

GREAT LAKES INDIAN FISH & WILDLIFE COMMISSION

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• MEMBER TRIBES •

MICHIGAN

Bay Mills Community
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MINNESOTA

Fond du Lac Band
Mille Lacs Band

Red Cliff Band
St. Croix Chippewa
Sokaogon Chippewa

June 23, 2003

VIA FACSIMILE – ORIGINAL BY MAIL

John Heinrich
Wisconsin Department of Natural Resources
Bureau of Air Management - AM/7
101 S. Webster St.
P.O. Box 7921
Madison, WI 53707-7921

RECEIVED
JUN 26 2003
AIR MANAGEMENT

Re: Mercury Emission Rule – Revisions to Chapter NR 466

Dear Mr. Heinrich,

The Great Lakes Indian Fish and Wildlife Commission's (GLIFWC's) Voigt Intertribal Task Force (Task Force) submits the following comments related to the Department of Natural Resources' ("DNRs") proposed mercury emission rule that will be presented to the Natural Resources Board in late June. As you know, GLIFWC and the Department enjoy a longstanding relationship regarding mercury contamination and monitoring; GLIFWC staff participated on and provided comments to the DNR as part of its Citizen Advisory Committee on this issue.

As the Department is aware, GLIFWC exercises delegated authority from its member Tribes regarding their treaty reserved hunting, fishing and gathering rights in the ceded territories. GLIFWC assists its member Tribes in the conservation and management of natural resources subject to those rights, and in the protection of habitats and ecosystems that support those resources. As the Department also is aware, the Task Force, one of GLIFWC's constituent committees, has been authorized by its member Tribes to oversee GLIFWC's programs and to coordinate consultation with the Department regarding the 1837 and 1842 treaty rights upheld by the *Voigt* case.

In general the Task Force is extremely disappointed at the lack of environmental protection provided in the final rule proposal and hopes that the DNR will reconsider its regulatory recommendation. There are several primary reasons that this rule fails to provide adequate environmental protection. First, the schedules for load reductions are not sufficiently strict. In contrast to its earlier proposal (30% reduction within five years of rule promulgation, 50% within 10 years, and 90% within 15 years), this rule only requires a 40% reduction by 2010 and 80% by 2015. This proposal is not consistent with commitments made by the State of

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Wisconsin under the Binational Program to Restore and Protect Lake Superior ("Binational Program"), that is, an 80% reduction of emissions in the Lake Superior basin by 2010 and "zero discharge" by 2020.

Second, the baseline emission levels on which mercury reductions are calculated are based on uncontrolled mercury emissions. Thus, utilities have only to reduce their current emissions by 20-25% to achieve the 40% goal. The 80% goal becomes something more like a 60% reduction from current emissions. This baseline calculation disguises the true reduction schedule and is misleading for those trying to evaluate the proposed rule. In fact, the rule is no longer an "emissions" reduction rule, it is a "baseline" reduction rule. Under this scheme, industries will have an incentive to burn coal higher in mercury during the baseline years; switching to lower mercury coal in later years would achieve part of the required reduction.

Third, there appears to be no cap on emissions from non-utility major stationary sources. Under the previous rule, these facilities were required to at least freeze emissions at a specific level; now these facilities can continue to increase emissions so long as they report annual emissions data. If these industries are not required to limit emissions through a cap, then at least emissions should be reduced through a *mandatory* energy efficiency improvement program. Other than this rule, there are no current or proposed programs to reduce mercury emissions from non-utility major stationary sources like the chlor-alkali plant near Wisconsin Rapids. That plant is a significant source of mercury emissions, contributing more than 1000 pounds per year.

In addition to these issues, the proposed rule is problematic in several other respects:

- The provisions that allow industries to use credits and to average their emissions across their entire system could lead to some utilities continuing to emit higher levels of mercury, putting locally affected waterbodies and communities at increased risk. This provision should be removed.
- The requirement for periodic rule evaluations under NR 446.12 should be expanded to include a report in 2018. This will be necessary in order to evaluate whether the load reduction targets were reached and to evaluate new control technology. This evaluation should also recommend revisions to the chapter that would require mercury reductions designed to reach zero discharge.
- The rule also fails to address increases in overall mercury emissions due to new plant construction. Although these sources will have to use the maximum achievable control technology, they will contribute to overall increases in mercury loading to the environment. Consistent with the State's commitments under the Binational Program, new sources should be required to achieve zero discharge in 2020.

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The Task Force hopes that the DNR and the Natural Resources Board will approve a revised rule that mandates aggressive emission reduction schedules for utilities and limits emissions from other major stationary sources. Stronger action than that which is proposed is necessary to fulfill the State's commitments to lower mercury concentrations in fish and wildlife.

Thank you for your consideration of these comments, please contact me if you have any questions or need further information.

Sincerely,



James H. Schlender
Executive Administrator

cc: Natural Resources Board



John Muir Chapter

**Statement on the proposed NR 446 Mercury Rule
Before the Natural Resources Board
June 25, 2003 in Waupaca WI
By Eric Uram, Midwest Office and Caryl Terrell, Wisconsin Chapter**

Thank you for this opportunity to present a statement expressing reluctant support for the NR 446 Mercury Air Emissions rule. The Sierra Club joined many fishing and other environmental groups in petitioning the Natural Resources Board in 2000 to adopt a rule to virtually eliminate mercury air emissions (90% mercury reduction, from current emissions, by 2010) so that future generations of anglers can safely eat the fish they catch in Wisconsin waters.

Frankly, we are disappointed in the rule before you today. We can do better and we ask the Board to show the leadership needed to amend this rule to protect Wisconsin's waters and recreation legacy.

The Technology Exists, Let's Use It:

- Currently, a number of states, including Massachusetts and Connecticut, and research groups, including the Northeast Midwest Institute, have issued guidance that indicates utilities can go much further than the current rule proposal from the WDNR indicates. (We are distributing the NEMW article that ran in the National Academy of Sciences magazine Issues in Science and Technology.)
- On the developing technologies front, ISCA Management Ltd., a Canadian interest, has indicated their multi-pollutant control technology controls 99% NO_x, SO₂ and 100% mercury for half the price of everything else. Certainly the power plants there are under the same need to reduce pollutants and we await verification of these results.
- As has been stated by WUA, the constraints of the WDNR rule and the surrogate technology apply only to power plants burning low-sulfur Powder River Basin (or similar) coal. Eastern bituminous coal, the coal Wisconsin utilities were originally designed to burn, has a much greater potential for mercury control. This means Wisconsin utilities could easily meet their control obligations by merely switching their coal contracts and installing the additional SO₂ controls along with required NO_x and PM control.
- On the existing technology front, published research shows that 5-6% of utilities are already achieving 90% mercury reductions with the scrubbers they use for NO_x and SO₂ control.
- According to the EPA and research compiled by the state of Massachusetts, 98% reductions are achievable with NO_x, SO₂, and PM controls. As a matter of fact, PM

control alone - using a fabric filter - has netted a 77% Hg reduction in eastern-coal-burning power plants.

We Can and Must Do Better.

An incremental approach to controlling mercury has gotten us where we are today - statewide fish advisories and the need for further solutions. We need you, the Natural Resources Board, to ensure we move aggressively to reduce as much above-background-amounts of this toxic element released as possible to ensure we are protective of all who consume fish in this state.

If not, your only alternative is to approve the posting of all waters that have fish advisories with the necessary information to warn individuals harvesting fish of the health risks they face. The state is liable for protecting the public trust that includes providing clean water and healthy fish, game and natural resources. We all recall the health issues Buddy Henk suffered due to his appetite for Northern Pike from Windigo Lake (loss of physical coordination and mental abilities affecting language, attention and memory). This tragedy can and must be stopped.

We recommend you either strengthen this rule through measures open to you or return the proposal to the WDNR for strengthening.

- We support a 90% reduction of current mercury pollution from coal plants.
- We need to ^{base}measure mercury reductions from what is coming out of power plant smokestacks, NOT from the mercury that is in the coal. Without making this change, the rule before you is only a 60-65% reduction.
- We need to address new sources of mercury pollution in this rule. We ask that you adopt a rule that includes a 150% offset for new sources of mercury. If our goal is to make fish safe to eat for everyone in the future, we can't just clean up existing sources of mercury pollution and ~~replace them with~~ ^{allow} new mercury polluters ~~to eliminate what gains are made,~~

As original petitioners, we say your job is not done until you adopt a DNR rule that begins the virtual elimination of mercury poisoning.

Thank you for listening to our position.

PERSPECTIVES

MATT LITTLE

Reducing Mercury Pollution from Electric Power Plants

The majority of electricity in the United States is produced by power plants that burn coal, with 464 such plants producing 56 percent of all electricity. But these power plants also are the nation's single biggest source of mercury pollution. Each year, the plants spew a total of 48 tons of mercury into the atmosphere—roughly a third of all human-generated mercury emissions. There is sound evidence that mercury emissions from coal-burning power plants can, in fairly short order, be cut dramatically and cost-efficiently. Yet plans to curtail emissions of this hazardous pollutant have become enmeshed in an intense squabble as politicians and regulators debate the specific regulatory framework to be implemented.

The Environmental Protection Agency (EPA), which is required under the Clean Air Act to regulate hazardous air pollutants, is developing regulations that would re-

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The technology to reduce emissions is at hand, but the Bush administration seems unwilling to require industry to use it. That's a mistake.

quire reducing mercury emissions by up to 90 percent in 2007. However, the Bush administration now is asking Congress to pass legislation requiring less stringent mercury reductions and spreading the reductions over a much longer time. In order to stave off this push, Sen. James Jeffords (I-Vt.), chair of the Senate Environment and Public Works Committee, has introduced his own legislation to codify the 90 percent reduction levels by 2007, and he has indicated that passage of this bill is his top priority. Given the significant

threats that mercury pollution poses to human health and the environment, along with the recent strides made in improving emission control technologies, the wisdom of following Sen. Jeffords's lead is compelling.

When coal is burned in power plants, the trace amount of mercury that it contains passes along with the flue gas into the atmosphere. The mercury eventually falls back to earth in rain, snow, or as dry particles, either locally or sometimes hundreds of miles distant. According to data from mercury monitoring stations nationwide, the highest deposition rates occur in the southern Great Lakes, the Ohio Valley, the Northeast, and scattered areas in the Southeast; basically, in areas around and downwind of coal-fired power plants.

Once the mercury is deposited on land or in water, bacteria often act to change the metal into an organic form, called methylmercury, that easily enters the food chain and "bioaccumulates." At the upper reaches of the food chain, some fish and other predators end up with mercury levels more than a million times higher than those in the surrounding environment. For the hu-

mans and wildlife that ultimately consume these species, these concentrations can be poisonous.

In the United States, the primary source of mercury exposure among humans is through consumption of contaminated fish. Women who are pregnant or may become pregnant, nursing mothers, and children are the populations of greatest concern. When a pregnant woman ingests mercury, it is easily absorbed by her blood and tissues and readily passes to the developing fetus, where it may cause neurotoxicity (damage to the brain or nervous system). This damage eventually may lead to developmental neurological disorders, such as cerebral palsy, delayed onset of walking and talking, and learning disabilities. Approximately 60,000 children may be born in the United States each year with neurological problems due to mercury exposure in the womb, according to a 2000 report by the National Research Council. Even after birth, young children who ingest mercury, from either breast milk or contaminated foods, remain especially susceptible to the pollutant's neurotoxic effects, because their brains are still in a period of rapid development.

To help protect the public against such potential dangers, the Food and Drug Administration (FDA), which regulates commercially sold fish and seafood, issued an advisory in 2001 for those groups of people deemed most at risk. The advisory recommended that these populations avoid eating swordfish, shark, king mackerel, and tilefish, and that they limit their consumption of other seafood to an average of 12 ounces per

week. Concurrently, EPA issued a recommendation that sensitive populations limit their intake of freshwater fish to one meal per week, with adults limiting their total weekly consumption to 6 ounces and children to 2 ounces. States have taken action as well, with 41 states now advising residents to limit consumption of certain species of fish. Although all fish contain some levels of mercury, states generally advise residents to limit their consumption of those species, such as bass, northern pike, walleye, and lake trout, that prey on other fish.

There is disagreement, however, about which set of recommendations will provide the best measure of safety. Some groups maintain that EPA's approach is generally more protective than is FDA's, and some also have accused FDA of catering to the tuna industry by not adding this species to its fish advisory. FDA recently announced that its Foods Advisory Committee will reexamine its fish consumption advisory and issues surrounding mercury in commercial seafood. But even as this particular debate continues, it remains clear that, above all, adequate steps are needed to reduce the amount of mercury emitted into the environment in the first place.

Seeking satisfactory standards

The Clean Air Act Amendments, passed in 1990, require that EPA establish emission standards for the major sources of 188 different hazardous air pollutants, including mercury. These standards must require the maximum degree of emission reductions that EPA deter-

mines to be achievable, and hence are known as Maximum Achievable Control Technology (MACT) standards. EPA already has set MACT standards for several major sources of mercury emissions. For incinerators used to burn municipal wastes and to destroy medical wastes, EPA has established standards that will reduce their mercury emissions by 90 percent and 94 percent, respectively. Similar standards also have been proposed for hazardous waste incinerators.

Utilities are the last major source of unregulated mercury emissions. The industry secured congressional exemptions from the MACT standards until EPA conducted a number of studies on mercury's sources and health effects. The studies concluded, among other things, that out of 67 toxic air pollutants emitted from coal-fired power plants, mercury was of greatest concern. Armed with these data and working under a deadline imposed by a federal court, EPA announced a plan to propose regulations for utility mercury emissions by 2003, finalize them in 2004, and require actual mercury reductions in 2007. Based on data already collected from analyses of coal-fired boilers, EPA has estimated that up to 90 percent reductions may be required under the MACT standard.

But as EPA was moving ahead, the Bush administration stepped in. On February 14, 2002, the administration proposed its "Clear Skies Initiative," which would reduce power plant emissions by only 46 percent in 2010 and 69 percent in 2018, rather than the 90 percent reduction in 2007 under a MACT standard. Because

this proposal requires congressional action to become law, the administration is looking for an influential member of Congress to introduce it.

In response, numerous members of both parties in the Senate and House have called on the administration to continue developing strict MACT standards and to strengthen its legislative proposal for mercury. Their advice is sound, on both technical and economic grounds.

Technology available

Even though they are not yet required to reduce mercury emissions, utilities already have removed 35 percent of the mercury from the coal they burn, without really trying. This is because many of the pollution control technologies installed on power plants to remove nitrogen oxides (NOx), sulfur dioxide (SO₂), and particulates also are removing mercury from the flue gas. With new regulations for NOx, SO₂, and particulates expected in the near future, the industry's incidental mercury capture rate is expected to increase further as additional controls for these pollutants are installed. EPA estimates that 46 percent of mercury emissions can be reduced by 2010 in this manner—exactly the level of reduction called for in the administration's Clear Skies Initiative. It would seem, then, that this proposal is not calling for much extra effort on the part of utilities.

Indeed, some combinations of existing pollution control technologies have achieved more than 98 percent mercury reductions at individual power plants. Of course, attaining consistent 90 percent

There is sound evidence that mercury emissions from coal-burning power plants can, in fairly short order, be cut dramatically and cost-efficiently.

mercury reductions across the industry, the level proposed by Sen. Jeffords and under EPA estimates, will be much more difficult than relying completely on other regulations and the control technologies they require. To help reach this goal, the Department of Energy (DOE) has partnered with eight groups of utilities and entrepreneurs to fund mercury control projects on actual power plants. The basic strategy of these ventures is to find new ways to enhance the ability of existing control technologies to capture mercury. Through this program, DOE hopes to develop control options that are cost-effective and can reliably reduce mercury emissions by 50 to 70 percent by 2005, and by 90 percent by 2010. On the basis of preliminary results, DOE believes that it will meet the first goal this year, and although DOE's second goal of reaching 90 percent reduction by 2010 is three years after EPA's target date, the developers of the technology being

tested, as well as other entrepreneurs in the field, believe that they will exceed this goal as well.

Utilities sometimes argue that these reduction levels will be more difficult to reach using certain types of coal. For example, mercury from subbituminous coal, common in the western states, is difficult to control because it exists mostly in the elemental form in flue gas. But some utilities that burn subbituminous coal already have achieved approximately 75 percent reductions using existing control equipment, and a number of new technologies are being developed that can reduce mercury from such coal as effectively as from bituminous coal. It also should be noted that EPA has considered having different requirements for different types of coal under the MACT standards being developed. Even under this scenario, EPA calculated that 43 tons of mercury emissions could be reduced overall, which is still a 90 percent reduction from the current total.

Another obvious concern for utilities is the cost of control measures. Today, the most well-developed option for controlling mercury emissions is called "activated carbon injection," a technology that has been used in incinerators for years. According to recent EPA estimates, use of this technology in power plants today would cost only fractions of a penny per kilowatt hour of electricity produced: a cost roughly the same as for technologies currently used to reduce NOx emissions. Although mercury and NOx pollution pose different health and environmental effects, it would be hard to argue that mercury is less important to mitigate.

Also, because NO_x regulations did not have a significant effect on consumer prices for electricity, it is not expected that mercury regulations will do so either.

Moreover, it is reasonable to assume that new mercury control technologies now being developed will be even less expensive. DOE's stated goal is to produce technologies that, by 2010, will be 50 to 75 percent cheaper than today's versions. Also, the Electric Power Research Institute currently is evaluating more than a thousand potential processes and sorbent materials for mercury control, and many of these already appear less expensive than using activated carbon. Finally, once regulations are set, control technology costs almost always go down as more entrepreneurs enter the business and more capital is expended in R&D. For example, the projected costs of the Clean Air Act's Acid Rain Program, a regulatory program for SO₂ and NO_x, fell by two-thirds between 1989 and 1997.

Utilities also express concern about some possible unintended effects of removing mercury from flue gas. For example, utilities now recycle some of the wastes from coal-fired boilers into useful products, such as wallboard, cement, and fertilizer, that are sold to help offset operating costs. The remaining wastes typically are put into landfills. Both options rest on the fact that today's wastes contain very low levels of mercury. However, future control regulations likely will result in additional levels of mercury in the wastes.

Although some observers believe that this minute addition of mercury (which will be in a solid, stable state) will not change the characteristics of the wastes or affect any byproducts produced from them, others are concerned that mercury might escape into the environment through water leaching or volatilization. Future wastes also will probably contain more activated carbon (one of the substances used to remove mercury), and there is some concern that this increase may render certain byproducts, such as cement, unmarketable. EPA, DOE, and others are looking into these issues to determine whether current practices can continue.

Another controversial issue to be addressed is whether the mercury control program eventually adopted should allow utilities to trade mercury credits among facilities. Under a trading program, a power plant could continue to emit high levels of mercury by buying credits from a plant that reduced mercury emissions beyond EPA's requirements. Most stakeholders support trading schemes for pollutants such as SO₂ and NO_x. But environmentalists and various community groups think that trading is inappropriate for mercury. They believe mercury to have greater health and environmental effects at the local level than do other pollutants, and thus they think trading would lead to the formation of "hot spots" of contamination around dirty power plants. Answering this question definitively will require more research on mercury's fate once re-

leased into the environment. But it appears that there is some justification for treating mercury differently from other pollutants by ensuring that all power plants make significant cuts in their emissions of mercury. This idea is further confirmed by the Clean Air Act itself, under which trading is prohibited for hazardous air pollutants, such as mercury, that are regulated under the MACT program. Sen. Jeffords's proposed legislation also would prohibit mercury trading, whereas the administration's proposal would allow it.

With all these various forces at work, determining a solution to the mercury problem will not be easy, and members of Congress will have to consider a number of issues as they decide how to proceed. Fortunately, even if Congress fails to pass legislation to address mercury emissions, EPA still will be required to propose MACT standards for power plants by December 2003. Many observers believe that this route actually will be more effective in protecting human health, since it has been used successfully to regulate other hazardous air pollutants listed in the Clean Air Act. However, in light of the expected effort by the Bush administration to weaken EPA's position, the safest way to ensure swift and decisive action is for Congress to pass legislation calling for a 90 percent reduction in mercury emissions in 2007. Such action will protect the long-term health and well being of the nation's lakes, streams, wildlife, and—most important—its people.

**Statement of David Hoopman
Wisconsin Federation of Cooperatives
to the Natural Resources Board
Waupaca, Wisconsin, June 25, 2003**

I'm appearing here today in opposition to the proposed NR446 regulation of mercury emissions from utility boilers.

I hope to make it clear that opposing that regulation is not the same thing as opposing reduction of mercury contamination in Wisconsin waters and Wisconsin fish.

I represented Wisconsin's electric cooperatives on the Citizen Advisory Committee. There may be those who think I was not a very effective advocate, because I didn't say a lot. I listened a lot. I was hoping to hear an answer to one question, but I never heard it.

At our very first meeting more than a year and a half ago, each committee member was asked to identify the one thing they thought would be the most important goal of our work. I said I hoped we'd answer this question: What's our best estimate of the environmental and public health effects of complete success in implementing the proposed rule?

I don't believe any proponent of this rule has come up with an answer that would stand five minutes' scrutiny.

It's instructive to look at some of the things that are said. Some of the most ardent supporters of this rule don't hesitate to announce amazingly specific numbers of people who are sickened or die because of emissions from specific coal-fired power plants. That certitude vanishes when the question is, "What result can we expect from reducing Wisconsin mercury emissions?"

The Department itself has been careful not to entangle itself in indefensible claims about public health and environmental benefits. For instance, the Department has declined to say any lake will come off a mercury advisory list as a result of implementing NR446, and has declined to say what progress can be expected in reducing the mercury content of fish.

That's wise, because it's hard to say you're rescuing people from a public health problem unless there is one. Last year, we contacted the Wisconsin Division of Public Health and asked what information they could give us about the incidence of mercury toxicity in this state. We were informed that the Division collects no such records.

Now, you can only conclude one of two things from that. Either the Division of Public Health is recklessly ignoring a problem that blights the lives of untold numbers of

Wisconsin residents, or, it's such a rarity for a Wisconsin resident to be adversely affected by mercury that keeping the statistics wouldn't tell you anything useful.

Put another way, unless the Division is guilty of being careless about our health, there's no apparent need for the proposed rule.

The initial proposal was to remove 90 percent of Wisconsin power plant mercury emissions over 15 years. Now it's 80 percent over the same length of time. Rather than quibble about those differences, it's far more informative to look at what would happen if all the Wisconsin-sourced emissions simply went away.

At least two computer models over the past two years have predicted that closing all the coal-burning power plants in Wisconsin would eliminate only between one and five percent of the mercury deposited in our waters.

Once you allow for the fact that only a small percentage of that amount is in a form that's available for conversion to methylmercury, and you go through the necessary calculations, it becomes clear that we're talking about removing approximately 25 one-hundred-thousandths of the potentially harmful stuff that's going into our lakes and streams.

If people were getting sick, I can't imagine we'd settle for something so ineffective.

The people I represent have a long and honorable history of serving their communities, rooted in the fact that nobody else would do it because it didn't pay. If those people believed we were going to achieve something important and necessary with NR446, their history suggests they'd step up and say let's find a way to get it done.

But they don't believe that. And I cannot in good conscience ask them to.

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TO: Natural Resources Board
FROM: Jeff Schoepke, Director, Environmental Policy
DATE: June 25, 2003
RE: NR 446, Proposed Mercury Regulations

Memo

Thank you for the opportunity to provide comments on proposed revisions to NR 446, creation of a program regulating air emissions of mercury.

Wisconsin Manufacturers & Commerce (WMC) is a statewide, non-profit association representing Wisconsin business. WMC has 4,300 members that include both large and small manufacturers, utilities, service companies, local chambers of commerce and specialized trade associations.

WMC has opposed the rule throughout this rulemaking process for three major reasons: 1) It is widely accepted that mercury loadings are affected by long range transport, and that a Wisconsin rule will have little impact on mercury in Wisconsin lakes; 2) The rule as proposed will increase electric rates and cost jobs; 3) Because the federal government is moving forward with rules, a voluntary program as a bridge to the federal program is the most prudent interim policy approach.

The final rule package before you today has several important revisions that improve the proposal. WMC is pleased, for example, that the final rule removes the major stationary source cap. WMC is also pleased that burdensome offset requirements have been eliminated from the rule.

However, WMC still has significant concerns regarding the overall approach of the effort and will oppose the rule unless several modifications, outlined below and in the attachment to this memo, are made prior to adoption.

First, the rule should be amended to exempt sources subject to a federal mercury emission limit. Under section 285.27 (2) (a) Wis. Stats. DNR would be required to promulgate a corresponding state standard once EPA finalizes their proposal next year. While the above provisions reference section 112 of the Act, there is no logical policy reason to treat differently a federal mercury emission limitation under another section of the Act. If the source is covered by a federal mercury program, that program should control to avoid duplication and inconsistencies. Thus, the simple policy change would be to exempt from the rule all sources subject to a federal emission limitation.

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Second, the rule's second-phase, 80 percent reduction requirement should be removed from the rule. It is impossible to predict in 2003 the appropriate Wisconsin mercury program for 2015. However, we know the current state of technology is such that the 80 percent reduction mandate likely could not be met. Technology and policy developments will surely evolve, however, the decision of the appropriateness of an 80 percent reduction is better made after the first phase and a thorough review of the rule at that time.

For example, almost everyone agrees that a federal mercury program will be in place by that date. This rule, always promoted by the DNR as a "bridge" to the federal program, need not address the second reduction phase at this time – it may simply be unnecessary. Should the federal government falter, there is ample opportunity before 2015 to develop a second phase. From a practical perspective, the delay of the 80 percent reduction decision will also help assure swift enactment of this rule without compromising DNR's primary objective for 40 percent reduction pending federal action.

Several utilities regulated under this rule have communicated technical and policy concerns with the latest draft. Unfortunately, major changes to the rule were shared with stakeholders less than a month before the board is being asked to adopt them. Thus, there are many additional issues that have arisen that could be addressed if more time were allowed. WMC requests the Board consider the technical changes requested by utilities before adoption of the rule.

Also, with the elimination of the major sources cap, trading with non-regulated entities is no longer allowed under the rule. In order to help reduce the total cost of reducing mercury emissions, WMC recommends the rule be amended to allow non-regulated companies to trade.

WMC's objections to the rule are based on a general position that the rule's costs and benefits are not commensurate. That is, the rule will impose significant costs to ratepayers and provide little in benefits to Wisconsin fishermen and aquatic ecosystems. We still believe that for these reasons, a Wisconsin-only rule makes little sense. However, these concerns could be mitigated by the adoption of an exemption for sources covered by federal rules and elimination of the second-phase, 80 percent reduction requirement. Should the Board make these changes, WMC will remove its official objection.

**Proposed Changes to DNR's Proposed Mercury Rule
(June 25, 2003)**

Proposed Amendment 1 – Existing NR 446.01 (1) is amended to read:

APPLICABILITY. This chapter applies to all air contaminant sources which may emit mercury and to their owners and operators. Stationary sources that are subject to a federal emission limit for mercury are exempt from the requirements of this chapter.

Rationale. This amendment is consistent with the relevant statutory provision, Section 285.27(2) (a), Stats., which provides:

If an emission standard for a hazardous air contaminant is promulgated under section 112 of the federal clean air act, the department shall promulgate by rule a similar standard but this standard may not be more restrictive in terms of emission limitations than the federal standard . . .

DNR has proposed several rule provisions that are consistent with this statutory provision and the suggested amendment, including NR 446.05 (2) in the proposed mercury rule relating to new or modified sources:

(2) New or modified stationary sources that are subject to an emission limit for mercury required under section 112 of the Act are exempt from the requirements of this section.

In addition, this policy is reflected in proposed NR 445.01(1)(b) [Air Toxic Program], which is recreated to read:

The emission limitations and control requirements in this chapter do not apply to hazardous air contaminants emitted by the emissions units, operations or activities that are regulated by an emission standard promulgated under section 112 of the Clean Air Act (42 USC 7412).

While the above provisions reference section 112 of the Act, there is no logical policy reason to treat differently a federal mercury emission limitation under another section of the Act. If the source is covered by a federal mercury program, that program should control to avoid duplication and inconsistencies.

Related Changes. Should this amendment be adopted, several provisions are no longer necessary, including:

- NR 446.05 (2), providing an exemption for new sources subject to federal standards)
- NR 446.12 (2) and (3), relating to report on effect of federal mercury regulations.

Proposed Amendment 2 – Proposed NR 446.06 (Mercury emission limits for major utilities) is amended to read:

(1) (a) Beginning January 1, 2008, no owner or operator of a major utility may cause, allow or permit mercury emissions from all stationary sources of the major utility on an annual basis in an amount which exceeds the controlled mercury emissions for the major utility's stationary sources, determined by the department under par. (b).

(b) No later than October 1, 2005, the owner or operator of a major utility shall conduct a source performance test on each combustion unit to determine the control efficiency of any control equipment or emission reduction activity on the mercury emissions from the combustion unit. This control efficiency shall be applied to the baseline mercury emissions calculated under s. NR 446.03 for the unit, using the procedures in s. NR 446.09, to determine the controlled mercury emissions of the combustion unit.

(2) Beginning January 1, 2010, no owner or operator of a major utility may cause, allow or permit mercury emissions from all stationary sources of the major utility on an annual basis in an amount which exceeds 60% of the baseline mercury emissions for the major utility's stationary sources, determined by the department under s. NR 446.03.

~~(3) Beginning January 1, 2015, no owner or operator of a major utility may cause, allow or permit mercury emissions from all stationary sources of the major utility on an annual basis in an amount which exceeds 20% of the baseline mercury emissions for the major utility's stationary sources, determined by the department under s. NR 446.03.~~

Rationale. It is impossible to predict in 2003 the appropriate Wisconsin's mercury program for 2015. Technology and policy developments will surely evolve. For example, almost everyone agrees that a federal mercury program will be in place by that date. This rule, always promoted as a "bridge" to the federal program, need not address the second reduction phase at this time – it may simply be unnecessary. Should the federal government falter, there is ample opportunity before 2015 to develop a second phase. From a practical perspective, the delay of the 80 percent reduction decision will also help assure swift enactment of this rule without compromising DNR's primary objective for 40% reduction pending federal action.

Related Changes. Proposed NR 446.12 (Periodic evaluation and reconciliation reports) is deleted and recreated to read:

NR 446.12 Additional reductions for major utilities. (1) By January 1, 2009 [one year before the first phase reduction deadline], the department staff shall submit a report to the natural resources board if major utilities are not subject to a emission limit for mercury required under the Clean Air Act by that date. The report shall include:

(a) An evaluation of the scientific and technology developments in relation to the control or reduction of mercury emissions.

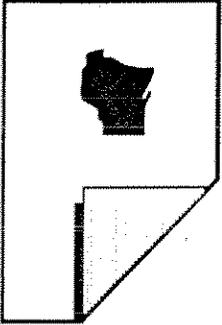
(b) An evaluation of whether mercury emission reductions for major utilities beyond those required by s. NR 446.06 are achievable, given the scientific and technological developments.

(c) Recommendations for revisions to this subchapter relating to major utilities based on the scientific and technological developments, and existing or pending federal mercury programs.

(2) The natural resources board shall review this report and, if they include recommendations for rule revisions, determine whether the department should proceed with actions based on the recommendations.

**WISCONSIN
PAPER
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AIR MANAGEMEN

June 19, 2003

MEMORANDUM TO: Natural Resources Board

FROM: Edward J. Wilusz
Director, Government Relations

SUBJECT: NR 446 – Control of Mercury Air Emissions

You will be asked to give final approval, on June 25, to significant revisions to NR 446 relating to the control of mercury air emissions. The final rule would require a 40% reduction in mercury emissions from major utilities by 2010 and an 80% reduction by 2015.

The Wisconsin Paper Council does not oppose NR 446. Removal of the industrial emissions cap was very positive and addressed our major concern. Another significant concern is the likely increase in energy costs that would result from mercury controls on the major utilities. However, our assessment using information currently available indicates that costs for the first phase of NR 446 could be incurred regardless of NR 446 due to forthcoming federal requirements such as the utility boiler MACT and/or legislation like the Clear Skies initiative. The impacts of the second phase of NR 446 are less clear and we strongly urge the Board to strengthen the state-federal reconciliation requirements in the rule. Finally, we are committed to working with the Department and others on a voluntary energy efficiency initiative aimed at reducing mercury emissions, both directly and indirectly. The following discussion expands on these issues.

As an initial matter, we have always questioned the benefits of a state-only mercury reduction rule. Mercury air deposition is a global phenomenon. Local actions are expensive and will likely have little, if any, direct benefit on aquatic resources in Wisconsin. The state would do well to wait for national action that could address emissions on a much broader scale, such as the federal utility MACT or Clear Skies legislation.

Removal of the emissions cap on industrial and small utility sources was entirely appropriate. Industrial boilers are already proposed to be regulated for mercury under the federal industrial and commercial boiler MACT. A cap on industrial sources would effectively limit economic growth at affected facilities or drive these facilities to convert to natural gas, a very costly and potentially unreliable option. Industrial boilers are much smaller than major utility boilers and operate in fundamentally different ways – controls, if needed to meet a cap, are untested on these sources and would be extremely expensive. A voluntary energy efficiency initiative, in cooperation with the DNR, is a much better alternative that provides a potential win-win situation.

Costs associated with the rule are a significant concern. The paper industry is facing serious global competitive challenges. Reducing costs is the top priority of the industry. It is very important that the state not take actions that would increase the cost of doing business in Wisconsin compared to other states and countries.

Mercury emission controls for utility sources will be costly. Using the methodology used by the Department to estimate costs, we estimate that the first phase of the rule could cost the paper industry \$3.1-3.6 million annually and the second phase could cost our members \$10-12 million annually. These are significant cost increases. However, in assessing the potential cost impacts of NR 446, we must consider the likely impacts from federal regulation that will be incurred regardless of NR 446.

Based on the information that is available, we anticipate that the federal utility MACT, scheduled for proposal by EPA this fall and promulgation in 2004, could require mercury reductions from major utilities that are in the same range as those proposed in NR 446. Assuming no significant delays due to legal challenges, the federal mercury control requirements could be similar to or slightly more stringent than the requirements in phase one of NR 446. Federal mercury control regulations may or may not be as stringent as phase two of NR 446. As a result, cost increases associated with phase one of NR 446 could be incurred under federal regulation, regardless of NR 446. The potential cost increases under phase two compared to federal regulation are much less clear.

To address potential cost concerns associated with NR 446, the state-federal reconciliation requirements should be strengthened. As drafted, the rule requires DNR staff to report on new federal mercury control regulations or laws, and how to reconcile any federal action with NR 446, within six months of the federal action. (Note – Webster defines “reconcile” to mean “settle, resolve <ifferences>” and “make consistent, congruous”.)

Memo to Natural Resources Board
NR 446 – Control of Mercury Air Emissions
June 19, 2003
Page 3

However, the staff report may include other, unspecified recommendations instead of code changes. Also, the Board may choose to not make code changes, even if code changes are recommended by staff. We strongly urge that the language in NR 446.12(2) & (3) be strengthened to clearly require that NR 446 be reconciled with federal regulations or laws. This will assure consistency with other states and prevent Wisconsin from becoming a higher cost regulatory island. As long as there is consistency, Wisconsin companies will be on a level playing-field with companies in other states – at least relating to energy costs associated with mercury controls.

We hope you find these comments useful. Please contact us with any questions.

ss

cc: Secretary Scott Hassett, Department of Natural Resources
Lloyd Eagan, Department of Natural Resources



Wisconsin Utilities Association
44 East Mifflin Street, Suite 202
Madison, Wisconsin 53703

To: Interested Parties

From: Bill Skewes, Executive Director
Wisconsin Utilities Association

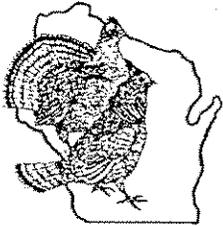
Date: June 20, 2003

Re: DNR Mercury Rulemaking

On behalf of Wisconsin's investor-owned gas and electric utilities and Dairyland Power Cooperative (DPC), the Wisconsin Utilities Association (WUA) continues to support reductions in emissions of mercury by coal-fired utility boilers, as a "bridge" to pending federal rules and/or legislation, consistent with the DNR's stated intentions.

While WUA and DPC support mercury emission reductions, the following modifications to the rule need to be made related to the timing of reductions, federal consistency, baseline determinations, credit for early reductions and recognition of specific multi-emission cooperative agreements:

- 1.) Rather than specifying the exact years in which the reductions will take place, the rule should, instead, specify the number of years between implementation of the rule and the cap and phased reductions, such as five, 10 and 15-year increments.
- 2.) Consistent with statutory provisions that federal standards will control, clarify that the rule does not apply to sources subject to federal mercury emission standards. Specify that it is in effect only in the absence of a federal MACT or other mercury regulation.
- 3.) The multi-pollutant alternative should also be available in the second phase of the rule implementation, not just the first phase and should recognize existing cooperative agreements on multi-emission reductions.
- 4.) Establish the ability to receive and bank credits for reductions that occur after the baseline period and before the rule limits are in effect and bank credits for reductions that are in excess of the rule requirements.
- 5.) Credit should be given for early voluntary reductions in the determination of baselines.
- 6.) The determination of the second phase of reduction level should not be specified. Rather, it should be established based on a review of current technology after the first phase has been achieved, in consultation with affected utilities.
- 7.) Additional revisions are needed to provide more flexibility in addressing various technical issues and to reduce administrative burdens.



Wisconsin Wildlife Federation

720 ST. CROIX ST., SUITE 101, PRESCOTT, WI 54021 • (715) 262-9279 • 1-800-897-4161

AFFILIATED WITH NATIONAL WILDLIFE FEDERATION

Testimony before the Natural Resources Board for Mercury Air Emission Reductions

Good afternoon Secretary Hassett, Mr. Vice-Chair and Members of the Board. The Wisconsin Wildlife Federation would like to thank you for the opportunity to testify on this important new health regulation. The Wildlife Federation is the largest conservation organization in Wisconsin made up of 82 hunting, fishing and trapping groups located throughout the State of Wisconsin. We are also the Wisconsin affiliate of the National Wildlife Federation.

The Wisconsin Wildlife Federation was one of the initial petitioners for mercury emission reduction rules. While we are testifying in support of the rule, in all candor, we believe that the rule does not go nearly far enough to protect Wisconsin citizens. We respectfully request that you strengthen the rules by increasing the rate of emission reductions to 90%, basing the reductions on actual current emissions rather than coal content and restoring the 150% offset for future increased mercury emissions.

This is a health issue to our members. They are very active anglers and they are concerned that the fish that they bring home to their spouses and children are heavily contaminated by mercury. They are concerned that studies by the National Academy of Science and the Center for Disease Control indicate that 1 out of 12 women in the United States have blood mercury levels in excess of that deemed safe from a health standpoint and that 60,000 children born each year in the United States may have their health impaired by the presence of mercury in their bodies. The source of mercury in most humans is the ingestion of fish contaminated with mercury. You have the responsibility to act to reduce this health hazard to Wisconsin citizens.

Some will argue for no or weak mercury regulations in Wisconsin because of potential adverse economic impacts to business. However the absence of strong mercury regulations is very harmful to the many small resorts, bait shops, gas stations and restaurants that depend on fishing for their tourism business. The traditional first question to resort owners is: How is the fishing? The current second question is now: What is the fish advisory on your lake? Businesses should not be able to harm human health or the livelihood of other businesses by emitting dangerous pollutants into the air. Furthermore during my thirty-two years experience in environmental protection, those dire projected business costs have never borne out.

You will hear from some that Wisconsin should not act because state emissions are a small percentage of total global emissions. That ignores the fact that Wisconsin sources

contribute the substantially highest percentage of the mercury that falls in our waters. If we reduce our emissions we can make a significant contribution to the reduction of mercury in our lakes and streams. Secondly, the Federation does advocate for strong federal regulations to improve the health of our citizens---stronger than those currently proposed by the Federal Administration. How can Secretary Hassett or the Wisconsin Congressional delegation fight for tough new federal regulations for Wisconsin citizens if Wisconsin does not act or if it only adopts a 60 % to 65% mercury reduction level--- which is the actual reduction of mercury in the rule before you today-----it is not an 80% reduction or the 90% reduction so strongly called for by the public at the hearings on this rule.

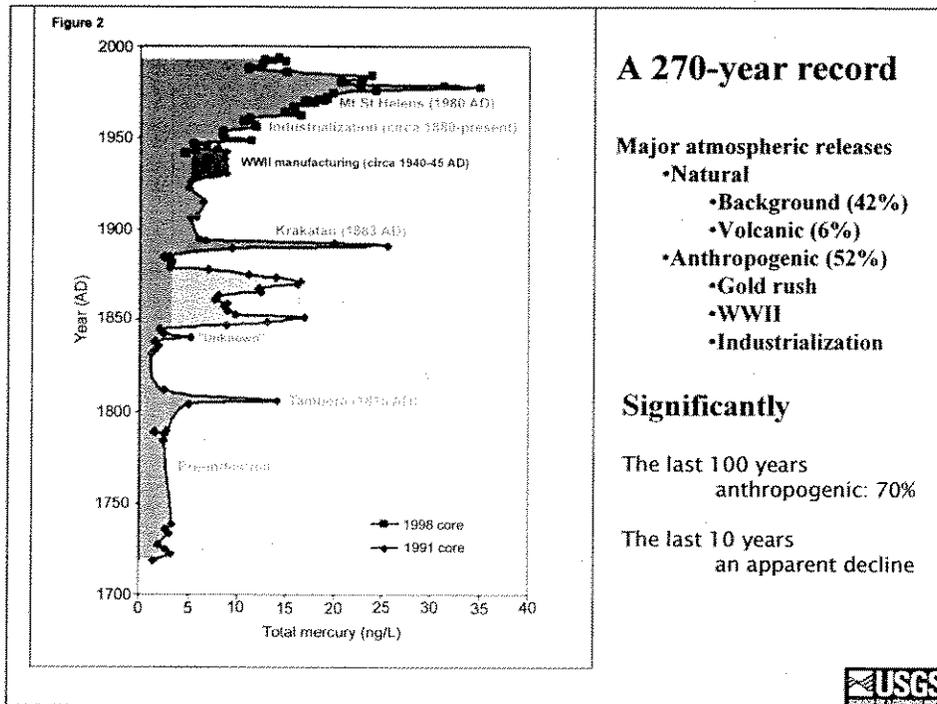
In the similar situation in 1986, Wisconsin led the nation by adopting strong acid rain regulations. Not only did they work well in Wisconsin from both an environmental and economic standpoint, they became the model for the acid rain provisions of the Clean Air Act Amendments of 1990. That is the opportunity and I would argue the responsibility that you have before you today.

You are not alone in making this decision. Both the states of Connecticut and North Carolina have adopted mercury emission reduction provisions more protective of human health than those before you today.

The Wisconsin Wildlife Federation, while supporting the proposed rule, strongly requests you to modify its provisions by requiring the reduction of mercury emissions by 90% of the current emissions and by requiring the offset of 150% for new mercury emissions.

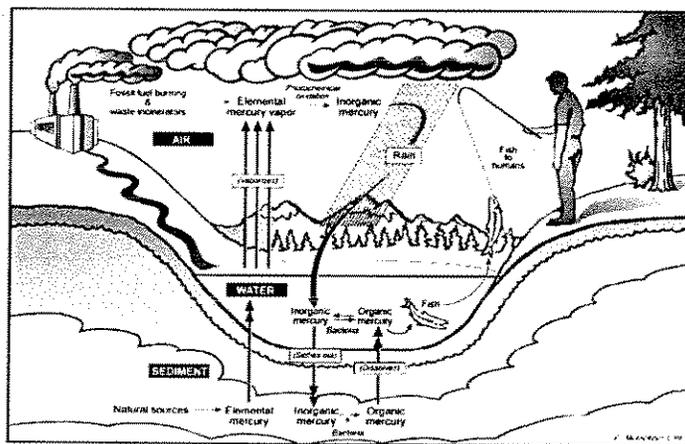
In conclusion, in April of this year, 82% of Wisconsin voters spoke loudly by adopting the Constitutional Amendment for the Right to Fish. Two weeks ago one of my members said to me, "you know, when we adopted the constitutional right to fish, I thought that included the right to eat the fish." It is up to you to determine whether our rights include the right to eat our fish.

Overview of Mercury Contamination of the Environment



Ice cores from glacier in Wind River range in Wyoming. Note significant events detected - Mt. St. Helens - WWII - Gold Rush. Pre-industrial level of mercury and rise in anthropogenic mercury in the last 100 years.

The Mercury Cycle



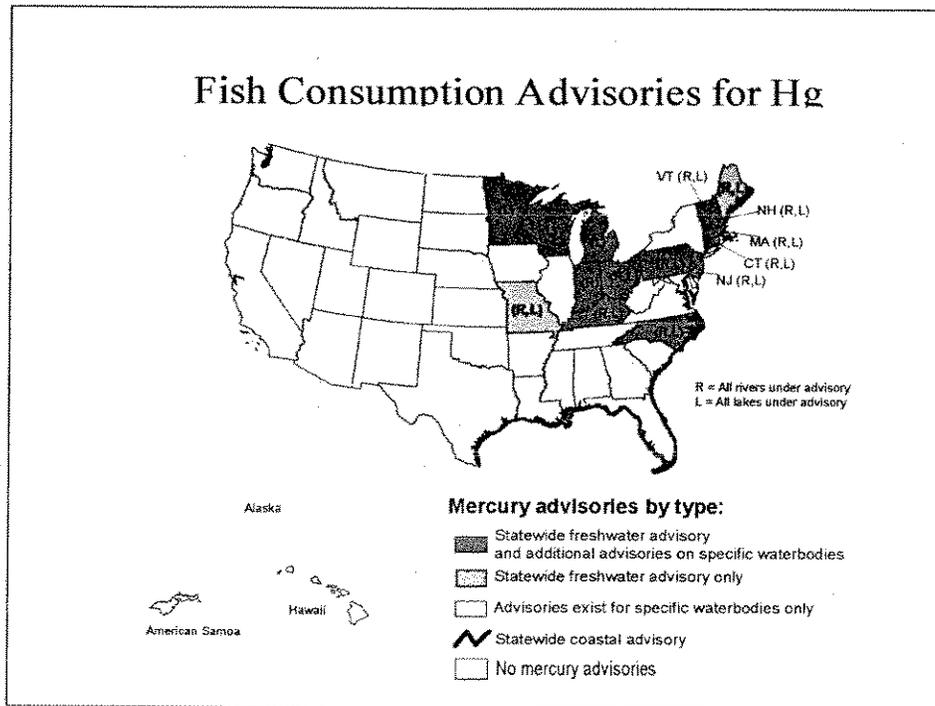
Today, atmospheric deposition is the most significant source of mercury into our waterways.

Mercury moves through the environment and can contaminate the food chain posing a serious threat to ecosystem health. Mercury from natural and anthropogenic sources is released to the atmosphere, where it is transported and may be deposited in terrestrial and aquatic ecosystems. Bacterial action in lakes and waterways converts a portion of this inorganic mercury to a more toxic organic form, methylmercury, which bioaccumulates in fish.

Bioaccumulation is the build-up of a substance in an organism from the surrounding air or water, or through the consumption of contaminated food.

Elevated methylmercury levels may lead to a decline in wildlife populations and may affect human health from the consumption of sufficient quantities of contaminated fish. Fish consumption is the most significant exposure route.

Fish Consumption Advisories for Hg



With few exceptions all but a handful of states have advisories for some or all of their water bodies.

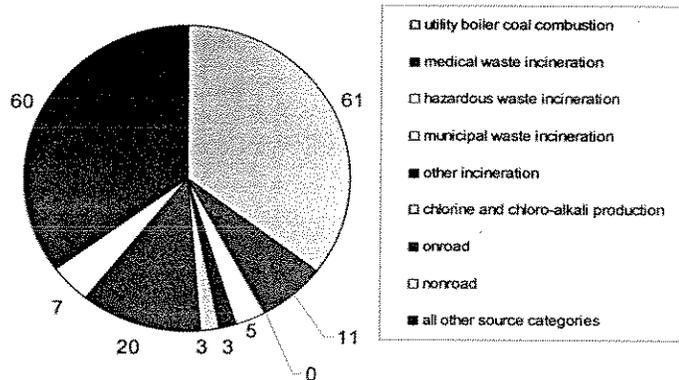
West Virginia and Maryland also have fish advisories.

Mercury Emission Trends

- 1990's increase coal combustion at electric utilities - decrease in coal use by industry
- Recent significant decline from medical waste and municipal waste incineration - federal regulations
- Chlor-alkali plants - steep mercury use reductions - recent MACT proposed
- Product related emissions from incineration, steel production, spills, landfills, and sewage sludge remain

Incinerator reductions on the order of 100 TPY in 1990 to 16 TPY in 1999.

Estimated 1999 Mercury Emissions for the Lower 48 States Based on the 1999 National Air Toxics Assessment Emissions Inventory (171 tons / year)



Utility Boilers - Slight increase in the 90's from 51 to 61 tons.

Other Category - Includes numerous point sources such as industrial and commercial combustion boilers, manufacturing operations, solid waste disposal and other combustion sources. Also, includes area sources such as open burning, landfills, fluorescent lamp breakage, and health care.

On-road and Non-road - Vehicle operation and fuel. Mobile source inventory is increasing due to better information.

Mercury Use Trends and Releases

- Mercury use in paint, fungicides and most batteries eliminated - 100 TPY 1990 to Zero
- Use in lamps, thermostats, thermometers, manometers, and auto switches eliminated or declining - large in-use inventory a concern
- Dental amalgam impact on the environment is significant

Little Rock Lake Response Summary

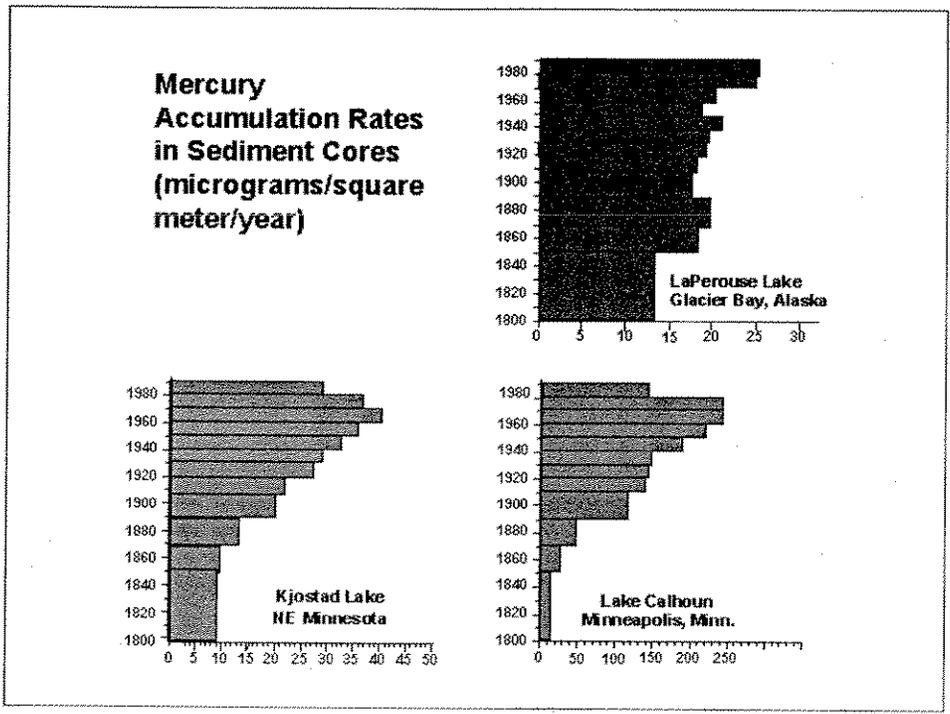
	Time Period	Average Rate of Change (% per year)
Atmospheric Sulfate Deposition	1988-2000	-4
Lake Water Sulfate Concentration	1988-2000	-5
Atmospheric Hg Deposition	1995-1999	-10
Lake Water Hg Concentration	1995-1999	-5
Yellow Perch Hg	1994-2000	-5

Mercury reduction actions that have already been taken are improving the environment.

Preliminary findings indicate that lakes may respond more rapidly to changes in atmospheric deposition of mercury than the decline in acidity from the reduction sulfur dioxide emissions. Promising indication that ambient air reductions lead to reduced lake mercury content as well as reduction of mercury in fish tissue.

Other states are also detecting some local improvement.

The decrease in atmospheric mercury deposition may be the result of a ban on mercury in house paint, removal of mercury from batteries, or the closure of the Copper Range smelter located in White Pine, Michigan. Study will continue.



By taking core samples of lake sediments and analyzing them for mercury, MPCA and Science Museum scientists can estimate where the mercury came from and begin tracking trends in mercury contamination.

A recent study indicates that less mercury is getting into Minnesota lake sediments than in the past, while studies in Alaska show that mercury from global sources is continuing to rise. If this increase in global mercury continues without corresponding local and regional decreases, mercury contamination in Minnesota fish will also rise.

Remaining Reduction Possibilities

- Electric Utilities
- Steel Scrap
- Chlor-alkali Plants
- Industrial Boilers
- Products - Manufacture and Recycling
- Dental Amalgam

Electric Utilities

Steel Scrap - recycling of appliances and autos with mercury containing switches.

Chlor-alkali - the end of mercury cell technology than tons of mercury for storage. Maine to Wisconsin example.

Industrial Boilers - Pending MACT would achieve minimal additional reductions.

Products - Some products still manufactured that are not essential uses. Significant issue is managing end-of-life for products - e.g. thermometers, thermostats, switches, and relays.

Dental Amalgam - significant source of mercury to the environment. Need Best Management Practices and Separators.

**September 18, 2000, Citizen Petition for Adoption of
Administrative Rules to Govern Mercury Emissions**

DATE: September 18, 2000

TO: Natural Resources Board

FROM: George E. Meyer

SUBJECT: Petition for the Adoption of Rules to Govern Mercury Emissions to the Air and Specifically Requiring Reductions from the Largest Sources of Mercury Emissions Which Contribute to Mercury Deposition to Wisconsin Lakes and Rivers

On May 18, 2000, the Department received a petition under s. 227.11(2)(a) and 227.12, Wis. Stats., to adopt rules requiring reductions in mercury emissions to the air. The petition, signed by several legislators and representatives of a number of environmental organizations, conservation groups and sportsmen clubs, asked the Department to conduct rule-making to "require the reduction of mercury emissions to the air, which are subsequently deposited in surface waters and bioconcentrate in game fish, from the largest known sources of such emissions".

On September 18, 2000, the Department received an amended petition signed by additional petitioners and advancing the deadline date for achieving emission reductions of mercury of at least 90% by 20 10 (compared to 2015 as requested in the original petition).

Under s. 227.13, Wis. Stats., the Department is required, within a reasonable period of time after receipt of the petition, to deny the petition in writing or to proceed with the requested rule-making. The Department staff is reviewing the petition, as recently amended, and expects to make a presentation to the Board at its October, 2000 meeting and a recommendation for Department action on the petitions. .

The original petition and the amended petition are attached for your information and as background for the Department staff's presentation and recommendation at next month's Board meeting. .

Attachments

Before The State of Wisconsin Department of Natural Resources

PETITION BY CITIZENS FOR THE ADOPTION OF RULES TO GOVERN MERCURY EMISSIONS TO THE AIR AND SPECIFICALLY REQUIRING REDUCTIONS FROM THE LARGEST SOURCES OF MERCURY EMISSIONS WHICH CONTRIBUTE TO MERCURY DEPOSITION TO WISCONSIN LAKES AND RIVERS

Citizen Petition for Rules Docket No. _____

TO : Secretary of the Department of Natural Resources, and the Natural Resources Board
P.O. Box 7921
Madison, Wisconsin 53707

The undersigned citizens of the State of Wisconsin hereby petition the Wisconsin Department of Natural Resources (WDNR) and the Natural Resources Board to conduct rulemaking to adopt administrative rules which require the reduction of mercury emissions to the air, which are subsequently deposited in surface waters and bioconcentrate in game fish. from the largest known sources of such emissions under the authority given to the Department in section 285.11 (9) Wis. Stats.

This petition is filed pursuant to the provisions of 227.11 (2) (a) and 227.12 (1) and (2) , Wis. Stats., and Wisconsin Administrative Code NR 2.05. A petition for rulemaking must state the substance or nature of the rule requested, the reason for the request, the petitioners' interest in the requested rule, and a reference to the agency's authority to promulgate the requested rule, 227.12 (2), Wis. Stats. This petition fulfills these requirements and describes why rules are urgently needed.