

Summary Statement of Testimony of
Kevin Rogers, President, Arizona Farm Bureau Federation

The American Farm Bureau Federation supports H.R. 1633, the Farm Dust Regulation Prevention Act. The bill would exclude from federal regulation nuisance farm dust that occurs naturally in the course of normal farming activities.

Unlike other types of particulate matter that are regulated by the Environmental Protection Agency, farm dust is naturally occurring and is found in rural, rather than in urban, areas. Further, unlike other types of particulate matter where the links to health effects are well established, there is considerable uncertainty about whether or not farm dust adversely affects human health.

Regulation of naturally occurring dust restricts my normal farming activities, making it more costly for me to farm. Other farmers in my area have the same or similar restrictions and associated costs.

The bill makes common sense amendments to the Clean Air Act by excluding from regulation naturally occurring materials that are not readily subject to regulation and for which any regulatory benefits are uncertain. The bill would not prevent regulation of farm dust if the scientific data on adverse impacts to human health becomes more evident.



Statement of the American Farm Bureau Federation

**TO THE
HOUSE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON ENERGY AND POWER
REGARDING: H.R. 1633, THE FARM DUST REGULATION
PREVENTION ACT OF 2011**

October 25, 2011

Presented by Kevin Rogers
President, Arizona Farm Bureau Federation
Testifying on Behalf of the American Farm Bureau Federation

Mr. Chairman and Members of the Subcommittee, my name is Kevin Rogers. I am a fourth generation farmer and work over 7,000 acres of land in Arizona with other members of my family. We produce cotton, alfalfa, wheat, barley and corn. I am president of the Arizona Farm Bureau Federation. I also serve on the Department of Agriculture (USDA) Air Quality Task Force, which advises the Secretary of Agriculture on federal clean air policies that affect farmers.

I am pleased today to testify on behalf of the American Farm Bureau Federation in support of H.R. 1633, the *Farm Dust Regulation Prevention Act*.

My farm in Arizona lies in one of the worst areas for dust in the nation. Within the past couple of months, four huge, naturally-occurring dust clouds have risen from the desert and swept over the Phoenix and Tucson areas. A picture of the first of these clouds, one mile high and 50 miles wide, is attached to my statement. Just last week, a similar naturally occurring dust storm engulfed Lubbock, Texas. A picture of that dust cloud is also attached to my statement. This is the “dust” that EPA regulates under the coarse particulate matter (PM) national ambient air quality standard (NAAQS). While these storms do not happen every day, they occur often enough to cause readings from PM monitors to skyrocket many times above allowable levels.

For purposes of determining whether or not an area is in attainment, the Clean Air Act makes no distinction between readings resulting from factory emissions and those from dust storms. If it so chooses, the state may seek to exempt these dust storms as “exceptional events” under EPA policy so they do not count toward violations under the NAAQS, but the application process is cumbersome and expensive, and EPA must approve each application on a case by case basis. If the state were to determine that receiving exemptions for these dust storms would not

change the area's non-attainment status, it may very well decide that it would not be worth the time and money to apply for exemption under the exceptional events policy.

H.R. 1633 would exempt dust storms and other types of "nuisance dust" (naturally occurring coarse particulate matter generated from agricultural activities) from federal regulation, unless such material would cause substantial adverse health impacts and the benefits of such regulation exceeded the costs. The bill rightly recognizes the great disparity in the coarse PM ambient air quality levels from one part of the country to another and from rural to urban areas. Current application of the Clean Air Act provides for one NAAQS for coarse PM, even though the data indicates that a single standard may not be appropriate. For example, the coarse PM levels on my farm in Arizona are significantly higher than coarse PM levels in most places in the United States. By providing for state or local regulation of rural "nuisance dust" from farming areas, the bill allows management flexibility to deal with unique local circumstances. At the same time, the bill would not preclude EPA regulation where substantial adverse health impacts can be shown. Appropriately, the bill makes common sense amendments to the Clean Air Act to prevent federal regulation of natural occurrences and naturally occurring dust from normal farming operations unless there is substantial evidence of adverse health impacts.

In order to illustrate why this bill is so important for rural communities, it may be helpful to describe for the Committee the legal context for EPA's actions, the different types of regulated particulate matter and the considerable differences between them, and also highlight some of the scientific uncertainties that EPA staff has identified in trying to determine whether dust might cause adverse health impacts.

1. Particulate Matter as a Criteria Pollutant

Particulate matter is listed as a “criteria pollutant” under the Clean Air Act. As such, it is subject to the establishment of a NAAQS. Under the Clean Air Act, EPA reviews NAAQS for criteria pollutants every five years. The NAAQS for particulate matter was last revisited in 2006, so EPA is undertaking its normal five-year review. We applaud the recent decision of the administrator to propose that the current standard for coarse PM be retained with no change, a decision that will help to prevent many other rural areas around the country from falling into non-attainment status for dust. Her action, however, will do nothing to help those of us in Maricopa and Pinal Counties in Arizona, the San Joaquin Valley in California, and several other rural areas throughout the Southwest and Plains states that are subject to the vagaries of naturally occurring dust storms and are regulated as a result.

2. Different Types of Particulate Matter

“Particulate matter” is broken down for EPA regulatory purposes into two distinct types.

- PM2.5 (fine particulate matter) – consists of particles less than 2.5 micrometers in size. PM2.5 is primarily emitted from power plants, industrial sources and motor vehicles – all man-made sources of emissions. PM2.5 is found mainly in urban areas and mainly in Eastern parts of the United States. PM2.5 consists of sulfate and nitrates, and results from chemical reactions in the atmosphere. There is a considerable body of scientific data on the health impacts of PM2.5.
- PM10-2.5 (coarse particulate matter) – consists of particles between 2.5 and 10 micrometers. PM10-2.5 is primarily found in rural areas. Most of the PM10-2.5 in rural areas consists of crustal and organic materials which are naturally occurring. While it can be disturbed by driving on unpaved rural roads, working farm fields with tractors, or

moving livestock, it is also generated by naturally occurring conditions, such as blowing winds. Unlike the scientific evidence for PM_{2.5}, the EPA readily admits that there are considerable uncertainties in the scientific knowledge of possible health impacts of this material. It is regulation of this naturally-occurring coarse PM raised in the performance of common everyday activities in rural areas that H.R. 1633 seeks to address.

The distinctions are important. It is clear that the focus of EPA NAAQS for particulate matter is the regulation of PM_{2.5} in urban areas, where there is a well-developed body of scientific data on the health impacts of PM_{2.5}. By contrast, as indicated below, there are few relevant studies on the health effects of exposure to coarse PM. PM_{2.5} emissions are man-made and consist of sulfates, nitrates and other chemicals. Coarse PM is mostly naturally occurring in rural areas, and consists of dirt and organic matter. While PM_{2.5} is emitted into the ambient air, farm dust already exists and is raised into the ambient air.

3. The Scientific Data on the Possible Health Impacts of PM_{10-2.5} is “Uncertain” at Best

Unlike the scientific data regarding the health effects of PM_{2.5}, the science dealing with possible health impacts of coarse PM (PM_{10-2.5}) is far less developed. In its 2006 review, EPA “concluded that the standard should target protection toward urban areas, where the evidence of health effects from exposure to PM_{10-2.5} is strongest.” (*Policy Assessment for the Review of the Particulate Matter National Ambient Air Quality Standards*, April 2011, p. 3-4). The 2011 EPA Policy Assessment notes that there are “important uncertainties and limitations” with the health data. (Id, p. ES-2).

Some of these “important uncertainties and limitations” include “those associated with the air quality estimates used in PM_{10-2.5} epidemiologic studies; the extent to which PM_{10-2.5} air quality concentrations reflect exposures to PM_{10-2.5}; the extent to which PM_{10-2.5} itself is

responsible for health effects reported in epidemiologic studies; and the extent to which the chemical and/or biological composition of PM10-2.5 affects particle toxicity.” (p. ES-2)

The Policy Assessment also says: “The ISA (Integrated Science Assessment) concludes that an important uncertainty in the PM10-2.5 epidemiological literature is related to the air quality estimates used in these studies. Specifically, the ISA concludes that there is greater error in estimating ambient exposures to PM10-2.5 than to PM2.5 and that such uncertainty is a particularly relevant consideration when interpreting PM10-2.5 epidemiological studies. Contributing to this uncertainty is the relatively limited spatial coverage provided by the existing PM10-2.5 monitoring network.” (id., p 3-16)

The health evidence is in fact so weak that EPA could not even perform a quantitative risk assessment for coarse PM during this review cycle. As the agency explains:

“Our approach relies most heavily on the health evidence, primarily the epidemiological evidence, assessed in the ISA (US EPA, 2009a) and on available PM air quality information. As discussed in more detail in the *Quantitative Health Risk Assessment for Particulate Matter – Final* (RA, US EPA, 2010a), we have not conducted a quantitative assessment of health risks associated with PM10-2.5. Staff concluded that limitations in the monitoring network and in the health studies that rely on that monitoring network, which would be the basis for estimating PM10-2.5 health risks, would introduce significant uncertainty into a PM10-2.5 risk assessment such that the risk estimates generated would be of limited value in informing review of the standard. Therefore, staff concluded in the RA that a quantitative risk assessment for PM10-2.5 is not supportable at this time (US EPA, 2010a, p. 2-6).” (P. 3-6)

EPA also readily admits that it has little or no data on health impacts in rural areas. It states that “most PM10-2.5 epidemiological studies have been conducted in urban locations in the U.S., Canada, and Europe while a small number of studies have examined the health impacts of dust storm events.” (id., 3-14) The applicability of these studies is limited. EPA staff concludes, “Effect estimates for PM10-2.5 were larger in the eastern U.S. than the western U.S., though this difference was not statistically significant (Peng et al., 2008).” (id. P. 3-13)

Given these and other factors, EPA concludes, “Although new studies have become available since the last review and have expanded our understanding of the association between PM10-2.5 and adverse health effects (see above and U.S. EPA, 2009a, Chapter 6), important uncertainties remain.” (id, p. 3-15)

The EPA cannot even state with any certainty that coarse PM causes adverse human health impacts. The Policy Assessment describes the EPA scientific scale used to determine the confidence in the health effects data. The scale ranges from causal relationship (the most confident), likely to be a causal relationship, suggestive of a causal relationship, and inadequate to infer a causal relationship (least confident). For coarse PM, the EPA concludes, “that the existing evidence is suggestive of a causal relationship between short-term PM10-2.5 exposures and mortality, cardiovascular effects, and respiratory effects. In contrast, the ISA concludes that available evidence is *inadequate to infer a causal relationship* between long-term PM10-2.5 exposures and various health effects .” (id, p. 3-9).

Based on this analysis, EPA “staff concludes that it would be appropriate to consider either retaining or revising the current standard, depending on the relative weight placed on the evidence supporting associations with PM10-2.5 and the uncertainties and limitations in this evidence.” (id. p. ES-2). That is consistent with the conclusion in the draft Policy Statement that it is “reasonable to conclude that the available evidence does not provide a basis for reaching a fundamentally different conclusion from the one reached in the previous review.”

The EPA thus concludes its analysis of the very uncertain science on coarse PM by stating that the evidence warrants either retaining the current standard or revising it. Many rural areas in the middle and western parts of the country already have difficulty meeting the current NAAQS of 150 ug/m³. Revising the standard will likely result in many more rural areas failing

to meet the new standard, thus causing those areas to go into non-attainment and subjecting them to the significant costs that result from non-attainment status. Conversely, revising the standard will likely not affect urban areas either way.

Given the EPA conclusion, and the increase in non-attainment in rural areas that is likely to occur as a result of a revision of the NAAQS, it is common sense to retain the current standard and not revise it, as the administrator announced.

4. There are Economic Impacts Associated with being in Non-Attainment

The area where I farm near Phoenix has one of the highest coarse PM levels in the United States, a distinction that we share with the San Joaquin Valley in southern California. It is arid and windy, similar to many other rural areas in the West, Southwest and Plains. The area where I farm cannot even meet the current coarse PM standard, and we have been in serious non-attainment for several years.

Once an area is designated as non-attainment, the governing authority must develop a state implementation plan (SIP) whose purpose is to bring the area into compliance within five years. The SIP may include regulations and restrictions on activities designed to reduce ambient air levels to attainment levels. In the absence of a SIP, the EPA may develop a Federal Implementation Plan (FIP) to bring the area into attainment.

The recent announcement by Administrator Jackson that EPA will propose the retention of the current coarse PM standard does not mean that farm dust is not or will not be regulated under the Clean Air Act. For those of us in coarse PM non-attainment areas, our activities are already regulated and will continue to be regulated unless H.R. 1633 is passed.

The Phoenix metropolitan area has not been in compliance with the coarse PM NAAQS since the Clean Air Act was amended in 1990. Since 1996, it has been in serious non-attainment.

Recognizing the need to become part of the solution, Arizona Farm Bureau Federation became proactive in seeking ways to help bring the area into attainment. The state developed the Governor's Agricultural Best Management Practices Committee to develop a general coarse PM permit to include controls on agricultural practices. The committee developed best management practices (BMP) in three different categories, and farmers were required to adopt one BMP in each category. The state law implementing this program was recently amended to require two BMPs from each category. All farmers and ranchers in the non-attainment areas are regulated for farm dust under the Clean Air Act. Farmers and ranchers who choose and accept to perform BMPs are covered under a general air permit. Those farmers and ranchers who do not participate in the BMP program must obtain individual air permits similar to those required of utilities and factories.

BMPs include practices such as: tillage based on soil moisture, not working fields in windy conditions, modifying equipment to prevent PM generation, speed limits on unpaved roads, planting windbreaks and permanent cover crops, to name a few.

Within the past few years, we have seen this program go from requiring one BMP per category to two for participating producers. EPA and the state say that more is needed. EPA is currently pushing for mandatory restrictions against working in fields when the wind reaches a certain speed.

All of these activities have economic consequences attached to them and place restrictions on farming operations. We are unaware of any general economic studies on the impacts of such restrictions. However, I can tell you that if I am required to park my tractor on windy days or when soil moisture is insufficient it will cost me time and money in lost labor and productivity. If I or my employees are limited to driving 15 miles per hour on county roads, it

will greatly increase the time we must spend on these roads, taking time away from engaging in other more productive activities. Others with similar restrictions will suffer similar economic consequences.

But even these BMPs and any mandatory restrictions cannot guarantee that an area will be brought into attainment. EPA, the state, farmers and ranchers cannot control the winds, rainfall or naturally occurring dust storms. Any positive results that might be achieved could be swept away by another giant dust storm. The fact that farm dust is naturally occurring and not from man made emissions reduces the effectiveness of any regulatory program.

5. The Lack of PM10 Monitors in Rural Areas Will Not Necessarily Curtail Enforcement

EPA acknowledges that there are relatively few monitors in rural areas for coarse PM, a factor that contributes to the considerable scientific uncertainty regarding health effects. Some argue that this factor also means that a coarse PM NAAQS would not be enforced in rural areas where there are no monitors.

We have learned first-hand that this is not the case. Citizen groups often place monitors in strategic places (e.g., near feedlots) and take readings and report them to the air quality authority. Once placed, such monitors become difficult to remove. One such group placed a monitor near one of our local feedlots and took readings. The monitor is now one of the permanent monitors in the area.

6. Conclusion

H.R. 1633 provides a reasonable and common sense approach to control ambient air quality for coarse particulate matter in a way that recognizes the natural occurrence of farm dust while at the same time recognizing the public health mandate of the Clean Air Act. By excluding “nuisance dust” from regulation, the bill allows EPA to continue regulating man-made

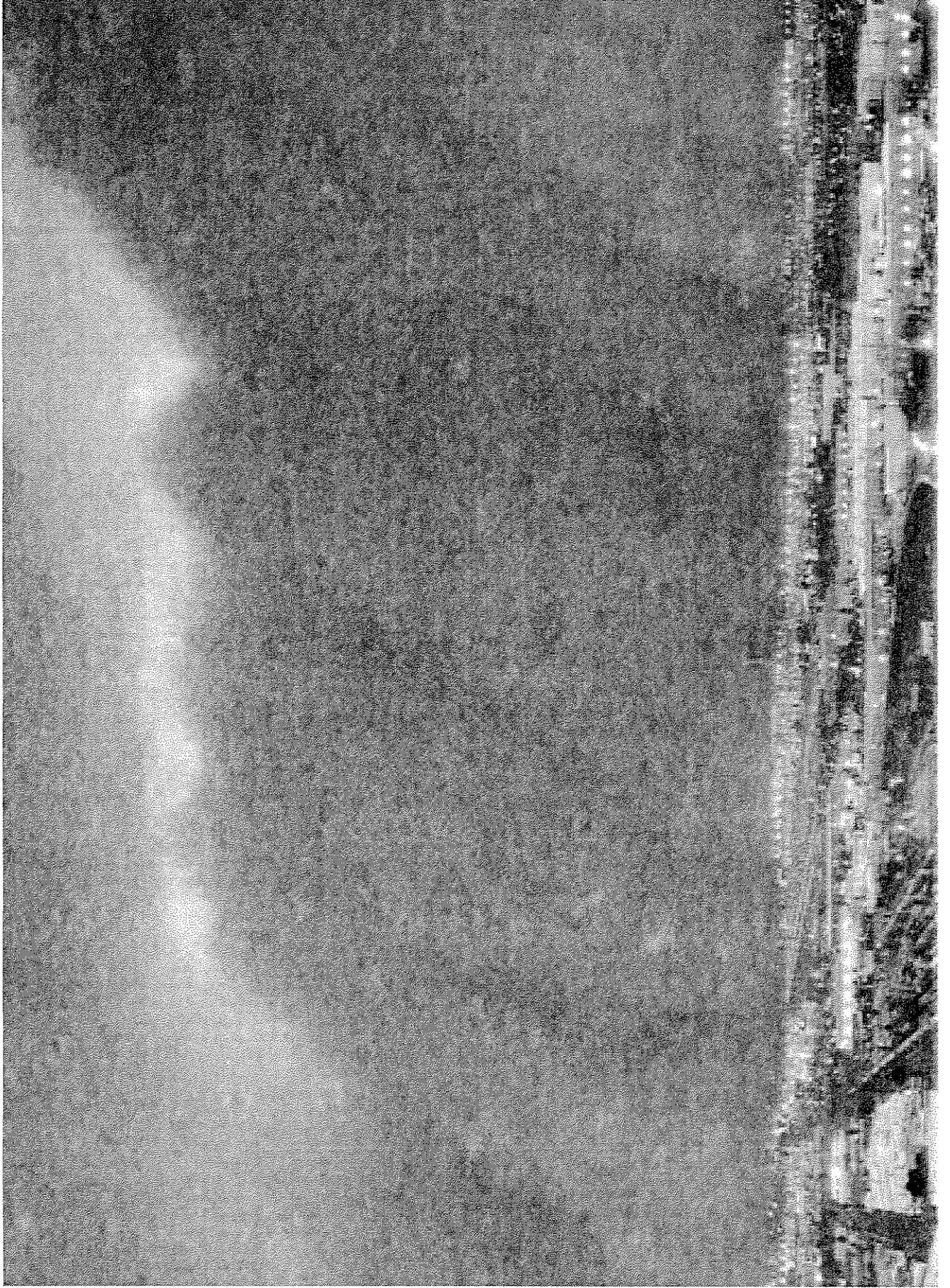
emissions of particulate matter, while at the same time not trying to regulate natural occurrences. The exclusion focuses EPA attention on things that EPA can control, instead of trying to regulate Arizona dust storms or arid conditions in rural areas.

The bill does not roll back any EPA protections afforded under the Clean Air Act. Rather, it reinforces the idea, consistently advanced by EPA, that regulatory decisions should be based on sound science. The record is clear that the scientific data relating possible health effects of coarse PM is “highly uncertain.” The bill provides the necessary flexibility for EPA to step in and regulate if the science becomes more conclusive that naturally occurring farm dust causes adverse health effects.

The fact that Administrator Jackson has determined to retain the current coarse PM standard for the next five years is good news, but it only addresses one aspect of the problem facing rural America. Passage of H.R. 1633, and its exclusion of “naturally occurring ‘nuisance’ farm dust” from regulation under the Clean Air Act unless the science more conclusively warrants it, addresses the other part of the issue.

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PHOENIX DUST STORM JULY 5 2011



LUBBOCK, TEXAS OCTOBER 17, 2011

