

EPA Issues Final Primary National Ambient Air Quality Standard (NAAQS) for Sulfur Dioxide

The New SO₂ Primary Standard

On June 2, 2010, EPA tightened the primary National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO₂) to improve protection of public health. The rule was published in the Federal Register on June 22, 2010 and will be effective on August 23, 2010. The current primary standards, which were implemented in 1996, are 140 parts per billion (ppb) measured over 24-hours and 30 ppb, measured over a year. EPA has changed those standards to a single standard of 75 ppb, measured over 1-hour.¹ EPA has based this rule on scientific evidence which indicates that public health would be better protected by reducing exposure to high short-term concentrations of SO₂.

In order to monitor SO₂ levels in areas of expected maximum short-term concentrations, EPA has proposed changes to the ambient air monitoring and reporting requirements. Monitoring agencies would have to report the 1-hour and maximum five minute average SO₂ data in each hour of the day. However, modeling will be used as the main way of assessing compliance for medium to larger sources, while monitoring will only be used to assess compliance for smaller sources. This will result in less monitors being required than in the original proposed rule. EPA's proposed rule estimated that at least 348 monitoring sites would be required, but the final rule estimates only 163 monitors will be needed, 41 of which will be new. All new monitors will have to be operational by January 1, 2013.

Sources of SO₂ and Cost Estimates

EPA's final Regulatory Impact Analysis (RIA) for this rule estimates that fossil fuel combustion at electric utilities accounts for about 66% of SO₂ pollution and fossil fuel combustion at other industrial facilities accounts for about 29% of SO₂ pollution. Other sources of SO₂ include extraction of metal from ore and the burning of high sulfur containing fuels by large ships, locomotives, and non-road diesel equipment. EPA estimates that implementing the new standard will cost \$1.3 to \$1.6 billion annually. However, EPA notes that this estimate is based on an analysis under the current monitoring network; therefore EPA lacks a "credible analytic path to estimating costs and benefits."² As more monitors will be added to implement the rule, it is likely that more counties will be considered nonattainment areas, thus the costs will actually be higher.

¹ In its November 2009 proposed rule, EPA was considering an SO₂ standard in the range of 50-100 ppb.

² Final Regulatory Impact Analysis for the SO₂ National Ambient Air Quality Standards (June 2010), p. 6-1

Timeline

EPA plans to make its final designations of attainment, nonattainment, and unclassifiable by June 2012 using either 2008-2010 monitoring data or, if provided by the state, refined dispersion modeling results. Refined dispersion modeling simulates how air pollutants spread through the atmosphere and can estimate the concentration of air pollutants from sources such as industrial plants or highways. State Implementation Plans (SIPs) for states with areas that were designated nonattainment will be due early in 2014. For all other areas, states must submit “maintenance” or infrastructure SIPs by June 2013 which demonstrate that all sources who might violate the standard are being sufficiently controlled and include any other necessary information, such as timetables for compliance and any appropriate testing or reporting. The attainment date is set to be August 2017.