MCERTS Bulletin 8 – Data treatment/telemetry error

MCERTS requires that total daily volume be measured with a target uncertainty of ±8% or better ***including*** any data treatment/telemetry error.

The MCERTS Inspector is required to include in the Site Inspection Report the maximum uncertainty associated with data treatment/telemetry and add this figure, in quadrature, to the uncertainty associated with the flow monitoring equipment (primary and secondary device).

MCERTS Inspectors examine the site process configuration, primary and secondary device during the site assessment. Data treatment/telemetry arrangements are assessed by auditing the Consent holders Quality Management System (QMS). MCERTS Inspectors are not required to carry out telemetry verification measurements.

It would seem logical therefore, for Consent holders, to define and record in their QMS the maximum acceptable data treatment/telemetry error and for the MCERTS Inspector to use this figure for all Inspection reports prepared for that Consent holder. The Consent holder's QMS arrangements would then ensure that the defined figure is maintained. Since some Consent Holders do not yet have well-developed QMS's in place, this data may not be readily available to MCERTS Inspectors.

Therefore, until further notice, it will be acceptable for MCERTS Inspectors to include the data treatment/telemetry error in the overall uncertainty calculation ***only where the data is made available***. Where no such data is made available, the Inspection report shall clearly state this.

Of course, if the uncertainty associated with the primary and secondary device is ±5%, a 2% data treatment/telemetry error will only contribute <0.4% to the overall uncertainty, so some pragmatism will be required when addressing this.

For example

$$U = \sqrt{U_c^2 + U_t^2}$$

$$U = \sqrt{5^2 + 2^2}$$

$$U = \sqrt{25 + 4}$$

$$U = \sqrt{29}$$

$$U = 5.385\%$$

Where:

U = total uncertainty

U_c = uncertainty associated with the flow monitoring equipment (in total daily volume)

U_t = uncertainty associated with data treatment/telemetry