

Quality Systems Program



An interdisciplinary team of researchers forms RTI International's Quality Systems Program (QSP), helping clients plan, implement, and assess environmental data collection activities. These scientists have expertise in environmental sampling, measurement quality assurance and quality control, chemistry, engineering, and quality systems and standards. They also have substantial international experience, including training and technical assistance with air quality monitoring in Africa and Asia.

Strengths

- Quality assurance (QA) program development and implementation in accordance with regulatory guidelines (both internal and external clients)
- Training programs and workshop facilitation for air quality programs (domestic and international)
- QA oversight and QA document review and preparation
- Technical systems audits (TSA), performance evaluation (PE) audits, and instrument performance audits (IPAs) of field monitoring locations and laboratories
- Development, testing, and evaluation of sample collection devices
- Certified staff for collecting and auditing PM air samplers (PM_{10} , $PM_{2.5}$, PM_{coarse} , chemical speciation, air toxics, PM lead, NPAP)
- Certified trainer for EPA's National Performance Evaluation Programs ($PM_{2.5}$, PM lead, PM_{coarse} , PM chemical speciation, NPAP)

Ensuring Data Quality

For nearly 30 years, RTI has provided technical support to the U.S. Environmental Protection Agency's mandatory QA program, assisting in the development of numerous QA guidance documents, reviewing data, and conducting audits and assessments. RTI's QSP team also provides internal QA support to RTI projects and programs that are accredited to the quality standards of ISO/IEC 17025, ISO/IEC 17043, ILAC G-13, or NELAC. These

Case Study in Air Quality Facilitation

Client Problem: A developing country needed guidance implementing a meaningful air quality monitoring system.

RTI Solution: RTI assisted the Lagos Metropolitan Area Transport Authority (LAMATA) in the development of an air quality monitoring network along existing and future expanding bus rapid transit (BRT) corridors. Our air quality experts reviewed the previous air monitoring studies provided by LAMATA, held discussions with LAMATA and local air quality experts, and took a vehicle tour of the existing and proposed BRT corridors. RTI provided specifications for two monitoring scenarios, the bare minimum and the full scenario, including costs, to be procured under the Lagos Urban Transport Project.

programs include asbestos, environmental lead, and beryllium laboratory proficiency testing programs that RTI conducts for the National Institute of Standards and Technology, American Industrial Hygiene Association, and Navy and Marine Corps Public Health Center, as well as RTI's Industrial Hygiene Laboratory.

QSP staff have led several projects for the Health Effects Institute in the role of QA oversight, which has included on-site audits in Canada, the United Kingdom, and the Netherlands. Many of these projects included the participation of RTI's staff epidemiologists.

The QSP team has also provided technical and QA support on a series of contracts with EPA's Office of Air Quality Planning and Standards (OAQPS), which RTI held for 15 years. This work covered a wide range of activities, including statistical analysis in support of air regulations, federal reference and equivalent methods development and review, monitoring network support, analysis of ambient air samples (including chemically speciated particulate matter), audits, training, software development, and data management.

For these activities, QSP personnel review data for technical accuracy and quality compliance before release to EPA or the general public. Staff also perform special data analyses to identify outliers and other data issues, which may result in investigation and corrective action.

QSP staff are certified to perform PM_{2.5} and Lead Performance Evaluation Program (PEP) and National Performance Audit Program (NPAP) field site audits. QSP staff can also perform field audits on PM_{2.5}, PM₁₀, and PM_{coarse}, as well as gaseous analyzers and monitors. This certification allows RTI to conduct Prevention of Significant Deterioration (PSD) audits.

Case Study in Particulate Matter Pilot Programs

Client Problem: Establish a pilot program for enhanced determination of coarse particulate matter.

RTI Solution: RTI provided technical support to EPA's OAQPS under a work assignment entitled "PM_{10-2.5} Speciation Pilot Monitoring Program Site Support, Sample Analysis, and Data Reporting." The purpose of this work assignment was to assist the U.S. EPA in implementing the PM_{10-2.5} Speciation Monitoring Program at two pilot study site locations throughout the United States and to begin collecting and analyzing samples to characterize the chemical, biological, and physical speciation of the coarse fraction (aerodynamic size range from 2.5 µm to 10 µm). Several issues were explored and resolved in order to develop the long-term PM_{10-2.5} speciation implementation plan. All of the techniques used for PM_{2.5} speciation may not be appropriate for PM_{10-2.5} speciation.

More Information

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