EPA
United States
Environmental Protection
Agency

Mercury in Products in the United States

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Background

- Use of mercury in products and processes in the United States has **declined more than 98 percent** since 1980s

- In 2016, an estimated 34 metric tons of mercury in mercury-added products were sold in the United States

- Categories of interest are switches, relays, dental amalgam, and lamps

- Currently implementing a statutory directive to collect information and create an inventory of supply, use, and trade of mercury

Minamata Convention on Mercury

- United States joined the Minamata Convention on November 6, 2013
- Implementing Article 4 (“Mercury-added products”) via paragraph 2 via demonstration of de minimis manufacture, import, and export of the large majority of the products listed in Part I of Annex A
- Further domestic emphasis will be put on switches and relays.
- Also interested in tracking ongoing use trends for batteries and lamps

Federal Laws and Regulations

- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
  - Cancelled registrations for mercury-containing pesticides or biocides
- Federal Food, Drug, and Cosmetic Act (FDCA)
  - Prohibits marketing of cosmetics and topical antiseptics containing mercury
- Mercury-Containing and Rechargeable Battery Management Act (Battery Act)
  - Prohibits sale of certain mercury-containing batteries
- Toxic Substances Control Act (TSCA)
  - Can collect information on products and processes that use mercury
  - Can prohibit or reduce use of toxic substances (e.g., mercury)
  - Can require notice of intent to use toxic substances (e.g., mercury)
- Mercury Export Ban Act (MEBA)
  - Prohibits export of elemental mercury

Federal Laws and Regulations

- Clean Air Act (CAA)
  - Regulates 188 air toxics, also known as “hazardous air pollutants”
  - Mercury is listed as one of these air toxics and EPA must establish technology-based standards for certain sources
  - Includes special provisions for dealing with air toxics emitted from utilities, giving EPA the authority to regulate power plant mercury emissions

- Clean Water Act
  - Under the Clean Water Act, states adopt water quality standards for their rivers, streams, lakes, and wetlands, which identify acceptable pollution levels in water for many pollutants, including mercury
  - Under the Act, no person may release any pollutant into waters unless the person has a permit under the National Pollutant Discharge Elimination System (NPDES)
  - EPA (or states authorized by EPA) issue these permits, which include pollution limits that ensure the water quality standards are met.

- Emergency Planning and Community Right-to-Know Act (EPCRA)
  - Requires industrial and federal facilities to report emissions of chemicals, including emissions of mercury and mercury compounds
  - Reporting is done through EPA's Toxics Release Inventory (TRI) Program

- Resource Conservation and Recovery Act (RCRA)
  - Requires that EPA manage hazardous wastes, including mercury wastes, from their generation, through storage and transportation, to their final treatment and disposal
  - Mercury-containing household hazardous waste, and waste generated in very small quantities, are exempt from some RCRA hazardous waste requirements
  - RCRA also sets emission limits for combusted mercury-containing hazardous waste
  - States are largely responsible for implementing the RCRA program

- Safe Drinking Water Act (SDWA)
  - Under the SDWA, EPA sets standards for drinking water that apply to public water systems to protect people by limiting levels of mercury and other contaminants in drinking water
  - States have the primary responsibility for enforcing drinking water standards.

Amendments to Toxic Substances Control Act

- The Frank R. Lautenberg Chemical Safety for the 21st Century Act (2016) amended the Toxic Substances Control Act

- The new law includes significant improvements, including:
  - ✓ Mandatory requirement for EPA to evaluate existing chemicals with clear and enforceable deadlines;
  - ✓ Risk-based chemical assessments;
  - ✓ Increased public transparency for chemical information; and
  - ✓ Consistent source of funding for EPA to carry out the responsibilities under the new law.

Amendments to TSCA (cont)

- The Lautenberg Chemical Safety Act also:
  - Prohibits export of five mercury compounds as of January 1, 2020
    - Includes: mercury (I) chloride or calomel; mercury (II) oxide; mercury (II) sulfate; mercury (II) nitrate; and cinnabar or mercury sulphide
    - Requires EPA to submit to Congress by June 22, 2021, a report to evaluate any exports for disposal of the five listed mercury compounds that occurred after June 22, 2016
  - Requires EPA to triennially publish an "inventory of mercury supply, use, and trade in the United States" as of April 1, 2017
    - EPA finalized a rule to establish reporting requirements in June 2018
    - Requires reporting from companies that manufacture (including import) mercury or mercury-added products, or otherwise intentionally use mercury in a manufacturing process
    - Based on information collected, EPA must (1) identify any manufacturing processes or products that intentionally add mercury; and (2) recommend actions, including proposed revisions of Federal law or regulations, to achieve further reductions in mercury use

State Laws, Regulations, and Programs

- Various states regulate or prohibit mercury used in products
  - Prohibit sale or offer
  - Require manufacturers to fund collection/handling waste
  - Require manufacturers, importers, or sellers to report and label products

- Other states implement programs to reduce use and pollution
  - Regional coordination and action plans
  - Inventories of emissions and releases
  - Voluntary phase out, reduction, and collection programs

EPA Strategy to Address Mercury-Containing Products

- Goal is to further reduce mercury use in products and processes in order to prevent future releases to the environment
- Published in September 2014 (http://www2.epa.gov/sites/production/files/2015-10/documents/productsstrategy.pdf)
- Designed to allow flexibility and prioritization of specific products and processes as data support
- With the conclusion of the Minamata negotiation and the passage of the revisions to TSCA, much of the content and intent of the strategy included in the original five phases of the strategy are now included under those two efforts
- The five phases of the original strategy included:
  - Information collection
  - Analyze updated mercury use information
  - Plan and prioritize mercury reduction activities
  - Take non-regulator actions to reduce use
  - *If needed,* consider regulatory options

International Efforts

- United Nations Environment Program – Global Mercury Partnership
- Goal - to protect human health and the environment from releases of mercury and its compounds
- Formed ten years ago as a mechanism for delivery of immediate actions on mercury during the negotiations for the Minamata Convention
- The Partnership currently has eight different partnership areas that represent sectors that use mercury, process raw materials that contain mercury, and address mercury management science and management.
- The partnership are leads and partners come from governments, industry, non-governmental organizations and academia.

International Efforts

- Mercury-Containing Products Partnership
  - Phase out and eventually eliminate mercury in products and to eliminate releases during manufacturing and other industrial processes via environmentally sound production, transportation, storage, and disposal procedures
  - Identify and implement successful approaches for reducing or eliminating mercury in products where there are effective substitutes
  - Foster a Partner-driven forum for discussing strategies for achieving goals and objectives
- Attend annual Partnership Advisory Group meetings
- Coordinate efforts, where possible, with Waste Management Partnership (Japan)
- Assisted in drafting report on Harmonized Commodity Description and Coding System
  - Per COP-2 directive, suggests "approaches for customs codes to identify and distinguish non-mercury-added and mercury-added products listed in Annex A to the [Minamata] Convention, including approaches for their possible harmonization"
  - Collaborated with the Minamata Secretariat and key stakeholders, including the World Customs Organization
  - Will be presented at COP-3 in November 2019

Next Steps

- Seeking to understand the changing dynamics of the marketplace for mercury in products
  - Analyzing information gathered on mercury supply, use, and trade flow in products and manufacturing processes
  - Analyzing import/export tracking, such as the effort to better understand approaches for the Harmonized Commodity Description and Coding System
- Addressing challenges for reducing the use of mercury in products
  - Using marketplace analyses and prioritize areas of concern and opportunity
  - Conducting outreach to both industry and consumers
  - Identifying manufacturing processes or products that intentionally add mercury
  - Recommending actions to achieve further reductions in mercury use

Where Can I Find More Information?

- EPA's mercury page: www.epa.gov/mercury
- EPA's Mercury Inventory Reporting Rule page: www.epa.gov/mercury/reporting-requirements-mercury-inventory-toxic-substances-control-act
- UNEP Global Mercury Partnership page: web.unep.org/globalmercurypartnership/
- UNEP Products Partnership page: web.unep.org/globalmercurypartnership/our-work/mercury-reduction-products
- UNEP Minamata Convention on Mercury page: www.mercuryconvention.org/

Where Can I Find More Information?

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