



Earthjustice Statement on Proposed Rules Establishing National Ambient Air Quality Standards for Particulate Pollution

My name is James Cox, and I am Legislative Counsel for Earthjustice, a non-profit organization that advocates on behalf of those who seek to achieve and maintain a clean and healthy environment.

EPA's proposed standards for particulate matter defy the Clean Air Act's mandate to protect public health with an adequate margin of safety. The proposed standards are less protective than recommended by the Clean Air Science Advisory Committee, and if promulgated, would allow thousands of needless deaths, asthma attacks, and hospital visits. Moreover, in failing to propose more protective secondary air quality standards, EPA would be violating legal requirements to protect important public welfare values like visibility and ecosystem health.

Earthjustice will be submitting more extensive written comments, but for the present, I would like to focus on EPA's attempt to establish a coarse particulate standard only in urban areas, and not rural ones, and to concurrently exempt the mining and agribusiness industries from having to comply with the standard.

Although the "urban/rural" distinction appears most prominently in the currently proposed "monitoring rule", that rule's clear demarcation of those areas that will be monitored, and those that will not, mean that the monitoring rule and the rule proposing to establish air quality standards must be considered as a unit. Under the "monitoring rule", in order to be eligible for comparison to the proposed air quality standard, a monitoring site must be contained within an urbanized area having a population of at least 100,000 persons, and a population density of at least 500 persons per square mile.

The very name of the standard under consideration—the *National* Ambient Air Quality Standard for particle pollution—shows that EPA's attempt to define a *local* standard that applies only in urban areas is unlawful. EPA is required by law to set air quality standards at those levels that are protective of public health for *all* Americans—not just those living in certain cities.

The science flatly refutes EPA's fundamental presumption that urban coarse particles are somehow more hazardous than rural ones. For example, some of the epidemiological studies relied upon by EPA for the purpose of establishing the coarse particle standard were conducted in Steubenville, Ohio; Provo, Utah; and Portage, Wisconsin. In each instance, observed health effects were associated with levels of coarse particle pollution in the air. Yet under the proposed rules, each of these locations would have been classified as a rural area at the time the studies were conducted, and the residents of each would therefore presumably not have had the protections that ensue from promulgation of a coarse-particle clean air standard.

Other science provides additional evidence of the arbitrary and political nature of the current proposal. Laboratory studies on human and animal lung tissues show inflammatory and immunological responses to coarse particles containing constituents that are common to rural areas. One such study sampled air from both a rural and an urban industrial region of Germany, and found a clear association between each location's coarse particle fraction and lung inflammation in laboratory animals. The authors of the study attributed the observed response to the presence of endotoxins in the particles. The term 'endotoxin' is used to describe a class of bacteria that includes the common agriculture toxins *Salmonella* and *E-coli*.

Occupational studies also provide clear scientific evidence refuting EPA's supposition that only urban particulates, and not rural ones, are harmful to human health. The deadly disease silicosis, more widely known as 'black lung', has caused death and disability to countless miners of coal and other minerals, for as long as the profession has been around. Silicosis is caused by the inhalation of quartz particles of crustal origin that EPA would have us believe are benign.

Coarse particles containing metals are also a known risk among mineworkers, construction workers, and those who live and work around smelters and fossil fuel-burning power plants. Coal fly ash consists of respirable coarse particles containing iron, which pose a hazard to lung tissues. Combustion of fuel oil produces hazardous vanadium particles; construction and demolition activities produce respirable cadmium dusts; and metal smelters produce a wide range of metal particulates.

The Provo example highlights the fallacy of any attempt to delineate a distinction between urban and rural coarse particles, insofar as their relative health effects are concerned. During the mid-1980's, a series of studies was conducted around the closure of a steel mill in the vicinity of Provo. The studies observed the number of deaths, lung ailments and hospital admissions for the time periods before, during and after the mill's closure, and related the observances to ambient measurements of PM₁₀. The studies found a clear association between PM₁₀ and the observed health effects. Because the Provo vicinity is an area "where the coarse fraction of PM₁₀ is typically much greater than the fine fraction," EPA has concluded that the studies "provide[] . . . supportive evidence for associations between short-term exposure to thoracic coarse particles and health effects, particularly morbidity effects, generally in areas not meeting the PM₁₀ standards."

According to census reports from 1990 and 2000, Provo's population increased to more than 100,000 sometime during the 1990s. If EPA's current proposal had been in effect then, at some point in the 1990s, the addition of one new member of the Provo community would have caused the coarse particles being emitted from the steel mill to switch from being 'rural' to 'urban', and suddenly cause them to be subject to regulation. But the same protection is not yet provided to Steubenville, Ohio, a small steel-mill town in eastern Ohio whose residents have also suffered health consequences as a result of so-called 'rural' coarse particles, but who have the misfortune of living in a town below the magic 100,000 threshold.

Another study of Provo's particulate pollution hypothesized that some of that pollution consisted of harmful copper particles being emitted some 50 miles away, from copper smelters in the western suburbs of Salt Lake City. Just as the steel mill particles being emitted from outside Provo had to travel across rural regions before entering Provo's now-urban air, the copper smelter particles found in that air had to cross vast rural regions as well. Under EPA's proposed rural exclusion, only upon their arrival in Provo would they become subject to regulation.

EPA's proposal to exempt mining and agribusiness operations from the coarse particle standards lacks a credible scientific basis. In particular, EPA's attempt to draw a line between construction sources—which the rule would regulate—and mining sources—which the rule would not—highlights the arbitrariness of the proposal. Both construction particulates and mining particulates are generally dominated by harmful silica dusts and metals; yet the proposed rule would regulate one, but not the other. Moreover, the proposed rule's attempt to exempt agricultural particles ignores the countless studies that show the presence of harmful endotoxins and other bacteria in those particles, as well as the certain presence of pesticides, silica, and other hazardous materials.

EPA must heed the numerous epidemiological, occupational and laboratory studies confirming that coarse particles threaten human health, whether those particles are urban or rural and whether they come from a coal mine or an urban construction site. EPA must adopt National Ambient Air Quality Standards that protect everyone from coarse particles—not just the residents of certain cities.