

**RELEASES TO AIR
ANNUAL RETURN
OPERATING HOURS**

Operator: Engie

Location: Barry Cogeneration Plant

Permit/Variation Number: EPR/JP3632ZH/V002

Form:

IED HR1

Version/date:

V.3.1.31 Dec 2015

Year: 2017	A1 (hours)	Bypass (hours)	A2 (hours)	Bypass (hours)	A3 (hours)	Bypass (hours)	LCP4 (hours)	Bypass (hours)
Annual Operating Hours (a), (b)	3910.72	0.00	524.50		4457.7	0.0		
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:

Date of return:

[Signature]
13/7/17

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

Operator: Engine
 Location: Barry Cogeneration Plant
 Form: IED CON 2 (Gas Turbines)
 Permit/Variation Number: EPR/JP3632ZH/V002

Year: 2017	NOx (mg/m3)		CO (mg/m3)	
	Monthly Mean	Max Daily Mean	Monthly Mean	Max Daily Mean
January	65.24	71.24	6.7	13.8
February	61.98	66.89	6.8	15.4
March	61.14	64.30	8.5	17.3
April	63.12	65.60	6.1	16.1
May	61.51	64.94	6.3	20.7
June	60.11	62.59	5.9	11.9
July	53.06	55.44	5.0	11.6
August	-	-	-	-
September	-	-	-	-
October	-	-	-	-
November	-	-	-	-
December	-	-	-	-
Monthly ELV / Annual ELV (f)	125	125	80	80
Annual 95th Percentile (h)	66.74(186)		19.9(186)	
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:

Date of return:

15/7/17
 H. M. M. M.

No confidence adjustment

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

Operator: Engle
Location: Barry Cogeneration Plant
Form: IED CON 2 (Gas Turbines)
Permit/Variation Number: EPR/JP3632ZH/V002

Year: 2017

Year: 2017	NOx (mg/m3)			CO (mg/m3)		
	Monthly Mean	Max Daily Mean	Part Load Mean	Monthly Mean	Max Daily Mean	Part Load Mean
January	58.41	62.25		3.6	11.7	11.7
February	57.91	60.62		4.7	14.7	40.7
March	59.38	63.61		5.6	21.0	22.0
April	61.92	64.51		4.2	15.2	15.2
May	60.68	69.02		3.6	10.0	15.9
June	60.77	72.10		3.3	7.1	8.6
July	71.37	73.65		0.9	3.1	20.6
August	-	-		-	-	-
September	-	-		-	-	-
October	-	-		-	-	-
November	-	-		-	-	-
December	-	-		-	-	-
Monthly ELV / Daily ELV (f)	125	125		80	80	80
Annual 95th Percentile (h)	68.82(218)			15.8(218)		
Annual Percentile ELV (g)	125			80		

NOTES:

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Signed on behalf of the Operator by:

Date of return:

No confidence adjustment

15/7/17
Hizam Mulla

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

Operator: Engine
Location: Barry Cogeneration Plant
Permit/Variation Number: EPR/JP3632ZH/V002
Form: IED CON 2 (Gas Turbines)

Year: 2017	NOx (mg/m3)				CO (mg/m3)	
	Month	Monthly Mean	Max Daily Mean	Part Load Mean	Monthly Mean	Max Daily Mean
	January	204.92	209.56		2.7	7.6
	February	-	-	-	-	-
	March	-	-	-	-	-
	April	-	-	-	-	-
	May	-	-	-	-	-
	June	177.63	194.94	-	-	-
	July	178.38	182.48	5.0	2.1	5.8
	August	-	-	-	-	-
	September	-	-	-	-	-
	October	-	-	-	-	-
	November	-	-	-	-	-
	December	-	-	-	-	-
	Monthly ELV /	250	250	100	110	
	Daily ELV (f)					
	Annual 95th	209.94(27)			12.8(27)	
	Percentile (h)					
	Annual Percentile	250			200	
	ELV (g)					

NOTES:
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Signed on behalf of the Operator by:

Date of return:

No confidence adjustment

15/7/17
Higan Mullan

IED RTA 1

10/12/2017

Releases of IED Pollutants to Air

Operational Summary for the year

2017.

Operator: Engle

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	(tonnes)	
	SO2	NOx
January		9.40
February		5.98
March		7.72
Total for Quarter 1		23.11
April		7.87
May		7.80
June		8.37
Total for Quarter 2		24.04
July		2.37
August		-
September		-
Total for Quarter 3		2.37
October		-
November		-
December		-
Total for Quarter 4		-
Annual Total		49.52

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.

[Signature]

Date

13/7/17