


Report on the Mercury Emissions Petition



Environmental Quality Board
Meeting

Harrisburg, Pennsylvania

August 16, 2005



Petition for Rulemaking: Mercury Emissions From Electric Utilities

On August 9, 2004, Citizens for Pennsylvania's Future (PennFuture) filed a petition with the Environmental Quality Board on behalf of various organizations "requesting action to reduce the high emissions of mercury to the air from Pennsylvania's electric utilities."



Petition for Rulemaking: Mercury Emissions From Electric Utilities

- The petitioners requested:
 - A control program similar to the New Jersey mercury control program.
 - A limit of 3.00 mg/MW-hr or a mercury control level of at least 90%.



Environmental Quality Board Actions on the Mercury Petition

- October 19, 2004 - The EQB accepted the mercury rulemaking petition for evaluation pursuant to 25 Pa.Code, Chapter 23.
- October 30, 2004 – The EQB published notice of acceptance of the petition was published in the *PA Bulletin* (34 Pa. B. 5992) in accordance with the provisions of Chapter 23, Section 23.6.
- January 18, 2005 - EQB approved a 120-day extension for completion of the Department's report on the petition.



MERCURY HISTORY UNDER CLEAN AIR ACT

- 1990 Clean Air Act Amendments – Section 112
- Section 112(n) – HAPS from EGUs
- EPA February 1998 – Mercury is HAP of greatest concern from EGUs
- Federal Advisory Committee Act – Stakeholder Process which developed EGU MACT
- EPA’s December 20, 2000 finding that Mercury MACT is “necessary and appropriate”.



EPA's De-listing of Electric Generating Units under Section 112 of the CAA

On March 29, 2005, EPA revised its “appropriate and necessary” regulatory finding for the regulation of mercury emissions from coal-and oil-fired electric utility steam generating units as hazardous air pollutants under Section 112 of the CAA.

- EPA issued a final action removing electric generating units from the list of Section 112(c) sources subject to regulation under Section 112 of the CAA.
- New and existing coal-fired EGU units are now subject to requirements promulgated under Section 111 of the CAA.
- New Source Performance Standards established for new units
- Existing units are subject to the Emissions Guidelines/State Plan



EPA's Clean Air Mercury Rule

(70 FR 28606)

EPA's final Clean Air Mercury Rule (CAMR) promulgated under Section 111 of the CAA on May 18, 2005.

- CAMR Effective Date—July 18, 2005.
- CAMR Applicability—new and existing coal-fired electric steam generating units producing more than 25 MW of electricity for sale.
- Establishes the following compliance schedule:
 - 2010 National cap – 38 tons per year
 - 2010 PA Cap – 1.78 tons per year
 - 2018 National cap – 15 tons per year
 - 2018 PA Cap – 0.702 tons per year
- State Plans for existing EGUs due to EPA by November 17, 2006



DEP Concerns with EPA's Mercury Rule

- Mercury is a potent neurotoxin with significant adverse environmental and health impacts because of its accumulation in the food chain.
- EPA's final mercury rule does not require the “control technology” approach contemplated under the hazardous air pollutant provisions of Section 112 of the CAA.
- The federal mercury rule disadvantages bituminous and anthracite coals by requiring little or no control of mercury emissions from lignite and sub-bituminous coals.
 - The most stringent requirements were established for units burning waste coal.



DEP Concerns with EPA's Mercury Rule

- Sub-categorization or “coal ranking” provisions in EPA’s mercury rule leads to a direct bias against eastern bituminous and anthracite coals.
- EPA’s mercury rule allows fuel switching from bituminous and waste coals to sub-bituminous or lignite coals.
- With fuel switching, the atmospheric mercury emissions will increase—not decrease.
 - Bituminous Coal – more stringent mercury emission standards, greater mercury control efficiencies
 - Sub-bituminous Coal - lower mercury capture, less stringent emission standards



Petitions for Review Pending before the U.S. Court of Appeals, DC Circuit

- March 2005, DEP filed a petition for review challenging EPA's final actions:
 - Rescinding the “appropriate and necessary” finding to regulate mercury emissions from electric generating units under Section 112 of the CAA.
 - Removing electric generating units from the listing of sources subject to regulation under Section 112 of the CAA.
- May 2005, DEP “signed on” a joint petition for review challenging EPA's final mercury rule.
 - California, Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New Mexico, New York, Vermont and Wisconsin.



DEP's Report on the Petition for Rulemaking

- On May 18, 2005, DEP mailed to PennFuture the Department's report on the Petition.
- The report concludes:
 - Mercury is a persistent, toxic, bio-accumulative pollutant.
 - EPA's program adopted under Section 111 of the Clean Air Act is inadequate to protect the citizens of Pennsylvania and the environment.
 - The coal-fired units regulated under New Jersey's mercury rule are not representative of the coal-fired boilers operating in Pennsylvania.
 - Effective mercury control technology exists.
 - The DEP will recommend development of a Pennsylvania specific proposal to regulate mercury emissions from electric generating units.



Responses to DEP's Report on the Petition for Rulemaking

- On June 16, 2005, PennFuture submitted comments, on behalf of numerous co-petitioners, in response to DEP's May 18 report.
- On June 17, 2005, the National Wildlife Federation and its affiliate, the PA Federation of Sportsmen's Clubs submitted comments in response to the report.
- On July 27, 2005, Senators White and Musto and Representative Adolph sent a letter to Secretary McGinty expressing "serious concerns" with the Department's response to the petition.
- On August 10, 2005, Secretary McGinty responded to the legislative concerns and also clarified the Department's rationale for recommending a "Pennsylvania-specific regulatory approach to reduce mercury emissions from coal-fired units.



Responses to DEP's Report on the Petition for Rulemaking

- On August 2, 2005, the Electric Power Generation, PA Coal Association, International Brotherhood of Electrical Workers and United Mine Workers of America sent a letter to Secretary McGinty and EQB members expressing concerns with the mercury petition and DEP's response. These organizations:
 - Strongly believe that the federal requirements are adequate to reduce and control the risk of mercury exposure.
 - PA electric generation industry would be at a competitive disadvantage relative to units in states that implement the federal program
- A draft response to the August 2 letter has been prepared.



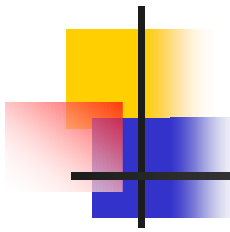
PennFuture's and Co-Petitioners' Response to DEP's Report

- PA's mercury rule should require a 90% control efficiency for new and existing units within three years of the final rule.
- NJDEP's rule should be adopted because the fleets are similar.
- Emissions trading between plants should not be allowed.
- The rule should ensure that coal burning in PA is "done in the cleanest, most efficient manner possible."
- New extraction and combustion of PA coal should not be a priority.



National Wildlife Federation and the PA Federation of Sportsmen's Clubs' Joint Response to DEP's Report

- The PA-specific mercury rule should:
 - Require a minimum of 90 percent control for coal-fired boilers within 3 years, or alternatively specify emission limits.
 - Not allow mercury trading between plants.
 - Include provisions to limit emission increases with growth.
 - Set output-based standards to encourage efficiency and incentivize clean technology.
 - Require continuous emissions monitors.
 - Prohibit non-utility reductions from being used to meet reduction targets.



Position of the PA Environmental Resources and Energy Committees

Development of a PA-specific mercury emission standard is not supported. Concerns include the following:

- An overriding concern with pursuing individual state action--mercury is a global problem.
- The DEP report omits a detailed analysis of the “no more stringent than” CAA requirements limitations imposed by the General Assembly.
- DEP’s regulatory approach exceeds the petitioners’ request.
 - The report also lacks an explicit recommendation concerning approval of the requested action.
- A comprehensive proposed rulemaking can not be developed by November 2005.



Highlights of Response to Petitioners' Comments on the DEP's Report

- Pennsylvania should develop a mercury rule appropriate for the Commonwealth rather than adopt a rule developed by the State of New Jersey.
- Cost effective levels of control would be established for new and existing units.
- Control levels would take into account source configurations of PA's units.
- The mercury rule would not set standards that are coal type specific.

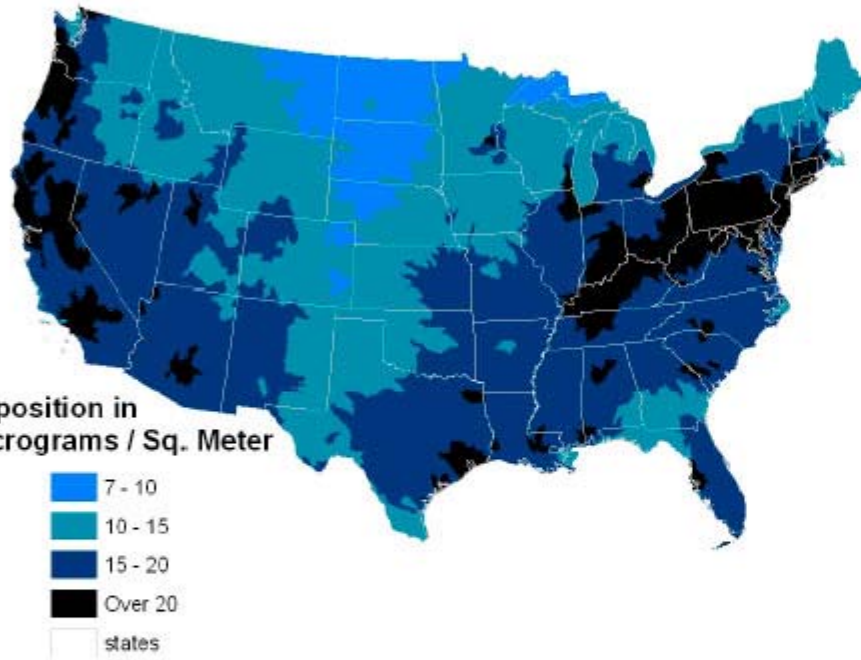


Health Effects of Mercury

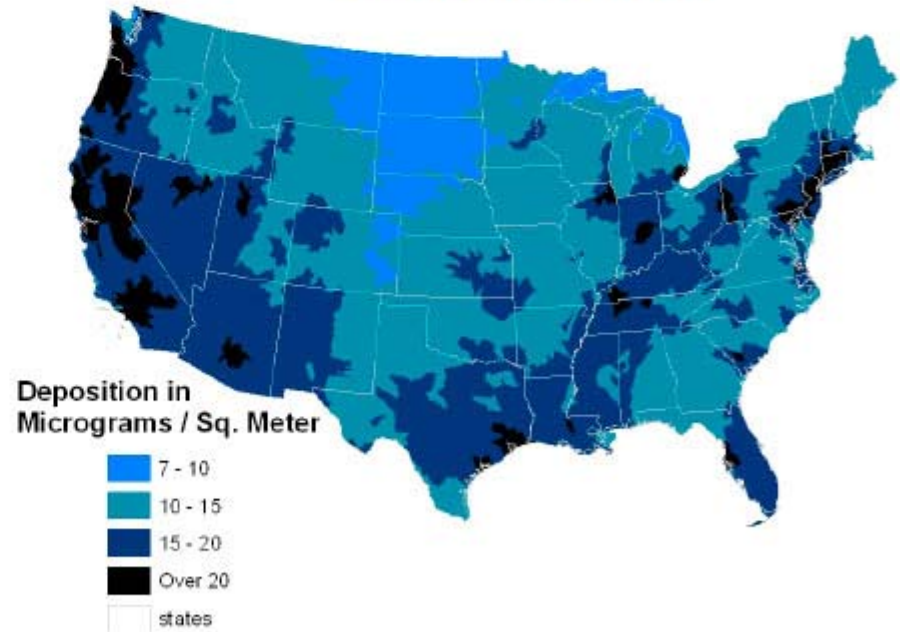
- Atmospheric mercury falls to Earth and can transform into methylmercury.
- Americans are exposed to methylmercury primarily by eating contaminated fish.
- The developing fetus is the most sensitive to the toxic effects of methylmercury
- Children exposed to methylmercury before birth may be at increased risk of poor performance on neurobehavioral tasks.
- Methylmercury exposure may also result in cardiovascular and other health effects.

Mercury Deposition in the U.S.

Deposition From All Sources in 2001

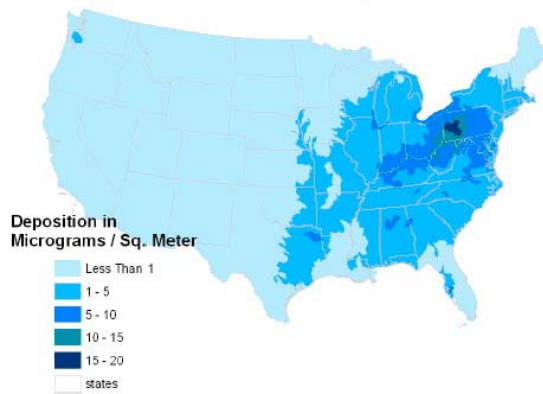


Deposition From All Non-Utility Sources in 2001

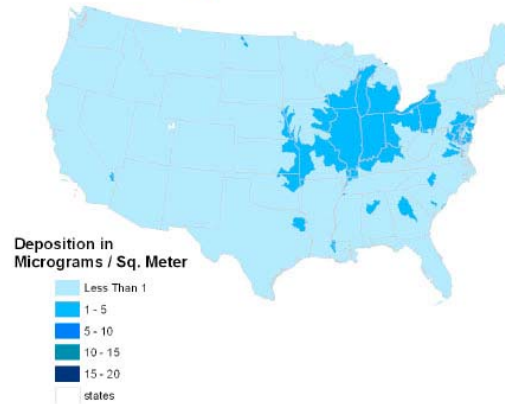


Power Plant Mercury Deposition

Deposition From Utility Sources in 2001

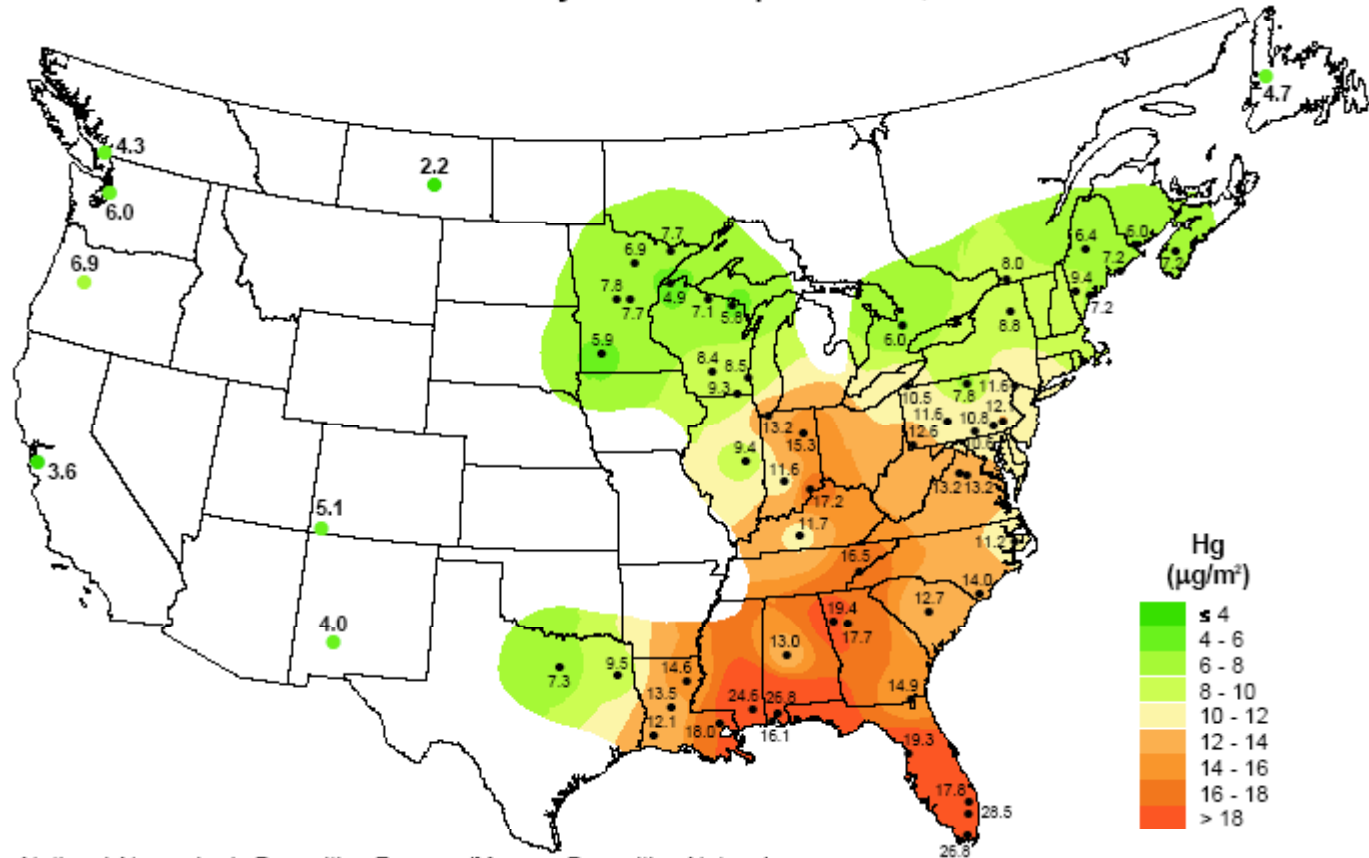


*Deposition From Utility Sources After
CAIR, CAMR, and Other Clean Air Act
Programs in 2020*



Source: U.S. EPA 2005

Total Mercury Wet Deposition, 2003



National Atmospheric Deposition Program/Mercury Deposition Network

DEP Recommendation



DEP recommends development of a PA-specific mercury regulation with significant stakeholder involvement. The rule development process would:

- Examine mercury emission reduction strategies.
- Encourage repowering with advanced clean-coal technologies by providing options for sources to be rebuilt.
- Encourage the burning of cleaner PA coal and concomitantly discourage fuel switching to dirtier coal types.
- Consider capacity and reliability concerns for delivery of power over the electric grid.



Thank You!

Thomas K. Fidler

Deputy Secretary, Office of Waste,
Air and Radiation Management

Joyce E. Epps

Director, Bureau of Air Quality

Robert Reiley

Office of Chief Counsel

John Slade

Bureau of Air Quality