

Date: 07 Dec 2009

Subject: Micro Motion Recommended Calibration Practices for Coriolis meters used to comply with EPA 40 CFR part 98, Green House Gas

This document defines the official Micro Motion Inc (MMI) “manufacturer recommended practice” to assist users in their compliance with EPA regulations governing Green House Gas measurement points. It is suggested that users retain a copy of this document in their compliance files.

1. **Initial baseline calibration:** All meters produced by Micro Motion (MMI) are factory calibrated in a NIST-traceable laboratory. This water calibration is a proven calibration method for all fluids including gases (see AGA-11/API MPMS Chapter 14.9, at www.aga.org). Calibration sheets are shipped with each meter, and a copy retained by serial number at MMI. Replacement copies of the calibration sheets are available upon request if the original is lost or damaged. Documentation is also available showing NIST and ISO17025 traceability.

2. **In-use Calibration Technique and Frequency:**

New Applications: MMI recommends the purchase and installation of meters with on-board Meter Verification (MV). MV is “manufacturer recommended practice” and can be run as frequently as the user desires. We suggest a once per quarter verification to establish a robust set of data. In the unlikely event the meter were to “fail” the MV, repeat the MV two additional times, and if there are 3 out-of-spec data points, then a “wet-calibration” is warranted. Data shows that if the meter passes MV, then it is within manufacturer specification, well within the EPA required 5%, and a wet-cal is not needed. Wet-cal options include a) NIST-traceable master meter, b) “catch-and-weigh”, c) return to MMI factory or c) a third party lab such as CEESI or SwRI.

For existing applications: where the application warrants, MMI recommends upgrade per above. If the installed meter is an Elite meter with 800 ECP, then a software upgrade to add MV may be performed in the field, in-situ by a trained and factory certified Micro Motion Service Technician. If the meter is of other vintage, and the process is continuous, MMI recommends upgrade to a meter with MV for the previously cited reasons. If the process does not warrant this investment, then MMI recommends the customer follow traditional wet-cal methods including “catch & weigh” or “master meter”. Once per 3 years is suggested, unless the application is highly corrosive (known material compatibility issues) and the meter is viewed as a “consumable”. In those rare applications, once per year is suggested.

Note that retrofits via the wireless Emerson THUM adapter can be used to remotely activate Meter Verification and unlock trapped diagnostics useful for process troubleshooting.

For more information, please feel free to contact your local Sales Representative or either of us directly.

Sincerely,

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