

**Mercury-Containing Products Partnership Area
Meeting Report
Summary of Day Two
29 April 2010**

The Transition to Mercury Free Products and Emerging Product Areas (cont'd)

1. The second day of the annual meeting of the Mercury-Containing Products Partnership Area, 29 April 2010, opened with the final discussion of emerging product sectors: button cell batteries.
2. Catherine Galligan of UMass shared an anecdote about a possible avenue to leverage the use of LED lamps due to their longevity and durability in the context of safety lighting in commercial and industrial facilities.

– Button Cell Batteries

3. Thomas Groeneveld of U.S. EPA presented on issues pertaining to button cell batteries, particularly mandatory and voluntary measures in the United States. In addition to overview of mercury consumption trends in button-cell batteries, Mr. Groeneveld provided a summary of national and global consumption trends, as well as considerations associated with mercury-free substitutes. He also cited existing and developing mandatory and voluntary measures to reduce or eliminate the manufacture and sale of mercury button-cell batteries in the United States.
4. Key questions and comments included:
 - a. Participants discussed the benefits of contacting manufacturers and other sources of primary data to obtain better information on batteries. In addition, the Technical Guidelines were mentioned as a resource that covers batteries.
 - b. Batteries were also noted as a good representative of the lifecycle approach given the focus on product manufacture and end-of-life management. Participants also noted the importance of working with local and provincial governments as they often administer collection programs. An example from Japan was cited where collection and recycling is a voluntary practice, but manufactures supply collection bins.
 - c. Participants stated that – in many cases – most or all batteries were imported and control in the borders and customs is difficult due the lack of harmonized labeling.
 - d. Novelty items that contain button cell batteries were cited as particularly challenging for tracking purposes and in the way that they can be targeted at children, are relatively inexpensive, and are typically disposed in household waste.
 - e. Participants noted that in many instances the overall content in batteries has decreased significantly; in turn, emissions via incineration – aided by better technologies – have also decreased. However, participants agreed that batteries were still a major concern. In fact, beyond manufacture and waste management, issues of export (and the prevention of exports from developed to developing nations) were cited as critical.

Opportunities for Projects in Different Regions

5. Long Rithirak presented on the efforts to address mercury-containing products in Thailand. Based on a 2008 national inventory, a 2009-2011 National Action Plan. Mr. Rithirak described a local battery waste collection program, which provided incentives for voluntary collection in the capital (a major urban center). Identified

priorities included batteries, dental amalgam, fever thermometers, and artisanal mining. Other thermometers are of interest, but medical varieties are emphasized.

6. Key questions and comments included:
 - a. Participants inquired whether it was possible to identify mercury-containing batteries during the course of collection and separation. Contributing to the challenge is the fact that all batteries are imported and it is difficult to differentiate content.
 - b. Current pilot project efforts are limited to a single city.
 - c. Participants inquired about the relative safety of the storage facility; the batteries are placed into metal containers and leakage is a concern. Impacts on the immediate indoor area where the batteries are contained are also a concern.
 - d. Participants asked if officials had approached – in addition to original manufacturers – other countries and end-users who might be interested in accepting the spent batteries.
7. Dr. Gerald Sawula presented on the efforts to address mercury-containing products in Uganda. Priorities were identified as dental amalgam, electrical appliances, laboratory chemicals, batteries, and cosmetics (especially skin-lightening creams). Particular emphasis was placed on the preference for the creams in rural areas, where outreach and education is a great challenge. An even greater challenge is the absence of a centralized program to collect information and address mercury-containing products. While there are overarching environmental laws, none specifically address mercury. The lack of information to guide decision-making was also identified.
8. Key questions and comments included:
 - a. The importance of having an assigned desk officer was identified – although the optimal scenario would be the capacity to hire a mercury-specific official.
 - b. Participants reiterated the importance of hearing the needs of developing countries to create critical mass and momentum to create global commitments and consensus on how to address mercury issues.
 - c. Data is not readily available on the amount of mercury consumed, imported, and exported due to the lack of a centralized mercury program; data can be very limited and fragmented. Participants suggested references in draft technical guidelines; guidance including, but not limited to mercury waste was cited as necessary (i.e., even basic outreach and education).
 - d. A suggested starting point was the counting and tracking mercury products via inquiries with trade partners and other import/export data.
9. Dr. Lillian Corra presented the project under the SAICM QSP coordinated by the International Society of Doctors for the Environment (ISDE) in six countries of South America (Argentina, Bolivia, Chile, Paraguay, Peru and Uruguay). Dr. Corra emphasized that the project pointed to increased awareness on mercury effects on health, mercury containing products in the market, and the need to develop mercury strategies to collect and safely dispose mercury household containing products at the end of their cycle of life. The two-year project involved health and environment governmental partners working with non-governmental organizations, such as the Societies of Pediatrics. The project was a multi-sector and participative project open to all the stakeholders involved in the issue. The inventory, educational materials, conclusions, and recommendations are located a Web site created under the Basel Convention Regional Centre for South

America and available in Spanish for all the Latin American countries. (Dr. Corra demonstrated the Web site created by the project).

10. Key questions and comments included:

- a. The importance of labeling on specific products (e.g., mercury content) and notification on imported products. Another specific area of concern was waste management – particularly in technical assistance.
- b. Participants suggested that the tool was very helpful and could be enhanced by adding information on amounts of mercury (i.e., concentration) in various product sectors.
- c. The inclusion and commitments of the high-ranking officials in pediatric societies was cited as particularly promising.

11. Gustavo Solorzano Ochoa presented on the efforts to address mercury-containing products in Mexico. Again, the challenges of the lack of a centralized regulatory scheme for mercury were identified. Mr. Solorzano described a national mercury market study and products inventory. In addition, Mexico is pursuing the assessment of primary and secondary mercury supplies – an outgrowth of the U.S. and EU elemental mercury bans. Among challenges faced by many partner nations, the illegal markets and the cultural use of mercury were noted as prevalent in certain regions of Mexico. Emerging efforts to monitor fish tissue, sediments, and wet deposition also were mentioned.

12. Key questions and comments included:

- a. Participants discussed the need to promote coordination by nation and regionally so that efforts are not isolated and forgotten when project periods conclude. Mr. Solorzano mentioned that Mexico elaborated its mercury releases inventory using UNEP's Toolkit and wanted to share our experience with other countries in the region and learn from their experiences. In order to do so Mexico is hosting a regional workshop in Mexico City with the participation of Canada, Chile, Ecuador, Panama and the United States.
- b. Participants proposed the possibility of resin subsidies (and other products) to replace mercury-containing products. An alternative was suggested that organizations can also promote the environmentally safe alternatives.
- c. Participants suggested that it would be helpful in preparations for INC 1 for all governmental representation to coordinate as much as possible with various departments and ministries, which will be required to comprehensively address mercury issues. It was also mentioned that emphasis should be placed on emerging issues, such as products and exports.
- d. The utility of using Lumex testing was described, not only in production facilities, but also where interim storage of mercury is occurring.

Opportunities for Coordination with Other Partnerships on Cross-cutting Issues

13. Professor Masaru Tanaka and Takeshi Sekiya presented on the Mercury Waste Management Partnership Area. Mr. Sekiya highlighted the challenges and ideas shared by participants in the most recent meeting of the Waste Management Partnership in March 2010. He also highlighted the objectives, scope, and status of the BAT/BEP Guidance for reduction of mercury releases from waste management, as well as its relationship to the draft Basel Technical Guidelines on Environmentally Sound Management of Wastes Consisting of, Containing or Contaminated with mercury. Key principles cited waste management included collection, recycling (including a take-back system and incentives), establishing recovery facilities, and cost-sharing by

14. Professor Tanaka presented on successful efforts of the Waste Management Partnership, including how the BAT/BEP guidance could be used as a mechanism to not only promote good examples (i.e., guidance) but also provide technical assistance (i.e., technical guidelines). He also demonstrated successful risk management pilots for dry cell batteries and the co-benefits of controlling air pollutants. For batteries, he discussed how technical reporting and public outreach resulted in calls for better collection and management strategies, which led to the development of mercury-free alternatives; this case was cited as an example of coordination between the product manufactures and the waste management sector. For the co-benefits of air pollutant regulation, Professor Tanaka noted that retrofitting gas treatment technologies for dioxin and other pollutants also increased removal efficiency of mercury. He also provided a conceptual model of the products lifecycle, which he differentiated between the products and waste lifecycles. A key consideration was the amount of resources (e.g., energy, natural, economic) put into each lifecycle and the resulting waste by-products. He cited the comprehensive nature of the issues considered in this process: scientific, human health, environmental, economic, and social; each component played into a larger cost-benefit analysis. One potential outcome of this process could be reaching out to manufacturers to “design for the environment” to reduce both endpoints of the product and waste lifecycles.
15. Key questions and comments included:
- a. The idea of joint projects was seconded by the lead of the Products Partnership. It was suggested that this approach could serve to drive the implementation and finalization of the BAT/BEP Guidance and Basel Technical Guidelines.
 - b. Participants discussed the differentiation between storage and waste management – and at what point (or what criteria determined) mercury transitions from “interim storage” to “long-term storage” to “waste management.” Participants agreed that this could be a significant discussion during the upcoming INC1 meeting.
16. Michael Bender presented on Mercury Storage and Supply Partnership Area. Mr. Bender highlighted the core concept of the partnership – that controlling supply is more efficient than curtailing manufacture and managing wastes. He also spoke to the interim nature of the partnership and its reduction goals and opportunities (e.g., added mercury export restrictions, storage of chlor-alkali surpluses, and less primary mining). Mr. Bender also described ongoing and developing projects in the Storage and Supply Partnership, including a framework document intended for presentation at INC1. He identified next steps his goal to “sunset” this partnership if efforts deal with mercury storage and supply are successful.
17. Key questions and comments included:
- a. Participants discussed the challenges of establishing regional storage facilities, particularly due to differing regulations applicable the import and storage of waste. Efforts to raise awareness among regional governments are seen as a good start.
 - b. The technical challenges surrounding stabilization were also described; in addition, it was emphasized the interim storage of products need to be addressed in some form among the Products, Waste Management, Storage and Supply Partnerships, as well as SBC.

Existing Reduction Goals and Merits of Developing Quantifiable Measures and Appropriate Monitoring Tools

18. Ned Brooks presented on the status of current Products Partnership goals and measures, and how they might be enhanced. He also described activities of the Quicksilver Caucus and the mercury issues and products advocated by various states within the United States; thermostats, fluorescent lighting, motor vehicle switches, and dental amalgam were cited as key areas of emphasis. He also described the information clearinghouse, the Interstate Mercury Clearinghouse (IMERC). Mr. Brooks also explored the status of current use and reduction goals for the Products Partnership and whether or not they were achievable on a global scale. Mr. Brooks suggested that the most recent data collected by IMERC showing a 46% reduction in mercury product sales between 2001-2007, suggests that the current goals are achievable with a "focused reduction" scenario. He proposed that additional goals be considered that would apply to mercury products outside of use reduction (e.g., number of inventories), as well as indicators beneath the more overarching goals or the possibility that product sectors and experts/practitioners could propose modifications or additional goals. Mr. Brooks also proposed that different kinds of measures could be considered, such as amounts of mercury retired and collected or amount of products "not purchased."

- a. It was proposed that the goals for dental amalgam could be modified, which could be informed by a survey of dental amalgam manufacturers and dental practitioners, as to the amounts of mercury actually being used in the global dental sector. This could serve as a baseline from which to operate.
- b. It was proposed that a global initiative, similar to health care, that would address dental amalgam.
- c. It was also discussed that the generation of numbers – especially on a regional basis – can be very challenging.
- d. A proposal was made that two statements pertaining to dental amalgam be considered by members of the Products Partnership:

Recognizing the importance of preventing disease, that governments foster and ensure appropriate prevention of dental decay [and promotion of environmental health],

Phase-down of amalgam use can occur where appropriate and where affordable alternative materials exist and where not, that acceptable mercury handling, management and pollution prevention practices be utilized.

*Please note: Participants are continuing to discuss these statements and will report to the Products Partnership to update the status of conversations.

- e. Dr. Maria Doa proposed that the statement be recorded in the Meeting Report and circulated for comment to the Partnership. Further, she requested that, if interest remains, that the statements could continue to be developed and submitted for consideration by the Products Partnership.
- f. Dr. Maria Doa also proposed a follow-up teleconference to further develop this concept. Those who are interested should provide comment to Thomas Groeneveld at groeneveld.thomas@epa.gov.
- g. Dr. Desiree Narvaez proposed that the statements be submitted to the PAG in September. She also urged that "promotion of dental health" be considered in the statements pertaining to dental amalgam.

- h. Dr. Maria Doa proposed that batteries and lighting be targeted for joint project development with the Waste Management Partnership. Mr. Bender urged that participants be mindful that the use of lamps will be expected to rise and that content standards were a key component to be considered by Partners.
- i. Dr. Maria Doa also urged that the Products Partnership place increased emphasis on cosmetics and pharmaceuticals. Mr. Bender suggested that skin-lightening creams be addressed as a separate category; a similar suggestion was made for cultural/traditional uses. Mr. Solorzano mentioned that some cultural/traditional uses of mercury would be driven by the fluctuating cost of mercury.
- j. Mr. Bender suggested that COMTRADE tracking of dental amalgam is frustrated by its current categorization (i.e., multiple versus uniform protocol).
- k. Dr. Lillian Corra urged that Partnership concentrate on electrical and electronic equipment.
- l. Catherine Galligan mentioned difficulties in tracking broken products in occupational settings due to blame and discipline issues that workers may face.

Goals for Products Partnership in the Context of Other Fora

- 19. Dr. Maria Doa of EPA led an open conversation of the goals of Products Partnership in other fora, including the INC and PAG processes.