDATION LOG

QUARTERLY RETURN	**Q4**		**Year: 2024**
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/V004**	**Barry Cogeneration Plant**

Date	Period of invalidation (hours)	Invalidated days in year	Comments
16/04/2024	5 hrs	1	
08/08/2024	1 hrs	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: ..... [redacted] .....

[redacted], Environmental Specialist

Date of return: ..... 28th January 2025

RELEASES TO AIR
QUARTERLY RETURN **2024** **Q4**
CUMULATIVE ROLLING MALFUNCTION AND BREAKDOWN HOURS (12 MONTH PERIOD)(a), (b)
OPERATING MODE:
Operator: **DOW** **Form:** **IED/LCPBREF BD1**
Location: **Barry Cogeneration Plant** Version/date: V.3.1 31 Dec 2015
Permit/Variation Number: **EPR/JP3632ZH/V004**

Year: 2024	A1 / LCP 60			
	NOx (mg/m3)		CO (mg/m3)	
Month	Malfunction (hours)	Breakdown (hours)	Malfunction (hours)	Breakdown (hours)
January	0.	0.	0.	0.
February	0.	0.	0.	0.
March	0.	0.	0.	0.
April	0.	0.	0.	0.
May	0.	0.	0.	0.
June	0.	0.	0.	0.
July	0.	0.	0.	0.
August	0.	0.	0.	0.
September	0.	0.	0.	0.
October	0.	0.	0.	0.
November	0.	0.	0.	0.
December	0.	0.	0.	0.
Annual total (hours)	0.	0.	0.	0.
Annual cap (hours)	120.	120.	120.	120.

NOTES:
(a) Cumulative rolling malfunction and breakdown hours (12 month period) updated monthly
(b) Data Acquisition and Handling Systems without the capability to report Black Start hours separately may incorporate Black Start hours on this form provided that a
(c) Insert the relevant months for the preceding 12 month period, e.g., starting with March 2016
(d) Gas turbines with CO abatement only (columns may be deleted for other plant types)
(e) Plants with HCl abatement only (columns may be deleted for other plant types)

Signed on behalf of the Operator by: [redacted] ……..

[redacted], Environmental Specialist

Date of return: 28th January 2025

No confidence adjustment

RELEASES TO AIR
QUARTERLY RETURN **2024** **Q4**
CUMULATIVE ROLLING MALFUNCTION AND BREAKDOWN HOURS (12 MONTH PERIOD)(a), (b)
OPERATING MODE:
Operator: **DOW** **Form:** **IED/LCPBREF BD1**
Location: **Barry Cogeneration Plant** Version/date: V.3.1 31 Dec 2015
Permit/Variation Number: **EPR/JP3632ZH/V004**

Year: 2022	A2 / LCP 60			
	NOx (mg/m3)		CO (mg/m3)	
Month	Malfunction (hours)	Breakdown (hours)	Malfunction (hours)	Breakdown (hours)
January	-	-	-	-
February	-	-	-	-
March	-	-	-	-
April	-	-	-	-
May	-	-	-	-
June	-	-	-	-
July	-	-	-	-
August	-	-	-	-
September	-	-	-	-
October	-	-	-	-
November	-	-	-	-
December	-	-	-	-
Annual total (hours)	-	-	-	-
Annual cap (hours)	120.	120.	120.	120.

NOTES:
(a) Cumulative rolling malfunction and breakdown hours (12 month period) updated monthly
(b) Data Acquisition and Handling Systems without the capability to report Black Start hours separately may incorporate Black Start hours on this form provided that a
(c) Insert the relevant months for the preceding 12 month period, e.g., starting with March 2016
(d) Gas turbines with CO abatement only (columns may be deleted for other plant types)
(e) Plants with HCl abatement only (columns may be deleted for other plant types)

Signed on behalf of the Operator by: [redacted] ……..

[redacted], Environmental Specialist

Date of return: 28th January 2025

No confidence adjustment

RELEASES TO AIR
QUARTERLY RETURN **2024** **Q4**
CUMULATIVE ROLLING MALFUNCTION AND BREAKDOWN HOURS (12 MONTH PERIOD)(a), (b)
OPERATING MODE:
Operator: **DOW** **Form:** **IED/LCPBREF BD1**
Location: **Barry Cogeneration Plant** Version/date: V.3.1 31 Dec 2015
Permit/Variation Number: **EPR/JP3632ZH/V004**

Year: 2024	A3 / LCP 60			
	NOx (mg/m3)		CO (mg/m3)	
Month	Malfunction (hours)	Breakdown (hours)	Malfunction (hours)	Breakdown (hours)
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Annual total (hours)	**0**	**0**	**0**	**0**
Annual cap (hours)	120	120	120	120

NOTES:
(a) Cumulative rolling malfunction and breakdown hours (12 month period) updated monthly
(b) Data Acquisition and Handling Systems without the capability to report Black Start hours separately may incorporate Black Start hours on this form provided that a
(c) Insert the relevant months for the preceding 12 month period, e.g., starting with March 2016
(d) Gas turbines with CO abatement only (columns may be deleted for other plant types)
(e) Plants with HCl abatement only (columns may be deleted for other plant types)

Signed on behalf of the Operator by: [redacted] ……..

[redacted], Environmental Specialist

Date of return: 28th January 2025

No confidence adjustment

RELEASES TO AIR
RETURN OF DISCONTINUOUS MONITORING RESULTS

Operator: **Dow Silicones UK Ltd**
Location: **Barry Cogeneration Plant** **Form:** **IED PM1**
Permit/Variation Number: **EPR/JP3632ZH/V004** **Version:** **V.11 Mar 2016**

Year - 2024	**LCP 60 (A4 FB-002A)**				
Six months to -31/12/24					
Measurement approach	**NO_x**	**SO_2**	**CO**	**Hg**	**Dust**
Time	11:00		11:00		
Date	12/11/2024		12/11/2024		
Measurement 1 (mg/m^3)[(b)]	98.16		2.06		
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/m^3 are 15% O_2 CCGT, 6% O_2 solid fuels, 3% O_2 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: [redacted], Environmental Specialist [redacted]

Date of return: 28th January 2025

RELEASES TO AIR
RETURN OF DISCONTINUOUS MONITORING RESULTS

Operator: **Dow Silicones UK Ltd**
Location: **Barry Cogeneration Plant** **Form:** **IED PM1**
Permit/Variation Number: **EPR/JP3632ZH/V004** **Version:** **V.11 Mar 2016**

Year - 2024 / **Six months to -31/12/24**	**LCP 60 (A5 FB-002B)**				
Measurement approach	**NO_x**	**SO_2**	**CO**	**Hg**	**Dust**
Time	13:45		13:45		
Date	12/11/2024		12/11/2024		
Measurement 1 (mg/m^3)[(b)]	100.51		1.69		
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/m^3 are 15% O_2 CCGT, 6% O_2 solid fuels, 3% O_2 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: [redacted], Environmental Specialist [redacted]

Date of return: 28th January 2025

IED AR1

V.3.1 Dec 2015

IED Reporting - Energy Usage & Emissions for the year: Q4

Operator:	Dow Silicones UK Ltd
Site Location:	Barry Cogeneration Plant
Permit/Variation number:	EPR/JP3632ZH/V004
LCP:	60.
LCP Net Rated Thermal Input Capacity (MW):	

		By Fuel							
Parameter	**TOTAL**	**Coal**	**Lignite**	**Peat**	**Biomass**	**Other solid fuels**	**Liquid fuels**	**Natural gas**	**Other gases**
Annual energy input (TJ)	2269.52							2269.52	
Total Annual SO2 emission (tonnes)									
Total Annual NOx emission (tonnes)	65.84								
Total Annual Dust (PM) emission (tonnes)									

Signed on behalf of the Operator [redacted] Date 28th January 2025

[redacted], Environmental Specialist

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

RELEASES TO AIR
ANNUAL RETURN
OPERATING HOURS

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

Form: **IED HR1**
Version/date: **V.3.1 31 Dec 2015**

Year: 2024	**A1 (hours)**	**Bypass (hours)**	**A2 (hours)**	**Bypass (hours)**	**A3 (hours)**	**Bypass (hours)**	**LCP4 (hours)**	**Bypass (hours)**
Annual Operating Hours (a), (b)	5277.56	27.59	598.56	NA	3900.62	23.55	6502.86	NA
Cumulative Operating Hours (c), (d)								
Derogated Annual Hours (e)								
Five year rolling average (f)								

NOTES:
(a) Annual operating hours for every LCP from 1-Jan in calendar year. (For gas turbines with a Bypass stack, include the Bypass stack operating hours during normal operation even though these are reported separately).
(b) For gas turbines with a Bypass stack, report Bypass operating hours from 1-Jan in calendar year, excluding Start-Up and Shut-down, in the adjacent column (labelled Bypass) which may be deleted if not applicable.
(c) Cumulative operating hours from 1-Jan-2016 for LCP subject to a Limited Lifetime Derogation or a 10,000h monitoring derogation. (For gas turbines with a Bypass stack, include the Bypass stack operating hours during normal operation even though these are reported separately).
(d) For gas turbines with a Bypass stack, report Bypass Cumulative operating hours from 1-Jan-2016 if subject to a separate 10,000h monitoring derogation, in the adjacent column (labelled Bypass).
(e) Annual operating hours in calendar year from entry date (in first year as applicable) or from 1-Jan in calendar year, for each 1,500h ELV derogated Unit/LCP only.
(f) Five year running average from entry date for each 1,500h derogated Unit/LCP only.
(g) General note: hours are reported as a decimal number to two decimal places.

Signed on behalf of the Operator by: [redacted]
[redacted] Environmental Specialist

Date of return: 28th January 2025