

# Stack Emissions Monitoring Report

Job Reference: JOB-2805

Commissioned by Permali Gloucester Ltd

**Operator Name**

Permali Gloucester Ltd | Gloucester

**Operator Address**

270 Bristol Rd  
Gloucester  
GL1 5TT  
EPR Permit 23/00006/A2

**Release Point**

RP 32 - Thermal Oxidiser

**Dates of the Monitoring Campaign**

12/05/2026 - 15/05/2026

**Report Date | Version Number**

11/06/2026 | Version 1

**Cura Terrae Primary Contact**

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| Monitoring organisation name & address                                                                                                                 | Report written by                                                                                                | Report approved by                                                                                                             | Report approved by signature                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Cura Terrae OH and Emissions Testing Limited<br>West Yorkshire Office<br>Bradford Chamber Business Park, New Lane<br>Bradford, West Yorkshire, BD4 8BX | Tom Ralph<br>Team Leader<br>MCERTS Level 2   Endorsements: TE1 TE2 TE3 TE4<br>MM 22 1706   expires on 20/05/2027 | Rob Hester<br>Technical Support Manager<br>MCERTS Level 2   Endorsements: TE1 TE2 TE3 TE4<br>MM 06 766   expires on 27/04/2029 |  |

# Report Contents and Monitoring Objectives

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## Report Contents

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## Monitoring Objective

The monitoring objective was to conduct stack emissions monitoring to demonstrate compliance against a set of emission limit values (ELVs) as specified in the Site's Environmental Permit.

## Special Requirements

There were no special requirements for this monitoring campaign.

## Opinions and Interpretations

Any opinions or interpretations contained within this test report are outside the scope of Cura Terra's MCERTS / ISO 17025 accreditation.

Part 1: Executive Summary - Monitoring Results Summary

Monitoring Results - Summary

| test parameter                           | EXPRESSED AS A CONCENTRATION |                           |             |       | EXPRESSED AS A MASS EMISSION |                           |             |       | reference conditions | accreditation status |
|------------------------------------------|------------------------------|---------------------------|-------------|-------|------------------------------|---------------------------|-------------|-------|----------------------|----------------------|
|                                          | result                       | uncertainty in result +/- | limit (ELV) | units | result                       | uncertainty in result +/- | limit (ELV) | units |                      |                      |
| Total Particulate Matter                 | 0.72                         | 0.57                      |             | mg/m³ | 12.9                         | 10.2                      |             | g/hr  | STP, wet             | MCERTS               |
| Total VOCs (as Carbon)                   | 28.2                         | 1.9                       | 20          | mg/m³ | 510                          | 42.3                      |             | g/hr  | STP, wet             | MCERTS               |
| Oxides of Nitrogen (as NO <sub>2</sub> ) | 19.2                         | 0.52                      | 130         | mg/m³ | 348                          | 18.9                      |             | g/hr  | STP, wet             | MCERTS               |
| Oxygen                                   | 20.1                         | 0.51                      |             | % v/v |                              |                           |             |       | dry                  | MCERTS               |
| Stack Gas Water Vapour                   | 1.2                          | 0.039                     |             | % v/v |                              |                           |             |       | actual               | MCERTS               |
| Stack Gas Temperature                    | 123                          |                           |             | °C    |                              |                           |             |       | actual               | MCERTS               |
| Stack Gas Velocity                       | 9.3                          | 0.12                      |             | m/s   |                              |                           |             |       | actual               | MCERTS               |
| Stack Gas Flow Rate (ACTUAL)             | 26174                        | 1230                      |             | m³/hr |                              |                           |             |       | actual               | MCERTS               |
| Stack Gas Flow Rate (REF)                | 18092                        | 851                       |             | m³/hr |                              |                           |             |       | STP, wet             | MCERTS               |

The stack gas water vapour, temperature, velocity and flow rates in the above table are calculated as an average of all of the results recorded during this monitoring campaign  
 The uncertainty in the result is reported at a 95% Confidence Interval in the same units as the monitoring result. In practice, this means that 95 times out of 100, the true result will lie within the stated range.

Part 1: Executive Summary - Monitoring Results Further Details

Monitoring Results - Further Details

| test parameter                           | run | EXPRESSED AS A CONCENTRATION |                           |             |                    | EXPRESSED AS A MASS EMISSION |                           |             |                    | sampling date   times      | run time (mins) | H <sub>2</sub> O (% v/v) | reference conditions |
|------------------------------------------|-----|------------------------------|---------------------------|-------------|--------------------|------------------------------|---------------------------|-------------|--------------------|----------------------------|-----------------|--------------------------|----------------------|
|                                          |     | result                       | uncertainty in result +/- | limit (ELV) | units              | result                       | uncertainty in result +/- | limit (ELV) | units              |                            |                 |                          |                      |
| Total Particulate Matter                 | R1  | 0.72                         | 0.57                      |             | mg/m <sup>3</sup>  | 12.9                         | 10.2                      |             | g/hr               | 12/05/2026   14:18 - 15:22 | 64              | 1.2                      | STP, wet             |
| Total VOCs (as Carbon)                   | R1  | 28.2                         | 1.9                       | 20          | mg/m <sup>3</sup>  | 510                          | 42.3                      |             | g/hr               | 12/05/2026   14:15 - 15:15 | 60              |                          | STP, wet             |
| Oxides of Nitrogen (as NO <sub>2</sub> ) | R1  | 19.2                         | 0.52                      | 130         | mg/m <sup>3</sup>  | 348                          | 18.9                      |             | g/hr               | 12/05/2026   14:15 - 15:15 | 60              |                          | STP, wet             |
| Oxygen                                   | R1  | 20.1                         | 0.51                      |             | % v/v              |                              |                           |             |                    | 12/05/2026   14:15 - 15:15 | 60              |                          | dry                  |
| Velocity & Flow Rate Traverse            | R1  | 9.4                          | 0.12                      |             | m/s                | 26558                        | 1249                      |             | m <sup>3</sup> /hr | 12/05/2026   14:02 - 14:18 |                 |                          | actual               |
| Stack Gas Water Vapour                   |     | 1.2                          | 0.039                     |             | % v/v              |                              |                           |             |                    |                            |                 |                          | actual               |
| Stack Gas Temperature                    |     | 123                          |                           |             | °C                 |                              |                           |             |                    |                            |                 |                          | actual               |
| Stack Gas Velocity                       |     | 9.3                          | 0.12                      |             | m/s                |                              |                           |             |                    |                            |                 |                          | actual               |
| Stack Gas Flow Rate (ACTUAL)             |     | 26174                        | 1230                      |             | m <sup>3</sup> /hr |                              |                           |             |                    |                            |                 |                          | actual               |
| Stack Gas Flow Rate (REF)                |     | 18092                        | 851                       |             | m <sup>3</sup> /hr |                              |                           |             |                    |                            |                 |                          | STP, wet             |

The stack gas water vapour, temperature, velocity and flow rates in the above table are calculated as an average of all of the results recorded during this monitoring campaign  
 The uncertainty in the result is reported at a 95% Confidence Interval in the same units as the monitoring result. In practice, this means that 95 times out of 100, the true result will lie within the stated range.

Part 1: Executive Summary - Monitoring and Analytical Methods

Monitoring and Analytical Methods

|                          |            |                      |                     |                  |                   |            |                      |                      |                      |                 |                      |
|--------------------------|------------|----------------------|---------------------|------------------|-------------------|------------|----------------------|----------------------|----------------------|-----------------|----------------------|
| where analysis required  | MONITORING |                      |                     |                  |                   | ANALYSIS   |                      |                      |                      |                 |                      |
| test parameter           | laboratory | accreditation number | technical procedure | reference method | monitoring status | laboratory | accreditation number | analytical procedure | analytical technique | analysis status | accreditation status |
| Total Particulate Matter | CTA        | 2522                 | TP-01               | EN 13284-1       | MCERTS            | CTA        | 2522                 | AP-01                | Gravimetric          | MCERTS          | MCERTS               |
| Water Vapour             | CTA        | 2522                 | TP-03               | EN 14790         | MCERTS            | CTA        | 2522                 | TP-03                | Gravimetric          | MCERTS          | MCERTS               |

|                                          |            |                      |                     |                       |                   |                                            |  |  |  |                      |
|------------------------------------------|------------|----------------------|---------------------|-----------------------|-------------------|--------------------------------------------|--|--|--|----------------------|
| where analysis not required              | MONITORING |                      |                     |                       |                   |                                            |  |  |  |                      |
| test parameter                           | laboratory | accreditation number | technical procedure | reference method      | monitoring status | measurement technique & equipment          |  |  |  | accreditation status |
| Total VOCs (as Carbon)                   | CTA        | 2522                 | TP-21b              | EN 12619              | MCERTS            | FID using iFID Mobile                      |  |  |  | MCERTS               |
| Oxides of Nitrogen (as NO <sub>2</sub> ) | CTA        | 2522                 | TP-22a              | EN 14792              | MCERTS            | Chemiluminescence using Horiba PG-350E     |  |  |  | MCERTS               |
| Oxygen                                   | CTA        | 2522                 | TP-22d              | EN 14789              | MCERTS            | Paramagnetism using Horiba PG-350E         |  |  |  | MCERTS               |
| Velocity & Flow Rate Traverse            | CTA        | 2522                 | TP-04a              | EN 16911-1   TR 17078 | MCERTS            | Pitot Tube, Thermocouple & Thermomanometer |  |  |  | MCERTS               |

Summary of Monitoring Deviations (from Appendix 2)

|                |     |                                                                   |
|----------------|-----|-------------------------------------------------------------------|
| test parameter | run | details of monitoring deviation                                   |
| All            | 1   | There were no deviations associated with the monitoring employed. |

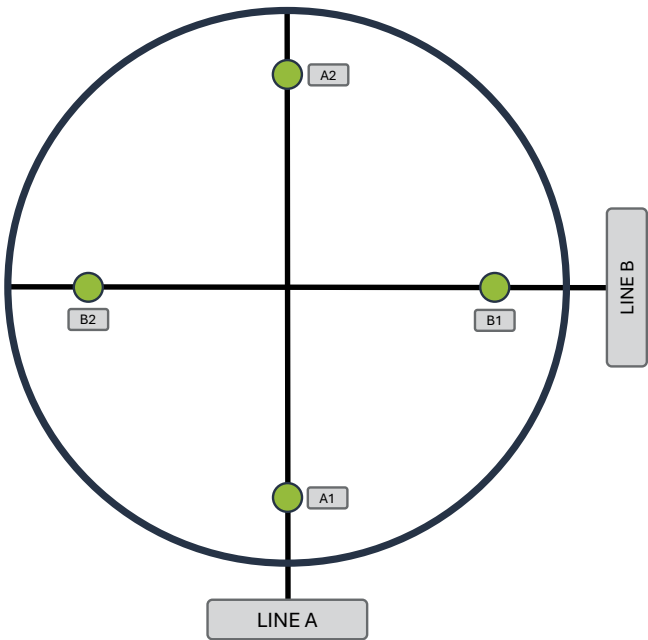
Part 1: Executive Summary - Monitoring Location

Monitoring Location Photos



Identification of Sampling Points on a Duct Diagram

refer to Appendix 2 - Raw Data to see how the points on this diagram relate to the points used for each test



Part 1: Executive Summary - Duct and Sampling Platform Information

Duct Characteristics | Sampling Ports

| parameter   | units          | value             | parameter                                               | value  | summary of all sample ports available |
|-------------|----------------|-------------------|---------------------------------------------------------|--------|---------------------------------------|
| shape       | -              | Circular          | primary sample port size                                | 4" BSP | 4" BSP                                |
| dimensions  | -              | Diameter = 1.00 m | primary sample port depth   cm                          | 9      |                                       |
| area        | m <sup>2</sup> | 0.79              | primary sample ports number of sampling lines available | 2      |                                       |
| orientation | -              | Vertical          |                                                         |        |                                       |

Sampling Location General Information

| general information      | details                                              |
|--------------------------|------------------------------------------------------|
| type   location   access | Permanent   Outside with no shelter available   MEWP |

CEMS | Abatement Systems

| parameter                   | details          |
|-----------------------------|------------------|
| abatement system/s          | Thermal Oxidiser |
| CEMS installed on the stack | N/A              |

Sampling Plane Validation Criteria Summary (EN 15259) from Stack Traverse/s

| criteria in EN 15259         | units | value | allowed | compliant |
|------------------------------|-------|-------|---------|-----------|
| lowest differential pressure | Pa    | 56.2  | > 5 Pa  | Yes       |
| lowest traverse velocity     | m/s   | 9.1   | -       | -         |
| highest traverse velocity    | m/s   | 9.7   | -       | -         |
| mean traverse velocity       | m/s   | 9.4   | -       | -         |
| ratio traverse velocities    | : 1   | 1.07  | < 3 : 1 | Yes       |
| angle of swirl compliance    | °     | < 15  | < 15°   | Yes       |
| no local negative flow       | -     | Yes   | -       | Yes       |

# Part 1: Executive Summary - Sampling Location and Operating Information

## Process Details

| process detail                             | details                                |
|--------------------------------------------|----------------------------------------|
| plume appearance on day of monitoring      | Intermittent black plumes.             |
| type of process                            | Fibreglass / Resin Product Manufacture |
| batch or continuous process                | Continuous                             |
| details of any unusual process occurrences | None                                   |

## Part 2: Supporting Information - Appendix 1: Monitoring Personnel, Analysis Laboratories and Test Equipment Used

### Monitoring Personnel

| name        | position    | MCERTS level   number   expiry           | MCERTS technical endorsements |
|-------------|-------------|------------------------------------------|-------------------------------|
| Tom Ralph   | Team Leader | MCERTS Level 2   MM 22 1706   20/05/2027 | TE1 TE2 TE3 TE4               |
| Zach Holden | Technician  | MCERTS Level 1   MM 23 1778   26/05/2028 | TE1 TE4                       |

### Analysis Laboratories

| laboratory                                                   | ISO 17025 accreditation number | laboratory short name | laboratory phone number |
|--------------------------------------------------------------|--------------------------------|-----------------------|-------------------------|
| Cura Terra OH and Emissions Testing Limited   West Yorkshire | 2522                           | CTA                   | 01274 738 668           |

### Test Equipment Used

| equipment type            | A-EQ ID |
|---------------------------|---------|
| Source sampling console   | 512     |
| Low flow sampling console | 657     |
| Low flow sampling MFCs    |         |
| ThermoFID / iFID mobile   | 528     |
| Horiba PG-250             |         |
| Horiba PG-350E            | 521     |
| Gasmet DX4000 FTIR        |         |
| Gasmet PSS                |         |
| Protea AtmosFIR           |         |
| Protea PIB 9ump           |         |
| Gasmet syringe calibrator |         |
| M&C PSS5-C                |         |
| Digital thermomanometer   | 851     |
| Top pan balance kit       | 536     |

| equipment type     | A-EQ ID |
|--------------------|---------|
| S-Type pitot       | 650     |
| S-Type pitot tip   | 655     |
| Mini S-Type pitot  | 601     |
| L-Type pitot       | 865     |
| Calipers           | 850     |
| Heated head filter | 591     |
| Heated tee         |         |
| 1.5m heated line   |         |
| 10m heated line    | 564     |
| 20m heated line    | 576     |
| Odour barrel       |         |
| Vacuum chamber     |         |
| Dilution probe     |         |
| Tape measure       |         |

| equipment type          | A-EQ ID         |
|-------------------------|-----------------|
| Barometer               | 735             |
| Timer                   | 744             |
| 10m umbilical           |                 |
| 30m umbilical           | 852             |
| Heated probe            | 756   757   758 |
| Filter oven             | 759             |
| Ambient thermocouple    |                 |
| Stack thermocouple      |                 |
| Exit thermocouple       |                 |
| Condenser thermocouple  |                 |
| Tubes kit thermocouple  |                 |
| 2-way heater controller | 656             |
| Air sampling pump       |                 |
| Analytical balance      | 1   492         |

Part 2: Supporting Information - Appendix 2: Total Particulate Matter | Run 1

Results
 reference conditions are: STP, wet

| parameter                | units             | result ± MU (95% CI) | units | result ± MU (95% CI) |
|--------------------------|-------------------|----------------------|-------|----------------------|
| Total Particulate Matter | mg/m <sup>3</sup> | 0.72 ± 0.57          | g/hr  | 12.9 ± 10.2          |

Analytical Laboratory Information

| parameter                | details                                      |
|--------------------------|----------------------------------------------|
| name of analytical lab   | CTA                                          |
| lab analytical procedure | AP-01                                        |
| lab analytical technique | Gravimetric   Analysis Accreditation: MCERTS |
| date analysis completed  | 26/05/2026                                   |

General Information

| parameter                                | details                          |
|------------------------------------------|----------------------------------|
| sampling date                            | 12/05/2026                       |
| sampling times                           | 14:18 - 15:22                    |
| sampling duration   testing team         | 64 minutes   tested by: TR   ZAH |
| standard   technical procedure           | EN 13284-1   TP-01               |
| nozzle / probe   filter housing material | Titanium   Titanium              |
| filter IDs                               | Sample: F-9927   Blank: F-9910   |

| parameter                               | details                                     |
|-----------------------------------------|---------------------------------------------|
| pre-use filter conditioning temperature | 250°C                                       |
| filter size, material & location        | 47mm GF   In Stack   heated to 130°C        |
| number sampling lines available         | 2                                           |
| number sampling lines used              | 2                                           |
| number sampling points ideal per line   | 4                                           |
| number sampling points used per line    | 4                                           |
| sampling point IDs                      | A1 to B4                                    |
| volume metering device                  | Millennium Method 5 Source Sampling Console |

Quality Assurance

| QA parameter                   | units             | sample run |           |        | blank (taken on 12/05/2026) |           |        |
|--------------------------------|-------------------|------------|-----------|--------|-----------------------------|-----------|--------|
|                                |                   | value      | allowable | result | value                       | allowable | result |
| maximum allowable blank        | mg/m <sup>3</sup> | -          | -         | -      | 0.17                        | N/A       | N/A    |
| leak test                      | %                 | 0.00       | 2.00      | Pass   | 0.00                        | 2.00      | Pass   |
| filter intact                  | -                 | Yes        | -         | Pass   | -                           | -         | -      |
| filter no signs of water marks | -                 | Yes        | -         | Pass   | -                           | -         | -      |
| maximum run filter temperature | °C                | 130        | < 230     | Pass   | -                           | -         | -      |
| silica trap <50% faded         | -                 | Yes        | -         | Pass   | -                           | -         | -      |
| are water droplets present     | -                 | No         | -         | -      | -                           | -         | -      |
| water vapour MU                | -                 | 3.3        | 20.0      | Pass   | -                           | -         | -      |
| isokinetic variation           | %                 | 103.9      | 95 - 115  | Pass   | -                           | -         | -      |

Breakdown of Results
 reference conditions are: STP, wet

| parameter                | sample volume [m <sup>3</sup> ] | LOD [mg] | mass on filter [mg] | mass in rinse [mg] | mass total [mg] | LOD result [mg/m <sup>3</sup> ] | result [mg/m <sup>3</sup> ] | result reported [mg/m <sup>3</sup> ] | mass emission [g/hr] |
|--------------------------|---------------------------------|----------|---------------------|--------------------|-----------------|---------------------------------|-----------------------------|--------------------------------------|----------------------|
| sample run <i>F-9927</i> | 1.5958                          | 0.23     | 1.30                | -0.15              | 1.15            | 0.14                            | 0.72                        | 0.72                                 | 12.9                 |
| blank <i>F-9910</i>      | 1.5958                          | 0.25     | 0.42                | -0.15              | 0.27            | 0.15                            | 0.17                        | 0.17                                 |                      |

Part 2: Supporting Information - Appendix 2: Total Particulate Matter | Run 1

Raw Data | Calculations

| data                 | units              | value  |
|----------------------|--------------------|--------|
| P <sub>bar</sub>     | mmHg               | 762.1  |
| P <sub>g</sub>       | Pa                 | 18.0   |
| ΔH <sub>@</sub>      | mmH <sub>2</sub> O | 51.3   |
| P <sub>m</sub>       | mmHg               | 765.8  |
| P <sub>s</sub>       | mmHg               | 762.2  |
| V <sub>m</sub> (DGM) | m <sup>3</sup>     | 1.6540 |
| Y <sub>d</sub>       | -                  | 1.0092 |
| C <sub>stp</sub>     | -                  | 0.3592 |

| data                               | units               | value  |
|------------------------------------|---------------------|--------|
| T <sub>m</sub>                     | °C                  | 18.9   |
| ΔH <sub>av</sub>                   | Pa                  | 727.8  |
| ΔP <sub>av</sub>                   | Pa                  | 55.8   |
| m <sub>wt</sub>                    | g                   | 15.5   |
| M <sub>w</sub>                     | g/mol               | 18.0   |
| V <sub>mol</sub>                   | m <sup>3</sup> /mol | 0.0222 |
| T <sub>s</sub>                     | °C                  | 126.3  |
| R <sub>ww</sub> (H <sub>2</sub> O) | % v/v               | 1.2    |

| data                   | units       | value |
|------------------------|-------------|-------|
| %CO <sub>2d</sub>      | % v/v (est) | 2.00  |
| %O <sub>2d</sub>       | % v/v (est) | 20.00 |
| %O <sub>2w</sub>       | % v/v (est) | N/A   |
| %N <sub>2d</sub>       | % v/v       | 78.00 |
| %O <sub>2ref</sub>     | % v/v       | N/A   |
| O <sub>2facd</sub>     | -           | N/A   |
| O <sub>2facw</sub>     | -           | N/A   |
| C <sub>p</sub> (pitot) | -           | 0.82  |

| data            | units           | value    |
|-----------------|-----------------|----------|
| M <sub>d</sub>  | g/mol           | 29.12    |
| M <sub>s</sub>  | g/mol           | 28.99    |
| R               | J/mol           | 8.314    |
| K <sub>4</sub>  | -               | 4.64E+06 |
| A <sub>s</sub>  | m <sup>2</sup>  | 0.79     |
| D <sub>n</sub>  | mm              | 9.02     |
| A <sub>n</sub>  | mm <sup>2</sup> | 63.90    |
| θ (sample time) | mins            | 64       |

where (est) refers to an estimated value

| data            | value |
|-----------------|-------|
| f <sub>WA</sub> | 0.995 |

| metered volume calculations                                                                                                                                              | units          | value  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|
| allow favourable O <sub>2</sub> correction                                                                                                                               | -              | N/A    |
| vol actual stack conditions, V <sub>mTa</sub> = (V <sub>mTstw</sub> )(T <sub>s</sub> + 273) / (P <sub>s</sub> ) / (C <sub>stp</sub> )                                    | m <sup>3</sup> | 2.3274 |
| vol dry, V <sub>mstd</sub> = (V <sub>m</sub> )(Y <sub>d</sub> )(C <sub>stp</sub> ) / ((P <sub>bar</sub> + (ΔH <sub>av</sub> / 9.80665 / 13.6)) / (T <sub>m</sub> + 273)) | m <sup>3</sup> | 1.5767 |
| vol dry, V <sub>mSSstd</sub> [from side stream sampling (if applicable)]                                                                                                 | m <sup>3</sup> | N/A    |
| vol dry, V <sub>mTstd</sub> [total volume metered]                                                                                                                       | m <sup>3</sup> | 1.5767 |
| vol wet, V <sub>mTstw</sub> = (V <sub>mTstd</sub> )(100 / (100 - R <sub>ww</sub> ))                                                                                      | m <sup>3</sup> | 1.5958 |
| vol dry O <sub>2</sub> , V <sub>mTstdO<sub>2</sub></sub> = (V <sub>mTstd</sub> ) / (O <sub>2facd</sub> )                                                                 | m <sup>3</sup> | N/A    |
| vol wet O <sub>2</sub> , V <sub>mTstwO<sub>2</sub></sub> = (V <sub>mTstw</sub> ) / (O <sub>2facw</sub> )                                                                 | m <sup>3</sup> | N/A    |

| isokinetic calculations                                                                                                                                                              | units | value |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| isokinetic rate, %I <sub>r</sub> = ((K <sub>4</sub> )(T <sub>s</sub> )(V <sub>mTstd</sub> )) / ((P <sub>s</sub> )(v <sub>s</sub> )(A <sub>n</sub> )(θ)(1 - (R <sub>ww</sub> / 100))) | %     | 103.9 |

| stack gas density   velocity   volume flow rate calculations                                                                                                                                                | units              | value   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------|
| density of stack gas, ρ = ((M <sub>s</sub> / 1000)(P <sub>s</sub> )(0.133322)(1000)) / ((R)(T <sub>s</sub> + 273))                                                                                          | kg/m <sup>3</sup>  | 0.887   |
| velocity of stack gas, v <sub>s</sub> = (f <sub>WA</sub> )(C <sub>p</sub> )√((2ΔP <sub>av</sub> ) / (ρ))                                                                                                    | m/s                | 9.1     |
| stack gas flow actual stack conditions, Q <sub>a</sub> = (60)(60)(A <sub>s</sub> )(v <sub>s</sub> )                                                                                                         | m <sup>3</sup> /hr | 25790.1 |
| stack gas flow dry, Q <sub>std</sub> = (Q <sub>a</sub> )(P <sub>s</sub> )(C <sub>stp</sub> ) / ((1 - (R <sub>ww</sub> / 100)) / (T <sub>s</sub> + 273))                                                     | m <sup>3</sup> /hr | 17471.5 |
| stack gas flow wet, Q <sub>stw</sub> = (Q <sub>a</sub> )(P <sub>s</sub> )(C <sub>stp</sub> ) / (T <sub>s</sub> + 273)                                                                                       | m <sup>3</sup> /hr | 17683.1 |
| stack gas flow dry O <sub>2</sub> , Q <sub>stdO<sub>2</sub></sub> = (Q <sub>a</sub> )(P <sub>s</sub> )(C <sub>stp</sub> ) / ((1 - (R <sub>ww</sub> / 100)) / ((T <sub>s</sub> + 273)(O <sub>2facd</sub> ))) | m <sup>3</sup> /hr | N/A     |
| stack gas flow wet O <sub>2</sub> , Q <sub>stwO<sub>2</sub></sub> = (Q <sub>a</sub> )(P <sub>s</sub> )(C <sub>stp</sub> ) / ((T <sub>s</sub> + 273)(O <sub>2facw</sub> ))                                   | m <sup>3</sup> /hr | N/A     |

Part 2: Supporting Information - Appendix 2: Total Particulate Matter | Run 1

Measurement Uncertainty (MU) Calculations

| parameter                                                                       | units                                | value          | standard MU | MU as %age | required standard | value          | sens coeff. | MU   mg/m <sup>3</sup> |
|---------------------------------------------------------------------------------|--------------------------------------|----------------|-------------|------------|-------------------|----------------|-------------|------------------------|
| DGM meter volume, V <sub>m</sub>                                                | m <sup>3</sup>                       | 1.6540         | 0.0083      | 0.50       | ≤5%               | -              | -           | -                      |
| DGM temperature, T <sub>m</sub>                                                 | K                                    | 291.9          | 2.0         | 0.69       | ≤2%               | -              | -           | -                      |
| DGM pressure, P <sub>m</sub>                                                    | kPa                                  | 102.1          | 0.50        | 0.49       | ≤2%               | -              | -           | -                      |
| DGM humidity, H <sub>m</sub>                                                    | % v/v                                | 0              | 1.0         | 1.00       | ≤2%               | -              | -           | -                      |
| DGM volume STP, V <sub>mstd</sub>                                               | m <sup>3</sup>                       | -              | -           | -          | -                 | 1.5767         | 0.46        | 0.01                   |
| leak, L                                                                         | % <sup>1</sup>   mg/m <sup>3.2</sup> | 0 <sup>1</sup> | -           | 0.00       | ≤2%               | 0 <sup>2</sup> | 1.00        | 0                      |
| mass of particulate, m                                                          | mg                                   | 1.15           | 0.46        | -          | -                 | 1.15           | 0.63        | 0.29                   |
| uncollected mass, m <sub>uc</sub>                                               | mg                                   | 0              | -           | 0          | ≤10% total mass   | 0              | 1.00        | 0                      |
| combined MU                                                                     |                                      |                |             |            |                   |                |             | 0.29                   |
| expanded MU 95% CI (k = 1.96) including method deviations MU                    |                                      |                |             |            |                   |                |             | 0.57                   |
| expanded MU 95% CI (k = 1.96) as percentage of measured value                   |                                      |                |             |            |                   |                |             | 78.4%                  |
| expanded MU 95% CI (k = 1.96) as percentage of measured value for mass emission |                                      |                |             |            |                   |                |             | 78.6%                  |

|                                          |
|------------------------------------------|
| MU factor O <sub>2</sub> correction      |
| N/A                                      |
| overall MU for O <sub>2</sub> correction |
| N/A                                      |
| method deviation factor                  |
| 1.00                                     |

|                                                                                                               |
|---------------------------------------------------------------------------------------------------------------|
| method and sampling deviations                                                                                |
| Sampling was performed in full compliance with the Standard, technical procedure and regulatory requirements. |

Part 2: Supporting Information - Appendix 2: Total VOCs (as Carbon) | Run 1

Results reference conditions are: STP, wet

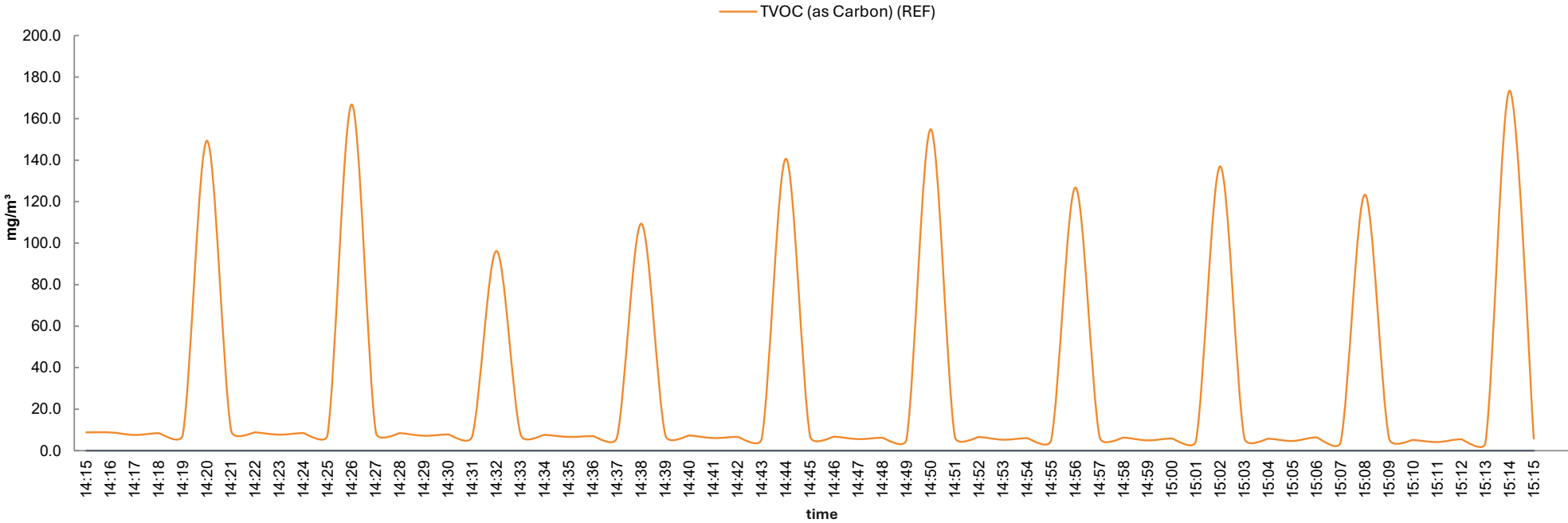
| parameter              | units             | result ± MU (95% CI) | units | result ± MU (95% CI) |
|------------------------|-------------------|----------------------|-------|----------------------|
| Total VOCs (as Carbon) | mg/m <sup>3</sup> | 28.2 ± 1.9           | g/hr  | 510 ± 42.3           |

General Information

| parameter                      | details           |
|--------------------------------|-------------------|
| sampling start date & time     | 12/05/2026 14:15  |
| sampling end date & time       | 12/05/2026 15:15  |
| test time   mins               | 60                |
| testing team                   | TR   ZAH          |
| standard   technical procedure | EN 12619   TP-21b |
| analyser type                  | iFID Mobile       |
| heated head & line temperature | 180°C             |

| parameter                             | details                                            |
|---------------------------------------|----------------------------------------------------|
| probe material                        | Stainless Steel                                    |
| filter size, material & location      | Heated Head Filter Element GF   Within Heated Head |
| number sampling lines available       | 2                                                  |
| number sampling lines used            | 1                                                  |
| number sampling points ideal per line | 1                                                  |
| number sampling points used per line  | 1                                                  |
| sampling point IDs                    | CG                                                 |

Plot of Emissions Over Time



Part 2: Supporting Information - Appendix 2: Total VOCs (as Carbon) | Run 1

Analyser Calibration Information with QA checks

where [A] = at analyser, [L] = down sampling line

| CAL ID | pre-test calibration events |                   |                   |                   |                   |                        |             | post-test calibration events |                |                   | quality assurance |                   |   |                     |                  |              |      |
|--------|-----------------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------|------------------------------|----------------|-------------------|-------------------|-------------------|---|---------------------|------------------|--------------|------|
|        | date & time                 | zero [A]<br>[ppm] | span [A]<br>[ppm] | zero [L]<br>[ppm] | span [L]<br>[ppm] | T <sub>90</sub><br>[s] | leak<br>[%] |                              | date & time    | zero [L]<br>[ppm] | span [L]<br>[ppm] | zero drift<br>[%] |   | span drift<br>[ppm] | allowable<br>[%] | temp<br>[°C] |      |
| 1      | 12/05/26 13:43              | 0.00              | 80.60             | 0.80              | 80.40             | 35                     | 0.3         | P                            | 13/05/26 08:48 | 0.00              | 80.20             | -1.0              | P | 0.8                 | P                | ±5           | 13.0 |

Analyser Calibration Extended Information

| CAL ID | performed by | drift corr. applied | log period [s] | CYL ID    | CYL conc. [ppm] | CYL expiry | CYL MU [%] | zero gas type | span [CYL] gas type      | span target [ppm] | range [ppm] | LOD [ppm] |
|--------|--------------|---------------------|----------------|-----------|-----------------|------------|------------|---------------|--------------------------|-------------------|-------------|-----------|
| 1      | TR           | No                  | 60             | A-CYL-164 | 79.68           | 05/06/2030 | 1.1        | Synthetic Air | 10l 80ppm Propane in Air | 79.68             | AUTO        | 0.03      |

Part 2: Supporting Information - Appendix 2: Total VOCs (as Carbon) | Run 1

Measurement Uncertainty (MU) Calculations

| general information              | units             | value |
|----------------------------------|-------------------|-------|
| emission limit value (ELV) (REF) | mg/m <sup>3</sup> | 20    |
| measured concentration (REF)     | mg/m <sup>3</sup> | 28.2  |

| MU budget    |       |      |       |
|--------------|-------|------|-------|
| parameter    | units | min  | max   |
| ambient temp | °C    | 11.0 | 15.0  |
| voltage      | V     | 90.0 | 130.0 |

| overall MU for O <sub>2</sub> correction |
|------------------------------------------|
| N/A                                      |
| MU factor O <sub>2</sub> correction      |
| N/A                                      |

| performance characteristics                                                     | MU budget input parameters |            |       |                                  | MU budget        |                   |            |
|---------------------------------------------------------------------------------|----------------------------|------------|-------|----------------------------------|------------------|-------------------|------------|
|                                                                                 | symbol                     | units      | value | source                           | symbol           | units             | value      |
| repeatability at zero                                                           | rz                         | % of value | 0.05  | MCERTS certificate MC050062      | U <sub>rz</sub>  | mg/m <sup>3</sup> | 0.014      |
| repeatability at span                                                           | rs                         | % of value | 0.08  | MCERTS certificate MC050062      | U <sub>rs</sub>  | mg/m <sup>3</sup> | 0.023      |
| lack of fit                                                                     | lof                        | % of value | 2     | maximum allowable                | U <sub>lof</sub> | mg/m <sup>3</sup> | 0.33       |
| maximum short term zero drift (ABS) [after drift correction]                    | dz                         | % of value | 1     | day of testing                   | U <sub>dz</sub>  | mg/m <sup>3</sup> | 0.16       |
| maximum short term span drift (ABS) [after drift correction]                    | ds                         | % of value | 0.75  | day of testing                   | U <sub>ds</sub>  | mg/m <sup>3</sup> | 0.12       |
| influence of sample gas flow                                                    | f                          | % of value | -0.42 | MCERTS certificate MC050062      | U <sub>f</sub>   | mg/m <sup>3</sup> | -0.068     |
| influence of sample gas pressure                                                | p                          | % of value | 0     | MCERTS certificate MC050062      | U <sub>p</sub>   | mg/m <sup>3</sup> | 0          |
| influence of ambient temperature zero point ( / 35k)                            | tz                         | % of value | -2.4  | MCERTS certificate MC050062      | U <sub>tz</sub>  | mg/m <sup>3</sup> | -0.026     |
| influence of ambient temperature span point ( / 35k)                            | ts                         | % of value | -2.7  | MCERTS certificate MC050062      | U <sub>ts</sub>  | mg/m <sup>3</sup> | -0.029     |
| influence of supply voltage ( / 60V)                                            | v                          | % of value | -0.46 | MCERTS certificate MC050062      | U <sub>v</sub>   | mg/m <sup>3</sup> | -0.05      |
| cross sensitivity at zero                                                       | iz                         | % of value | 3.8   | MCERTS certificate MC050062      | U <sub>iz</sub>  | mg/m <sup>3</sup> | 0.62       |
| cross sensitivity at span                                                       | is                         | % of value | 3.9   | MCERTS certificate MC050062      | U <sub>is</sub>  | mg/m <sup>3</sup> | 0.63       |
| maximum leak                                                                    | L                          | % of value | 0.25  | day of testing                   | U <sub>L</sub>   | mg/m <sup>3</sup> | 0.041      |
| uncertainty associated with calibration gas                                     | adj                        | % of value | 1.1   | span gas calibration certificate | U <sub>adj</sub> | mg/m <sup>3</sup> | 0.15       |
| combined MU                                                                     |                            |            |       |                                  |                  | mg/m <sup>3</sup> | 0.98       |
| expanded MU 95% CI (k = 1.96)                                                   |                            |            |       |                                  |                  | mg/m <sup>3</sup> | 1.9        |
| expanded MU 95% CI (k = 1.96) as percentage of measured value                   |                            |            |       |                                  |                  | %                 | 6.8        |
| expanded MU 95% CI (k = 1.96) as percentage of measured value for mass emission |                            |            |       |                                  |                  | %                 | 8.3        |
| expanded MU (k = 1.96) as percentage of ELV [allowable 15%]                     |                            |            |       |                                  |                  | %                 | 9.6        |
|                                                                                 |                            |            |       |                                  |                  |                   | result     |
|                                                                                 |                            |            |       |                                  |                  |                   | N/A   >ELV |

| method and sampling deviations                                                                                |
|---------------------------------------------------------------------------------------------------------------|
| Sampling was performed in full compliance with the Standard, technical procedure and regulatory requirements. |

Part 2: Supporting Information - Appendix 2: Oxides of Nitrogen (as NO<sub>2</sub>) | Run 1

Results reference conditions are: STP, wet

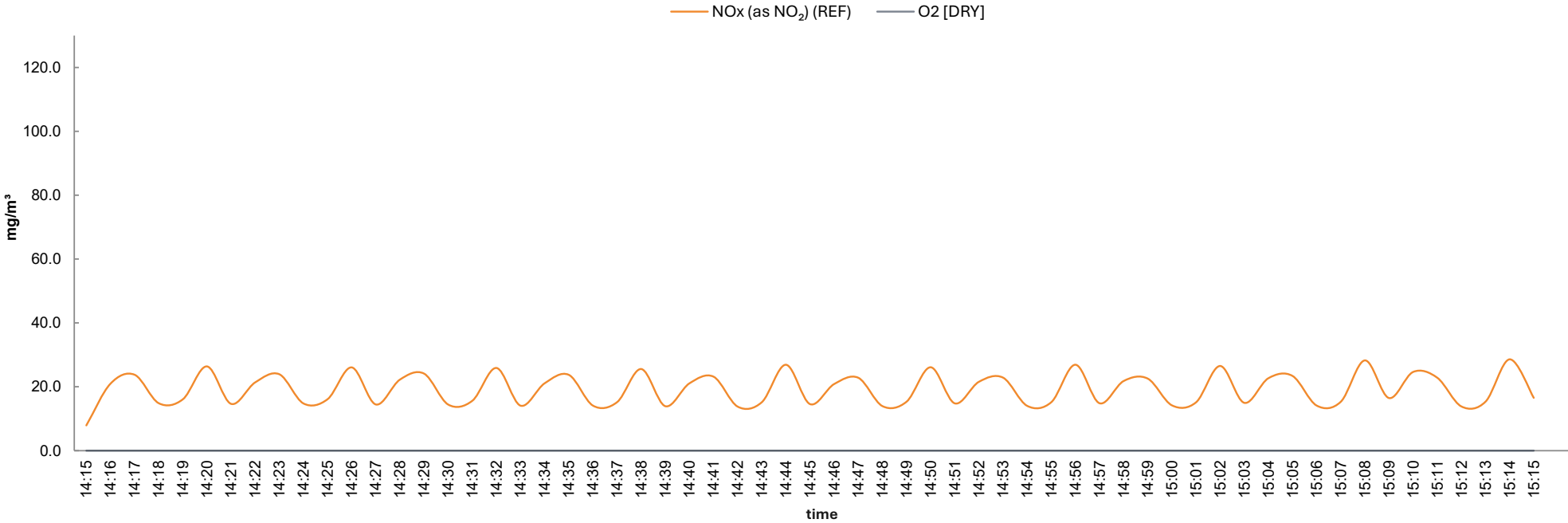
| parameter                                | units             | result ± MU (95% CI) | units | result ± MU (95% CI) |
|------------------------------------------|-------------------|----------------------|-------|----------------------|
| Oxides of Nitrogen (as NO <sub>2</sub> ) | mg/m <sup>3</sup> | 19.2 ± 0.52          | g/hr  | 348 ± 18.9           |

General Information

| parameter                      | details           |
|--------------------------------|-------------------|
| sampling start date & time     | 12/05/2026 14:15  |
| sampling end date & time       | 12/05/2026 15:15  |
| test time   mins               | 60                |
| testing team                   | TR   ZAH          |
| standard   technical procedure | EN 14792   TP-22a |
| analyser type                  | Horiba PG-350E    |
| heated head & line temperature | 180°C             |

| parameter                             | details                                            |
|---------------------------------------|----------------------------------------------------|
| probe material                        | Stainless Steel                                    |
| filter size, material & location      | Heated Head Filter Element GF   Within Heated Head |
| number sampling lines available       | 2                                                  |
| number sampling lines used            | 1                                                  |
| number sampling points ideal per line | 1                                                  |
| number sampling points used per line  | 1                                                  |
| sampling point IDs                    | CG                                                 |

Plot of Emissions Over Time



Part 2: Supporting Information - Appendix 2: Oxides of Nitrogen (as NO<sub>2</sub>) | Run 1

Analyser Calibration Information with QA checks

where [A] = at analyser, [L] = down sampling line

| CAL ID | pre-test calibration events |                   |                   |                   |                   |                        |             | post-test calibration events |                |                   | quality assurance |                   |   |                     |                  |              |      |
|--------|-----------------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------|------------------------------|----------------|-------------------|-------------------|-------------------|---|---------------------|------------------|--------------|------|
|        | date & time                 | zero [A]<br>[ppm] | span [A]<br>[ppm] | zero [L]<br>[ppm] | span [L]<br>[ppm] | T <sub>90</sub><br>[s] | leak<br>[%] |                              | date & time    | zero [A]<br>[ppm] | span [A]<br>[ppm] | zero drift<br>[%] |   | span drift<br>[ppm] | allowable<br>[%] | temp<br>[°C] |      |
| 1      | 12/05/26 13:30              | 0.00              | 199.00            | 0.00              | 199.10            | 35                     | 0.0         | P                            | 13/05/26 08:50 | 0.00              | 192.40            | 0.0               | P | -3.3                | P                | ±5           | 13.0 |

Analyser Calibration Extended Information

| CAL ID | performed by | drift corr. applied | log period [s] | CYL ID    | CYL conc. [ppm] | CYL expiry | CYL MU [%] | zero gas type | span [CYL] gas type                             | span target [ppm] | range [ppm] | LOD [ppm] |
|--------|--------------|---------------------|----------------|-----------|-----------------|------------|------------|---------------|-------------------------------------------------|-------------------|-------------|-----------|
| 1      | TR           | Yes                 | 60             | A-CYL-259 | 199.15          | 06/01/2029 | 1.2        | Nitrogen 5.2  | 10l 200ppm NO   160ppm CO   16% CO2 in Nitrogen | 199.15            | 250         | 0.09      |

Part 2: Supporting Information - Appendix 2: Oxides of Nitrogen (as NO<sub>2</sub>) | Run 1

Measurement Uncertainty (MU) Calculations

| general information              | units             | value |
|----------------------------------|-------------------|-------|
| emission limit value (ELV) (REF) | mg/m <sup>3</sup> | 130   |
| measured concentration (REF)     | mg/m <sup>3</sup> | 19.2  |

| MU budget    |       |      |       |
|--------------|-------|------|-------|
| parameter    | units | min  | max   |
| ambient temp | °C    | 11.0 | 15.0  |
| voltage      | V     | 90.0 | 130.0 |

| overall MU for O <sub>2</sub> correction |
|------------------------------------------|
| N/A                                      |
| MU factor O <sub>2</sub> correction      |
| N/A                                      |

|                                                                                                               | MU budget input parameters |                                                                                 |       |                                  | MU budget        |                   |                   | result<br>Pass |      |
|---------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------|-------|----------------------------------|------------------|-------------------|-------------------|----------------|------|
| performance characteristics                                                                                   | symbol                     | units                                                                           | value | source                           | symbol           | units             | value             |                |      |
| repeatability at zero                                                                                         | rz                         | % of value                                                                      | 0     | MCERTS certificate MC130223      | U <sub>rz</sub>  | mg/m <sup>3</sup> | 0                 |                |      |
| repeatability at span                                                                                         | rs                         | % of value                                                                      | 0.1   | MCERTS certificate MC130223      | U <sub>rs</sub>  | mg/m <sup>3</sup> | 0.019             |                |      |
| lack of fit                                                                                                   | lof                        | % of value                                                                      | 2     | maximum allowable                | U <sub>lof</sub> | mg/m <sup>3</sup> | 0.22              |                |      |
| maximum short term zero drift (ABS) [after drift correction]                                                  | dz                         | % of value                                                                      | 0     | day of testing                   | U <sub>dz</sub>  | mg/m <sup>3</sup> | 0                 |                |      |
| maximum short term span drift (ABS) [after drift correction]                                                  | ds                         | % of value                                                                      | 0     | day of testing                   | U <sub>ds</sub>  | mg/m <sup>3</sup> | 0                 |                |      |
| influence of sample gas flow                                                                                  | f                          | % of value                                                                      | 0.1   | MCERTS certificate MC130223      | U <sub>f</sub>   | mg/m <sup>3</sup> | 0.011             |                |      |
| influence of sample gas pressure                                                                              | p                          | % of value                                                                      | 0     | MCERTS certificate MC130223      | U <sub>p</sub>   | mg/m <sup>3</sup> | 0                 |                |      |
| influence of ambient temperature zero point ( / 35k)                                                          | tz                         | % of value                                                                      | 0     | MCERTS certificate MC130223      | U <sub>tz</sub>  | mg/m <sup>3</sup> | 0                 |                |      |
| influence of ambient temperature span point ( / 35k)                                                          | ts                         | % of value                                                                      | 1.8   | MCERTS certificate MC130223      | U <sub>ts</sub>  | mg/m <sup>3</sup> | 0.013             |                |      |
| influence of supply voltage ( / 60V)                                                                          | v                          | % of value                                                                      | 0.4   | MCERTS certificate MC130223      | U <sub>v</sub>   | mg/m <sup>3</sup> | 0.03              |                |      |
| cross sensitivity at zero                                                                                     | iz                         | % of value                                                                      | 0.63  | MCERTS certificate MC130223      | U <sub>iz</sub>  | mg/m <sup>3</sup> | 0.07              |                |      |
| cross sensitivity at span                                                                                     | is                         | % of value                                                                      | -0.52 | MCERTS certificate MC130223      | U <sub>is</sub>  | mg/m <sup>3</sup> | -0.058            |                |      |
| maximum leak                                                                                                  | L                          | % of value                                                                      | 0     | day of testing                   | U <sub>L</sub>   | mg/m <sup>3</sup> | 0                 |                |      |
| uncertainty associated with calibration gas                                                                   | adj                        | % of value                                                                      | 1.2   | span gas calibration certificate | U <sub>adj</sub> | mg/m <sup>3</sup> | 0.11              |                |      |
|                                                                                                               |                            | combined MU                                                                     |       |                                  |                  |                   | mg/m <sup>3</sup> |                | 0.27 |
|                                                                                                               |                            | expanded MU 95% CI (k = 1.96)                                                   |       |                                  |                  |                   | mg/m <sup>3</sup> |                | 0.52 |
|                                                                                                               |                            | expanded MU 95% CI (k = 1.96) as percentage of measured value                   |       |                                  |                  |                   | %                 |                | 2.7  |
|                                                                                                               |                            | expanded MU 95% CI (k = 1.96) as percentage of measured value for mass emission |       |                                  |                  |                   | %                 | 5.4            |      |
|                                                                                                               |                            | expanded MU (k = 1.96) as percentage of ELV [allowable 10%]                     |       |                                  |                  |                   | %                 | 0.4            |      |
| method and sampling deviations                                                                                |                            |                                                                                 |       |                                  |                  |                   |                   |                |      |
| Sampling was performed in full compliance with the Standard, technical procedure and regulatory requirements. |                            |                                                                                 |       |                                  |                  |                   |                   |                |      |

Part 2: Supporting Information - Appendix 2: Oxygen | Run 1

Results

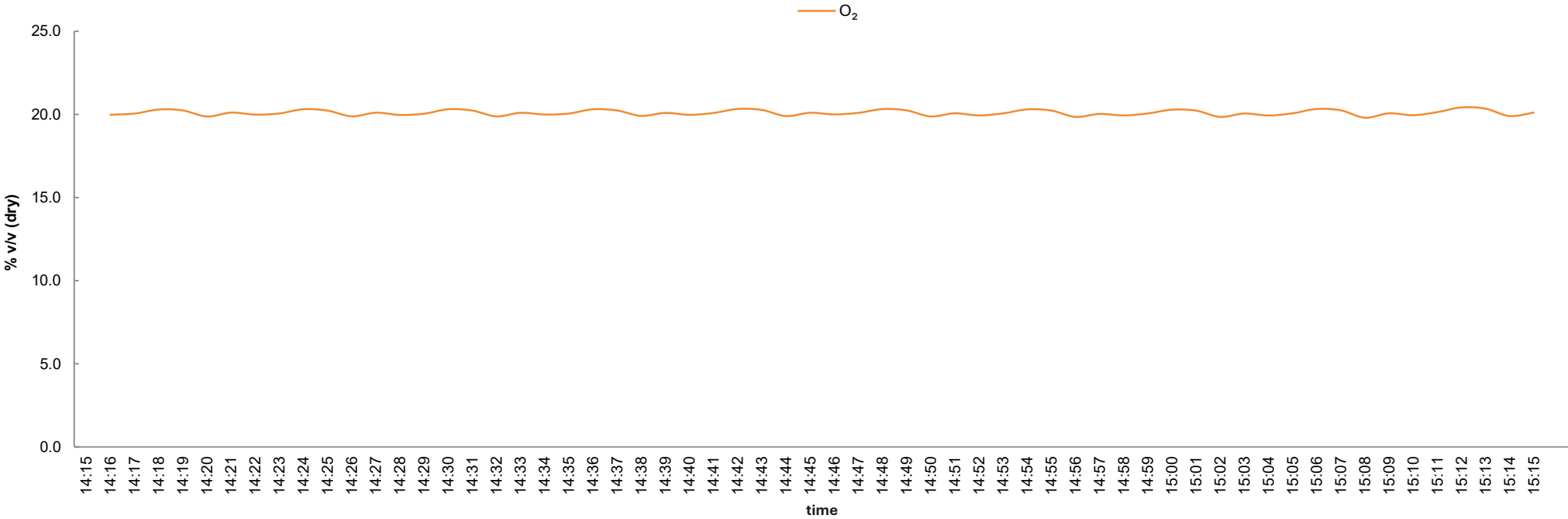
| parameter | units | result ± MU (95% CI) |
|-----------|-------|----------------------|
| Oxygen    | % v/v | 20.1 ± 0.51          |

General Information

| parameter                      | details           |
|--------------------------------|-------------------|
| sampling start date & time     | 12/05/2026 14:15  |
| sampling end date & time       | 12/05/2026 15:15  |
| test time   mins               | 60                |
| testing team                   | TR   ZAH          |
| standard   technical procedure | EN 14789   TP-22d |
| analyser type                  | Horiba PG-350E    |
| heated head & line temperature | 180°C             |

| parameter                             | details                                            |
|---------------------------------------|----------------------------------------------------|
| probe material                        | Stainless Steel                                    |
| filter size, material & location      | Heated Head Filter Element GF   Within Heated Head |
| number sampling lines available       | 2                                                  |
| number sampling lines used            | 1                                                  |
| number sampling points ideal per line | 1                                                  |
| number sampling points used per line  | 1                                                  |
| sampling point IDs                    | CG                                                 |

Plot of Emissions Over Time



Part 2: Supporting Information - Appendix 2: Oxygen | Run 1

Analyser Calibration Information with QA checks

where [A] = at analyser, [L] = down sampling line

|        | pre-test calibration events |                     |                     |                     |                     |                        |             | post-test calibration events |                |                     | quality assurance   |                   |   |                   |                  |              |      |
|--------|-----------------------------|---------------------|---------------------|---------------------|---------------------|------------------------|-------------|------------------------------|----------------|---------------------|---------------------|-------------------|---|-------------------|------------------|--------------|------|
| CAL ID | date & time                 | zero [A]<br>[% v/v] | span [A]<br>[% v/v] | zero [L]<br>[% v/v] | span [L]<br>[% v/v] | T <sub>90</sub><br>[s] | leak<br>[%] |                              | date & time    | zero [A]<br>[% v/v] | span [A]<br>[% v/v] | zero drift<br>[%] |   | span drift<br>[%] | allowable<br>[%] | temp<br>[°C] |      |
| 1      | 12/05/26 13:30              | 0.00                | 21.04               | 0.00                | 21.07               | 35                     | 0.0         | P                            | 13/05/26 08:50 | 0.00                | 21.08               | 0.0               | P | 0.2               | P                | ±5           | 13.0 |

Analyser Calibration Extended Information

| CAL ID | performed by | drift corr. applied | log period [s] | CYL ID    | CYL conc. [% v/v] | CYL expiry | CYL MU [%] | zero gas type | span [CYL] gas type | span target [% v/v] | range [% v/v] | LOD [% v/v] |
|--------|--------------|---------------------|----------------|-----------|-------------------|------------|------------|---------------|---------------------|---------------------|---------------|-------------|
| 1      | TR           | No                  | 60             | A-CYL-215 | 21.09             | 07/11/2029 | 1.2        | Nitrogen 5.2  | 10l Synthetic Air   | 21.09               | 25            | 0.03        |

Part 2: Supporting Information - Appendix 2: Oxygen | Run 1

Measurement Uncertainty (MU) Calculations

| general information          | units | value |
|------------------------------|-------|-------|
| measured concentration (dry) | % v/v | 20.1  |

| MU budget    |       |      |       |
|--------------|-------|------|-------|
| parameter    | units | min  | max   |
| ambient temp | °C    | 11.0 | 15.0  |
| voltage      | V     | 90.0 | 130.0 |

| performance characteristics                                   | MU budget input parameters |            |       |                                  | MU budget        |       |         |
|---------------------------------------------------------------|----------------------------|------------|-------|----------------------------------|------------------|-------|---------|
|                                                               | symbol                     | units      | value | source                           | symbol           | units | value   |
| repeatability at zero                                         | rz                         | % of value | 0.02  | MCERTS certificate MC130223      | U <sub>rz</sub>  | % v/v | 0.004   |
| repeatability at span                                         | rs                         | % of value | 0.02  | MCERTS certificate MC130223      | U <sub>rs</sub>  | % v/v | 0.004   |
| lack of fit                                                   | lof                        | % of value | 2     | maximum allowable                | U <sub>lof</sub> | % v/v | 0.23    |
| maximum short term zero drift (ABS) [after drift correction]  | dz                         | % of value | 0     | day of testing                   | U <sub>dz</sub>  | % v/v | 0       |
| maximum short term span drift (ABS) [after drift correction]  | ds                         | % of value | 0.19  | day of testing                   | U <sub>ds</sub>  | % v/v | 0.022   |
| influence of sample gas flow                                  | f                          | % of value | -0.01 | MCERTS certificate MC130223      | U <sub>f</sub>   | % v/v | -0.0012 |
| influence of sample gas pressure                              | p                          | % of value | 0     | MCERTS certificate MC130223      | U <sub>p</sub>   | % v/v | 0       |
| influence of ambient temperature zero point ( / 35k)          | tz                         | % of value | -0.4  | MCERTS certificate MC130223      | U <sub>tz</sub>  | % v/v | -0.0031 |
| influence of ambient temperature span point ( / 35k)          | ts                         | % of value | -0.15 | MCERTS certificate MC130223      | U <sub>ts</sub>  | % v/v | -0.0011 |
| influence of supply voltage ( / 60V)                          | v                          | % of value | 0.02  | MCERTS certificate MC130223      | U <sub>v</sub>   | % v/v | 0.0015  |
| cross sensitivity at zero                                     | iz                         | % of value | 0     | MCERTS certificate MC130223      | U <sub>iz</sub>  | % v/v | 0       |
| cross sensitivity at span                                     | is                         | % of value | 0     | MCERTS certificate MC130223      | U <sub>is</sub>  | % v/v | 0       |
| maximum leak                                                  | L                          | % of value | 0     | day of testing                   | U <sub>L</sub>   | % v/v | 0       |
| uncertainty associated with calibration gas                   | adj                        | % of value | 1.2   | span gas calibration certificate | U <sub>adj</sub> | % v/v | 0.12    |
| combined MU                                                   |                            |            |       |                                  |                  | % v/v | 0.26    |
| expanded MU 95% CI (k = 1.96)                                 |                            |            |       |                                  |                  | % v/v | 0.51    |
| expanded MU 95% CI (k = 1.96) as percentage of measured value |                            |            |       |                                  |                  | %     | 2.6     |

| method and sampling deviations                                                                                |
|---------------------------------------------------------------------------------------------------------------|
| Sampling was performed in full compliance with the Standard, technical procedure and regulatory requirements. |

Part 2: Supporting Information - Appendix 2: Velocity & Flow Rate Traverse | Run 1

Supporting Information

| parameter                              | units             | value |
|----------------------------------------|-------------------|-------|
| barometric pressure                    | kPa               | 101.6 |
| average wet density                    | kg/m <sup>3</sup> | 0.902 |
| average stack static pressure          | Pa                | 19.0  |
| pitot tube coefficient, C <sub>p</sub> | -                 | 0.817 |

General Information

| parameter                      | details                                      |
|--------------------------------|----------------------------------------------|
| traverse date                  | 12/05/2026                                   |
| traverse times   performed by  | 14:02 - 14:18   performed by: TR   ZAH       |
| standard   technical procedure | EN 16911-1   TR 17078   TP-04a               |
| device used                    | S-type Pitot with KIMO MP 210 (500Pa module) |

Limit of Detection (LOD) is 1 m/s for this device combination

Quality Assurance

| parameter                         | details |
|-----------------------------------|---------|
| result of pitot stagnation test   | Pass    |
| result of pitot leak check (pre)  | Pass    |
| result of pitot leak check (post) | Pass    |
| water droplets present            | No      |

ND = Not Detected

NM = Not Measured

|    |           | Line A                  |           |           |           |         | Line B                  |           |           |  |
|----|-----------|-------------------------|-----------|-----------|-----------|---------|-------------------------|-----------|-----------|--|
|    |           | static pressure = 18 Pa |           |           |           |         | static pressure = 20 Pa |           |           |  |
| Pt | Depth   m | ΔP   Pa                 | Temp   °C | Vel   m/s | Swirl   ° | ΔP   Pa | Temp   °C               | Vel   m/s | Swirl   ° |  |
| 1  | 0.15      | 56.2                    | 120.0     | 9.1       | < 15      | 61.3    | 120.0                   | 9.5       | < 15      |  |
| 2  | 0.85      | 58.7                    | 120.0     | 9.3       | < 15      | 64.5    | 120.0                   | 9.7       | < 15      |  |

Part 2: Supporting Information - Appendix 2: Velocity & Flow Rate Traverse | Run 1

Measurement Uncertainty (MU) Calculations

| ND = Not Detected                                                      |                   |          |
|------------------------------------------------------------------------|-------------------|----------|
| parameter                                                              | units             | value    |
| standard uncertainty on the coefficient of the pitot tube              | -                 | 0.0015   |
| standard uncertainty associated with the mean local dynamic pressures  | Pa                | 1.4      |
| standard uncertainty associated with the molar mass of the gas         | -                 | 0.000025 |
| standard uncertainty associated with the temperature                   | K                 | 2        |
| standard uncertainty associated with the absolute pressure in the duct | Pa                | 176      |
| standard uncertainty associated with the density of the gas effluent   | kg/m <sup>3</sup> | 0.0049   |
| standard uncertainty associated with the local velocities              | m/s               | 0.11     |
| standard uncertainty associated with the mean velocity                 | m/s               | 0.061    |

| ND = Not Detected                                                                     |                    |       |
|---------------------------------------------------------------------------------------|--------------------|-------|
| parameter                                                                             | units              | value |
| standard uncertainty associated with the mean velocity (95% CI)                       | m/s                | 0.12  |
| standard uncertainty associated with the mean velocity (95% CI), relative             | %                  | 1.3   |
| standard uncertainty associated with the volume flow rate @ actual (95% CI)           | m <sup>3</sup> /hr | 1249  |
| standard uncertainty associated with the volume flow rate @ actual (95% CI), relative | %                  | 4.7   |
| standard uncertainty associated with the volume flow rate @ ref 1 (95% CI)            | m <sup>3</sup> /hr | 870   |
| standard uncertainty associated with the volume flow rate @ ref 1 (95% CI), relative  | %                  | 4.7   |

| method and sampling deviations                                                                                |
|---------------------------------------------------------------------------------------------------------------|
| Sampling was performed in full compliance with the Standard, technical procedure and regulatory requirements. |