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EQB MERCURY COMMENTS

On behalf of the Pennsylvania Chamber of Business and Industry we appreciate the opportunity to comment on the proposal by the Department of Environmental Protection to establish a state specific program to reduce mercury emissions from coal fired power plants. The Chamber is the largest broad-based advocacy association in Pennsylvania and our thousands of members represent more than 50% of the Commonwealth's private workforce. Our membership includes energy production companies, mining companies, and industrial and commercial consumers of energy.

The Chamber strongly supports the federal Clean Air Interstate Rule (CAIR) and the federal Clean Air Mercury Rule (CAMR) both of which are a comprehensive national approach to reduce mercury emissions from power plants. However, we have significant concerns with the state specific plan proposed by DEP. We believe the Department has put forward a proposal that ignores a significant body of evidence regarding health studies on the impact of mercury, overlooks the significant reductions that will come with the existing federal program, threatens the reliability of Pennsylvania's electric grid, threatens jobs in the mining, energy generation, and manufacturing sectors, and is likely to result in higher costs for all Pennsylvania consumers. Most importantly, this will result in little if any benefit to human health and the environment.

We are also concerned with some proponents of a state specific rule who have attempted to present this as a choice between the DEP rule and the 'status quo', that is, no mercury reductions. In fact, this debate is about finding the most efficient way of protecting the public health and continuing the significant reduction in mercury emissions that have occurred in recent years.

In these comments, we will provide additional information on each of these concerns.

Background

Mercury is a naturally occurring element that is released into the environment as a result of both natural and human activities. Natural emissions (volcanoes, geysers, fissures in earth's surface) account for about 50% of total worldwide mercury emissions. Utilities that burn coal to generate electricity emit mercury into the atmosphere when trace elements of mercury in that coal are emitted during the combustion process. The amount emitted through this operation is about 40% of US manmade emissions and just 1% of total worldwide mercury emissions.

These mercury emissions can travel thousands of miles. One estimate is that up to 70% of the mercury deposited in the US comes from foreign sources.

When mercury is deposited into waterways it can be converted into methylmercury and enter the aquatic food chain where it bioaccumulates in fish tissue. Humans can then ingest this methylmercury when they eat fish. Numerous studies have been done on the

health effects from ingesting methylmercury in fish. The largest concern expressed about this exposure has been with children and women of childbearing age as young children can suffer neurological impairments at relatively low levels of exposure.

In 2005, the United States Environmental Protection Agency issued the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR.) CAIR is designed to significantly reduce sulfur dioxide and nitrogen oxide emissions from coal fired power plants and achieve a 'co-benefit' in mercury emissions from these facilities. Utilities will be capped at 38 tons per year by 2010. CAMR will require the installation of mercury specific control technologies to reach the 2018 cap of 15 tons. Utilities are permitted to utilize emissions trading to reach these goals. EPA has estimated the nationwide health benefits of the rule at \$200,000 to \$3,000,000 annually. Conversely, annual costs to the power industry to implement CAMR will rise to \$750 million in 2020 (1999 dollars.)

With this action, the US became the first country in the world to regulate mercury emissions from power plants and will result in a 70% percent reduction when CAMR is fully implemented. Pennsylvania has the most stringent requirements of any state as it will be held to an 86% reduction standard under the cap and trade program.

Chamber Involvement

The Chamber was an active participant in the Mercury Stakeholder group formed by DEP, at the behest of EQB. While we appreciated the opportunity to participate in this process, it was also disappointing to hear at the outset of the meetings that DEP would not use this opportunity to decide whether a state specific rule was necessary but merely as a forum for those participating to help craft a state rule.

In our view, the majority of the information presented at the stakeholders meetings showed that mercury is not the acute public health crisis that proponents of a state specific rule have purported it to be. Evidence further showed that the federal rule is a reasonable, cost effective approach to further reduce man-made emissions of mercury. Those testifying in support of a state-specific rule both during the stakeholder process as well as during subsequent legislative appearances have failed to provide any compelling evidence as to the benefits to public health and the environment by a state rule versus implementation of federal legislation.

Health Aspects

During the stakeholder and subsequent numerous hearings conducted by the House and Senate Environmental Resources and Energy Committees, a significant amount of information relative to the health impacts of mercury was disseminated. Many groups urging a state specific rule have used highly inflammatory claims in an attempt to garner public support for their position. For example, they have claimed that hundreds of thousands of children are born each year with "brain damage" or "mercury poisoning" as a result of mercury. These claims are patently and demonstrably false.

The United States has the most stringent standards in the world regarding mercury blood levels. To a large degree, this standard is based on a study done in the Faroe Islands linking neurological impacts on children with methylmercury exposure. Many researchers however believe that study was skewed by the fact that the women in that study ate large amounts of pilot whale meat which was contaminated with polychlorinated biphenyls (PCBs) and that any effects on their children might be more a result of PCB exposure.

Another study linking methylmercury exposure and neurological impairment in children was done in New Zealand. However a report prepared for the American Council on Science and Health found this study included a relatively small number of children and the correlation between "methylmercury exposure and decrease in average IQ score in this study was not statistically significant."

The most recent study done would appear to negate the findings of the Faroe Islands and New Zealand work. A February 27, 2006 Los Angeles Times article announced the results of a study done in the Seychelles Islands. That study followed 770 children from their time in the womb until age 16 and found no neurological impairments in children even though their mothers ate as much as 10 times the amount of fish as American women. Dr. Philip Davidson, a member of the study team admitted the findings were a "shock" as they all expected to find adverse effects from high levels of mercury. His explanation was that the amount of mercury consumed from fish "may be just too low to cause problems." Another explanation offered was that the micronutrients in fish "support the developing brain and prevent the potential problems of mercury exposure."

Much has been made about the work of the Centers for Disease Control on this issue as well. Given the misrepresentation of CDC's work on this it is important to note precisely what their 2005 study results showed. The CDC did not say that 600,000 women are at risk. What they did say when announcing the results from their 2005 National Health and Nutrition Examination Survey (NHANES) was:

"Mercury exposure is particularly important to women of childbearing age because mercury levels above 58 micrograms are associated with neurodevelopmental effects in the fetus. Our exposure reports that **no women in the survey had mercury levels that approached this concentration** but we do see that a small percentage of women about 5.7% of women had levels within a factor of ten of what has been defined as the health threshold effect." (emphasis added.)

The CDC recommended that this small percent of women "merit close monitoring" because they "had levels within a factor of 10 of those associated with neurodevelopmental effects. Defining safe levels of mercury in blood continues to be an active research area."

Despite what they have often claimed, proponents of a statewide rule have failed to provide any documentation that CDC has stated anyone has an unsafe level of mercury in their blood from eating fish. In fact, there are no confirmed cases in biomedical literature of a single person in the US having a level of mercury in their blood due to fish consumption that comes anywhere near a level that would cause adverse health effects.

The CDC also added that merely finding a measurable level of a contaminant in the blood did not mean that it would cause adverse health effects.

It is also worthwhile to note what the US Food and Drug Administration has stated. FDA states that their "action level" for mercury in fish "was established to limit consumers' methyl mercury exposure to levels 10 times lower than the lowest levels associated with adverse effects."

During a hearing before the PA Senate Environmental Resources and Energy Committee earlier this year, Dr. Jack Snyder, the former staff toxicologist at Thomas Jefferson Medical College stated that "the legislature has not been provided credible evidence supporting speculation that any women, children, or fetuses have been harmed, or have been placed at increased risk of harm as a result of eating fish obtained from bodies of water in PA or other parts of the US."

Dr. Harold Koenig (Former Surgeon General of the US Navy) stated in a paper on the mercury issue that "No US women or children are being exposed to unsafe levels of mercury through fish consumption."

Also noteworthy are the comments of former U.S. Secretary of Health and Human Services Dr. Louis Sullivan on attempts in California to place warning labels where fish is sold. In court testimony in California, Dr. Sullivan expressed his concern about such an action, believing that such warnings given without "context" do not "serve the public well." Dr. Sullivan expressed strong concerns about the adverse health effects of scaring people away from eating fish and when asked whether there was a "scientific consensus" that "people in America would be better off eating more, not less, fish," he answered "very definitely, yes."

Finally, while it is anecdotal, it is important to note that in countries such as Japan where populations eat significantly more fish than here in the US and blood mercury levels are much higher children's neurological development does not appear to be adversely impacted by those levels. In fact, Japanese children, on average, routinely outperform US children on standardized tests.

In summary, there is little evidence that methylmercury in fish is the public health crisis many groups claim it to be. A July 5, 2006 release by US EPA demonstrated that mercury emissions here in the US have fallen drastically (45% since 1990) and CAIR and CAMR will continue to reduce those levels.

In fact, given the generally accepted benefits of eating fish as promoted by groups such as the American Heart Association, scaring people away from eating fish is likely responsible for a much larger health problem than whatever minimal risk exists in ingesting the mercury in that fish.

Emissions Trading

DEP has strongly stated their opposition to the provision in federal law that allows for emissions trading to meet mercury reduction requirements. They believe that allowing for emission trading will lead to the creation of mercury “hot spots.” This topic was addressed in the stakeholder group by Dr. Terry Sullivan of Brookhaven National Lab whose work found no evidence of these hot spots. Opponents of trading have stated that a yet to be published study of the Steubenville, OH area shows the existence of hot spots. While the full details of this report have not been seen, the study appears to show that mercury emissions from those plants traveled 400 miles—a distance approximate to the width of the Commonwealth of Pennsylvania.

Emissions trading has been used to good effect in a large number of pollution reduction strategies, including lead. Credits are generated in one of two ways—either reductions done at a facility earlier than required or reductions done at a facility above and beyond those that are required. Given the transport issues involved with mercury, if states upwind of PA can make those reductions on a more cost effective basis then it appears to us that the consumer wins both from a financial as well as a health basis.

In support of this statement, a 2004 article in the “Environment Reporter” which studied the impact of trading programs on air emissions concluded “none of the programs evaluated has resulted in regional shifts of emissions, and all trading programs led to proportionately greater reductions from the larger sources. Overall, the data from the programs reviewed in this report indicate that the effects of trading have been slight but beneficial with regards to geographic hot spots, in the sense of smoothing out emissions concentrations instead of concentrating them, and cooling and creating hot spots.”

Impact of Proposed State Rule on Energy Production

As an organization that represents Pennsylvania’s mining, energy production, and industrial and commercial consumers, the Chamber is extremely concerned about the impact the DEP proposed rule will have on our economy.

Because of the deregulation of Pennsylvania’s electricity market, in-state producers are forced to compete on the open market for customers. If they are burdened with unnecessary costs, such an action could make them uncompetitive with plants in other states. Faced with such a situation, certain plants could opt not to make the necessary

spend in order to comply. This would threaten not only the jobs at the energy generating facility, but the mining jobs associated with supplying the coal for that plant. While industrial and commercial consumers can certainly buy from out of state producers, a reduction in energy producing facilities can be expected to produce further upward pressure on energy prices. For many of the Chamber's members whose energy costs can be as much as 60% or more of operating costs such as scenario has the real possibility to adversely impact the Commonwealth's manufacturing sector and threaten those jobs as well. Imposition of burdensome, unnecessary mercury regulations can have a devastating, rippling effect throughout the energy production, mining, and manufacturing sectors.

Public Utility Commission Chair Wendell Holland recognized these concerns in comments he submitted at the May 17, 2006 EQB meeting. He expressed his concerns about the impact DEP's rule could have on the reliability of Pennsylvania's electric grid.

Even proponents of the state specific rule have admitted that plants could be shut down as a result of this proposed rule. (PennFuture Facts Vol 8 No 16.)

It is no surprise that business and industry is joined in its opposition to DEP's rule by the United Mine Workers, International Brotherhood of Electrical Workers, and the Conference of Teamsters.

Availability of Technology

During deliberations on the CAIR and CAMR rules, US EPA and the US Department of Energy looked at various control technologies for reducing mercury. What they found was that there are no commercially available technologies that can consistently reduce mercury emissions at all facilities to the levels called for in CAMR. As a result, the compliance date for CAMR was fixed at 2018 in the hopes that technologies will emerge to meet that standard. DEP's proposal to increase the reduction standard to 90% and advance that date poses real problems for energy producers. If DEP's rule were to pass, producers would be in the unenviable position of spending significant sums of money in hopes of attaining the requirements and still face a huge risk of non-compliance.

While the mercury stakeholder group did hear from certain interests who claimed that DEP's standard could be met, in most cases those persons are vendors of products they hope to market in the event of promulgation of a state-specific rule.

Proponents of a state specific rule have also said that compliance with DEP's rule will be relatively inexpensive. However, one Pennsylvania utility has filed financial disclosure statements that show they expect to spend as much as \$200 million here in PA if a state specific rule is adopted.

Likelihood of Mercury Emission Reductions

Proponents of a state specific rule have claimed that there is no assurance that there will be any mercury reductions if we adopt the federal rule. Such a statement is simply not credible given the significant reductions already made in recent years. In July of this year, US EPA reported that US mercury air emissions have been reduced by 45% since 1990. Here in PA, power plants have already reduced mercury emissions 33% between the period 1999 and 2004, according to Toxics Release Inventory reports.

Further, a number of Pennsylvania's electric utilities have already announced plans to install pollution control equipment that will control mercury, as well as sulfur dioxide and nitrogen oxides. The capital cost of the controls announced by just these four companies is approximately \$3 billion.

No Compelling Reason for Rule

In 1996, then Governor Tom Ridge promulgated Executive Order 1 of 1996. This order dictates that state rules should be no more stringent than federal requirements unless there is a compelling state reason to do so. One of the reasons for this order was to avoid placing Pennsylvania's job creators in an uncompetitive position by levying a regulatory burden on those entities that is not placed on competitors in other states and has no benefit to human health and the environment.

To date, DEP has demonstrated no compelling reason to implement a state specific mercury rule. Certain groups supporting a state specific rule have stated that one of the reasons we should do a state rule is because utilities can afford it. There are two fatal flaws in such an argument. First, the ability to pay is a question that should not be confused with the necessity for any given regulation. Second, many of the facilities that would be impacted by DEP's rule are small operators and may opt to go out of business rather than attempt to comply with this rule.

Since executive orders stand until formally withdrawn and such an action has not occurred with Executive Order 1 of 1996, DEP's mercury rule should not be promulgated.

Summary

As a participant in the discussions held on the mercury issue, both at the stakeholder and through the legislative process, the Chamber remains unconvinced that a state specific mercury rule is necessary to protect human health and the environment here in Pennsylvania. Moreover, we believe, based on the reasons listed above, that imposition of such a rule could have dire consequences for jobs in Pennsylvania's utility, mining, and manufacturing industries, adversely impact reliability of Pennsylvania's electricity market, and raise costs to business, industry, and residential consumers.

Since air knows no boundaries, we believe that a national approach to reduce mercury emissions from power plants makes the most sense from all perspectives.

Once again, the critical question in this debate is not whether we will reduce mercury emissions. The only question for EQB to answer is to quantify the benefit a state specific rule will have for Pennsylvania. Given that DEP has failed to provide an adequate response, and given the likely adverse implications of a state specific rule for Pennsylvania business and consumers, we encourage EQB to reject DEP's proposal and cooperate with other states and the federal government on a cost-effective approach for the Commonwealth.

Thank you for the opportunity to provide comments on this important public policy issue.