

I. EPA Failed to Follow the Recommendations of Its Outside Scientific Experts and Staff in Its Proposal to Revise the Fine Particle (PM_{2.5}) Standard

- a. EPA's recommended suite of PM_{2.5} standards – annual and daily – are outside the ranges recommended by the Clean Air Scientific Advisory Committee (CASAC) and its own staff.
 - i. EPA proposes to keep the annual standard at 15 micrograms per cubic meter ($\mu\text{/m}^3$) and lower the daily standard to 35 $\mu\text{/m}^3$.
 - ii. CASAC recommended lowering the annual standard to between 13 and 14 in conjunction with lowering the daily standard to between 30 and 35.
 - iii. EPA staff recommended two options:
 1. If the annual standard is kept at 15, the daily standard needs to be lowered to between 25 and 30.
 2. Alternatively, a daily standard of between 35 and 40 would be appropriate if the annual standard were lowered to between 12 and 13.
 - iv. EPA did not follow *any* of these recommended suite of options.
 1. EPA did not follow CASAC's recommendations. While EPA's recommended daily standard is within the CASAC recommendation for a daily standard, EPA's proposal to keep the annual standard at the current level is not.
 2. EPA's proposal does not follow the EPA staff recommendations.
 3. Note that annual and daily standard protect against different health effects – the annual against long-term effects, and the daily against short term. A lower daily standard does not protect against long term health effects still seen at existing annual standard (St. Louis and Detroit).
 - a. CASAC panel “did not endorse the option of keeping the annual standard at its present level. The annual standard should be lowered because “some cities have relatively high annual PM concentrations, but without much variation in concentrations from day to day. Such cities would only rarely exceed a 24-hour PM_{2.5} standard, even if set at levels below the current standard. This observation indicates the desirability of lowering the level of the annual PM_{2.5} standard as well.” 6/6/05 CASAC letter at 7.
 - b. Staff paper says more deaths avoided by lowering annual average (from Thurston; get cite).

- c. Work in thought from CASAC call on 2/3 – James Franco point that there are adverse health effects at current annual standard, and it is an obligation of EPA to provide an adequate margin of safety.

II. EPA’s Proposal to Create a NAAQS That Excludes Emissions from Certain Sources is Unprecedented, Does Not Comport with Science and is Unworkable in Practice

- a. EPA’s proposed indicator for coarse particles, $PM_{10-2.5}$, is qualified to exclude “any ambient mix of $PM_{10-2.5}$ that is dominated by rural windblown dust and soils and PM generated by agricultural and mining sources.” (p.2668) In addition, its proposed regulation expressly excludes agricultural and mining sources from controls in meeting this standard.
- b. Does not comport with science
 - i. This seems to imply that there is not an absence of evidence that these sources are harmful, but that there is evidence that emissions from these sources *do not have a health impact*. Can EPA really say that? How is that providing an adequate margin of safety?
 - 1. would be good to have examples of health impacts from ag and mining here.
 - ii. Also inconsistent with CASAC
 - 1. Some on CASAC recommended a coarse indicator (with no urban/rural distinction, presumably) but with “monitoring network design criteria and natural/exceptional events policies that would emphasize urban influences. . . In either case, CASAC indicated that the intent of any such indicator should be to ‘provide protection against those components of $PM_{10-2.5}$ that arise from anthropogenic activities occurring in or near urban and industrial areas.’” p.2667
 - a. What about mining and agriculture activities near urban areas? CASAC’s intent was not to exclude these.
 - b. CASAC recommendation also tied to monitoring in rural areas to elicit information about toxicity of particles in rural areas, but monitors not proposed by EPA (see below).
 - iii. EPA states that presence of metals in coarse PM in urban areas contributes to its toxicity. How does EPA know that coarse PM from mining activities does not contain metals? Seems to fly in the face of common sense.
 - iv. Diesel exhaust is very unhealthy, yet EPA’s proposal seems to exclude controlling diesel exhaust from mining and agricultural activities. (Diesel listed as a possible carcinogen?)
- c. Unprecedented
 - 1. NAAQS are supposed to be “national,” yet EPA is proposing to exclude from this NAAQS rural areas. EPA doesn’t say that, but the standard has that effect.

2. Rural areas are more likely to have windblown dust problems and agricultural and mining activities with emissions of concerns; these emissions are excluded by definition.
3. By not siting PMcoarse monitors in rural areas, rural areas are in effect being excluded from the standard. It also makes it hard to ever find out if there are PMcoarse problems in rural areas!
4. EPA has never before stated, in proposing a NAAQS, that certain sources should not be controlled in order to meet a NAAQS. Is this statement intended to keep states or localities from exercising their own discretion to regulate emissions from these sources if they feel differently – will these sources argue against this regulation because EPA has said there is no need or basis for controlling them? Is that really EPA’s intent – undermine state and local authority?

d. Unworkable

1. What activities are considered to be part of mining and agricultural and are therefore excluded?
 - a. Mobile sources, too? What about road traffic coming in and out of mines and tractors and other farm equipment on agricultural lands?
 - i. FN p. 2666 “Mining sources are intended to include all activities that encompass extraction and/or mechanical handling of natural geologic crustal materials.” Does this include the trucks and machines hauling this stuff out? If so, how is that different than urban traffic?
 - b. Or emissions from manure piles at CAFOs?
 - c. Burning of ethanol in mobile sources?
 - d. Emissions from irrigation pumps?
2. How exclude “ambient mix of PM_{10-2.5} that is dominated by rural windblown dust and soils and PM generated by agricultural and mining sources”
 - i. Not in PM NAAQS proposal; is it in monitoring proposal?
3. Numerous technical problems in addition to policy problems related to exclusions of particles from windblown dust, agriculture, and mining. Even if you could define these activities, how do you exclude particular particles from the filter measurement?
3. Science shows that wind-blown and other exempted particles cause health problems:

For example, wind-blown dust studies—ALL except one (that was relied on by EPA) point to health impacts. Note Spokane study stands alone

III. EPA's Proposal to Site PMcoarse Monitors Only in Urban Areas Contradicts CASAC's Recommendations, Avoids Collecting Important Data to Track Pollutant Levels and Ignores Reality that Sources of Pollutants of Concern Exist in Rural Areas

- a. Monitoring only required in MSAs with urbanized areas of 100,000 people or more. See pp.110→ in proposal. Siting criteria are a joke.
 - i. What about areas with fewer than 100,000 people but lots of industrial sources?
 - ii. How gather data on health effects of rural PMcoarse if no monitors there? CASAC recommendation. Per 2/6 call, this was key to CASAC's recommendation for an indicator focused on urban material – they were only OK with this idea as long as monitoring would be conducted in rural areas to gather data.—also monitoring budget proposed huge cuts
- b. What about rural areas affected by woodsmoke? (AK issue)
- c. What about sensitive people who live in rural areas? Elderly and those with heart or lung diseases?

IV. Monitoring Funding

- a. monitoring provisions must be reexamined in light of changed budget assumptions
 - 1. National Monitoring Strategy is the blueprint for the revised regulations. It assumes constant or slightly decreasing federal funds. Significant cuts for 2007 means that the underlying assumptions of the regulations have been changed
 - 2. Therefore, we need to reevaluate the provisions of the regs in light of the budget. Research-oriented programs that state and locals had accepted, such as NCore multipollutant sites and quality assurance requirements may need to be trimmed in light of the proposed budget.
- b. PM Coarse Network
 - 1. Cost-benefit of PM Coarse network is extremely questionable as is. In order to be effective, standard should be significantly tightened.
 - a. Virtually all of the eastern part of the country is in compliance with the 70 $\mu\text{g}/\text{m}^3$ already.
 - b. Because of the population cutoffs and exemptions for windblown dust, agriculture and mining, much of the western part of the country will not have monitors (regardless of what people are actually breathing)
 - c. Cost of network is \$20 million approximately, with \$15 million annual maintenance.
 - d. Even assuming that it can be redesigned as to enable meaningful measurements of PM Coarse nationwide, who will pay for it? Feds?

- V. Secondary Standard Should Be Added to Protect Small Towns** (cross-reference and summarize previous NAAQS arguments). Nonetheless, if population-based system is kept, a secondary standard should be added for welfare (and in order to require controls from all relevant sectors)
- i. Secondary standard must be added to protect small towns from agriculture, mining, other industry sectors (they themselves are too small to have sources to control but need secondary standard for outside-town sources). Soot, dust, and ecosystem effects should be addressed by a nationwide secondary standard.
 - ii. *American Trucking* case relates to primary standard duplication, but not secondary.