



Herek Clack, Ph.D.

Research Associate Professor

Department of Civil and Environmental Engineering, University of Michigan

**Controlling Emissions of
Ultra-trace Toxic Metals and
New Assessments of Climate Forcing Impacts**

Wednesday, January 9, 2013, 4:00 – 5:00 PM

2315 G.G. Brown Building (North Campus)

The University of Michigan

Refreshments served at 5:00 PM

Abstract. The organic form of mercury is a potent neurotoxin, entering the atmosphere from multiple sources, transferred by precipitation to aquatic environments, and ultimately undergoing bioaccumulation in the aquatic food chain leading to human exposures through fish consumption. The largest anthropogenic source of mercury into the environment is coal combustion for electric power generation and the recent (2012) Mercury and Air Toxics Standard issued by the U.S. EPA makes the U.S. the worldwide leader in regulating and controlling mercury emissions. The most mature control technology is adsorption of mercury onto dry powdered sorbents, typically powdered activated carbon. This presentation summarizes the unique scientific challenges posed by this newest air quality standard, as well as recent analyses showing for the first time that there may be unexpected climate change implications to widespread use of this mercury emissions control technology.