

CLEAN AIR COUNCIL TESTIMONY TO PHILADELPHIA CITY COUNCIL ON THE USE
OF MERCURY IN DENTISTRY, MAY 2, 2007.

My name is Sean Jacobs, and I am Program Manager for Mercury at Clean Air Council.

Clean Air Council is a nonprofit environmental and public health advocacy organization that works to protect everyone's right to breathe clean air. Incorporated in 1967, and operating in Pennsylvania, Delaware, and New Jersey, the Council currently has 7,000 dues-paying members, with roughly 4,000 of those residing in the City of Philadelphia.

Clean Air Council supports the general purpose of Bill No. 040904, the *Use of Mercury in Dentistry Act*, to ensure informed consumer consent, with respect to the use of mercury amalgam in dental procedures, and proper disposal of toxic mercury waste used in connection with these procedures. The Council also supports the specific mechanisms proposed in the bill -- namely, more aggressive consumer education about options to mercury and the required use of amalgam separator systems to reduce the discharge of mercury from dentist offices into the wastewater system.

There is no safe amount of mercury. In recent years, the health effects of mercury on humans, in particular on children, pregnant women, and women who may become pregnant have been amply established and almost never disputed. I trust that these facts are well known to those in attendance at this hearing today. In addition, as you know, the dangers that the mercury amalgam used in dental procedures poses to humans is increasingly being recognized. The

manufacturers of dental filling materials themselves do not oppose a ban for children, pregnant women, or those with kidney disease.

Mercury is the new lead, and around the country, more and more states and municipalities are acting to manage its use and disposal. These local jurisdictions are acting in response to new scientific conclusions, but also to the abdication of responsibility by the Food and Drug Administration in prudently managing human exposure to mercury amalgam in dental procedures. At present, one part of the FDA prohibits veterinarians from rubbing a mercury-containing product on even the skin of a horse or dog, but another part of this agency allows dentists to implant grams of this neurotoxin inches from a child's brain.

These facts regarding human health and mercury are well known. For this reason, I wish to limit my remaining comments today to amalgam separators -- the mechanism proposed by the bill to reduce mercury discharge from dental offices into the environment. Clean Air Council is a long-standing advocate of policies and practices that stop the release of mercury into the environment. In 2004, for example, we helped broker a landmark agreement between the steel industry, mercury recyclers, auto dismantlers, the Pennsylvania Department of Environmental Protection, and others to remove mercury-containing auto convenience switches from old automobiles before they are melted down for steel. Today, we have a staff person who conducts outreach to auto scrapyards to make sure that they know about the incentive program to remove these switches. The mercury auto switch effort supports not only the Council's program to educate Pennsylvania lawmakers about mercury-containing furnace thermostats, but aggressive Pennsylvania DEP initiatives to control mercury release. As you probably know, in 2006, the PA

DEP began implementation of its plan to significantly cutting mercury emissions from coal plants by 2010, with an ultimate goal of controlling 90 percent of the mercury pollution from this source by 2015. Those who discharge mercury into the environment are being asked more forcefully – and with greater justification -- than ever to dramatically reduce their emissions.

The amount of mercury in circulation from use in dental procedures is significant. The United States Environmental Protection Agency estimates that mercury amalgam accounts for more than 1,000 tons of mercury residing in the mouths of Americans today nationwide. And while the use of mercury amalgam by dentists may be declining, the mercury they use still figures largely in total mercury consumption in the United States. A report recently issued by the New England Zero Mercury Coalition, for example, indicates that 14% of all mercury used in the United States today is for dental fillings.

You might be wondering at this point what happens to all this mercury in our mouths. Well, if it is not captured and recycled, there is a good chance that some of it is ending up back in our school lunches and on our dinner plates -- causing the well-documented problems for children, mothers, families, and the rest of us. At the dentist office in Philadelphia, unlike a growing number of other places, this mercury is not captured and recycled according to the best technology. Without a device to effectively prohibit its discharge, a significant amount of mercury is released into the wastewater stream when new fillings are put in and old ones removed. According to the US EPA, dentists estimate that 20% of amalgam escapes into the wastewater system. From there, mercury can enter the environment in a number of ways: 1) directly into surface waters via effluent from publicly owned treatment works; 2) mercury

emitted from sewage sludge incinerators; 3) volatilization of mercury from land-applied biosolids; 4) the leaching of mercury from landfills. In Philadelphia, mercury is finding all these pathways to work its way back into the environment.

While there is some dispute about how much of the mercury that is removed from the mouths of dental patients ends up back in the environment – the American Dental Association says very little, a claim that echoes the assertions of fuel manufacturers who wrongly, as it turned out, argued in the 1970s that removing lead from gasoline would have very little impact on lead levels in the environment and individuals – it is beyond doubt that technologies to remove mercury amalgam, specifically amalgam separators have been highly effective. In King County, Washington, an aggressive inspection program around wastewater discharge has been implemented, with the result that mercury in biosolids has dropped by 50% since 2000. An intense effort in Boston has yielded even greater improvements in mercury reduction flowing into Boston Harbor.

Amalgam separator units that capture mercury from wastewater leaving the dental office are currently on the market. The units are installed in the plumbing system of the office and can collect 98% or more of mercury in wastewater. New Jersey, New York, most New England states and several municipalities now mandate separators. In New York, where all dental offices will be required to have amalgam separators installed by May 1, 2008, the New York State Department of Environmental Conservation has estimated that the cost to New York State dentists would be \$1,229 for the first year and \$133 per year after that for separators, with some variability in pricing for different locations. In other words, the separators are affordable, and the regulations

also require and detail the proper recycling of amalgam. In Philadelphia, with a large number of dentists, and two very large dental schools at the University of Pennsylvania and Temple University, the benefit to wastewater discharge of the installation of amalgam separators would be significant. Given that a few pounds of mercury can render millions of fish inedible and cause untold damage to human health, Philadelphia – and then the Commonwealth -- should be next in taking aggressive steps to limit mercury discharge through amalgam separators.

Toxic mercury released from dental offices is identifiable and its release is controllable. Clean Air Council strongly urges Philadelphia City Council to prevent the discharge of hundreds of pounds of mercury into the environment, where it is ultimately absorbed into the food that Philadelphians and their families eat. We urge City Council to pass Bill No. 040904, *Use of Mercury in Dentistry Act*.



Mercury-Free Thermostats

Support the Mercury-Free Thermostat Act, House Bill 44!

- Prohibits the sale and restricts the disposal of mercury thermostats in Pennsylvania.
- Easy way to eliminate mercury from our environment at no cost to consumers.
- Unprecedented coalition of supporters:
 - **Industry:** Honeywell, the nation's largest manufacturer of thermostats
 - **Sportsmen:** Pennsylvania Federation of Sportsmen's Club, Pennsylvania Council of Trout Unlimited
 - **Environmentalists :** Clean Air Council, Pennsylvania League of Conservation Voters, Group Against Smog & Pollution
 - **Regulators:** Pennsylvania Department of Environmental Protection
 - **Health Advocates:** Women's Health and Environmental Network, Philadelphia Physician's for Social Responsibility

Why Thermostats?

- Mercury is still commonly found in switches in thermostats that are used to maintain building temperatures.
- Thermostats containing mercury contribute to local, regional and global mercury pollution when they are handled and disposed of improperly.
- Mercury thermostats represent the largest amount of mercury in household products, with a single mercury thermostat usually containing between 3-5 grams of mercury.
- Comparably priced snap-switch and electronic programmable thermostats that do not contain mercury are readily available.

Protecting Public Health and Our Environment

- Mercury is a potent neurotoxin known to cause developmental disabilities and other health impacts in children.
- Approximately 640,000 of the 4 million babies born in the U.S. each year are exposed to dangerous levels of mercury in the womb, putting them at risk of developmental harm.
- Every lake, river and stream in Pennsylvania is currently under a fish consumption advisory warning from the state Department of Environmental Protection due to mercury and other contaminants.