



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

September 13, 2007

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Brian Gustafson, President
Western States Air Resources Council
500 Union Street, Suite 640
Seattle, Washington 98101

Dear Mr. Gustafson:

Thank you for your letter of March 19, 2007, regarding the views of the Western States Air Resources (WESTAR) Council on the national ambient air quality standards (NAAQS) for particulate matter (PM).

In your letter, you raised several issues related to the regulation of coarse particles and the Environmental Protection Agency's (EPA's) plans for assessing the public health risks associated with coarse particles in rural settings during the next review of the PM NAAQS. I addressed these concerns in part during my comments at WESTAR's Spring Business Meeting in April 2007, and would now like to elaborate further on EPA's plans for coarse particle research and monitoring.

EPA is actively supporting numerous research activities focusing on the health effects of coarse particles. EPA's Office of Research and Development is engaged in conducting both human and animal experimental studies which examine the health effects associated with exposure to different PM size fractions and components. This work involves collaboration with the five EPA-funded PM Centers around the country investigating the effects of ambient particle pollution on human health. In particular, the Harvard PM Center's work includes a focus on the cardiovascular effects of concentrated ambient coarse particles, and the Southern California PM Center is investigating the size fractionated chemical speciation of PM and exposure gradients in the Los Angeles area. In addition, EPA will soon issue grant awards under its July 2006 Research Funding Announcement on *Composition and Health Effects of Coarse Particulate Matter*. These projects, along with a new initiative to investigate the "Chemical Characterization of Ambient Coarse Particulate Matter in Rural Areas of Arizona Impacted by Significant Population Growth" under EPA's Regional Applied Research Effort (RARE) Program in EPA Region 9, will provide important new information on composition and health effects of different mixtures of coarse particle.

EPA expects that some of the information gathered under these research initiatives will be available in time to inform the review of the PM NAAQS scheduled to be completed in 2011. Other projects may generate new evidence that can be incorporated into subsequent reviews.

EPA is confident that the body of available coarse particle research will continue to expand over the next several years, and the iterative nature of the NAAQS review process enables the Agency to continuously review the latest scientific information and to incorporate this information effectively into its NAAQS decisions.


EPA also agrees that additional monitoring efforts are essential to improve our understanding of the concentration and composition of ambient coarse particles in different locations. Your letter highlighted WESTAR's concerns regarding the limited size of the new NCore multipollutant monitoring network, the timeline for network implementation, and the uncertainties associated with incorporating coarse particle speciation into the network.

To clarify, I would note that the fully deployed NCore network will consist of approximately 75 stations located in a diverse set of locations, including both urban and rural settings. At least one NCore station will be located in each state, with more populated states having a minimum of two or three stations. EPA currently projects approximately 55 of these sites will be urban in nature and 20 will be in rural locations, although some of the urban stations are likely to be located in smaller metropolitan areas or in the suburban portion of major cities where the sites themselves are not directly impacted by heavy industry and/or other non-representative source mixes.

WESTAR is correct that the final deployed NCore network is not due to be fully implemented until July 1, 2011. However, approximately half of the candidate stations are currently sited and operating with a significant subset of the required parameters, particularly the trace-level gases, ozone, and filter-based fine particle measurements. We are in the earliest phases of designing the coarse particle speciation program and much work lies ahead to better define the sampling and analysis methodologies that will be required in the NCore framework. Once finalized, such coarse particle measurements (total mass as well as speciated components) will be required at all 75 NCore stations on a minimum frequency of 1-in-3 days. Thus, these measurements will provide data on a wide range of locations, including both larger and smaller communities, as well as rural areas and possibly remote locations such as National Parks. Although the initial availability of such speciated coarse particle data will likely be toward the end of the NCore network implementation phase, these data will be available to better inform future PM NAAQS reviews beginning after 2011.

Again, thank you for your letter. I hope that the information I have provided has been helpful in addressing the concerns of the WESTAR Council regarding EPA's planned research and monitoring efforts for coarse particles. If you have additional questions or comments, please feel free to contact me at (919) 541-5507.

Sincerely,



Lydia N. Wegman, Director
Health and Environmental Impacts Division