



WVE

Women's Voices for the Earth

August 23, 2006

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Center for Devices and Radiological Health (HFZ-480)
Food and Drug Administration
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Re: Comments for the Joint Meeting of the Dental Products Panel of the Medical Devices Advisory Committee of the Center for Devices and Radiological Health and the Peripheral and Central Nervous System Drugs Advisory Committee of the Center for Drug Evaluation and Research

To the Joint Committee:

These comments are submitted on behalf of Women's Voices for the Earth (WVE), a national women-centered environmental health advocacy organization based in Montana. WVE focuses on reducing and/or eliminating persistent toxic pollution which disproportionately affects women and children's health and works to create opportunities for all women to influence environmental decision-making.

We appreciate the opportunity to provide written comments to the joint committee. The impacts of mercury use in the dental industry are significant and we are pleased that the joint committee is willing to hold this hearing to gather more information.

Much of the testimony you hear today may be focused on the toxicity effects to individuals from having amalgam fillings, or possibly occupational effects to dentists and dental hygienists from working with dental amalgam. This testimony is important and we will let the experts in those fields share that research with you. Our goal is to remind the committee, that the impacts of the dental industry include not only the effects on individuals from their direct contact with amalgam in teeth, but also the cumulative effect of the dental industry on the environment which is a significant contributor to toxicity in humans especially neurotoxic effects. This cumulative effect, given its enormity, cannot be separated from the topics discussed by the committee today.

The dental industry is historically a very large user/consumer of mercury.

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According to EPA estimates (see chart below), dental preparations comprise a significant proportion of the mercury that is currently in use, representing 13% of the total national mercury reservoir. An estimated 1,200 tons of mercury are currently present in dental amalgams in the teeth of U.S. citizens. By comparison, there are approximately 600 tons of mercury present in auto switches, 200 tons of mercury in thermostats nationwide and 45-85 tons of mercury in thermometers. There is little opportunity to recycle or recover mercury amalgam in teeth. Eventually, almost all of the 1,200 tons of mercury currently “walking around” will be released to the environment, either through air emissions from cremation, or through burial. This poses a significant burden on our already contaminated waterways and land, which are affecting human health.

The dental industry is one of largest industrial releasers of mercury in the U.S.

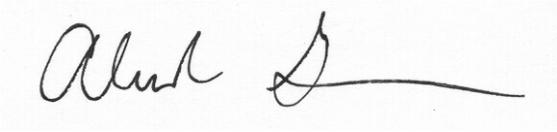
The EPA estimates that dental preparations result in the release of 7.4 tons of mercury directly to water resources every year, representing 37% of all industrial releases. These 7.4 tons predominantly come from amalgam waste deposited down the drain while amalgam fillings are being placed or removed. While each dental practice is responsible for a relative small portion of mercury going down the drain, the cumulative impacts are significant and must not be overlooked. Mercury deposited directly into a waterway can be easily transformed into the highly toxic organic methylmercury which bioaccumulates in fish. Highly contaminated fish pose a significant toxic health threat to pregnant women and their developing children.

The dental industry’s mercury contribution as compared to coal-fired power plants.

Coal-fired power plants are currently the industry most under fire for their contribution of mercury to the environment. Due to the scientific consensus that the mercury emissions from power plants are harmful to health, new regulations have been promulgated to better control air emissions from this source. Coal-fired power plants are collectively responsible for 48 tons of mercury emissions each year, some portion of which, through atmospheric deposition, ends up in our lakes and rivers contaminating fish and thus posing a threat to human health. Billions of dollars will be spent over the next 50 years to comply with the new regulations to decrease these air emissions. Meanwhile, the dental industry is responsible for 7.4 tons of mercury being released each year directly into our waterways. This is not trivial. This cumulative impact should be treated with a similar level of concern as the emissions from coal-fired power plants.

Thank you for the opportunity to provide comments on this important topic. We strongly encourage the joint committee to consider the cumulative impacts of the dental industry in their discussions on the impacts of dental amalgam.

Sincerely,

A handwritten signature in black ink, appearing to read "Alex Gorman", with a long horizontal flourish extending to the right.

Alexandra Gorman
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Enclosure

Mercury Products & Environmental Health

GOVERNMENT STATISTICS ON MERCURY

Source: U.S. Environmental Protection Agency (2002). Use and Release of Mercury in the United States. EPA/600/R-02/104. December 2002. Available at:

<http://www.epa.gov/ORD/NRMRL/pubs/600r02104/600r02104.htm>

U.S. Mercury reservoir: (mercury in use or in storage): 9,000 tons

Government stockpiles	4,850 tons	54%
Chlor-alkali manufacturing	2,000 tons	22%
Dental preparations	1,200 tons	13%
Switches and relays	630 tons	7%
Thermostats	230 tons	2%
Electrical lighting	65-75 tons	<1%
Thermometers	45-85 tons	<1%

Water releases of Mercury: 20 tons/year

Dental Preparations	7.4 tons	37%
Utility Coal Combustion	7.0 tons	35%
Sewage treatment	5.5 tons	28%
Chlor-Alkali Manufacturing	.1 tons	1%

Air Releases of Mercury: 120 tons/year

Utility coal combustion	48 tons	40%
Non-utility coal combustion	21- 23 tons	21%
Mercury containing products*	20-28 tons	21%
Oil combustion	8-11 tons	8%
Hazardous waste combustion	7.1 tons	6%
Gold mining	6.2 tons	5%
Dental Preparations	0.8 tons	<1%

*Includes manufacture, use and disposal of electrical lighting, thermometers, thermostats, switches and relays, and chlor-alkali manufacturing.