

Summary of closing comments by Eric Uram, Headwater Consulting

After hearing the presentations here, it is apparent that we understand a lot about mercury and that our understanding and knowledge about mercury issues is increasing:

- Mercury sensitivity to health – our knowledge about the effects of mercury on human health is sufficient to formulate decisions while our knowledge increases.
- Ecosystem health – as we get a better handle on the effects of mercury on environmental health and the health of wildlife and other life forms, we are recognizing there may be a need to address mercury releases more substantially in some areas to protect sensitive ecosystem health.
- Mercury's movement and uptake – our understanding about the release, transport, and transformation of mercury as it moves through our ecosphere and how to predict its movements and related chemistry is growing.
- Opportunities to educate people – the recognition of potential mercury sources and the role of the public in helping to protect ourselves and the environment are growing. We need to continue to educate and motivate actions.

We have also increased our ability to reduce mercury releases, although mercury control remains elusive. Many times, as we reduce mercury from one source, it escapes elsewhere. We need to continue to move through the processes that release mercury to find controls that will reduce them further and address associated issues. One example comes to mind:

- Lighting and power plants: To reduce the mercury coming from power plants, we reduce electrical consumption from coal by switching our lighting sources. However, florescent lamps, including compact fluorescent lamps (CFLs), contain mercury and need to be managed effectively. It was estimated in 2004 that only about 5 percent of residential and 25 percent of commercial fluorescent lighting ever made it to a recycler. Unfortunately, as increased sales of fluorescent lamps have reduced electrical demand, their sales have far outpaced any increases in recycling efforts.

As power plants move toward controlling mercury, many multi-pollutant approaches are in use. This co-benefit of air pollution controls leads to shifting mercury from air to another media. Scrubber sludge and their dewatering processes now contain significant amounts of mercury. Continued use of co-benefit pollution controls will continue to shift mercury from air to other medium. One example hits close to home:

- Conversion of a mercury cell chlor-alkali plant: This conversion put 200 tons of mercury onto the “free” market. This mercury represents 400 years of emissions from a mercury-cell chemical plant or about 4 years total emissions from all power plants in the U.S. Unfortunately, nothing prevented this from happening, and the plant made about one million dollars from the sale. I wonder how much it would cost to control that much mercury from elsewhere.

The two regions represented here are our national leaders. The Northeast and the Midwest are demonstrating the possibilities. We need to continue to push further to ensure we solve this

global dilemma. The implemented international and national solutions will be based on what can and cannot be accomplished and at what cost. Everyone in this room represents the cutting edge on this effort. Roles and responsibilities at the state, local, and federal levels will have application to the upcoming international treaty on mercury. Following the February decision that came out of the Governing Council and Global Ministerial Environmental Forum of the United Nations Environmental Program in Nairobi, Kenya this document will be negotiated in the next few years resulting in a draft by 2013.

Just as with other international efforts such as the Persistent Organic Pollutants (POPs) Treaty (Stockholm Convention), the Basel Convention on waste, and the Prior Informed Consent Treaty (Rotterdam Convention or PIC Treaty), there is a role for leadership on these issues and the Northeast and Midwest represent much of the global leadership on mercury.

So with that in mind, we in this room need to:

- Stay the course – addressing leaks from the system and closing loops. Making sure that we prevent the emission of more mercury to an already over-burdened system will result in the necessary outcomes.
- Do good science – as Kate Mahaffey told Alan Stern “do unassailable science.” I encourage everyone doing mercury science to make that their goal and ensure that irrefutable science guides our decisions.
- Develop incentives – we need to promote a less toxic world. Motivating the human spirit to action and providing the right framework of regulation and reward will be necessary. Just as with other international agreements that eliminate other highly toxic materials, leadership is needed for the upcoming mercury treaty.
- Create and replicate good practices. Honing the best and implementing the necessary will only happen from sound science, strong leadership and good decision-making.
- Demonstrate that global solutions are in reach. By ensuring actions are taken at the necessary level, we can demonstrate how this can be done and in a way that it is affordable, achievable and offers beneficial results.