

# **Guidance on the identification of individual stocks of mercury or mercury compounds exceeding 50 metric tons and sources of mercury supply generating stocks exceeding 10 metric tons per year**

## **Background**

1. Paragraph 5 (a) of article 3 of the Minamata Convention on Mercury provides that each Party “shall ... endeavour to identify individual stocks of mercury or mercury compounds exceeding 50 metric tons, as well as sources of mercury supply generating stocks exceeding 10 metric tons per year, that are located within its territory”. Paragraph 12 of article 3 requires the Conference of the Parties to provide further guidance in regard to that issue at its first meeting. The present guidance is intended to assist Parties in fulfilling their obligation under paragraph 5 (a) of article 3.
2. In the development of the guidance, emphasis has been placed on the need for each Party to “endeavour to identify” individual stocks of mercury as well as sources of mercury supply. It is recognized that for some Parties the resources available to undertake these activities may be limited, and the guidance therefore includes an initial focus on desk studies. Information may also be collected through the development of mercury inventories, which is being facilitated in many countries through Minamata Convention initial assessment projects funded by the Global Environment Facility.
3. It should also be recognized that Parties have an obligation to take measures to ensure that the stocks are stored in an environmentally sound manner as provided for under article 10 of the Convention.

## **Definitions**

4. In article 3 of the Minamata Convention, “mercury” is defined to include mixtures of mercury with other substances, including alloys of mercury with a mercury concentration of at least 95 per cent by weight, and “mercury compounds” is defined as “mercury (I) chloride (known also as calomel), mercury (II) oxide, mercury (II) sulphate, mercury (II) nitrate, cinnabar and mercury sulphide”. The article does not cover “quantities of mercury or mercury compounds to be used for laboratory-scale research or as a reference standard”, “naturally occurring trace quantities of mercury or mercury compounds present in such products as non-mercury metals, ores, or mineral products, including coal, or products derived from these materials, and unintentional trace quantities in chemical products”, or “mercury-added products.”

## **Individual stocks of mercury or mercury compounds exceeding 50 metric tons**

5. The obligations set out in paragraph 5 (a) of article 3 relate to “individual stocks” of mercury or mercury compounds in the amounts specified. The term “individual stocks”, however, is not defined in the Convention. In the absence of a definition of “stocks” in the convention text, a “stock”, in this context, could be considered to be a quantity of mercury or mercury compounds accumulated or available for future use, but would not include quantities of mercury disposed of and managed as waste, nor mercury at a contaminated site, nor geologic reserves of mercury. In identifying stocks, it is important to consider both mercury and mercury compounds held at active premises and mercury and mercury compounds (that is not waste mercury) stored in decommissioned facilities. An individual stock would be identified when the aggregate weight of mercury or mercury compounds exceeded 50 metric tons. Parties may express the aggregate weight as a sum of the contribution of the various amounts of mercury within the compounds aggregated.
6. Where mercury or mercury compounds are not intended for a use allowed under the Convention, they fall under the definition of mercury wastes set out in Article 11, namely, “substances or objects ... that are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law or this Convention”. Thus, they should be managed as mercury waste and should therefore be excluded from the requirements of article 3. The particular requirements of paragraph 5 (b) of article 3 in relation to mercury that a Party determines to be excess mercury from the decommissioning of chlor-alkali facilities should be taken into consideration.
7. An “individual stock (not defined in the Convention) of mercury or mercury compounds” could be considered to be the total quantity of mercury or mercury compounds under the control of a Party,

or an economic or legal entity, to be determined as the Party deems appropriate. An entity storing mercury in different locations will consider them combined as an individual stock.

8. The obligation in paragraph 5 (a) regarding identifying stocks exceeding 50 tons is an ongoing obligation, not limited to stocks in existence at the time of entry into force of the Convention for a Party. As stocks may be of a dynamic nature, depleted by the use of mercury for allowed uses and replenished by the generation of mercury from sources of mercury supply, it will be useful for a Party to keep track of the movement of mercury through commerce, perhaps by tracking the demand for or sale of mercury by the concerned entities, although ongoing tracking is not required by the Convention.

9. In determining the levels of mercury stocks at any given time, initial actions will rely on the identification of entities that may store or use mercury and related facilities. Such entities and facilities might include:

- (a) Mercury traders that buy and sell, including through imports and exports, mercury or mercury compounds and may have varying amounts on hand at any time;
- (b) Primary mercury mines, which may have stocks of mercury awaiting sale and therefore may have large quantities on hand at certain times, depending on demand;
- (c) Other facilities or activities – for instance recycling – that produce mercury or mercury compounds, including mercury waste treatment facilities, which may also have large stocks on hand, depending on the overall mercury demand or on whether mercury is held pending a final decision on whether it is destined for disposal;
- (d) National Governments, which may have stocks of mercury on hand resulting from the seizure of mercury and from authorized uses such as military storage;
- (e) Production facilities for mercury-added products or facilities that use processes that use mercury or mercury compounds, which may also maintain significant stocks of mercury depending on the supply chain and current demand.

10. The assessment of such facilities may be assisted by considering any registered exemptions under the Convention, as well as data presented under tools such as the global chlor-alkali inventory published by UNEP.<sup>1</sup> As is discussed above, information gathered through a national mercury inventory developed, for instance, under a Minamata Convention initial assessment may also assist in the identification of stocks, as well as in the consideration of permits issued to store mercury or mercury compounds if a system for issuing such permits is in place.

11. Following the identification of relevant facilities it may be useful to undertake a desk evaluation to determine whether the facilities hold stocks of more than 50 metric tons. This determination could be based on a mass balance approach by considering inputs, outputs, material generated and material consumed, e.g.:

- (a) Quantities and makeup of mercury or mercury compounds used;
- (b) Quantities of mercury or mercury compounds purchased;
- (c) Quantities of mercury waste disposed of or managed;
- (d) Quantities of mercury or mercury compounds sold;
- (e) Estimated quantities of mercury or mercury compounds lost to the environment or recovered from processes.

12. Information may be available from national processes for managing imports of mercury, from information on marketing mercury nationally and from registries of facilities subject to environmental permits. Reporting by facilities and the keeping of detailed records may facilitate such assessments. A detailed assessment of records relating to a facility may be useful, along with direct communication and on-site inspection.

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<sup>1</sup> Available from [www.unep.org/chemicalsandwaste/Mercury/GlobalMercuryPartnership/ChloralkaliSector/Reports/tabid/4495/language/en-US/Default.aspx](http://www.unep.org/chemicalsandwaste/Mercury/GlobalMercuryPartnership/ChloralkaliSector/Reports/tabid/4495/language/en-US/Default.aspx).

13. In assessing the level of stocks actually held at facilities, visual inspection may be useful to verify the quantities of mercury held in storage. As a guide, a 35 kg flask of mercury would have approximate dimensions of 30 cm height and 12.5 cm diameter. A container for 1 metric ton of mercury would have the dimensions of approximately 50 cm height and 50 cm diameter. Based on this, 50 metric tons of mercury would fill at least 50 containers, which would occupy approximately 12.5 square metres of floor space.

### **Sources of mercury supply generating stocks exceeding 10 metric tons per year**

14. There are a number of possible sources of mercury supply within the territory of a Party that may generate stocks exceeding an aggregate weight of 10 metric tons per year pursuant to Article 3. Such sources could be included in a Party's effort to identify sources of mercury supply. These sources do not include imports of mercury or mercury compounds as such imports are not sources located within the territory of the Party.

15. The identification of possible sources of mercury supply may be undertaken initially as a desk exercise, including an examination of records such as transaction records, evidence of the distribution of mercury or mercury compounds and import or export records that could be compared with estimated quantities used. The intention of such a comparison is to identify any significant discrepancies that may highlight previously unknown uses of mercury or indicate the existence of other sources of supply.

### **Guiding questions to aid in the identification of stocks of mercury or mercury compounds or sources of mercury supply**

16. Taking into account the elements set out above, the following questions may assist in determining whether a country has stocks of mercury or mercury compounds exceeding 50 metric tons or sources of mercury supply that generate more than 10 metric tons per year:

- (a) Is primary mining occurring within the country's territory?
- (b) Are there identified sites where mercury is stored prior to use within the territory?
- (c) Are recycling or recovery activities that may produce mercury undertaken within the territory? If so, what quantity of mercury is produced by those activities?
- (d) Is there any proposed decommissioning of chlor-alkali plants, vinyl chloride monomer plants or other facilities with manufacturing processes in which mercury or mercury compounds are used?
- (e) Are there facilities that may result in the production of by-product mercury within the territory? If so, what quantity of mercury is generated by those facilities?

