In the last few months EPA has developed policy specific to laboratory and field operations. The following is a brief review of both and how these policies may affect the ambient air monitoring community.

**Forum on Environmental Measurements (FEM) excerpt from the FEM guidance document**

This document establishes the Agency’s policy requiring organizations generating or using environmental data under certain Agency-funded assistance agreements to submit documentation of their competency prior to award of the agreement or if that is not practicable, prior to beginning any work involving the generation or use of environmental data under the agreement. This includes organizations performing environmental sampling, field measurements, and/or laboratory analyses under Agency-funded agreements.

The goal of the FEM is to assure that, nationwide, organizations performing environmental data operations have effective quality management systems and technical competence, and thus have the capability to generate valid environmental data.

Organizations performing activities involving the use or generation of environmental data under covered assistance agreements shall provide the Agency with:

- **Quality documentation such as a quality management plan (QMP), and/or other documentation that demonstrates conformance to U.S. EPA quality program requirements; and**
- **Demonstration of competency in the fields) of expertise.**

Demonstration of competency may include (but not be limited to):

1. Current participation in accreditation or certification programs that are applicable to the environmental data generated under the Agency-funded assistance;
2. **Ongoing participation by the organization in proficiency testing (PT) or round robin programs conducted by external organizations;**
3. **Ongoing U.S. EPA accepted demonstrations and audits/assessments of proficiency; and**
4. Other pertinent documentation that demonstrates competency (e.g., past performance to similar statement of work [SOW]).

The highlighted elements in the list are those that are implemented by the monitoring agency (QMPs/QAPPS) as well as by EPA. With the implementation of our various performance evaluation programs (i.e. NPAP, PEP, Ozone SRP etc.) and the EPA Regional technical systems audits (TSAs), OAQPS believes we have the FEM policies adequately covered for agencies monitoring for NAAQS and some of our major networks like CSN and NATTs.

**Field Operations Group Guidelines – The Fog**

The FOG Guidelines are **minimum requirements** for establishing a quality management system to support field activities for the Agency. The basis of the FOG Guidelines is EPA Order CIO 2105.0, *Policy and Program Requirements for the Mandatory Agency-wide Quality System* (EPA 2000), and Agency-required
quality management plans (QMPs) [see EPA Quality Manual for Environmental Programs, CIO 2105-P-01-0 (2000), and EPA Requirements for Quality Management Plans, EPA QA/R2 (2001)]. EPA Order CIO 2105.0 applies to all programs that collect, evaluate, and use environmental data for EPA. The FOG Guidelines are developed specifically for field activities that satisfy minimum existing requirements of EPA Order CIO 2105.0. The FOG Guidelines are relevant to all Agency organizations that collect environmental data, regardless of the data's intended use. Data and environmental data are defined in EPA Order CIO 2105.0.

The FOG developed ten operational guidelines for field activities (hereafter, FOG Guidelines) to ensure consistency in managing field practices and to reduce potential vulnerabilities. The FOG Guidelines are based on best practices for data collection as determined by EPA field groups, EPA quality requirements, and concepts of management systems established by the International Organization for Standardization (ISO). They are intended to apply to any field sampling, measurements, and observations used by EPA for any purpose, such as ambient monitoring, research, clean-ups, risk management, studying new/revised regulations, screening, compliance monitoring, and enforcement. The FOG Guidelines are derived from EPA and ISO 17025 and 17020 requirements. The following is a brief description of each of the ten FOG Guidelines:

**Personnel/Training.** Personnel responsible for field activities will have appropriate records documenting qualifications, education, training, experience, and competency for carrying out requirements of field activities.

**Document Control.** Field groups will maintain a system for the control of all documents relating to their field activities, including the preparation, review, approval, issuance, revision, revocation, and archiving of documents. Controlled documents (policies, SOPs, SOP compendiums, guidance, blank template forms, and checklists) are generated internally for each organization and describe how work will be conducted.

**Records Management.** Field groups will maintain a records management system to suit their particular circumstances and to comply with applicable federal, EPA, and regional records management regulations and retention schedules.

**Evidence Management/Sample Handling.** Evidence includes samples, measurements, and documentation, such as field notes and instrument charts. Field groups will establish and maintain procedures for the identification, transportation, handling, protection, storage, and retention of samples and other potential evidence during field studies in accordance with federal criteria for various types of evidence.

**Field Documentation.** Field groups will establish and maintain procedures to document all field activities to ensure the credibility of all observational, measurement, photographic, and sample collection information.

**Field Equipment.** Field groups will establish and maintain procedures for field equipment to ensure all equipment is properly identified, maintained, and calibrated.

**Field Inspections and Investigations.** Field groups will establish and maintain procedures for planning field investigations and inspections, taking into consideration all applicable EPA and program-specific requirements.

**Reports.** Field groups will establish and maintain a procedure describing minimum standards for the preparation of a written report to summarize results of field activities and compliance inspections.

**Internal Audits.** Field groups will establish procedures to conduct internal audits to verify that their operations comply with these guidelines. The personnel performing the audits will be qualified and independent from the functions being audited whenever possible.

**Corrective Actions.** Field groups will establish and maintain a procedure for addressing findings from
internal audits through corrective actions whenever nonconformities with these guidelines are identified. Most elements are covered in the monitoring organizations QAPPs.

**How does the FOG and FEM Affect the Ambient Air Monitoring Community?**

The **FOG** should have no immediate affect on monitoring organizations. The FOG is not presently required for grantees but will most likely be required in the next two years. The implementation aspects of this policy is still under discussion with Regional and Headquarters leads and so OAQPS does not think it’s appropriate to implement any policies that may change. In addition, OAQPS believes that many of the elements the FOG already fall within the guidance and requirements for quality systems included in the development of QMPs, QAPPs and standard operating procedures (SOPs). To their credit, the EPA Regions and the air monitoring community have been developing and implementing these documents which OAQPS has imbedded in our ambient air QA regulations (40 CFR Part 58 App A). OAQPS has been tracking these documents for years and as most are aware, we’ve now included the QMP and QAPP submittal and approval dates in AQS.

The **FEM**, since it is now policy, may have some effect. However, as indicated on page six and above we have been pushing hard on the development of QMP and QAPPs and the implementation of our various performance evaluation programs which should help achieve these FEM policy requirements. The FEM workgroup is currently developing a one page document that can be used to help grantees demonstrate competence. For ambient air monitoring grants, OAQPS will work with the EPA Regions to develop specific language that would relate to this competency demonstration.

An issue that we see is related to Tribal air monitoring since many of the tribal monitoring agencies may be small and some can have frequent turnover. The FEM policy is based on grants over $ 200,000 so although the EPA still requires quality system documentation some of the additional FEM certification requirements will not be required. In addition, Tribal GAP Grants which are intended to build capacity and competency may be exempt from the FEM policy. Those Tribal STAG (103/105) grants over $200,000 are included in the policy.

**Summary**

OAQPS and the EPA Regional air monitoring QA staff are working together to interpret the FEM and FOG and to develop a consistent strategy for any additional aspects of these policies that need to be incorporated in future revisions of monitoring organization quality system documentation. Any elements requiring additional information will be identified along with some explanation of how it can be addressed. OAQPS’s overall goal is to create a consistent regional approach to fulfill the recommendations of these new policies. A timetable for incorporation of this material in quality system documentation will be developed in a manner that provides as little burden to the monitoring organization as possible.

The EPA Quality Staff are currently revising the quality system policies and guidance, OAQPS has been advocating for the EPA Quality Staff to incorporate elements of the FEM and FOG that are not currently addressed into their new guidance so that monitoring organizations don’t have to address three separate documents when writing or revising their ambient air specific QA documentation and applying for STAG.