



The Clean Air Mercury Rule: Weak Control Standards For Coal-Fired Power Plants Mercury Backgrounder

Mercury is a developmental toxin, primarily affecting fetal development.¹ At higher doses, it can also have serious health effects on adults. The primary exposure pathway for most Americans is through consumption of fish with high levels of methylmercury, the toxic form of mercury that accumulates in fish and shellfish and the animals that eat those fish, including humans.² This becomes alarming when put into context: In 2004, forty-seven states and territories had fish consumption advisories for mercury for at least some of their waters.³ Moreover, in January 2004, the EPA estimated that one in six U.S. women of childbearing age has mercury levels in her blood high enough to put her baby at risk.⁴ That means approximately 630,000 newborns are at risk each year.⁵ A study at Mt. Sinai Medical Center sponsored by the National Institute of Environmental Health Sciences valued the impact of mercury from American power plants on developing fetuses at \$1.3 billion a year.⁶

Coal-fired power plants are the largest single man-made source of mercury pollution⁷ and the largest unregulated source of mercury in the United States. Mercury is not a by-product of combustion. Rather, very small amounts of mercury are present in coal, and are vented through the exhaust system when the coal is burned.

There are commercially available technologies in use today, such as activated carbon injection, which achieve more than 90 percent emissions reductions from coal-fired power plants over uncontrolled levels.⁸ And the cost is affordable—estimates predict that installing technology to capture 90 percent of mercury emissions from coal-burning power plants would amount to a 1 to 3 percent increase in monthly electric bills.⁹ This cost translates to the cost of a cup of coffee per month for residential users, or \$1 to \$3 in the worst case scenario, depending on the state.¹⁰

In addition to being affordable and relying on available technology, studies have also proven that cleaning up mercury pollution is feasible. In 2003, the Florida Department of Environmental Protection released the findings of a decade-long study of mercury in southern Florida and Everglades. The study found that tough regulations of mercury pollution from medical and municipal waste incinerators helped remove this toxic pollutant from the environment and the food chain.¹¹

1990 Clean Air Act Amendments

Under the Clean Air Act Amendments of 1990, EPA is required to conduct studies of mercury and other hazardous air pollutants released from coal fired power plants and then decide whether to regulate this pollution with "MACT" (Maximum Achievable Control Technology) rules under section 112 of the Clean Air Act. After completing the studies, in 2000 EPA found that power plants emitted so much toxic mercury pollution that they should be regulated under these MACT standards.¹² Under a settlement agreement¹³, EPA was required to propose a utility MACT by December 2003, finalize it by December 2004, and fully implement it by December 2007.¹⁴ MACT standards automatically carry a deadline requiring existing facilities to comply three years after promulgation with the possibility of one-year extensions.

In December 2001, EPA presented information to the Edison Electric Institute indicating they believed that the MACT would result in a 90% reduction in mercury from power plants, from close to 50 tons per

year down to about 5 tons per year in 2008.¹⁵ This reduction would occur at every plant since there is no pollution trading allowed under the MACT provision.

FDA/EPA Fish Consumption Advisory

On December 10-11, 2003, the Food and Drug Administration's (FDA) Food Advisory Committee met for an update on the status of their previous recommendations to the FDA on methylmercury in fish and shellfish. At this meeting, the Food Advisory Committee issued a draft joint advisory that for the first time combined FDA's and EPA's advice into a single uniform advisory.¹⁶ The advisory is targeted to pregnant women, women who may become pregnant, and nursing mothers. It also mentions canned tuna for the first time, although unfortunately it fails to provide specific guidelines for safe consumption. In addition, the advisory indicates that children can be adversely affected by mercury in fish, but also fails to give specific guidelines on this matter. The advisory was finalized in March 2004¹⁷; unfortunately, at the same time the administration was moving forward with a proposal that undermines our current clean air laws and allows polluters to continue spewing toxic mercury into our air.

Federal Mercury Pollution Policy Leaves the Public at Risk and Ignores Science

On January 30, 2004, the EPA formally proposed a plan with a goal of reducing mercury emissions through two phases to 15 tons in 2018, and which allows pollution trading.¹⁸ This plan takes much longer and allows at least three times more mercury pollution for decades longer into our air than enforcement of current clean air laws allows. And according to EPA's own modeling analysis, this plan would not meet the 15 ton limit until 2030 or later (12 years behind schedule), and at best would only achieve less than a 50% reduction by 2020.¹⁹ The plan's cap-and-trade program may leave some communities at risk for more hazardous air pollution than others by creating "hot spots" of pollution. Also, although the administration has referred to this as a mercury reduction plan, it should include all hazardous air pollutants (HAPs) from power plants, not just mercury, because of the earlier EPA decision to regulate power plants as hazardous facilities.²⁰

Longtime EPA staff charge that high level administration officials ordered them to scrap the usual scientific and economic studies when drafting the mercury plan.²¹ Instead, the proposed mercury plan includes language copied directly from a report written by West Associates, an industry organization representing 23 large Western utility companies, including a suggestion for how to regulate mercury emissions from power plants. The group had presented the EPA with recommendations about mercury regulations and described the results of an analysis of mercury emission reduction scenarios in March 2003.²² The plan also includes verbatim language from a memo prepared by Latham & Watkins, a law firm representing Cinergy Inc and other utility companies with a stake in the rulemaking. Of note also is that both the former (Jeffrey Holmstead) and new (William Wehrum) EPA Assistant Administrator for Air and Radiation worked at Latham & Watkins before joining EPA.²³

Shortly after the draft rule was released and continuing throughout the year, the Children's Health Protection Advisory Committee—a body of experts including researchers, health care providers, and advocates—began sending a series of letters to the EPA expressing their concerns that the rule was not protective enough of children's health.²⁴ The Committee repeatedly, and unsuccessfully, asked EPA to conduct further cost and health effects analyses before finalizing any mercury plan.

In February 2005, the EPA's Inspector General released a report revealing that the administration overlooked health effects and sided with the utility industry in developing rules for cutting toxic mercury pollution.²⁵ According to EPA's Inspector General, the proposed mercury emissions rule for coal-burning power plants was written without following the requirements of the Clean Air Act.

Later that month, the nonpartisan Government Accountability Office said that the U.S. Environmental Protection Agency distorted its analysis of the controversial proposal to regulate mercury emissions from power plants, so that it appeared that the market-based approach was superior to other proposals.²⁶ In its report, the GAO said that EPA did not completely document the impact of toxic mercury on brain development, learning and neurological functioning. The GAO urged EPA to fix these problems before taking final action on the mercury rule, but EPA did not.

On March 15, 2005, EPA finalized the mercury rule, known as the Clean Air Mercury Rule (CAMR), staying close to their original proposal.²⁷ In finalizing the rule, EPA did not address concerns raised by the February reports, nor did it address additional health issues raised by an EPA-funded study out of Harvard University.²⁸ Moreover, at the same time it proposed CAMR, the EPA also reversed its 2000 finding that power plants are sources of hazardous pollutants and “delisted” them from requirements under MACT regulations.²⁹ This underhanded move allowed EPA to propose weaker mercury standards than called for under the Clean Air Act.

Following the introduction of the problematic final mercury rule, several states, tribes, and environmental groups petitioned the EPA for reconsideration of both CAMR and the delisting, which led to a new public comment period beginning in October 2005.³⁰ However, on May 31, 2006, the EPA issued a rule which upheld CAMR with only a few technical changes and refused to reconsider the delisting decision.³¹ The final rule made no significant improvements and ignored the concerns raised by the petitioners.

States Take the Lead on Mercury Pollution

Responding to the serious shortfalls under the Clean Air Mercury Rule, many states have taken steps to avoid the EPA’s weak controls by enacting their own tough mercury standards. The more ambitious of these state plans will require 90 percent mercury reductions from coal-fired power plants and will achieve the reductions in a much shorter time than the federal plan. All states—whether adopting the federal CAMR or their own standards—have until November 17, 2006 to submit their plans to the EPA for review.

Updated July 2006

¹ Agency for Toxic Substances and Disease Registry, “ToxFAQs for Mercury.” April 1999.

² U.S. Environmental Protection Agency, “Frequent Questions About Mercury.” Updated July 11, 2006. Available at <http://www.epa.gov/mercury/faq.htm>

³ U.S. Environmental Protection Agency, Office of Water, “2004 National Listing of Fish Advisories,” September 2005. EPA-823-F-05-004.

⁴ U.S. Environmental Protection Agency, “Methylmercury: Epidemiology Update.” Presentation by Kathryn Mahaffey, PhD at the National Forum on Contaminants in Fish, San Diego, CA. January 25-28, 2004. Available at <http://www.epa.gov/waterscience/fish/forum/2004/presentations/monday/mahaffey.pdf?src=QHA022>

⁵ Ibid.

⁶ Leonardo Trasande, MD, MPP, Philip J. Landrigan, MD, and Clyde Schechter, MD “Public Health and the Economic Consequences of Methylmercury Toxicity to the Developing Brain,” *Environmental Health Perspectives*. 113(5):590-6. May 2005.

⁷ U.S. Environmental Protection Agency, Fact Sheet, “EPA to Regulate Mercury and Other Air Toxics Emissions from Coal- and Oil-Fired Power Plants.” December 14, 2000. Available at http://www.epa.gov/ttn/oarpg/t3/fact_sheets/fs_util.pdf

⁸ Northeast States for Coordinated Air Use Management (NESAUM), “Mercury Emissions from Coal-Fired Power Plants.” October 2003. Available at <http://bronze.nescaum.org/airtopics/mercury/rpt031104mercury.pdf>

⁹ National Wildlife Federation, “Getting the Job Done: Affordably Achieving 90% Mercury Control from Power Plants.” October 2004.

¹⁰ Ibid.

¹¹ Florida Department of Environmental Protection, “Integrating Atmospheric Mercury Deposition with Aquatic Cycling in South Florida.” November 2003. Available at <http://www.dep.state.fl.us/secretary/news/2003/nov/1106.htm>

¹² U.S. Environmental Protection Agency, “Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units.” December 20, 2000. Federal Register, Vol. 65, No. 245, pages 79825-79831.

¹³ Natural Resources Defense Council v. U.S. EPA, No 92-1415 (D.C. Circuit)

¹⁴ U.S. Environmental Protection Agency, “Controlling Power Plant Emissions: Decision Process and Chronology,” accessed July 17, 2006 at http://www.epa.gov/mercury/control_emissions/decision.htm

¹⁵ U.S. Environmental Protection Agency, Presentation to Edison Electric Institute. December 4, 2001.

¹⁶ U.S. Food & Drug Administration, “Overview of the Draft FDA/EPA Methylmercury (MeHg) Consumer Advisory.” December 10-11, 2003.

¹⁷ U.S. Department of Health & Human Services and U.S. Environmental Protection Agency, “What You Need to Know About Mercury in Fish and Shellfish.” March 2004. EPA-823-R-04-005.

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- ¹⁸ U.S. Environmental Protection Agency, "Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units." Announced December 15, 2003 and published January 30, 2004. Available at <http://www.epa.gov/air/mercuryrule/rule.htm>
- ¹⁹ Congressional Research Service, "Mercury Emissions from Electric Power Plants: An Analysis of EPA's Cap-and-Trade Regulations." April 15, 2005. Available at <http://www.eenews.net/Greenwire/Backissues/images/042205gwr1.pdf>
- ²⁰ See above at reference 12.
- ²¹ Tom Hamburger & Alan C. Miller, "Mercury Emissions Rule Geared to Benefit Industry, Staffers Say," *Los Angeles Times*. March 16, 2004. Available at http://www.latimes.com/news/nationworld/politics/scotus/la-031604mercury,1,4123385.story?coll=la-news-politics-supreme_court
- ²² Eric Pianan, "Proposed Mercury Rules Bear Industry Mark," *Washington Post*. January 31, 2004.
- ²³ *Ibid*, see also reference 21.
- ²⁴ Letters available on the Committee's website at http://yosemite.epa.gov/ochp/ochpweb.nsf/content/whatwe_recomm.htm
- ²⁵ U.S. Environmental Protection Agency, Office of Inspector General, "Evaluation Report: Additional Analysis of Mercury Emissions Needed Before EPA Finalizes Rules for Coal-Fired Electric Utilities." February 3, 2005. Available at <http://www.epa.gov/oig/reports/2005/20050203-2005-P-00003.pdf>
- ²⁶ Government Accountability Office, "CLEAN AIR ACT: Observations on EPA's Cost-Benefit Analysis of Its Mercury Control Options." February 28, 2005. Available at <http://www.gao.gov/new.items/d05252.pdf>
- ²⁷ U.S. Environmental Protection Agency, "Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units," March 15, 2005. Available at http://www.epa.gov/air/mercuryrule/pdfs/camr_final_preamble.pdf
- ²⁸ Shankar Vedantam, "New EPA Mercury Rule Omits Conflicting Data," *Washington Post*. March 22, 2005.
- ²⁹ U.S. Environmental Protection Agency, "Controlling Power Plant Emissions: Decision Process and Chronology." Accessed July 17, 2006 at http://www.epa.gov/mercury/control_emissions/decision.htm
- ³⁰ *Ibid*.
- ³¹ *Ibid*.