

**Evaluation of Historical Methods for Determination of Total
Volumes Collected in RETS/REMP Air Monitoring Applications
with Currently Available Technology**

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The historical methodologies for RETS/REMP air sampling has utilized primarily variable area flowmeters for determination of flowrates and dry gas test meters for determination of total volumes of air sampled during a sampling event.

The pros and cons of the historical methodologies is compared with the current technology available from the integration of multiple solid state sensors with microprocessor controlled electronics.

Topics discussed in the comparisons include accuracy of measurements, footprint of components, reliability, typical costs, calibration issues and requirements.

The topic of the calibration of dry gas test meters will also be discussed.

A discussion is presented of the impact that particulate and/or charcoal cartridge selection has on the pressure drop and its further impact on the determination of totalized volume when utilizing a dry gas meter as the volume totalization component. The pros and cons of utilizing actual flows vs. flows corrected to a reference temperature and pressure is discussed from a scientific as well as a regulatory perspective.