

Testimony of David Hoopman
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On proposed revisions to N.R. 446
Wisconsin Department of Natural Resources
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At my first meeting as a member of the citizen advisory committee on NR 446 back in the summer of 2001, all of us were asked to say what we hoped would be the outcome of our work. I said I hoped we would have a realistic idea of what public health impact could be expected if we achieved complete success implementing the proposed rule.

There was a question implied there, and I don't believe it's ever been answered, though in the nearly six years since that time, I've learned a number of things that strongly suggest what an answer might sound like if anybody ventured to give one.

It was quite early in the rulemaking that I learned about two separate studies—one by the utility industry and one by a consortium of state government air quality agencies—that showed the maximum achievable reduction of mercury deposition in Wisconsin—achieved not by setting a targeted percentage but by simply *eliminating* every coal-fired power plant in the state—would be five percent or less. In other words, if every Wisconsin utility simply ceased to exist, at least 95 percent of the mercury going into our lakes would still go into our lakes.

I'm not sure what the public health effect of that small reduction would be, but that's because I don't believe anybody has ever identified a public health effect of the mercury deposition that occurs right now, so there's no basis for comparison. Five percent better than *what?*

Even earlier in the rulemaking process, I learned about a study of roughly 700 children and their mothers who lived in the Seychelles Islands and who ate a lot of fish. In fact, the mothers were eating typically 12 meals of fish every week, lots of it with a higher mercury content than we typically find here. That was the usual diet, including during pregnancy, and the research team from the University of Rochester said they went into the project expecting to find real health problems. They said they were ultimately surprised when they found absolutely no ill effects on the mothers or their children.

I was a little surprised not too long ago to learn that study is still going on, monitoring the children who are now in their late teens, and there's still no sign of any mercury-related problem, even though the mothers' mercury levels average six times what you'd expect to find in the U.S. population. In their most recent report two years ago, the team leader said, "There is no question that many chemicals and contaminants are neurotoxic. The real question is whether the actual exposure has enough of an effect to be relevant."

And that leads us to something that ought to be welcome news, on two fronts: first, the apparent absence of adverse health effects from people's *current* mercury exposure, and second, the clear evidence that mercury exposure is *decreasing* from levels that apparently were already within tolerable limits.

The National Institutes of Health have an ongoing survey called the National Health and Nutrition Exposure Study that's examined women of childbearing age, 16-49, since 1999. In its first year, the study found seven percent of the women had bloodstream mercury levels above the Environmental Protection Agency's safe exposure limit.

I'd point out that the safe exposure limit is something different from the exposure level believed to be connected with possible health consequences. The EPA set the safe exposure limit at one-tenth the level researchers say might increase the risk of adverse health effects. The study found *no one* with exposure reaching the higher level.

So they started with seven percent above the safe exposure level in 1999 and by 2002, the study found half as many women, fewer than 3.5 percent of participants, with exposure above the official safe level. By 2004, the latest year with complete data available, those above the safe level had dropped to fewer than two percent.

Something else they found was that at the same time the percentage of people above the safe exposure level was dropping by almost three fourths, their fish consumption was rising.

So that brings us to a final point, and again, it's something I would think everyone here ought to welcome as good news.

Since last fall, research studies have been published by two highly esteemed institutions, the Harvard School of Public Health and the University of Bristol in England. Their separate studies arrived independently at the same conclusion: that the nutritional benefits of fish consumption far exceed any health risk from mercury contamination in fish.

The two studies made it clear that pregnant women should avoid a few large, predatory species that are more likely to concentrate mercury, but the lead author of the Harvard study said fish consumption was "associated with reduced risk of cardiac death, lower total mortality, and *improvements in child brain development.*" [emphasis added].

The lead researcher in the British study said "We recorded no evidence to lend support to the warnings that pregnant women should limit their seafood consumption."

The British study gathered data from almost 12,000 pregnant women starting in 1991. In addition to verifying the nutritional benefits of fish for mothers and their children, it also found something else. It found that women who *avoided* fish in their diets were more likely to have children with poorer physical coordination and communications skills in their early years—problems hauntingly similar to those they might have been warned about in connection with *eating* fish.

The Environmental Protection Agency's Clean Air Mercury Rule has been finalized. Electric power producers here in Wisconsin and nationwide are committed to comply with it. It will eliminate seven-tenths of the mercury emissions that aren't already captured by pollution control technology currently in place.

This will occur against the backdrop of mercury exposure declining steadily since the 1990s; of a record that is vacant of examples of public health impacts associated with airborne mercury emissions; and of internationally respected institutions concluding that health warnings going overboard may be producing health consequences with a striking resemblance to the ones they set out to prevent.

The wisest course for Wisconsin would be simply to adopt the federal Clean Air Mercury Rule. That action could capture whatever environmental benefits are available more promptly than the proposed NR 446 revisions. It would also be less likely than the NR 446 revisions to impose additional economic burdens on the citizens of this state.

And adoption of the federal rule would be fully supported by the power providers of this state who, for their benefit and the benefit of the ratepayers who ultimately bear the cost, need to know the target they're required to hit will at some point stop moving.

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