

## FACT SHEET

### PROPOSED SUPPLEMENTAL RULE FOR REDUCING MERCURY EMISSIONS FROM POWER PLANTS

#### ACTION

- On February 24<sup>th</sup> 2004, the Environmental Protection Agency (EPA) proposed a rule supplementing its December 15, 2003 proposal to permanently cap and reduce mercury emissions from power plants.
- Today's supplemental proposal includes:
  - **Model cap-and-trade program** -- a program jointly administered by participating states and the EPA to cost effectively reduce mercury emissions from power plants.

In this supplement, EPA is proposing rule language for a cap-and-trade program that states can adopt to achieve and maintain a mercury emissions budget consistent with the rule signed on December 15. States may join the trading program by adopting or referencing the model trading rule in State regulations or adopting regulations that mirror the necessary components of the model trading rule. Today's supplemental proposal identifies the necessary common components of state rules and identifies EPA and state responsibilities for administering a mercury trading program. Today's notice also discusses the program elements of the model trading program, including applicability, allowance allocations, banking, compliance, and enforcement.

- **Monitoring and reporting requirements** -- methods to measure mercury emissions from new and existing coal-fired electric utility steam generating units. In today's rule, EPA proposes requirements for monitoring mercury emissions from utilities in states choosing to participate in the trading program.
- EPA will take comment on this proposal for 45 days after publication in the *Federal Register*.

#### BACKGROUND

- Mercury is a toxic, persistent pollutant that accumulates in the food chain. Fossil fuel fired power plants are the largest source of human-generated mercury emissions in the United States.
- Concentrations of mercury in the air are usually low and of little direct concern. However, atmospheric mercury falls to Earth through rain or snow and enters lakes, rivers

and estuaries. Once there, it can transform to its most toxic form, methylmercury, and accumulate in fish tissues.

- Americans are exposed to mercury primarily by eating contaminated fish. Because the developing fetus is the most sensitive to the toxic effects of methylmercury, women of childbearing age are regarded as the population of greatest concern. Children who are exposed to low concentrations of methylmercury prenatally are at increased risk of poor performance on neurobehavioral tasks, such as those measuring attention, fine motor function, language skills, visual-spatial abilities, and verbal memory.
- Because many types of fish are caught and sold globally and mercury can be transported thousands of miles in the atmosphere, effective control of exposure will require reductions in global emissions. Recent estimates, which are highly uncertain, of annual total global mercury emissions from all sources, natural and anthropogenic (human-generated), are about 5,000 to 5,500 tons per year. U.S. anthropogenic mercury emissions are estimated to account for roughly 3 percent of the global total, and U.S. power sector are estimated to account for about 1 percent the total global emissions.
- The U.S. has reduced its anthropogenic mercury emissions by more than 40 percent since 1990. This is important because EPA estimates that about half of the mercury deposited in the U.S. comes from U.S. sources including coal-fired power plants.
- On December 15, 2003 rule, EPA proposed three alternatives for controlling emissions of mercury from utilities. The alternatives include:
  1. Proposed rule requiring utilities to install controls known as “maximum achievable control technologies” (MACT) under section 112 of the Clean Air Act. If implemented, this alternative would reduce nationwide emissions of mercury by 14 tons (29 percent) by the end of 2007, from 48 tons to 34 tons annually.
  2. As part of this rulemaking, EPA has requested comment on an alternative mercury cap-and-trade program [under Clean Air Act section 112(n)]. This would be a federally run program. The trading program requirements would be similar to the section 111 program described below.
  3. Proposed rule establishing “standards of performance” limiting mercury emissions from new and existing utilities. This proposal, under section 111 of the Clean Air Act, would create a market-based cap-and-trade program that, if implemented, would reduce nationwide utility emissions of mercury in two distinct phases. When fully implemented, mercury emissions would be reduced 33 tons (69 percent), from 48 tons to 15 tons annually. Under this alternative, states would submit a plan to EPA for running a trading program. With EPA’s approval of their plan, the states would allocate allowances to sources and states and EPA would share responsibility for

administering the program.

- EPA also proposed to revise its December 2000 finding that it is “appropriate and necessary” to regulate utility hazardous air emissions using the MACT standards provisions (section 112) of the Clean Air Act. This action would give EPA the flexibility to consider a more cost effective way to control mercury emissions.
- In a separate but closely related action known as the “Interstate Air Quality Rule,” EPA proposed a regulation to improve air quality in the Eastern United States. This proposal would address interstate air pollution by requiring states to reduce sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) emissions. States could comply with these requirements through a cap and trade system based on the successful Acid Rain Trading Program. Technologies to reduce SO<sub>2</sub> and NO<sub>x</sub> under the “Interstate Air Quality Rule” would also concurrently reduce mercury.
- The health benefits of addressing mercury, SO<sub>2</sub>, and NO<sub>x</sub> in an integrated fashion are dramatic. EPA expects this suite of actions to reduce the number of asthma attacks and heart attacks around the country by lowering the levels of fine particles and ground-level ozone in the air. By reducing mercury levels, this program would also reduce risks for pregnant women and young children who consume certain fish from local streams and lakes.

## **CAP-AND-TRADE BASICS**

- Under the cap-and-trade approach proposed in the December 15, 2003, rulemaking, EPA would allocate to each state specified amounts of emission “allowances” for mercury, which essentially caps mercury emissions. The states would allocate those allowances to utilities. A utility must hold sufficient allowances to cover its emissions each year, so the limited number of allowances ensures that the required reductions are achieved. Utilities may sell or bank their excess emission allowances, providing them with a strong incentive to reduce mercury emissions.
- The mandatory emissions caps, coupled with significant automatic penalties for noncompliance, would ensure that human health and environmental goals would be achieved and sustained. At the same time, stringent emissions monitoring and reporting requirements make flexibility possible. The flexibility of allowance trading creates financial incentives for utilities to look for new and low-cost ways to reduce emissions and improve the effectiveness of pollution control equipment.
- In 2018, the second phase of the mercury program sets a cap of 15 tons. The program includes a banking provision that results in both early reductions (benefiting health and the environment) and a later date when the cap will be achieved.

## **FOR MORE INFORMATION**

- For information on the mercury proposal, visit [www.epa.gov/mercury/](http://www.epa.gov/mercury/).
- For information on the proposed Interstate Air Quality Rule, visit [www.epa.gov/interstateairquality/](http://www.epa.gov/interstateairquality/).