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Consultation Meeting on Mercury Waste and Storage

23 September 2010, Geneva

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Photo title page: One-way mercury-containing thermometers.
Courtesy: Heidelore Fiedler, UNEP/DTIE, Chemicals Branch

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1 OPENING AND INTRODUCTION

The consultation meeting was opened by Mr. Per Bakken, Head of UNEP Chemicals, who welcomed the participants and reminded them on the objectives of this consultation workshop. He mentioned that presently, there are several activities underway on storage of elemental mercury and on the environmentally sound management (ESM) of mercury waste. These include two projects coordinated by UNEP Chemicals, and funded by the Norwegian government and one programme coordinated by the Secretariat of the Basel Convention. The Basel Convention programme is currently being funded by the USEPA.

The UNEP Chemicals project on mercury waste management resulted in waste management plans in five countries. The plans constitute an initial step for national action identified as priorities through stakeholder consultations and underlined through analysis of relevant samples for total mercury content. Most plans include components that a country can resolve at national level, while others need international support.

The work of UNEP Chemicals on mercury storage draws on the 2009 Assessment/Trade Reports which project excess elemental mercury coming from decommissioned chlor-alkali plants, byproduct mercury from non-ferrous metals mining and natural gas, among others. There is need to store excess elemental mercury in order to prevent its reentry to the global marketplace as a commodity

The consultation meeting was part of a Norway funded Mercury Waste and Storage project that would result in identifying the gaps and overlaps, as well as developing handy guidance through practical case studies addressing specific but commonly perceived problems on mercury waste and storage. It was expected that user-friendly guidance reflecting especially developing country situations and specific for three scenarios: industry, household and healthcare, would be developed and made available for use.

At the meeting, priority areas/issues on waste and storage were to be identified and agreements would be reached on the design of the pilots in three developing countries. Participants noted the limited funding and timeframe for implementation for the pilots.

Mr. Bakken closed by inviting countries or institutions to be one of the volunteers where the guidance material would be pilot tested.

After the opening remarks, the participants introduced themselves by stating their names and relation to mercury waste/storage issues (for complete address details, see Annex 1). The consultation meeting proceeded according to the agenda (see Annex 2).

In preparation for the consultation meeting, (Annex 3)

2 PRESENT STATUS OF BASEL ESM GUIDELINES (TABLE OF CONTENT)

Francesca Cenni, Programme Officer, Secretariat of the Basel Convention, introduced the ongoing work on mercury under the Basel Convention. The Secretariat of the Basel Convention developed draft technical guidelines on the environmentally sound management of mercury wastes (Basel TG), with the Government of Japan as lead country. The Convention’s Open-ended Working Group considered the fifth draft of the technical guidelines at its seventh session in May 2010. These technical guidelines set out comprehensive information on mercury wastes, including on the chemistry and toxicology of mercury, sources of mercury and mercury wastes, existing expertise on the environmentally sound management of mercury wastes and provisions on mercury wastes under international legal instruments. These guidelines are being tested at the pilot projects implemented by the SBC as well as UNEP Chemicals. It is expected that the guidelines will be considered for adoption at COP10 in October 2011. In addition, the SBC is now implementing pilot projects for mercury waste in three Latin American countries that are funded by the USEPA and under the execution by the Basel Coordinating Regional Center in Uruguay.

The Zero Mercury Working Group (ZMWG) expressed concerns about the coverage of liquid mercury storage issue in the Basel TG, since management of liquid mercury is different from management of solid hazardous waste. They further noted that the development of a glossary of terms would potentially help in clarifying issues such as waste and storage and related terms.

3 PRESENTATION OF ASSESSMENT REPORT ON EXISTING INFORMATION, GAPS ANALYSIS AMONG WASTE AND STORAGE PROJECTS

Dr. Mario Yarto and Dr. Sven Hagemann undertook an analysis of the two UNEP projects. Their findings are summarized in a document that was made available to the participants in advance of the meeting.

3.1 Analysis of the UNEP Waste Management Project

Mr. Mario Yarto (Mexico) presented the summary and main outcomes of this project, which have been implemented in five developing countries, namely: Burkina Faso, Cambodia, Chile, Pakistan and The Philippines.

Key results included the review of the national inventory for mercury emissions, followed by a prioritization of main sectors and sources contributing to mercury releases and mercury waste. Additionally, each country organized stakeholders meetings to agree on an action plan for mercury and mecury waste. Such plans have now been developed and are currently in a planning phase for its implementation.

Some of the priority sectors identified after evaluating the mercury inventory and through technical workshops and discussions with stakeholders included the following: small-scale artisanal gold mining, chlor alkali production, mercury in products, solid and hazardous waste, and others.

An important highlight of the project considered the importance on the applicability of the Basel Technical Guidelines for Mercury Waste, regarding its use at the national level in a developing country context. In fact, the national action plans included relevant considerations as described in the guidelines.

Several gaps were identified during the national workshops, and emphasis was made on the need for enhanced capacities to carry out technical tasks as set in the national action plan for mercury waste. Some of these pending issues include temporary storage, enhanced analytical capacity for mercury analysis, and management/remediation of contaminated sites.

3.2 Analysis of the UNEP Storage Project concerning surplus metallic mercury

Mr. Sven Hagemann of GRS (Germany) presented the summary of the two studies on mercury storage (Asia-Pacific, Latin America and the Caribbean), and mentioned that the estimates of surplus mercury in each region were based on the reports by Peter Maxson. It appears that there would be a quite urgent need for storage of surplus metallic mercury in the regions.

The options analysis study for Asia concluded that:

- No permanent (underground) storage is possible in the regions due to lack of salt mine
- Options are temporary storage which could take place in a desert region, possibly an above ground storage facility or export to another region

The options analysis for Latin America and the Caribbean (LAC) revealed that:

- In principle, rock and clay formations are available and may present an option for underground

disposal

- Since licensing and site selection is time-consuming, there is a need for temporary storage
- There is need for a tracking system of mercury storage

Most aspects addressed in the Basel guidelines are covered in the two storage projects, but the LAC study contains more recent and comprehensive information on the issue of stabilization/solidification technologies than the Draft Basel TG. It also contains a better description of temporary and permanent storage approaches.

Mr. Sven Hagemann identified a number of gaps and needs that should be addressed in the future. Regarding permanent storage, the possible benefits of prior stabilization of mercury should be explored. The disposal of mercury containing waste has not been looked into sufficiently. There is a need for elaborating a site selection process and further investigation of possibly suitable geological formations for underground disposal. For both temporary and permanent storage of surplus metallic mercury, there is lack of adequate legislation in many countries. This was also mentioned in the discussion. The idea of developing a regulatory toolbox was appreciated by participants.

Moreover, Sven Hagemann found that technical terms are not consistently used in the Basel TG and in the storage reports. A comprehensive glossary of relevant terms is needed in order to prevent further confusion in using relevant terms. Such a glossary of terms related to mercury waste and storage is currently being prepared. Mercury-containing tailings are a consequence of mining and processing ores of gold and other metal ores. This issue was not addressed in any of the studies nor in the Basel TG. The management of stockpiles of commodity mercury and other mercury containing goods is not covered under any of the studies or the SBC TG.