

Commonsense approach to mercury cleanup

Although California is often at the forefront of environmental issues, it occasionally fails to use commonsense.

Take the state's efforts to clean up toxic mercury. In the 1980's, the CAL-EPA established the nation's toughest regulatory measure for reducing the mercury content of fluorescent lighting. This regulation, called the "total threshold concentration limit," classifies fluorescent lighting tubes containing mercury in concentrations of more than 20 parts per million (a tiny fraction of a percent) as hazardous for waste purposes. This limit far surpasses federal requirements and is considered the gold standard for source reduction.

But in taking up the challenge to reduce mercury in fluorescent tubes to a level so low that they would be deemed nonhazardous, manufacturers faced a difficult feat by traditional manufacturing standards.

Fast forward more than a decade. Philips lighting Company met this challenge, just as the CAL-EPA's Department of Toxic Substances Control is contemplating doing away with the limit. That would remove a powerful incentive for mercury reduction and penalize companies that provide low-mercury fluorescent lights.

Why turn back the clock?

Well, the Toxic Substances Control department has changed course and now is focused on another solution for reducing mercury in the environment: recycling. While recycling is an admirable goal, and one that should be an everyday practice, it should not be relied upon as the sole alternative to source reduction because no infrastructure exists at present for recycling lighting tubes.

This means more than half of the fluorescent tubes used when this regulation would take effect will wind up in landfills. Wouldn't it be a good idea to keep the threshold concentration limit and continue to provide incentives for manufacturers to produce lighting tubes that meet this regulation? The answer is simple: Yes.

First and foremost, the technology is available. Philips has produced fluorescent tubes that meet, and in some cases exceed, California's stringent regulation. And, the company has offered to share this technology. If we want to have energy-efficient fluorescent lights in places such as our offices, malls and hospitals, why not require all tubes to meet the regulation? The less mercury in fluorescent tubes, the less will be released into the environment when they are disposed.

Reducing mercury in fluorescent lights can make a big difference. According to CAL-EPA, lighting accounts for nearly 25 percent of the mercury in California's garbage, second only to mercury in batteries. The state could reduce mercury used in four-foot fluorescent lights alone by nearly 3,000 pounds over the next 10 years by requiring that

these fluorescents meet the threshold concentration limit. Much larger reductions are possible if the state requires all lights to meet strict standards for mercury.

Such reductions will result in real public health benefits. Mercury doesn't break down in the environment and even tiny amounts can result in dangerous concentrations of mercury in fish due to bio-magnification in aquatic food chains. A small fraction of a teaspoon falling on a 20-acre lake in a year is enough to trigger government warnings to limit fish consumption. The mercury concentration in commercial fish such as tuna can be hundreds of thousands of times that in water. A recent study of San Francisco residents who eat a lot of fish—typically a healthy habit—actually showed they had unsafe levels of mercury in their bodies. (Low-level exposure to mercury is known to cause permanent damage to the brain, nervous system and kidneys. Pregnant mothers and unborn children are particularly at risk.)

The solution is really commonsense. Pass a new regulation to require recycling but preserve the standard that encourages manufacturers to provide fluorescent lights with the lowest possible mercury content. By adopting this approach, California would both protect public health and provide leadership for the nation.