BRIEF 2

MERCURY WASTE: KEEP THRESHOLD AT 1 mg/kg – 25 mg/kg TOO HIGH!

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MERCURY WASTE THRESHOLDS AND DEFINITIONS:

This will be a key issue for COP 3 as it will define what 'mercury waste' is under the treaty and what waste will therefore be subject to Convention requirements. If threshold concentrations are set high, large quantities of mercury waste will escape sound management. There will be those seeking this outcome at COP 3 and beyond, to reduce the costs of mercury waste management to certain industry sectors. One member of the expert group on waste thresholds proposed a level of 25 mg/kg to define waste contaminated with mercury. ***A threshold level of 25 mg/kg was NOT supported or endorsed by any other members of the expert group and should not be considered for a draft decision at COP 3.***

This value was raised at the expert meeting by one member *but was not supported by any other member of the expert group*. If 25 mg/kg is adopted it will allow very large quantities of mercury contaminated waste to escape treatment and be used in ways that can lead to further contamination, such as agricultural application as soil amendment and reuse in the construction industry A high level of 25 mg/kg would ensure that most waste incinerator bottom ash and sewage sludge would also avoid regulation as mercury wastes under the treaty.

Decision MC-2/2 on Mercury Waste Thresholds established an intersessional expert group to determine what types of mercury waste, if any, should be subject to threshold concentrations that would define the substance as 'mercury waste' and therefore be subject to the requirements of the Convention. The three forms of waste under Article 11 that were given consideration by the expert group were substances or objects:

(a) Consisting of mercury or mercury compounds;

(b) Containing mercury or mercury compounds; or

(c) Contaminated with mercury or mercury compounds.

The expert group met in Osaka in May 2019 and through online meetings, and resolved to recommend to the COP that all elemental **mercury waste in group** (**a**) that was not being traded as a commodity for an allowable use (i.e. mercury which is confiscated, retired, sourced from chlor-alkali plant closures, etc.) would be deemed mercury waste and did not require a threshold concentration to define it. In practical terms this should work; but it depends on whether a given jurisdiction regards the mercury as a 'waste' or a 'commodity'. IPEN has noted in the past that any threshold definition for waste consisting of mercury should be consistent with Article 3 1. (a), specifically "a mercury concentration of at least 95 percent by weight," but if no threshold is applied then IPEN proposes mercury of lesser purity than 95 percent (yet still capable of being used for ASGM, etc.) is automatically deemed 'mercury waste' under category (c).

Waste in group (**b**) practically refers to products containing mercury. The expert group recommended that all end-of-life products (or those phased out or otherwise destined for disposal) containing mercury should be deemed 'mercury waste' and that no threshold should be required. This should be supported on the proviso that all such products are clearly labelled as containing mercury.

Waste in group (**c**) is expected to be the largest form of mercury waste by volume and the expert group recommended that a threshold level should apply. The expert group did not agree on a value for a threshold level. One level was proposed by a member of the group at 25 mg/kg, but it was not agreed. This level is based on the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and is a level based on the inherent toxicity of mercury to the most sensitive receptor (aquatic life). IPEN supports a level of 1 mg/kg as the threshold that defines mercury waste on the basis that technology is available to clean bulk mercury contaminated waste (soils, sludges, etc.) down to 1 ppm, thereby removing the mercury from significant release to the environment.

The expert group was also required to assess *approaches* to determining threshold concentrations. Some parties have pushed for 'leaching' values to be used. IPEN strongly opposes this approach as it is based on a test (Toxicity Characteristic Leaching Procedure - TCLP) that simulates the disposal of mercury waste to landfills. It effectively seeks to define mercury waste based on a waste management practice – landfilling – and locks in that method of disposal. The expert group rejected leaching values as a legitimate approach to establishing thresholds for most waste and this should be maintained at COP 3.

A contentious issue will be the treatment of *mining tailings, overburden and waste rock*. Tailings from ASGM will be deemed mercury waste. Mining tailings, overburden and waste rock from primary mercury mining will also be deemed mercury waste. However, mining tailings, overburden and waste rock from other mining activity (i.e. not ASGM or primary mercury mining) will only be deemed mercury waste if such waste exceeds a threshold concentration established by the COP (this has not yet occurred).

The expert group has recommended "*that the hazard and risk associated with industrial-scale waste rock and overburden is sufficiently low that it is not necessary to develop a threshold for these sources*." However, this recommendation will need to be re-evaluated, as some sources suggest that overburden, in particular, may be a significant source of volatile mercury emissions in some regions.

The exclusion of all these mining wastes from the regulation of the Convention could result in large reservoirs of mercury waste releasing mercury emissions to the air, as well as releases to waterways.

Another contentious issue is the manner in which *tailings* from industrial scale mining will be tested to see if such waste meets the definition of mercury waste under Article 11 para 2. The expert group has proposed a two-tier test system where, to be declared mercury waste, the tailings must exceed;

1) the total threshold concentration limit (yet to be established by the COP) and then, if this level is exceeded, subject the tailings to;

2) a leachable limit test to determine how much mercury is able to leach into the environment due to precipitation, erosion and other processes. Presumably a leachable limit would need to be established and the tailing must then exceed this limit to be declared mercury waste.

No threshold value has been established yet for either the total threshold value or the leachable limit value that would be applied in this two-tiered process. There are also multiple types of leaching tests that could be applied none of which cover all real-world scenarios.

IPEN does not support this two-tiered assessment proposal. To be consistent with the Convention text, only the first-tier assessment is required.

ASGM tailings. Photo: Lee Bell

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