

Expect Tighter Particulate Matter Standards

Tighter particulate matter standards are in our future, according to Regulatory Editor Lynn Bergeson in this month's Compliance Advisor column on ChemicalProcessing.com

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By Lynn Bergeson, regulatory editor

Particulate matter (PM) is a hot button issue poised to raise business costs and litigation. The U.S. Environmental Protection Agency (EPA) was recently due to issue final PM standard revisions. EPA last year proposed stronger National Ambient Air Quality Standards (NAAQSs) for fine PM (2.5 micrometers or less in diameter (PM_{2.5})) and the 24-hour PM_{2.5} standard. However, EPA sought to keep annual PM_{2.5} NAAQS of 15 µg/m³. EPA's proposal was inconsistent with a Clean Air Scientific Advisory Committee (CASAC) recommendation to reduce standards to a 13 to 14 µg/m³ range. How EPA decides to proceed and which standards it selects are closely watched topics.

Proposed NAAQS

EPA proposed NAAQS for PM revisions in January, as required by an EPA and American Lung Association (ALA) 2003 consent agreement. Standards are to protect public health, and welfare, including that of crops, vegetation, wildlife, buildings and national monuments, and visibility. EPA says studies link PM exposure to health problems, including asthma, chronic bronchitis, reduced lung function, heart attack, and premature death in people with heart or lung disease.

EPA proposed lowering 24-hour fine particle standards from 65 µg/m³ to 35 µg/m³, retaining annual fine standards at 15 µg/m³, and setting 24-hour standards for inhalable coarse particles at 70 µg/m³.

Assuming EPA issues the standards, states would make recommendations by November 2007 for designated attainment and nonattainment areas. EPA would make final designations for PM_{2.5} by November 2009 to be effective in April 2010. States would have until April 2013 to submit state implementation plans (SIP) and until April 2015 to meet them. For PM_{10-2.5}, final designations wouldn't be made until May 2013, effective in July 2013. States generally would have to comply by July 2018, but in some cases not until July 2023.

EPA, on February 3, issued advance notice of proposed rulemaking (ANPR) for implementing NAAQS. The notice, in part, was to assure stakeholders that EPA is aware of and considering the challenging issues of implementing revised PM NAAQS. By engaging stakeholders early, EPA hopes to address cost implications of meeting the standards. Industry as well as states are concerned about these standards and are under the gun to develop SIPs and prepare to demonstrate attainment in as many areas as possible.

Implications

EPA's decision to leave annual PM standards in place, counter to CASAC recommendations, has inspired controversy. Other proposal details also have proven controversial, including excluding rural sources from coarse particles standards. Not surprisingly, how these issues sort out will have important implications.

Leaving current annual PM standards unchanged would have adverse health consequences, according to the ALA. It claims the proposal doesn't go far enough to eliminate or diminish premature deaths due to PM. EPA reviewed some 2,000 scientific studies and found links between ambient air particles and health problems. In nine cities EPA analyzed, particulates would cause an estimated 4,729 premature deaths unless standards are strengthened.

The final rule likely will have significant implementation issues. For example, the new standard is expected to increase from approximately 116 to 191 counties that wouldn't attain PM2.5 NAAQS with the proposed PM2.5 NAAQS by 2010. Following formal nonattainment designation, states have three years to submit SIPs that identify regulations and emissions control requirements to bring areas into compliance. If new or revised attainment SIPs establish or revise a transportation-related emissions allowance or add or delete transportation control measures, they will trigger "conformity" determinations. The Clean Air Act (CAA) requires transportation conformity for federal funding and approval for highways and transit projects to show they are consistent with, or conform to, SIP established air quality goals and won't cause new, or worsen existing air quality violations, or delay timely NAAQS implementation. The standards have significant implications for state and regional air enforcement and other government air agencies.

New, stricter standards are expected to have a significant financial impact on various business sectors. For example, the standards likely will mean more cost for transportation and industrial sectors, including refineries, utilities, trucking, and others affected by PM controls.

Given these multiple significant impacts, litigation may well be in EPA's future.

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