

**Clean Air Task Force
Clean Water Action
Clear The Air
Environmental Integrity Project
National Environmental Trust
National Wildlife Federation
Natural Resources Defense Council
Ohio Environmental Council
Southern Alliance for Clean Energy
Southern Environmental Law Center
U.S. Public Interest Research Group**

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VIA e-mail, Hand Delivery, and U.S. Mail

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RE: Docket ID No. OAR-2002-0056, “Proposed Emission Standards for Hazardous Air Pollutants; and in the Alternative, Proposed Standards of Performance for New and Existing Sources: Electric Utility Steam generating Units;” Proposed Rule, 69 Fed. Reg. 4652 (January 30, 2004) and Supplemental Notice, 69 Fed. Reg. 12,398 (March 16, 2004)

Dear Administrator Leavitt,

The eleven undersigned environmental and public health organizations appreciate the opportunity to submit these comments on your proposal to regulate the hazardous air pollutants (HAPs) emitted by the coal- and oil-fired power industry – which currently is the largest unregulated industrial air emitter of mercury in the country. However, we

write to express our extreme disappointment in and opposition to your Agency's proposal, which is fundamentally flawed both legally and technically, for the reasons we set out below, and which are more fully explored in comprehensive comments and attachments submitted with this letter.

EPA has utterly failed to promulgate a Maximum Achievable Control Technology (MACT) standard for the coal- and oil-fired electric power industry that meets the legal requirements of the Clean Air Act (CAA or the Act). Instead, the agency puts forward a pollution program that does too little and takes far too long to do it, relying on statistical and legal obfuscation that is without precedent in the history of EPA's implementation of the CAA. As these comments demonstrate, EPA must require a MACT emissions rate applicable to all facilities in this listed industry – an emissions rate based on the best performing units in the industry, as required by law. A MACT standard that meets the Act's mandates would result in significant – over 90 percent – reductions in the HAPs (particularly mercury) emitted by this industry, and would accomplish the reduction in three years at most.

Based on the data in the record, we calculate that the Act actually requires an existing source MACT floor for mercury emitted by coal-fired units of 0.42lb/TBtu, representing a 92 percent cut from present levels. For the metal HAPs emitted by coal-fired units, we calculate that the existing source MACT floor should be set at levels reflecting 99 percent removal rates. For new sources, we calculate floor rates of 1.0×10^{-6} lb/MWh for mercury, and greater than 99 percent removal for the non-mercury metal HAPs. In addition, we assert that EPA is well aware that there are multiple technologies and techniques that are currently available or available in the very near term, and cost-effective, that can and must serve as the basis for "beyond-the-floor" MACT emissions rates. Although EPA did not include a cost-effectiveness analysis either comparing various MACT floors or in assessing beyond the floor options, we have included such analysis in Chapter V of the attached comments, and find that far more stringent emission limits are cost-effective.

Our comments address, in Chapter I, the public health and environmental costs of mercury and the other HAPs emitted by the utility industry. In Chapter II, we explain why EPA's proposed MACT standard is fundamentally flawed, and put forward an analysis of what a legally appropriate MACT standard would accomplish. In Chapters III and IV we assert that regulating mercury or other HAPs emitted by utility units under section 111 of the Act is contrary to law, and that EPA's cap and trade proposals also are *ultra vires*. Chapter V includes our comparison of the cost-effectiveness of a more stringent set of emission rates to EPA's proposal.

EPA is required by the Act to finalize a MACT emissions standard for the electric power industry.¹ While one of the alternatives EPA proposes is described as a MACT

¹ EPA listed coal- and oil-fired electric utility steam generating units under section 112(c) of the Act on December 20, 2000, Regulatory Finding on the Emissions of Hazardous Air Pollutants from Electric Utility Steam Generating Units, 65 Fed. Reg. 79,825, 79,831 (Dec. 20, 2000) ("Regulatory Finding"). Listing triggers the requirement to promulgate a MACT standard for the industry.

standard, the legal and technical reasons put forward by the Agency to support the emissions rates it would require if finalized as proposed are fundamentally flawed.

First, the Agency's proposal to subcategorize coal-fired power plants by coal rank burned is arbitrary and capricious because it is internally inconsistent and unsupported by the facts. For example, EPA on the one hand concedes that over 20 percent of all units burn a blend of coals, but at the same time (incorrectly) asserts that coal-rank based subcategories are necessary because power plant design differs in fundamental ways based on the kind of coal burned.

Second, the Act requires that a MACT standard for existing sources must be expressed as an emissions rate that is at least as stringent as the average emission limitation achieved in practice by the top 12 percent of the best performing sources. EPA's proposed floor emission rates for existing sources do not come close to meeting this requirement, however. Scrutiny of EPA's floor setting exercise reveals that there is no rational connection between the facts available to the Agency and the regulatory choices the Agency has proposed. For example, EPA proposes an emission rate for units burning bituminous coal that is 17 times higher than the arithmetic mean of the observed emissions at the units EPA considers the best performers, and the emission rate for units burning subbituminous coal is eight times higher than the mean of the best performers in that subcategory. Furthermore, EPA's proposed MACT floor for new sources does not reflect the Act's requirement that the new source standard shall not be less stringent than the emissions control level achieved in practice by the best-controlled similar source.

EPA achieves its regulatory sleight-of-hand by using an industry-provided method to calculate the MACT floors that wildly and illegally overcompensates for variations in individual sources' performance over time.² EPA does this in a thinly veiled attempt to produce MACT floors that achieve results mirroring the emission caps in the Administration's Clear Skies Initiative, rather than following the requirements of the Act. EPA also adjusts the resulting standard to an output-based standard using efficiencies that do not reflect the best performers in the industry – again, this is contrary to law.

EPA also neglects to propose, or even consider in this proposal, MACT emission standards for HAPs other than mercury emitted by coal-fired Utility Units and nickel from oil-fired Utility Units. This is contrary to the requirements of the Act.

Analysis of the emissions test data, performed by CATF and its consultants, tells us that a MACT floor developed in accordance with the requirements of the Act would result in greater than 90% reduction in current national power plant mercury emissions alone. This translates to total mercury air emissions from this industry, beginning in March of 2005, of slightly more than 4 tons per year – as compared with the current

² West Associates. Multivariable method to estimate the mercury emissions of the best-performing coal-fired utility units under the most adverse circumstances which can reasonably be expected to recur. Prepared by ENSR Corporation, March 4, 2003.

annual total of 48 tons. Each facility must meet an emissions rate requirement based on this overall level of stringency – and each facility can do so.

A MACT standard is generally expressed as an emissions rate based on the best performance of all available technologies and techniques, but is not a requirement for a certain technology. Moreover, the Act's MACT provisions are technology-forcing – meant to drive and provide incentives for new, more stringent levels of control to the market. Power plants today are achieving significant mercury reductions simply by controlling other pollutant emissions, and also by employing various alternative control technologies that are now in various stages of development, ranging from commercially available to bench-scale testing. Furthermore, precombustion practices are available now and in the near term that would yield additional reductions in mercury emissions. Both the actual performance of these controls and precombustion practices support a significantly more stringent MACT limit than EPA has proposed.

EPA asserts that much more research and development is required before the agency can demand anything more than a minimal mercury reduction. In fact, many of these techniques are currently available – and state permits for new coal-fired units reflect that fact, going well beyond what EPA has proposed in this rule. Conventional NO_x and SO₂ controls on existing boilers already capture on average about 36% of the mercury – with some configurations capturing well in excess of this amount. In addition, EPA's own analysis of conventional controls shows that adding these controls to existing boilers to reduce fine particulate matter will capture an additional 29% of the mercury they emit. For boilers that already have controls, optimizing the performance of these devices for mercury removal (e.g., by adding a bag to an existing fabric filter) has the potential to significantly increase mercury capture by these controls. And yet, in the proposed rule, EPA does not acknowledge the immediate availability of some of these options. EPA also dismisses pre-combustion practices out-of-hand, despite the fact that the Act mandates their consideration, despite the fact that practices such as choosing cleaner coals and coal-cleaning, among other precombustion techniques are available now, and despite the fact that the record demonstrates that a new technique specific to subbituminous coal will be commercially in 2005.

EPA also erroneously states, as part of the basis for its proposed MACT standard, that mercury-specific control technologies (in particular activated carbon injection, or ACI) will not be adequately demonstrated until after 2010 and will not be able to be applied to all facilities until 2018. EPA's position on the availability of mercury controls is at odds with what five pollution control equipment vendors reported in response to a request for information by Senator Jeffords:³

- Two companies are confident their technologies can reduce mercury emissions from power plants by at least 80-90% from all types of coal combustion.

³ The Real Status of Mercury Control Technology- December 3, 2003. Statement of James M. Jeffords, Ranking Member, Senate Environment and Public Works Committee.

- One of these two technologies can achieve even greater than 90% capture of mercury from the harder-to-control western sub-bituminous and lignite coals.
- Three out of the five companies responding indicate that their technologies are currently available commercially.
- The remaining two plan to enter the market in 2004 and 2005.

Moreover, stringent mercury controls are affordable. EPA's own analysis includes detailed cost estimates for activated carbon injection (ACI).⁴ However, not all plants will need to use ACI, because of advances in other types of technology. It is important to emphasize that EPA expects the cost of ACI will decrease by at least 40% with the development of lower cost sorbents. Appendix A summarizes the most recent estimates of mercury control costs. For comparison, NO_x and SO₂ control costs also are shown.

EPA's estimated national cost to reduce mercury emissions by 14 tons (about 30%) to 34 tons is \$2 billion annually (\$945 million in compliance costs and \$1.2 billion in social costs such as increased costs of electricity).⁵ We note that a \$2 billion annual cost represents just 0.8 percent of annual power generation revenues. EPA also estimates that reducing mercury emissions to 34 tons will result in annual benefits amounting to \$15 billion. However, EPA did not quantify the multiple health and welfare benefits associated with reducing mercury emissions; instead, only the health benefits resulting from reducing PM_{2.5} were quantified. Consequently, the additional benefits of reducing mercury would be higher than \$15 billion. The proposal in fact states that EPA believes the benefits of reducing mercury emissions "are large enough to justify substantial investment in [mercury] emission reductions."⁶ And yet EPA does not propose a standard that requires such investment by the industry.

Moreover, in a recent report, the Congressional Research Service notes that the disparity between costs and benefits (i.e., the few benefits EPA chooses to quantify are 16 times higher than the compliance costs and 9 times higher than the social costs) raises the question of why the regulations are not more stringent or required to be implemented more quickly.⁷

In addition, EPA's proposed cap and trade alternatives violate the Act. We strongly oppose EPA's alternative cap and trade programs and the extended deadlines EPA proposes for compliance with these programs. Mercury is a HAP listed by Congress in section 112(b) of the Act. As such it must be regulated under section 112 of the Act – via a MACT standard. EPA's proposal to instead promulgate section 111 New

⁴U.S. EPA, 2003. Performance and cost of mercury and multipollutant emission control technology applications on electric utility boilers. Prepared for Office of Research and Development. EPA-600/R-03-110. October.

⁵ 69 Fed. Reg. 4652 (January 30, 2004).

⁶ *Id.* at 4711.

⁷ Congressional Research Service Report for Congress. Mercury Emissions to the Air: Regulatory and Legislative Proposals. Updated February 10, 2004.

Source Performance Standards for mercury emissions from the coal-fired utility industry runs directly contrary to the Act's requirements. Furthermore, federal cap and trade alternatives are not permitted under either section 111 or section 112 of the Act.

EPA's cap and trade alternatives are contrary to law for other reasons as well. In particular, in order to facilitate its proposed trading alternatives even EPA recognizes it must first remove coal-fired power plants from the list of source categories for which MACT standards are mandated. However, in its proposal, EPA has not even attempted to satisfy the criteria in section 112(c)(9) for de-listing a source category. Nor could the Agency do so, as the coal-fired power industry includes many sources that emit mercury (and other HAPs) in amounts that yield "adverse environmental effect[s]" and "exceed a level which is adequate to protect public health with an ample margin of safety." 42 U.S.C. § 7412(c)(9)(B)(ii). Indeed, as EPA concluded in December, 2000, "the available information indicates that mercury emissions from electric utility steam generating units comprise a substantial portion of the environmental loadings and are a threat to public health and the environment."⁸

Furthermore, neither trading alternative will avoid the creation of toxic hot spots – geographic areas that will experience even more mercury contamination than at present, because under the proposals, local sources would be permitted to trade away the requirement to reduce their emissions levels.

In addition, the tonnage caps are transparently based on the legislative targets in the Administration's Clear Skies approach to power plant regulation, and do not go nearly far enough or fast enough – either to adequately protect public health, or to satisfy the requirements set out by Congress to govern the regulation of HAPs. While the Agency asserts that a 34-ton target in 2010 is based on what can and must be achieved to control other conventional pollutants, the Act requires far more than this level of effort for the control of a HAP.

In summary, EPA has completely disregarded the requirements of the Act in developing the proposed rule. The facts demonstrate that stringent emission limits that will achieve significant mercury emission reductions – and reductions of other metal HAPs – in the near term are not only required by law, they are available and affordable. Coal-fired power plants are the largest unregulated source of mercury air emissions in the United States. They are a significant part of this country's problem of mercury-contaminated fish, which is recognized by over 40 states and one territory that have issued fish consumption advisories. This industry must be regulated as the law requires.

We call on EPA to finalize a MACT standard, including floors that represent real best performance, and that are applicable at each facility and result in significant reductions in mercury and other HAPs emitted by the coal- and oil-fired power plant industry.

⁸ Regulatory Finding, 65 Fed. Reg. at 79,827.

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