

Pollutant Minimization Programs for Total Mercury

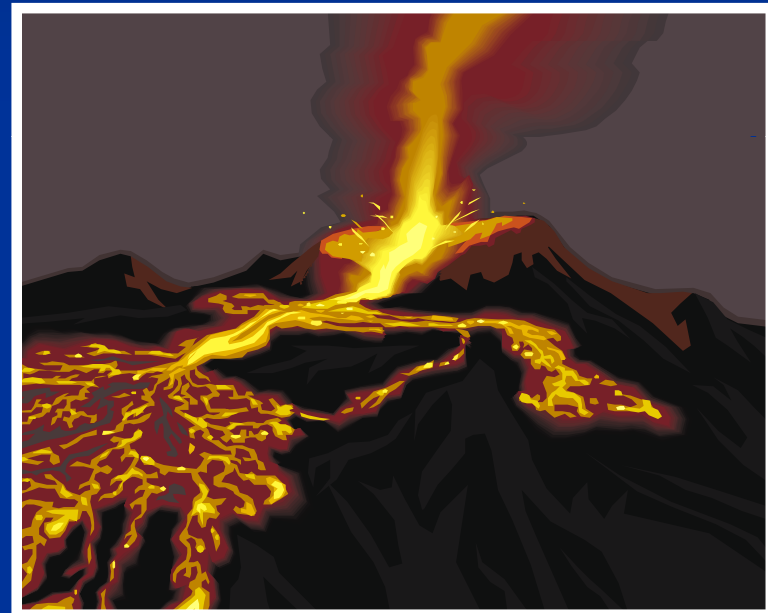
Ryan Blazic
DNRE-Water Bureau
Gaylord Field Office

Why Mercury?

- Mercury in surface water is converted by aquatic organisms to a highly toxic and bioaccumulative form; methyl mercury
- Fish Consumption Advisories
- Sensitive Populations – Children; Pregnant Women
- Impact immune, nervous, cardiovascular systems; IQ

Mercury Sources To Surface Water

- Natural
 - Volcanos
 - Natural Deposits
- Atmospheric
 - Powerplants
 - Incinerators
- Water
 - Contamination sites
 - Wastewater Discharges



Sampling Methods



- Method 245.1
 - 200 ng/L Quantification Level
- Ultra-Low level Method 1631
 - Developed in 1999
 - 0.5 ng/L Quantification Level
- $\text{ng/L} = \text{Parts Per Trillion}$

Water Quality Standards

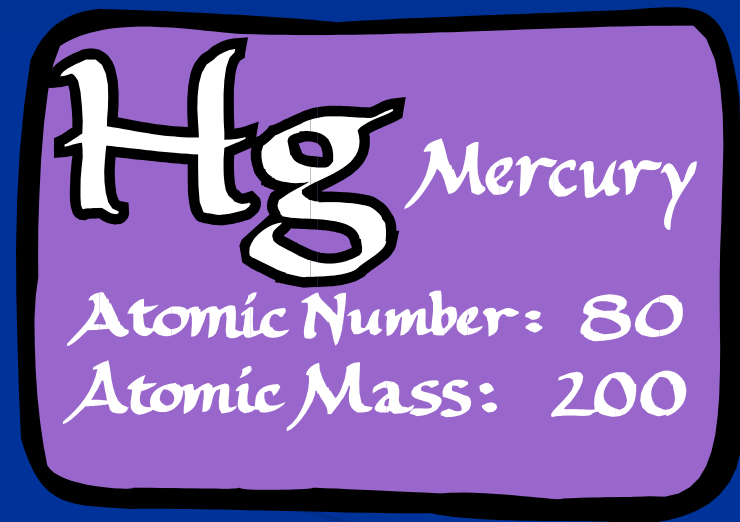
- Rule 57 values calculated to protect humans, wildlife and aquatic life.
 - 1.3 ng/L (parts per trillion) for Mercury
 - Wildlife Criteria
- Sampling revealed that most ambient waters and NPDES permitted dischargers exceed this level
- End of pipe treatment not attainable or cost effective.

Multiple Discharger Variance

- Statewide Level Currently Achievable
 - 30 ng/L → 10 ng/L
- Pollutant Minimization Program
 - Reduce Sources of Mercury to the WWTP with the goal of meeting 1.3 ng/L in effluent
- New dischargers not eligible for the variance

NPDES Requirements

- Mercury Effluent Monitoring
 - Monthly
 - Method 1631
 - 12 Month Rolling Average For LCA Compliance
 - Monitoring Reduction Language
- Biosolids
- Pollutant Minimization Program Implementation



Pollutant Minimization Programs

- Minimum Requirements
 - Must be submitted and approved by DNRE
 - Annual review and semi-annual monitoring of potential mercury sources
 - Program to evaluate effectiveness of significant mercury reduction actions and treatment system performance
 - Implementation of reasonable cost effective control measures when sources are discovered.
 - Submittal of an annual status report by March 31 of each year

2007 Lawsuit

- Filed by National Wildlife Federation on Behalf of the Lone Tree Council
- Questioned legal authority of 10 ng/L statewide LCA
- Consent Decree
- Permits effective October 1, 2008 will include discharge specific LCAs

Any Questions?

