

Operator : Valero Energy Ltd

Installation Location : Pembroke Refinery, Pembroke, SA71 5SJ

Parameters: sulphur dioxide, oxides of nitrogen, dust (particulate matter) and carbon monoxide - (by discontinuous measurement)
(For use for 50 to >100 MW(th) LCP and for parallel test reporting for LPC of 100 or more MW(th))

| Discontinuous Monitoring for Sulphur Dioxide - H1 | | | | | | |
|---|-------------------------|--|--|--|---|---|
| Reference point | Date & Time of sampling | Flue gas flow rate (Nm ³ /hour) | Fuel or fuels used during sampling period, [include S content(s), mass flow rate(s)] | Measured concentration (mg/Nm ³) | Sampling method used (refer to standards) | CEMS result (where continuous monitor is in use) over sampling period (hourly mean) |
| A6 | 15/01/20 13:11 - 14:11 | 83920 | Fuel Gas. Flow = 4.75 te/hr, H2S = 0.5 ppm | 1,466 | Infra Red | |
| A12 | 14/01/20 11:25 - 12:29 | 95025 | Fuel Gas. Flow = 5.96 te/hr, H2S = 0.5 ppm | 4 | Infra Red | |

| Discontinuous Monitoring for Oxides of Nitrogen - H1 | | | | | | |
|--|-------------------------|--|--|--|---|---|
| Reference point | Date & Time of sampling | Flue gas flow rate (Nm ³ /hour) | Fuel or fuels used during sampling period, [include mass flow rate(s)] | Measured concentration (mg/Nm ³) | Sampling method used (refer to standards) | CEMS result (where continuous monitor is in use) over sampling period (hourly mean) |
| A6 | 15/01/20 13:11 - 14:11 | 83920 | Fuel Gas. Flow = 4.75 te/hr, H2S = 0.5 ppm | 105 | BS EN 14792 | |
| A12 | 14/01/20 11:25 - 12:29 | 95025 | Fuel Gas. Flow = 5.96 te/hr, H2S = 0.5 ppm | 97 | BS EN 14792 | |

| Discontinuous Monitoring for Particulate (Dust) - H1 | | | | | | |
|--|-------------------------|--|--|--|---|---|
| Reference point | Date & Time of sampling | Flue gas flow rate (Nm ³ /hour) | Fuel or fuels used during sampling period, [include mass flow rate(s)] | Measured concentration (mg/Nm ³) | Sampling method used (refer to standards) | CEMS result (where continuous monitor is in use) over sampling period (hourly mean) |
| A6 | 15/01/20 13:11 - 14:11 | 83920 | Fuel Gas. Flow = 4.75 te/hr, H2S = 0.5 ppm | 1 | BS EN 13284-1 | |
| A12 | 14/01/20 11:25 - 12:30 | 95025 | Fuel Gas. Flow = 5.96 te/hr, H2S = 0.5 ppm | 0.7 | BS EN 13284-1 | |

| Discontinuous Monitoring for Carbon Monoxide - H1 | | | | | | |
|---|-------------------------|--|--|--|---|---|
| Reference point | Date & Time of sampling | Flue gas flow rate (Nm ³ /hour) | Fuel or fuels used during sampling period, [include mass flow rate(s)] | Measured concentration (mg/Nm ³) | Sampling method used (refer to standards) | CEMS result (where continuous monitor is in use) over sampling period (hourly mean) |
| A6 | 15/01/20 13:11 - 14:11 | 83920 | Fuel Gas. Flow = 4.75 te/hr, H2S = 0.5 ppm | 34 | BS EN 15058 | |
| A12 | 14/01/20 11:25 - 12:29 | 95025 | Fuel Gas. Flow = 5.96 te/hr, H2S = 0.5 ppm | 1.2 | BS EN 15058 | |

Signed : RDLivockName : Richard Livock

On behalf of the Operator Valero Energy Ltd

Date : 24/07/2020