

Testimony in favor of HB455, 04 February 2005

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EXHIBIT 8  
DATE 2.4.05  
HB 455

Representing Montana Chapter of the Sierra Club.

This bill is not about catch and release fishing but about the health and well being of children for generations to come.

We know that mercury is a potent toxin and that it does irreversible damage to the developing brain of the fetus and young infant.

Sierra Club – not anti-big business. Big business is a major force in the world today. Environmentalists need to dialogue with big business. Nevertheless it is not good business to do irreparable harm to our environment or our people.

Sierra Club – not knee jerk opposition to coal fired generators. We are dependent upon electrical power. Windmills and solar panels will not supply us with the amount of power we believe is necessary. Coal fired generation plants will be with us for years to come. Yet we will be dealing with the effects of pollution for even longer.

In the past 150 years humans may have tripled the amount of mercury in the atmosphere. Coal contains mercury. Coal-fired utilities and industrial broilers account for about 50% of mercury in the atmosphere.

Mercury is not well absorbed through the gastro-intestinal tract. That is why Meriwether Lewis did not outright poison the three men to whom he administered large doses of mercury by mouth. He was treating the syphilis the men had acquired. All three of the young men did die a few years after the expedition. Were their deaths caused by the syphilis or by the treatment?

When mercury vapor is in the air we breathe it can and does enter our bodies via our lungs.

Then there is methyl mercury, which does enter through the digestive tract.

The mercury in the atmosphere eventually settles and goes into streams and ponds. There aquatic bacteria convert the element mercury into methyl mercury which enters the bodies of fish through their digestive tract. It is through fish that the methyl mercury enters human food.

The mercury, either form, in a pregnant woman's bloodstream readily goes through the placenta to the fetus. In the fetus the mercury is distributed throughout all body cells, but preferentially the cells of the developing brain.

If the mother has methyl mercury in her blood, it is also in her breast milk and can enter the nursing infant through its digestive tract.

We know exactly how the mercury molecule poisons the cell. It stops cell division. It also sticks to the RNA, the templates for constructing proteins. The protein, depending where the mercury molecule is stuck, is then malformed and cannot perform its function. So when a single brain cell is disabled, it can no longer divide, change its form, migrate to the place in the brain where it was