



Walter Wright, Jr.
wwright@mwlaw.com
(501) 688.8839

Air Pollution/Opportunities to Better Sustain and Modernize National Air Quality Monitoring System: U.S. Government Accountability Office Report

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The United States Government Accountability Office (“GAO”) published a November 2020 report titled: *Air Pollution – Opportunities to Better Sustain and Modernize the National Air Quality Monitoring System (“Report”)*

The *Report* evaluates the Clean Air Act National Air Quality Monitoring System.

Various methods and techniques are used to determine the quantity of a given pollutant in the ambient air and/or the amount of emissions generated by a source. Determining the quantity of a given pollutant in the ambient air is often accomplished by:

- Sampling the air;
- Chemical analysis of the sampled air; and
- Quality assurance to ensure the precision and accuracy of measurement.

The concentration of a pollutant in the ambient air will be influenced at any given point by meteorological conditions. Also relevant are topographical conditions such as hills or valleys. They, of course, influence air pollutant movement.

Federal and state air quality managers, researchers, environmental organizations, industry and the public use data from the monitoring system to characterize ambient air conditions, analyze the human health and ecological effects of air pollution, implement strategies to reduce adverse health effects, and demonstrate progress in addressing air quality issues.

Sampling ambient air conditions is an important part of the process for determining whether an area is and/or will remain in compliance with the relevant Clean Air Act National Ambient Air Quality Standards. Ambient air monitoring networks are therefore prescribed by Clean Air Act regulations. By way of example, the Arkansas Department of Energy and Environment – Division of Environmental Quality operates a number of ambient air monitoring stations around the state to sample for various criteria air pollutants.

Senators Thomas Caper and Sheldon Whitehouse, who are ranking members of the Committee on Environment and Public Works and Subcommittee on Clean Air and Nuclear Safety, respectively, asked GAO to evaluate the national Clean Air Act air quality monitoring system.

The GAO *Report* examines:

1. The role that the national ambient air quality monitoring system plays in managing air quality
2. How EPA and state and local agencies manage the system
3. The challenges that EPA and selected state and local agencies face in managing the national ambient air quality monitoring system
4. What additional air quality monitoring information could help meet the needs of air quality managers, researchers and the public
5. The challenges EPA and selected state and local agencies face in meeting air quality information needs
6. The extent to which EPA has addressed and could better address these challenges

In order to address the questions, GAO states that it undertook the following:

- Review of relevant documents and literature
- Review of federal laws and regulations governing the national ambient air quality monitoring system
- Review of EPA reports, guidance and information on the oversight and operation of the monitoring system
- Conducted a series of interviews with federal, state and local officials and representatives from air quality associations
- Interviews with EPA officials from the Office of Air Quality Planning and Standards and the Office of Research and Development
- Interviews with six regional EPA offices
- Interviews with 14 state and local air quality monitoring agencies

GAO makes the following recommendations:

1. The Assistant Administrator of EPA's Office of Air and Radiation, in consultation with state and local agencies, should develop, make public, and implement an asset management framework for consistently sustaining the national ambient air quality monitoring system. Such a framework could be designed for success by considering the key characteristics of effective asset management described in our report, such as identifying the resources needed to sustain the monitoring system, using quality data to manage infrastructure risks, and targeting resources toward assets that provide the greatest value. (Recommendation)
2. The Assistant Administrator of EPA's Office of Air and Radiation, in consultation with state and local agencies and other relevant federal Recommendations for Executive Action Page 58 GAO-21-38 Air Pollution agencies, should develop and make public an air quality monitoring modernization plan to better meet the additional information needs of air quality managers, researchers, and the public. Such a plan could address the ongoing challenges in modernizing the national ambient air quality monitoring system by considering leading practices, including establishing priorities and roles, assessing risks to success, identifying the resources needed to achieve goals, and measuring and evaluating progress. (Recommendation)

A copy of the *Report* can be downloaded [here](#).