

# Mercury Related Waste Issues

P<sub>2</sub>E<sub>2</sub> Roundtable

Lehigh County Government Center

November 17, 2005

# Universal Waste Overview


- Universal Waste is hazardous waste
- SQ Handler of universal waste <5,000 kg of combined universal waste
- LQ Handler > 5,000 kg of combined universal waste
- Universal waste transporters are deemed to have a license

# Universal Waste Overview (cont.)

- Manifests are not required
- Handlers can accumulate U-waste from offsite without a storage permit
- Destination facilities must be permitted TSDs

# Types of Universal Wastes

(40 CFR Part 273)

- Batteries
- Some Pesticides (recalled under FIFRA)
- Lamps
  - (Note: Crushing not allowed without treatment permit)
- Mercury Thermostats
- Mercury-Containing Equipment 

# Mercury Containing Equipment

- Promulgated August 5, 2005 – Final Rule, immediately effective, replaces 273.4
- Contains elemental Hg integral to its function
- Effectively the same as PA Mercury Containing Device definition (25 PA Code 266b.2). PA will remove.

# Mercury Containing Equipment Examples

- Barometers, manometers, natural gas regulators, electric switches (e.g., automobile light switches), Sphygmomanometers, etc.

# Mercury Initiatives

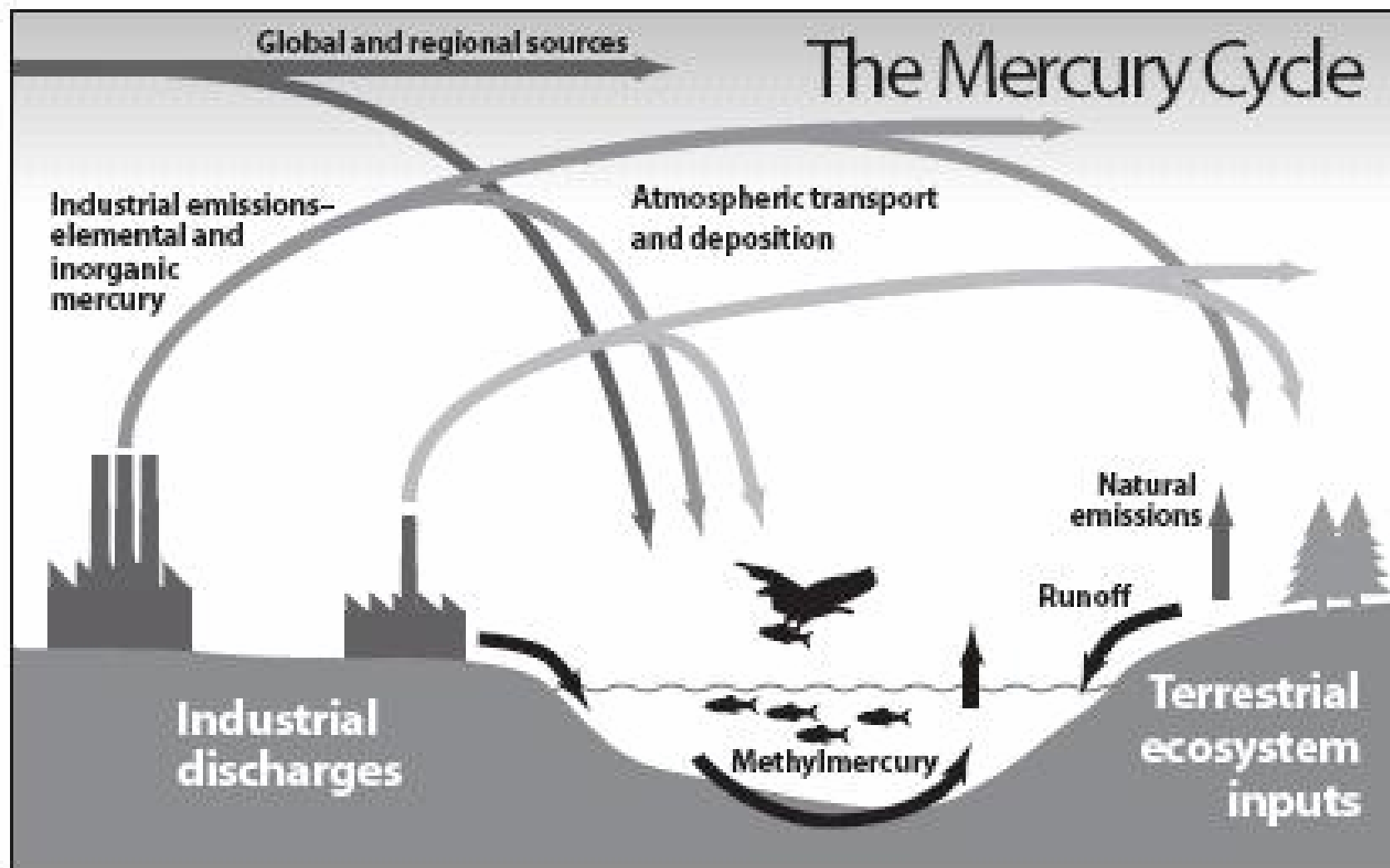
- Pennsylvania Voluntary Mercury Automobile Switch Removal Program
- The National Partnership for Environmental Priorities “Mercury Challenge”



# Pennsylvania Voluntary Mercury Automobile Switch Removal Program







*Cycle of Harm: Mercury's Pathway from Rain to Fish in the Environment.*  
*National Wildlife Federation. May 2003, 2nd Edition*

# Pennsylvania Voluntary Mercury Automobile Switch Removal Program

- Voluntary two year program.
- DEP pays an incentive of \$1 per switch based on weight to the auto recyclers.
- Auto Recyclers:
  - Register with DEP.
  - Remove mercury switches in convenience lighting under hoods and trunks of vehicles.
  - Ship the mercury switches for FREE to the participating mercury recyclers (AERC and Bethlehem Apparatus).
  - Receive incentive

# Pennsylvania Voluntary Mercury Automobile Switch Removal Program

- ✓ Goal 600 lbs of Mercury recycled over 2 yrs.
- DEP is Considering increasing the incentive to \$2.00 per Switch
- Some administrative changes will be made to make the program more user friendly...

## Stay Tuned!

- For more information:
  - [www.dep.state.pa.us](http://www.dep.state.pa.us) DEP Keyword, “Mercury Switch”
  - Contact: Jane Greber (DEP Air Quality)

717-772-2328

# National Partnership For Environmental Priorities (NPEP)

- Key component of The National Resource Conservation Challenge
- How to participate:
  1. Identify one or more chemicals for reduction.
  2. Develop a source reduction/recycling goal and project time line for each chemical selected.
  3. Sign Up



# National Partnership For Environmental Priorities (NPEP)

- Recognitions and Awards
  1. Membership plaque; use of logo
  2. Annual and final accomplishment awards
  3. Publication of success story
  4. Press events (if desired)



# National Partnership for Environmental Priorities (NPEP): *Focus on Mercury*

- Mercury is one of 31 priority chemicals founds in our Nations hazardous wastes and in the product life cycle
- NPEP is a program focused on reducing these chemicals (lead, mercury, naphthalene and Dioxin, etc.)
- Most recent goal is to reduce by 10% by the year 2008
- Tracking is done by using TRI data and also by documenting reductions in the product life cycle

# Mercury Challenge

- The Mercury Challenge is a Targeted initiative under NPEP
  - Purpose: Promotes voluntary, systematic elimination of mercury containing equipment in industry. Encourages the use of mercury alternatives.
  - Provides targeted information and resources on mercury reduction in industry

# Mercury Challenge Pledge

Our Company will...

- ✓ Identify mercury in our facilities and products
- ✓ Replace mercury-containing equipment with non-mercury alternatives
- ✓ Dispose of mercury-containing equipment safely
- ✓ Establish mercury-free purchasing policies
- ✓ Educates staff, suppliers, and clients about mercury and non-mercury alternatives

# Accepting the Challenge/Measuring Success

## **Accepting the Challenge**

- Develop a source reduction/recycling goal and pledge to reduce mercury at your facility
- Sign up for voluntary National Partnership for Environmental Priorities under “The Mercury Challenge”
- Receive awards and national recognition from NPEP

# Mercury Challenge Brochure

## Who has successfully reduced mercury?

Bethlehem Steel, Ispat Inland, and US Steel developed mercury reduction plans, focusing primarily on mercury-containing devices under a voluntary agreement with EPA, the Indiana Department of Environmental Management, and the Lake Michigan Forum. These plans included taking an inventory of mercury-containing equipment, materials, storage, and waste streams. The mills instituted plans to reduce the amount of mercury by 90 percent by 2008 by substituting equipment, altering purchasing practices, and educating employees. By 2003, the three facilities had collectively removed 3,700 pounds of mercury from their facilities. The greatest reduction came from operating equipment and devices.

International Steel Group's (formerly Bethlehem Steel) Burns Harbor Division, Ispat Inland, and US Steel are all located in Indiana on Lake Michigan and provide steel for use by the automotive, office furniture, container, and appliance markets.

We Energies voluntarily reduced its mercury-containing equipment (including thermometers, barometers, manometers, and switches) by over 10,000 pounds. We Energies removed equipment during routine maintenance and implemented targeted reduction plans. They also changed purchasing policies to buy mercury-free caustic soda.

We Energies provides electric and natural gas services to Wisconsin and the Upper Peninsula of Michigan and water and steam services to northern suburban and downtown Milwaukee.

Consumers Energy Company established a Mercury Pollution Prevention Initiative in 1996 and by

## The National Partnership for Environmental Priorities (NPEP) Mercury Challenge

- Be proactive...*  
join the **PARTNERSHIP**.
- Be committed...*  
take the **PLEDGE**.
- Be an environmental steward...*  
accept the **CHALLENGE!**

For more information about mercury, NPEP, or how to create a mercury reduction program, please visit:

<http://www.epa.gov/epaoswer/hazwaste/minimize/mercchall.htm>



## Mercury: Serious Problem, Practical Solutions

## The National Partnership for Environmental Priorities Mercury Challenge

U.S. Environmental Protection Agency

*Be part of the solution:  
prevent mercury pollution!*

# For More Information:

<http://www.epa.gov/epaoswer/hazwaste/minimize/mercchall.htm>



The screenshot shows a Microsoft Internet Explorer browser window displaying the EPA's Mercury Challenge website. The browser's address bar shows the URL: <http://www.epa.gov/epaoswer/hazwaste/minimize/mercchall.htm>. The website header features the U.S. Environmental Protection Agency logo and the text "U.S. Environmental Protection Agency" in green. Below this is a dark blue banner with the text "Waste Minimization" in white. A search bar with a "GO" button is located to the right of the banner. The main content area is titled "The Mercury Challenge" and contains the following text: "The [National Partnership for Environmental Priorities' \(NPEP\)](#) Mercury Challenge promotes the voluntary, systematic elimination of mercury-containing equipment from industrial sites. Mercury is a highly toxic chemical designated as one of 31 [priority chemicals](#) that EPA wants to reduce in our nation's products and wastes. Mercury is a documented contaminant of air, land, water, plants, and animals and exposure to mercury can cause serious health problems. For additional information about joining the National Partnership for Environmental Priorities and participating in the Mercury Challenge, please visit the [Take the Mercury Challenge](#) page." To the right of this text is a logo for the "National Partnership for Environmental Priorities" which consists of a stylized green and white graphic. Below the main text, there is a link to "Visit EPA's [mercury home page](#) for more information on mercury and EPA's mercury efforts." A sidebar on the left contains a navigation menu with the following items: Home, About Waste Minimization, Partnership, Success Stories, Federal Facilities, Priority Chemicals, Trends Report, Mercury Challenge, Projects, Tools, and Links. At the bottom of the page, there are two sections: "Take the Mercury Challenge" with a list of links including "Take the Mercury Challenge", "Building a Mercury Reduction Plan", "Mercury-Free Success Stories", "Mercury: Serious Problem", and "Practical Solutions Brochure [PDF File, 2 pages, 525 KB, [About PDF](#)]", and "Why Should You Join The Mercury Challenge?" with a paragraph of text and a list of benefits: "reduce mercury in the environment", "receive [public recognition and other benefits](#)", "reduce your environmental liability", and "enhance your company's image in your".

# Waste Minimization Contacts

The screenshot shows a web browser window displaying the DEP website. The browser title is "landrecwaste: Hazardous Waste Minimization Contacts - Microsoft Internet Explorer provided by DE". The website header includes the DEP logo and navigation tabs for AIR, LAND, WATER, and ENERGY. A sidebar on the left lists various topics, with "Hazardous Waste Minimization" selected. The main content area is titled "Hazardous Waste Minimization Contacts" and is divided into "Central Office Contacts" and "Regional Office Contacts".

**Hazardous Waste Minimization Contacts**

**Central Office Contacts**

<b>Glenn Mitzel</b> phone: (717) 787-6239	<b>Vu Tran</b> phone: (717) 787-6239
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**Regional Office Contacts**

<b>North East</b> Brian Hilliard phone: (570) 826-2090	<b>South East</b> Calvin Ligons phone: (610) 832-6162	<b>South Central</b> Donald Hagerich phone: (717) 705-4910
<b>North West</b> Jack Crow phone: 814-332-6848	<b>South West</b> Bob Popichak phone: (412) 442-4160	<b>North Central</b> Ron Sommers phone: (570) 327-3755

[www.dep.state.pa.us](http://www.dep.state.pa.us) DEP Keyword: "Waste Minimization"