

North American Commission for Environmental Cooperation CEC-Americas Workshop to Reduce Mercury Use in Products

Hyatt Regency Merida Ave Colon, Esq Calle 60 Merida, Yucatan 97000, Mexico

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Meeting Summary

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Welcome and Opening Remarks

Ernesto Navarro Reynoso Director General de Gestión Integral de Materiales y Actividades Riesgosas, SEMARNAT, and Mexico's representative for the Working Group on the Sound Management of Chemicals (SMOC) of the Commission for Environmental Cooperation (CEC), opened the meeting and welcomed the participants. Introductory remarks were provided by by Sr. Marco Pinzón from the regional office of UNEP, Denise Wright, US EPA, Chair of the CEC's Mercury Task Force and Luke Trip, Program Manager for the Sound Management of Chemicals from the CEC.

Session 1: Mercury Partnerships

Overview of UNEP Mercury Program and Global Partnership for Mercury Reduction in Products - *Juan Caicedo, UNEP*

Mr. Caicedo, of the United Nations Environment Program in Geneva is responsible for the UNEP Mercury Program as well as other work on lead and cadmium. Mr. Caicedo gave an overview of the development of the UNEP Mercury Program. In February of 2005, UNEP chemicals, through the Mercury Program, invited countries to provide information about their mercury related programs and to identify priority areas for future mercury actions. The following websites contain more information: <u>www.chem.unep.ch/mercury/</u>, <u>www.chem.unep.ch/Pb_and_Cd/</u>. Please see attached presentation "Caicedo.ppt".

Global Mercury Partnerships - Denise Wright, US EPA

Ms. Wright outlined the US commitments to the Global Mercury Partnerships and discussed current partnership activities and initiatives, including chlor-alkali manufacturing (contact Angela Bandemehr at <u>bandemehr.angela@epa.gov</u>), artisanal and small scale gold mining (Marianne Bailey at <u>bailey.marianne@epa.gov</u>), coal fired power (Carl Mazza at <u>mazza.carl@epa.gov</u>) and mercury containing products (Denise Wright at <u>wright.denise@epa.gov</u>).

The US is also discussing the development of mercury release inventories in China and India and supports ongoing activities of the UNEP Mercury Program. The EPA contact for mercury release inventories is Ellie McCann at <u>mccann.ellie@epa.gov</u>. Please see presentation attached "Wright1.ppt".

Overview of CEC and North American Regional Action Plan on Mercury - *Luke Trip, CEC*

Mr. Trip outlined the current programs under the Commission for Environmental Cooperation (CEC) focusing on the Sound Management of Chemicals Program (SMOC). The North American Regional Action Plan (NARAP) on Mercury is a trilateral initiative addressing the reduction of mercury use and emissions throughout North America. This NARAP contains 85 individual action items in 6 sections. Product related recommendations include actions on:

- Life cycle management practices and substitution options for mercury
- Automotive vehicle and equipment manufacturing sector
- Mercury cell chlor-alkali sector
- Dry cell battery manufacturing sector
- Electrical switches and relays sector

- Lamp manufacturing sector
- Health and dental care sectors
- Cultural and artisanal uses

The action plan is available electronically at

http://www.cec.org/programs_projects/pollutants_health/project/index.cfm?projectID=25&varl an=english

Please see presentation "Trip1.ppt".

<u>Question:</u> In reference to the NARAP on PCB's, a US state representative asked how the CEC approached the remediation of PCB contaminated soils. <u>Response:</u> Soils are referenced in the plan, and national programs of the three countries are responsible for clean up of contaminated soils in their respective countries.

<u>Comment:</u> It was suggested that the CEC consider a trilateral approach to PCB soil remediation.

<u>Question:</u> An ENGO representative asked for more information on the trinational blood biomonitoring project. <u>Response:</u> This study is developing data on persistent organic pollutants and some metals from first birth mothers in Canada, USA and Mexico, More information can be found at <u>http://www.cec.org/trio/stories/index.cfm?ed=16&ID=181&varlan=english</u>.

Session 2: Identifying the Problem

Domestic & International Sources of Mercury Used in Products & Processes - *Luke Trip, CEC*

Mr. Trip gave an overview of the domestic and international sources of mercury used in products. Currently, the largest mercury mine in the world is thought to be in China, rather than in Spain. Byproduct mercury results from mining of other metals including silver and gold, potentially during the production of bauxite, and is thought to be extracted from some gas streams during the production of natural gas. Mercury is recycled from spent mercury- containing products and from the mercury- cell chlor-alkali process.

There may also be recovered historical mercury from reprocessing facilities near old silver and gold mine sites. This mercury may have originated from mines in Spain and Peru, and other mines operating between 1500 and 1850. It was brought to North, Central and South America and used for silver and gold mining by the amalgamation process. The current form of this mercury is unknown and is thought to be incorporated into soils and sediments, either in elemental form or as inorganic mercury compounds. There is considerable difficulty in accounting for both the import and export of this "recovered" mercury. There are also industrial sources of mercury, the largest being from the mercury- cell chlor-alkali sector and stockpiles of mercury, as mercury was formerly retained as a strategic metal. Please see presentation attached "Trip2.ppt".

Identifying Mercury Products & How Products Contribute to Releases -Ned Brooks, Minnesota Pollution Control

Mr. Brooks presented information on specific products containing elemental mercury as well as mercury in compounds. He noted that mercury in consumer products may be mixed with other wastes and incinerated, mostly without mercury controls in many countries. Releases to water usually result from domestic sewage and industrial sources, surface run off and landfill leaching.

Releases to land result from waste disposal, spills, and ash and sewage sludge disposal. Please see presentation attached "Brooks1.ppt".

Human Exposure from Mercury in Cosmetics and Other Products – *Michael Bender, Mercury Policy Project*

Mercury in skin lightening products poses a risk to human health and can be found in some specialized soaps and creams globally. These products may be manufactured in Dubai, Thailand, Taiwan, and Mexico and may be exported to Indonesia and South Africa. The environmental community recommends required reporting for manufacture and trade in mercury soaps/cosmetics, education of health care professionals and populations as risk, issuance of a worldwide bulletin on mercury in these products and an end to the manufacture of these products. They encourage a global study on alternatives to Thimerosal in vaccines and recommend discouraging dental amalgam use in women of child bearing age, infants and children.

There are reported ritualistic uses of elemental mercury, including drinking, sprinkling and burning of mercury in homes in Caribbean and Latin American countries. An EPA report suggests that these uses pose a significant risk of exposure to users, since indoor mercury vapours permeate entire residences. <u>http://www.epa.gov/superfund/action/community/mercury.pdf</u>

For information see <u>www.mercurypolicy.org</u>. Mr. Bender noted a report on the State of the World by Worldwatch that contains a section on mercury. This report is translated into Spanish and can be found at <u>www.worldwatch.org</u>. Please see attached presentation "Bender.ppt".

Mercury Export/Import: Reports, Data Issues, Customs Reporting Protocols & Discussion

Mercury Import/Export Data Issues - *Tim Whitehouse, CEC*

Three reports have been produced by the CEC that relate to import /export issues mentioning mercury:

- 2005 Report: Crossing the Border: Opportunities to Improve the Tracking of Transboundary Hazardous Waste Shipments in North America. http://www.cec.org/files/pdf/LAWPOLICY/Crossing-the-Border_en.pdf
- 2003 Report: Mechanisms for Tracking Mercury Imports and Exports for Use and Disposal in Canada, Mexico and the United States http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=1289
- Taking Stock On-line <u>www.cec.org/takingstock</u> with Pollutant Release and Transfer Registry (PRTR) information from the Canadian National Pollutant Release Inventory (NPRI), American Toxics Release Inventory (TRI), and the Mexican Registry of Emissions and Transfer of Contaminants (RETC).

Please see the attached presentation "Whitehouse.ppt".

Mercury Global Market Study and Trade Issues - Tim Lehman, US EPA

Sources of mercury in the US include mercury from recycling, waste recovery, and sales from closed chlor-alkali facilities. The US has federal and state stockpiles of mercury.

The US contributes 255 metric tons to global supplies through secondary sources. Global stocks are thought to be 22,000 metric tons from chlor alkali and 4,582 from US government stockpiles,

which are being stored. The trends for supply and demand suggest that in the coming years there will be an excess of mercury stockpiles. It is unclear whether the mercury exported from the US is consumed in receiving countries or re-exported to third parties, or stored for future sale. The US has also imported mercury from other countries.

The first step in a comprehensive plan for any country is to understand which sectors and products consume mercury and from where the supply originates. Trade statistics can reveal some flows of mercury, but may not accurately describe the fate of mercury usage and whether some imported mercury is later re-exported. Please see attached presentation "Lehman1.ppt".

<u>Question:</u> A US state representative asked how the countries can effectively track small quantities of mercury, for example quantities under their current release reporting limit of 10 lbs. <u>Response:</u> It was noted that there is a long term effort to move to computerization for the three NAFTA countries but the information will only be as good as what is collected on the paper and will be limited by domestic tariff and waste codes. Mr. Bender noted a recent effort by ENGOs to promote tracking of mercury trade at the global level at the meeting of the UNEP Governing Council in Nairobi.

Someone asked about the REACH program (Registration, Evaluation and Authorization of Chemicals) which is a European initiative to not only inventory chemicals under the Pollutant Release and Transfer Registries (PRTR) but also to provide toxicity and quantity information in a more regulated manner. The REACH program proposes to impose greater responsibility on industry to manage the risks from a large suite of chemicals and to provide safety information on the substances.

Session 3: Current North American Programs and Efforts

U.S. Mercury Reduction Programs - Denise Wright, US EPA

The US EPA has implemented regulations that ban mercury in paint, ban mercury in batteries except button cell batteries, and control hazardous waste collection, storage and disposal. The US has reduced its mercury use significantly since 1980 due to national and regional partnership programs, state mercury laws and regulations, technological advances, and voluntary reductions by industry to reduce mercury consumption.

The US EPA will focus further mercury use reduction efforts in the field of mercury switches, relays and measuring devices. There will also be work on reduction of mercury in schools, promotion of the purchase of non-mercury and non-toxic products through the Green Suppliers Network and Suppliers Partnership for the Environment <u>www.greensuppliers.gov</u>, and the use of tools and resources such as the Environmentally Preferable Purchasing Database at <u>http://yosemite1.epa.gov/oppt/eppstand2.nsf</u>, and the Electronic Product Environmental Assessment Tool at <u>www.epeat.net</u>.

The EPA is working to promote industry partnerships to reduce use as well as raise awareness of mercury in products. See EPA's mercury website at <u>www.epa.gov/mercury</u>. There is ongoing work with North American and international groups. Please see attached presentation "Wright2.ppt".

State Mercury Reductions in the USA - *Maria Peeler, Washington Department of Ecology*

The primary motivation for mercury reductions at the State level are human health concerns, specifically regarding fish consumption. The economic costs associated with methyl mercury induced toxicity, in terms of lost productivity, is estimated to be \$8.7 billion US dollars annually. Some states coordinate their product initiatives through the Interstate Mercury Education and Reduction Clearinghouse (IMERC), which is developed, used and supported by a number of US state governments. The State Health Facts website can be found at <u>www.statehealthfacts.kff.org</u>. The Environmental Council of the States (ECOS) is the national non-profit, non-partisan association of state and territorial environmental agency leaders. The purpose of ECOS is to improve the capability of state environmental agencies and their leaders to protect and improve human health and the environment of the United States of America. The Quicksilver Caucus under ECOS is the organization responsible for mercury management.

Individual state actions to reduce mercury use include work in the dental sectors such as the installation of amalgam separators, hospital mercury reductions, a ban of mercury in auto switches, and the removal of mercury from schools. Various states also work on promoting labeling of mercury on fluorescent lamps, requiring notification of Hg in products, and banning novelty items containing Hg. Several states are tracking mercury releases from industry and in different environmental conditions. The states are learning to increase data collection and analysis and use information from human monitoring from the Center for Disease Control. Please see presentation "Peeler1.ppt" and <u>http://www.ecy.wa.gov/mercury/</u>, <u>http://www.doh.wa.gov/ehp/mercury/</u>.

Mercury Management in Canada - Grace Howland, Environment Canada

Ms. Howland outlined mercury management practices in Canada and noted that Canada is a net receiver of atmospheric mercury. The Canadian Environmental Protection Act houses regulations for mercury emissions from mercury cell chlor-alkali plants; transboundary movements of hazardous wastes; environmental emergencies planning requirements and National Pollutant Release Inventory reporting criteria. Other acts in Canada that regulate aspects of mercury include the Fisheries Act and the Transportation of Dangerous Goods Act.

Mercury "Canada Wide Standards" have been developed by the Canadian Council of Ministers of the Environment. These standards are implemented at the individual federal, provincial and territorial jurisdictional levels. For mercury, there are standards in place for base metal smelters, incinerators, mercury containing lamps and dental amalgam waste and are approved in principle for coal fired power plants. Canada also participates in North American, regional and global mercury initiatives such as the CEC's North American Regional Action Plan (NARAP) on Mercury, the Great Lakes Binational Toxics Strategy, the UNECE LRTAP Heavy Metals protocol and the UNEP global mercury programme. Please see presentation attached "Howland.ppt" and

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