

RELEASES TO AIR

QUARTERLY RETURN

MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS <sup>(a),(b),(c)</sup>



OPERATING MODE: Combined Cycle

Operator: RWE Generation UK plc

Form: IED CON2 (Gas Turbines)

Location: Pembroke

Version/date: V.10.9 Dec 2015

Permit/Variation Number: EPR/DP3333TA

| Year: 2020                                        | LCP: Unit 11 A1                      |                     |                    |                              |                         |                     |                    |                              |
|---------------------------------------------------|--------------------------------------|---------------------|--------------------|------------------------------|-------------------------|---------------------|--------------------|------------------------------|
|                                                   | NO <sub>x</sub> (mg/m <sup>3</sup> ) |                     |                    |                              | CO (mg/m <sup>3</sup> ) |                     |                    |                              |
| Month                                             | Monthly Mean (d)                     | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) | Monthly Mean (d)        | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) |
| January                                           | 10.37                                | 14.63               | 11.79              | 11.78                        | 1.46                    | 11.70               | 2.54               | 9.53                         |
| February                                          | 10.91                                | 15.33               | 12.99              | 12.54                        | 1.43                    | 7.29                | 3.43               | 44.67                        |
| March                                             | 10.96                                | 14.71               | 12.54              | 12.54                        | 1.50                    | 10.94               | 2.46               | 10.25                        |
| April                                             |                                      |                     |                    |                              |                         |                     |                    |                              |
| May                                               |                                      |                     |                    |                              |                         |                     |                    |                              |
| June                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| July                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| August                                            |                                      |                     |                    |                              |                         |                     |                    |                              |
| September                                         |                                      |                     |                    |                              |                         |                     |                    |                              |
| October                                           |                                      |                     |                    |                              |                         |                     |                    |                              |
| November                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| December                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| Monthly ELV/Daily ELV <sup>(f)</sup>              | 50.00                                | 50.00               | 50.00              | 50.00                        | 100.00                  | 200.00              | 100.00             | 250.00                       |
| Annual 95 <sup>th</sup> Percentile <sup>(g)</sup> |                                      |                     |                    |                              |                         |                     |                    |                              |
| Annual Percentile ELV <sup>(h)</sup>              |                                      |                     |                    |                              |                         |                     |                    |                              |

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% O<sub>2</sub>, 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 95<sup>th</sup> percentile ELV within the Permit

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

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

Signed on behalf of the Operator by:

*Danica Williams*

Date of return:

07 April 2020

RELEASES TO AIR

QUARTERLY RETURN

MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS <sup>(a),(b),(c)</sup>



OPERATING MODE: Combined Cycle

Operator: RWE Generation UK plc

Form: IED CON2 (Gas Turbines)

Location: Pembroke

Version/date: V.10.9 Dec 2015

Permit/Variation Number: EPR/DP3333TA

| Year: 2020                                        | LCP: Unit 21 A2                      |                     |                    |                              |                         |                     |                    |                              |
|---------------------------------------------------|--------------------------------------|---------------------|--------------------|------------------------------|-------------------------|---------------------|--------------------|------------------------------|
|                                                   | NO <sub>x</sub> (mg/m <sup>3</sup> ) |                     |                    |                              | CO (mg/m <sup>3</sup> ) |                     |                    |                              |
| Month                                             | Monthly Mean (d)                     | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) | Monthly Mean (d)        | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) |
| January                                           | 13.59                                | 19.65               | 16.10              | 15.55                        | 0.17                    | 16.53               | 1.28               | 14.12                        |
| February                                          | 13.71                                | 18.71               | 15.99              | 15.12                        | 0.43                    | 11.14               | 0.94               | 11.02                        |
| March                                             | 13.39                                | 18.79               | 15.94              | 15.46                        | 0.44                    | 6.84                | 0.78               | 16.37                        |
| April                                             |                                      |                     |                    |                              |                         |                     |                    |                              |
| May                                               |                                      |                     |                    |                              |                         |                     |                    |                              |
| June                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| July                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| August                                            |                                      |                     |                    |                              |                         |                     |                    |                              |
| September                                         |                                      |                     |                    |                              |                         |                     |                    |                              |
| October                                           |                                      |                     |                    |                              |                         |                     |                    |                              |
| November                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| December                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| Monthly ELV/Daily ELV <sup>(f)</sup>              | 50.00                                | 50.00               | 50.00              | 50.00                        | 100.00                  | 200.00              | 100.00             | 250.00                       |
| Annual 95 <sup>th</sup> Percentile <sup>(g)</sup> |                                      |                     |                    |                              |                         |                     |                    |                              |
| Annual Percentile ELV <sup>(h)</sup>              |                                      |                     |                    |                              |                         |                     |                    |                              |

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% O<sub>2</sub>, 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

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

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

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

Signed on behalf of the Operator by:

*Danica Williams*

Date of return:

07 April 2020

RELEASES TO AIR

QUARTERLY RETURN

MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS <sup>(a),(b),(c)</sup>



OPERATING MODE: Combined Cycle

Operator: RWE Generation UK plc

Form: IED CON2 (Gas Turbines)

Location: Pembroke

Version/date: V.10.9 Dec 2015

Permit/Variation Number: EPR/DP3333TA

| Year: 2020                                        | LCP: Unit 31 A3                      |                     |                    |                              |                         |                     |                    |                              |
|---------------------------------------------------|--------------------------------------|---------------------|--------------------|------------------------------|-------------------------|---------------------|--------------------|------------------------------|
|                                                   | NO <sub>x</sub> (mg/m <sup>3</sup> ) |                     |                    |                              | CO (mg/m <sup>3</sup> ) |                     |                    |                              |
| Month                                             | Monthly Mean (d)                     | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) | Monthly Mean (d)        | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) |
| January                                           | 11.69                                | 16.15               | 12.99              | 12.99                        | 0.41                    | 0.94                | 0.49               | 3.43                         |
| February                                          | 12.87                                | 17.94               | 14.85              | 14.85                        | 0.41                    | 1.27                | 0.52               | 24.43                        |
| March                                             | 12.67                                | 18.75               | 15.38              | 15.38                        | 0.40                    | 2.02                | 0.62               | 2.08                         |
| April                                             |                                      |                     |                    |                              |                         |                     |                    |                              |
| May                                               |                                      |                     |                    |                              |                         |                     |                    |                              |
| June                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| July                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| August                                            |                                      |                     |                    |                              |                         |                     |                    |                              |
| September                                         |                                      |                     |                    |                              |                         |                     |                    |                              |
| October                                           |                                      |                     |                    |                              |                         |                     |                    |                              |
| November                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| December                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| Monthly ELV/Daily ELV <sup>(f)</sup>              | 50.00                                | 50.00               | 50.00              | 50.00                        | 100.00                  | 200.00              | 100.00             | 250.00                       |
| Annual 95 <sup>th</sup> Percentile <sup>(g)</sup> |                                      |                     |                    |                              |                         |                     |                    |                              |
| Annual Percentile ELV <sup>(h)</sup>              |                                      |                     |                    |                              |                         |                     |                    |                              |

NOTES:

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

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

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Date of return:

07 April 2020

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QUARTERLY RETURN

MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS <sup>(a),(b),(c)</sup>



OPERATING MODE: Combined Cycle

Operator: RWE Generation UK plc

Form: IED CON2 (Gas Turbines)

Location: Pembroke

Version/date: V.10.9 Dec 2015

Permit/Variation Number: EPR/DP3333TA

| Year: 2020                                        | LCP: Unit 41 A4                      |                     |                    |                              |                         |                     |                    |                              |
|---------------------------------------------------|--------------------------------------|---------------------|--------------------|------------------------------|-------------------------|---------------------|--------------------|------------------------------|
|                                                   | NO <sub>x</sub> (mg/m <sup>3</sup> ) |                     |                    |                              | CO (mg/m <sup>3</sup> ) |                     |                    |                              |
| Month                                             | Monthly Mean (d)                     | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) | Monthly Mean (d)        | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) |
| January                                           | 11.81                                | 15.08               | 12.84              | 12.67                        | 0.89                    | 5.87                | 2.07               | 11.52                        |
| February                                          | 12.19                                | 16.67               | 14.60              | 14.00                        | 0.94                    | 6.67                | 1.25               | 27.97                        |
| March                                             | 12.09                                | 15.67               | 13.07              | 13.78                        | 0.93                    | 4.20                | 1.91               | 10.20                        |
| April                                             |                                      |                     |                    |                              |                         |                     |                    |                              |
| May                                               |                                      |                     |                    |                              |                         |                     |                    |                              |
| June                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| July                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| August                                            |                                      |                     |                    |                              |                         |                     |                    |                              |
| September                                         |                                      |                     |                    |                              |                         |                     |                    |                              |
| October                                           |                                      |                     |                    |                              |                         |                     |                    |                              |
| November                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| December                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| Monthly ELV/Daily ELV <sup>(f)</sup>              | 50.00                                | 50.00               | 50.00              | 50.00                        | 100.00                  | 200.00              | 100.00             | 250.00                       |
| Annual 95 <sup>th</sup> Percentile <sup>(g)</sup> |                                      |                     |                    |                              |                         |                     |                    |                              |
| Annual Percentile ELV <sup>(h)</sup>              |                                      |                     |                    |                              |                         |                     |                    |                              |

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QUARTERLY RETURN

MONTHLY MEAN, MAXIMUM DAILY MEAN AND ANNUAL PERCENTILE CONCENTRATIONS <sup>(a),(b),(c)</sup>



OPERATING MODE: Combined Cycle

Operator: RWE Generation UK plc

Form: IED CON2 (Gas Turbines)

Location: Pembroke

Version/date: V.10.9 Dec 2015

Permit/Variation Number: EPR/DP3333TA

| Year: 2020                                        | LCP: Unit 51 A5                      |                     |                    |                              |                         |                     |                    |                              |
|---------------------------------------------------|--------------------------------------|---------------------|--------------------|------------------------------|-------------------------|---------------------|--------------------|------------------------------|
|                                                   | NO <sub>x</sub> (mg/m <sup>3</sup> ) |                     |                    |                              | CO (mg/m <sup>3</sup> ) |                     |                    |                              |
| Month                                             | Monthly Mean (d)                     | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) | Monthly Mean (d)        | Max Hourly Mean (d) | Max Daily Mean (d) | Part Load Max Daily Mean (e) |
| January                                           | 25.74                                | 35.08               | 30.99              | 28.87                        | 0.27                    | 9.63                | 1.43               | 8.30                         |
| February                                          | 29.02                                | 39.01               | 34.76              | 34.45                        | 0.33                    | 7.36                | 0.86               | 31.42                        |
| March                                             | 26.11                                | 35.44               | 32.18              | 31.45                        | 0.29                    | 1.09                | 0.36               | 32.09                        |
| April                                             |                                      |                     |                    |                              |                         |                     |                    |                              |
| May                                               |                                      |                     |                    |                              |                         |                     |                    |                              |
| June                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| July                                              |                                      |                     |                    |                              |                         |                     |                    |                              |
| August                                            |                                      |                     |                    |                              |                         |                     |                    |                              |
| September                                         |                                      |                     |                    |                              |                         |                     |                    |                              |
| October                                           |                                      |                     |                    |                              |                         |                     |                    |                              |
| November                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| December                                          |                                      |                     |                    |                              |                         |                     |                    |                              |
| Monthly ELV/Daily ELV <sup>(f)</sup>              | 50.00                                | 50.00               | 50.00              | 50.00                        | 100.00                  | 200.00              | 100.00             | 250.00                       |
| Annual 95 <sup>th</sup> Percentile <sup>(g)</sup> |                                      |                     |                    |                              |                         |                     |                    |                              |
| Annual Percentile ELV <sup>(h)</sup>              |                                      |                     |                    |                              |                         |                     |                    |                              |

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07 April 2020