

June 7, 2007

To: Robert Eckdale, Bureau of Air Management, Wisconsin Department of Natural Resources

From: Michael Miller, Director, Environmental Programs, Electric Power Research Institute

Cc: Members of the Wisconsin Natural Resources Board:

Ms. Christine L. Thomas, Chair
Mr. Jonathon P. Ela, Vice-Chair
Mr. John W. Welter, Secretary
Mr. David Clausen
Mr. Gerard M. O'Brien
Mr. Howard D. Poulson
Ms. Jane Wiley

Wisconsin Department of Natural Resources:

Mr. Scott Hassett, Secretary
Mr. Allen Shea, Division Administrator-Air and Waste
Mr. Kevin Kessler, Bureau Director-Air Management

Reference: AM-32-05, Revisions to chs. NR 440 and 446, Wisconsin Adm. Code, related to the establishment of provisions for major electric generating units in Wisconsin to comply with the Clean Air Mercury Rule promulgated by the U.S. Environmental Protection Agency

Dear Mr. Eckdale:

The Electric Power Research Institute (EPRI) is pleased to submit material for your consideration as you explore options for controlling mercury from the electric power sector in Wisconsin. Our organization has been conducting research on all aspects of the environmental sources, fate, effects and control technology related to mercury for more than 20 years. Our total investment has been between \$10-20 million per year during this period.

EPRI was established in 1973 as an independent, nonprofit center for public interest energy and environmental research. EPRI brings together member organizations, the Institute's scientists and engineers, and other leading experts to work collaboratively on solutions to the challenges of electric power. These solutions span nearly every area of power generation, delivery, and use, including health, safety, and the environment. EPRI's members, including those in Wisconsin, represent over 90% of the electricity generated in the United States. Much of our research, including that on mercury, is leveraged with state and federal organizations. In fact, the Wisconsin Focus on Energy recently cofunded some of EPRI's mercury research.

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In the last several years, much of EPRI's research has been focused on clarifying the environmental and health consequences that will ensue from regulation of U. S. electric power generation mercury emissions and the decline of those emissions over time. Recently we have examined the public health benefits of states or federal agencies applying stricter controls levels than would follow from implementation of the U.S. EPA's Clean Air Interstate Rule and the Clean Air Mercury Rule. In parallel, EPRI has joined with the U.S. Department of Energy, the utility industry and equipment vendors in the development, testing and demonstration of effective and predictable mercury controls for coal-fired generation units.

Based on the research programs of EPRI and others, many of which are still ongoing, some of the most important findings are the following:

1. Data show that mercury exposure in women of child-bearing age, including members of minority groups, have declined over the past decade while fish consumption has increased.
2. Controls of mercury more stringent than the EPA 70% national level appear to have diminishing returns in terms of reduced mercury deposition and reductions in risk, primarily due to international mercury transport from Asia and the form of mercury remaining in power plant emissions after reaching the EPA target.
3. EPRI cannot yet say with confidence that 90%-effective mercury control technologies are commercially available at this time for all power plants.
4. Results of EPRI modeling analyses specific to the State of Wisconsin and reported to the state in 2002 showed that mercury emissions from all state sources contribute less than 25% of the mercury deposition in Wisconsin, and that Wisconsin utilities contribute less than 10% to total deposition.

These points are expanded upon in several documents that have been enclosed with this letter and submitted to your docket. These materials include recent testimony (oral and written) by Dr. Leonard Levin of EPRI's staff to the Subcommittee on Clean Air and Nuclear Safety, Committee on Environment and Public Works, United States Senate on May 16, 2007. In addition, I have enclosed 6 Issue Briefs on mercury covering sources of mercury; atmospheric transport; emissions and anticipated benefits of reductions; health effects and exposure risks; the potential for mercury hotspots; and controls. You can also visit EPRI's web site for more information (www.epri.com).

Thank you for this opportunity to provide a short summary of some of EPRI's mercury research for your consideration. As a former Wisconsin resident and graduate of the University of Wisconsin-Madison I take great pride in the accomplishments of the state and its environmental policies. Please feel free to contact me for further information (mmiller@epri.com).