

Introduction

On 8–12 August 1983 a conference devoted solely to Quality Assurance for Environmental Measurements was held at Boulder, Colorado. The conference was sponsored by ASTM through its Committees D-19 on Water and D-22 on Sampling and Analysis of Atmospheres. The conference was co-sponsored by the Environmental Protection Agency (EPA) and the National Bureau of Standards. The purpose of the conference was to bring together in one program environmental scientists, engineers, and statisticians concerned with assuring that the quality of environmental measurement data are of known, documented, and acceptable quality. In the context of this conference, quality assurance was defined to include only those quality management and technical operations necessary to ensure that measurement systems are in statistical control and performing within prescribed specifications. The measurement system includes sampling, analysis, quality control, data processing, and reporting.

The conference focused on the following question: What is quality assurance? What is its role in the measurement process? What are the benefits of quality assurance? The conference continued with a presentation concerning the development, management, and operation of a quality assurance program for the Environmental Protection Agency. The remainder of the conference was devoted to presentations by prominent experts in the fields of environmental measurements, standard reference samples, statistical treatment and analysis of data, performance evaluation of measurement systems and analysts, and certification of environmental laboratories. The sessions were divided in the following manner: Data Quality Assessment, Ambient Air Measurements, Ambient Water Measurements, Source Measurements, Discharge Monitoring, Reference Materials, Quality Assurance Management, and Special Topics covering meteorological measurements, the AMES test, atmospheric acid deposition, and personal exposure monitoring. In general, the papers presented describe relatively new concepts in quality assurance in the complex area of monitoring environmental quality. As the national concern for protecting and improving environmental quality continues, many of the concepts presented during this conference will become an important part of established scientific disciplines.

In his key note address Mr. Douglas M. Costle, former Administrator of the Environmental Protection Agency, emphasized the need for, and the importance of, reliable measurement data in setting environmental quality standards and

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establishing regulations to monitor compliance with these standards. In keeping with this need, this conference represents a major milestone towards a national quality assurance effort to ensure that all environmental measurement data are scientifically valid and of known and documented quality.

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