

## Compliance Monitoring in a Performance Based Environment

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### **Biographical Sketch of Author**

Herb Brass is the Analytical Methods Team Leader in USEPA's Office of Ground Water and Drinking Water. He is the Co-Chair of the Methods and Data Comparability Board, a sub-group of the National Water Quality Monitoring Council, whose goal is to achieve comparability, so that data can be assessed across programs and organizations. He also coordinates EPA's drinking water alternative test procedure program that evaluates methods for use in compliance monitoring.

### **Abstract**

A performance based, or flexible, approach to analytical measurements permits the use of any scientifically appropriate method that demonstrates the ability to meet established method performance criteria (e.g., accuracy sensitivity, bias, precision) and complies with specified data quality needs or requirements. Key aspects of a performance-based system include; a) the need to establish concise measurement quality objectives (MQOs) or data quality objectives (DQOs) for each parameter reported; b) the need for demonstrated methods capable of meeting these MQOs or DQOs or regulatory limits; c) the need for adequate reference materials to assist laboratories in demonstrating the appropriateness of a given method; d) the need for laboratories to adequately document method performance, and e) the successful completion of a pilot program to demonstrate the advantages and viability of a performance-based approach.

There are significant issues concerning how such an approach would be implemented in compliance monitoring programs. The training requirements are extensive due to the diversity of programs and varying data requirements. Adequate training and education of data generators, auditors, and users is central to the successful implementation of a performance-based system. Mechanisms for determining liability must be established, and compliance data must be recognized in a court of law.

EPA approaches to a performance based system, in a compliance setting, include EPA's so-called streamlining initiative that includes validation requirements for new and modified methods and the development of new methods according to a protocol where validation is included in the methods development process.