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EPA Docket Center (Air Docket)
U.S. EPA West (6102T), Room B-108
1200 Pennsylvania Ave., NW
Washington, DC 20460
(Attention Docket ID No. OAR-2002-0056)

Subject: Wisconsin Department of Natural Resources Comments - Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units; Proposed Rule (January 30, 2004, 69 Federal Register 4652)

Dear EPA Air Docket

On January 30, 2004, the Environmental Protection Agency (EPA) proposed air emission standards to reduce mercury from coal fired electric utility units. EPA listed three possible alternatives under the Clean Air Act (CAA) for regulating mercury including section 112(d) Maximum Achievable Control Technology (MACT), section 112(n) with a cap-and-trading program, and section 111, New Source Performance Standards (NSPS).

The Wisconsin Department of Natural Resources (DNR) strongly supports the development of federal regulations to reduce mercury emissions from electric utility units. However, the DNR does not agree with EPA's proposed mercury reduction strategy and believes that none of the three alternatives is adequate to reduce mercury to levels that are achievable and protective of public health and the environment. In addition to testimony provided at the Chicago public hearing on February 25, 2004, the DNR is submitting the following comments on specific concerns with EPA's proposed mercury regulation. In general, they relate to emission reductions, control technology, section 112 determination, MACT floor, trading and banking, section 111 administration, and multi-pollutant control.

Emission Reductions

The percentage of mercury emission reductions proposed under both sections 112 and 111 are much too low compared to what the DNR believes is technically achievable and cost effective.

Under the section 112 alternative, EPA is proposing an emission rate of 5.8 lbs/tbtu for existing units that burn sub-bituminous coal. In Wisconsin, electric utilities predominately burn sub-bituminous coal with a weighted average mercury content of 5.8 lbs/tbtu. This means that only one utility plant in the state would be required to reduce emissions based on the proposed emission rate. This one plant, which is the largest utility unit in Wisconsin and has the highest emission rate (9.4 lbs/tbtu), would only have to reduce its mercury emissions by 40 percent.

For electric utility units in other parts of the country that burn bituminous coal, the proposed section 112 emission rate of 8.5 lbs/tbtu would only require a 77 percent reduction in mercury

from a U.S. fuel average. This is below the average 90 percent control that has been demonstrated by fabric filter technology.

Under the section 111 alternative, all utilities in the country as an aggregate would only have to achieve a very modest 70 percent reduction of mercury emissions by the final cap date of 2018. If banking and trading are allowed, the final reduction for 2018 may only be 54 percent.

Electric utility plants firing sub-bituminous coal should be capable of achieving somewhere between 50 to 83 percent mercury removal from fuel input based on a fabric filter alone. For bituminous coal, the control efficiency with a fabric filter is as high as 92 percent. The percentage removal for sub-bituminous coal could be as high as 90 percent with the addition of activated carbon injection. In fact, the DNR has recently permitted one coal-fired electric utility plant and proposed another utility plant with more stringent mercury limits than those proposed by EPA. One coal-fired plant was permitted at 90% mercury removal for bituminous coal (1.12 lbs/tbtu emission rate limit) using a fabric filter and wet flue gas desulfurization. Another plant was permitted at 83% mercury removal for sub-bituminous coal (1.70 lbs/btu emission rate limit) using a fabric filter (dry desulfurization system) with sorbent injection. The mercury control equipment for these two facilities is applicable to existing as well as new coal-fired units.

Based on currently available control technology, the DNR believes that existing electric utility plants should be able to meet a minimum 80 percent mercury efficiency for sub-bituminous coal and a minimum 90 percent efficiency for bituminous coal. Taking into account electric reliability and economic considerations, existing utility plants should be able to meet these reduction levels by the year 2015.

Control Technology

The proposed rules under both the MACT and the NSPS alternatives would unacceptably delay the installation of dedicated mercury control equipment on utility coal fired boilers. Under the proposed MACT alternative, few if any of the utility plants in Wisconsin affected by the rule would have to install dedicated mercury control equipment. Under the NSPS alternative, utility plants would only have to install dedicated mercury control equipment by 2018.

The DNR strongly disagrees with EPA's position regarding the availability of control technology for reducing mercury emissions. The DNR believes that fabric filter technology exists today that can reduce mercury emissions by an average of 72 percent average (range of 50 to 83 percent) for sub-bituminous coal, and up to 92 percent for bituminous coal. Activated carbon injection technology also represents a very cost effective dedicated control for mercury and is considered to be in the early stages of full-scale commercialization. Combining ACI and a fabric filter essentially eliminates problems with carbon contamination of flyash and would allow for the beneficial reuse of ash in concrete and other products.

Also, neither of the MACT or NSPS alternatives provides the necessary federal government action to help move the development of dedicated mercury control technology. Continued advances in pollution control technology are often dependent upon the promulgation of strong regulations. As currently proposed with minimal reduction requirements, EPA's MACT and NSPS alternatives would not provide a clear incentive for advancing the science of mercury removal technology in conjunction with the control of other pollutants (SO_x, NO_x, and PM). As an example, the U.S. DOE (Department of Energy) technology program is expected to have cost effective mercury control available by 2010. EPA's utility mercury rule should be at least consistent with that timing.

Section 112 Determination

As an alternative, EPA is proposing to revise its December 2000 regulatory finding and remove coal-fired electric utility plants from the section 112(c) list, and instead regulate mercury emissions from utility plants under section 111 (NSPS) of the CAA. The DNR does not agree with removing coal-fired utility plants from the section 112(c) list and strongly believes that the CAA language is very clear in that EPA must regulate utility mercury emissions as a MACT standard under section 112 of the CAA.

If EPA does not regulate mercury as a MACT standard, the agency will be ignoring statutory obligations under section 112 of the CAA. These obligations include examining other hazardous air pollutants including but not limited to arsenic, chromium, cadmium, dioxins, and hydrogen chloride. Also, section 112 requires EPA to evaluate and address the residual risks that remain eight years after a MACT is issued. Not regulating mercury emissions from coal-fired utilities under section 112 also exposes EPA to legal challenges that would most likely delay the promulgation and implementation of federal rules. This delay would allow utility plants to continue emitting mercury at current unacceptable levels. The DNR believes that it has already taken too long for EPA to develop federal regulations to reduce mercury emissions from coal-fired electric utility plants. EPA should not risk further delay in achieving mercury reductions by selecting a regulatory strategy that invites legal challenge.

Assuming EPA promulgates a MACT standard by 2004, utility plants would then be required to meet the emission rate of the best performing twelve percent of utility plants by 2007 with an opportunity for a one year extension until 2008. EPA believes 90% reductions cannot be achieved within the section 112 time frame. The DNR recognizes that a 2008 deadline may not provide a sufficient amount of time for some utility plants to install the necessary control equipment and make other needed adjustments in order to be in compliance with a stringent MACT regulation. However, section 112 also allows for Presidential Exemptions for up to two years per period with extensions of an infinite number of periods. Therefore, the DNR believes that section 112 provides a sufficient time frame for utility plants to meet a more stringent MACT standard than currently proposed by EPA.

MACT Floor

In establishing the MACT floor for electric utilities, EPA attempted to account for the variability of mercury content in coal by applying a complicated set of uncertainty and variability factors to the average emission rates in the EPA ICR (Information Collection Request) database. In essence, applying these extra factors established a worst-case scenario for mercury in coal and the plant operating conditions, and substantially increased the emission rates that would be used to establish the MACT floor for bituminous and sub-bituminous fired units. For bituminous-fired units the average emission rate based on ICR data is 0.118 lbs/tbtu. Adding the uncertainty and variability factors increased the emission rate to 2.0 lbs/tbtu. For sub-bituminous-fired units, the average ICR emission rate of 0.738 lbs/tBtu was adjusted to 5.8 lbs/tbtu. For sub-bituminous units in Wisconsin and most likely other states upwind of Wisconsin, an emission limit of 5.8 lbs/tbtu would mean little or no reduction in mercury emissions and most likely little or no reduction in mercury deposition.

The DNR strongly disagrees with the uncertainty and variability factors EPA used to adjust average ICR tested emission rates for establishing the MACT floor and believes that variability of mercury in coal is already inherent in the average emission rates derived from ICR testing at coal fired utility plants. The DNR also believes that the intent of the MACT program under the Clean Air Act is for EPA to use average emissions based on available data to establish the existing top performing twelve percent of units. Therefore, the MACT floor should be established using the 0.118 lbs/tbtu for bituminous units and 0.738 lbs/tbtu for sub-bituminous units. This would allow for a more stringent MACT with regard to mercury emission reductions at both bituminous and sub-bituminous-fired electric units. To check for reasonableness, EPA could apply the average emission rates of the existing twelve percent best performing units to the ICR fuel test data for each utility unit in the U.S.

In discussing the MACT floor, EPA states that sorbent injection is not commercially available at this time. However, the DNR believes that activated carbon as one type of sorbent injection technology will be commercially available within the very near future. This near-future time frame should fit within the MACT compliance schedule with the inclusion of presidential exemptions. Therefore, sorbent injection technology should be used to establish a beyond the floor MACT.

Trading / Banking

EPA is proposing a trading and banking program under both sections 111 and 112 of the Clean Air Act. In reference to section 112, the Department believes that the purpose of a MACT regulation is to bring all sources up to a comparable control level that is demonstrated by the existing twelve percent best performing sources. Trading under section 112 would then be in direct contrast to this purpose as it would allow some sources to trade for emission credits rather than directly controlling their own emissions. All existing utility units should be required to meet reasonable control standards. Trading under s. 112 also raises questions about the legality of such a program under the Clean Air Act with possible challenges causing delays in MACT promulgation and implementation. Therefore the DNR believes that trading should not be included in regulations developed under section 112 of the CAA.

In reference to section 111, the DNR believes that a trading program for mercury on a national scale that is coupled with very lenient emission rates would allow a significant number of sources upwind of the state to avoid mercury emission reductions that could otherwise be achieved. Unlike more traditional pollutants, mercury can be transported great distances in the atmosphere and tends to build up or bio-accumulate in the environment. The Wisconsin DNR believes that a significant proportion of the mercury that is deposited to the state is from sources located outside the state. Trading of emission credits among a significant number of utility plants located upwind from a particular state may result in that state continuing to receive high mercury deposition with no benefit from federal regulations. Also, the DNR believes that the purpose of a trading program is to provide flexibility to a few unique sources that could not otherwise meet emission standards without experiencing undue economic hardship. For all of these reasons, the DNR opposes a trading program for mercury designed on a national scale. The DNR suggests that if mercury trading is allowed under either section 111 or 112 of the CAA, it be limited to a regional or contiguous state basis. In other words, electric utility plants should only be allowed to trade with utility plants that are either located within their respective state or located in an adjacent state.

EPA is also proposing to allow electric utility units to bank early emission credits with no restrictions to be used in meeting reduction requirements under section 111. However, if banking and trading are allowed, EPA's proposed 15-ton final mercury cap in 2018 would increase to 22 tons or only a 54 percent reduction in mercury emissions. The DNR believes that banking of emission credits should be restricted and that at a minimum, credits should expire by a final compliance date.

Section 111 Administration

As an alternative, EPA is proposing to regulate mercury from coal-fired electric utility plants under section 111 (New Source Performance Standards) of the CAA. The DNR does not believe this approach is appropriate for reasons relating to legal concerns, environmental effects, and stakeholder process.

First, the DNR and others believe that Congress intended for mercury and other toxic air pollutants to be regulated under section 112 of the CAA, not section 111. Deciding to regulate mercury under section 111 may subject EPA to a legal challenge over that decision. Such action may ultimately delay the implementation of mercury reductions at coal-fired utility plants.

Second, EPA states that once implemented, the proposed emission limits under section 111 would adequately address any environmental effects associated with mercury emissions from utility units. The

DNR does not agree with EPA's assertion of section 111 adequately addressing environmental effects from utility emissions since the EPA goes on to discuss that it is unable to quantify the contribution of utility plant emission to the health effects of surrounding populations. Specifically, EPA believes that it is currently not possible to determine how much of the mercury in fish is contributed by coal-fired electric utility plants. EPA appears to be making a contradiction in its discussion of environmental benefits under section 111 since the benefits themselves cannot be quantified.

Third, the DNR strongly disagrees with the process EPA used to develop a proposal to regulate mercury from utility plants under section 111 of the CAA as an alternative to regulating mercury under section 112. In this context, EPA totally ignored the FACA (Federal Advisory Committee Act) stakeholder process and the committee's recommendations used to develop the MACT, and is proposing an alternative under section 111 that was never mentioned or discussed beforehand with states or other stakeholders. EPA's proposal of the section 111 alternative is an example of the agency's complete disregard of a working partnership between itself, states, and other stakeholders to address mercury emission from utility plants.

Multi-pollutant Control

Under the section 111 alternative, utility plants would not have to install dedicated mercury controls until 2018 in order to meet the mercury emissions cap of 15 tons annually. The reductions achieved to meet the 34-ton interim emission cap for the year 2010 are the result of the co-benefits of utilities meeting emission limits for other pollutants such as SO_x, NO_x, and PM. While the Wisconsin DNR strongly supports regulations that incorporate a multi-pollutant approach with the associated control cost savings, the DNR believes there is a significant economy in developing and installing mercury control equipment to work integrally with other pollution control equipment. Without more significant mercury reductions required for the interim cap beyond those that would be obtained under a co-benefit approach, an opportunity may be lost for a higher level of mercury control on a more cost-effective basis. The DNR strongly urges EPA to include dedicated mercury control equipment and more stringent mercury control limits in its proposed rule.

Mercury continues to be a great concern to Wisconsin because of the health risk to our residents who consume fish and the potential economic consequences caused by fish consumption advisories that threaten Wisconsin's strong tradition of recreation and tourism activities. Federal regulations to control emissions of mercury from electric utilities are necessary because mercury is a persistent bioaccumulative toxic substance that can be transported and deposited at great distances. The Wisconsin Department of Natural Resources strongly urges U.S. EPA to address all of the concerns stated above and promulgate a regulation under section 112 of the CAA that achieves more mercury emission reductions sooner from the electric utility sector. With that said, the DNR is very willing to assist and work cooperatively with EPA and other stakeholders to develop federal mercury regulations that are reasonable, technically feasible, and protective of public health and the environment.

Thank you for the opportunity to provide comments on EPA's proposal to control hazardous air pollutants from electric utility units. If you have any questions regarding the comments contained in this document, please contact either Marty Burkholder at 608-264-8855 or Jon Heinrich at 608-267-7547.

Sincerely,

Al Shea, Administrator
Division of Air and Waste