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Meeting of the Group of Technical Experts on

Waste Thresholds to be Established Pursuant to

Paragraph 2 of Article 11 of the Convention

Minamata Convention on Mercury

Osaka, Japan, 27-29 May 2019

Compilation of comments on approaches for establishing thresholds for overburden, waste rock and tailings, except from primary mercury mining [[1]](#footnote-2)

1. Members and observers of the group of technical experts on mercury waste thresholds and other experts involved in the work of the group provided their comments on the matters mandated by the Conference of the Parties in its decision MC-2/2. This document provides a compilation of comments on approaches for establishing thresholds for overburden, waste rock and tailings, except from primary mercury mining. This document has been prepared on the basis of the earlier document UNEP/MC/COP.2/6, which had included comments from experts submitted in preparation for the second meeting of the Conference of the Parties in November 2018. Therefore, the comments submitted by the experts during this commenting round are indicated as such in this document.
2. Approaches for establishing thresholds for overburden, waste rock and tailings, except from primary mercury mining
3. Differing views were expressed with regard to the prioritization of mining waste. One expert included this waste as a highest priority task, expressing particular concern about tailings from gold, lead, zinc, copper and silver mining. Another expert commented that thresholds should be determined for mine tailings given that emissions and releases of mercury and mercury compounds from mine tailings could seriously threaten human health and the environment, whereas thresholds might not be needed for overburden and waste rocks. In the submissions from the experts in March 2019, one expert supported this comment and said that the thresholds for mine tailings should be referenced to the natural mercury content of undisturbed soils in the area. The expert also said that soil disturbance by mining can also contribute to emissions and releases of natural mercury that can impact on human health and the environment.
4. Two other experts noted that overburden, waste rock and tailings from non-primary mercury mining generally contained mercury in the highly insoluble forms that were present in the original earthen materials, were already regulated nationally, and were managed on-site in specifically designed facilities where there was no exposure to the public, and therefore mining waste that was not from primary mercury mining was of a very low priority. However, in the submissions from the experts in March 2019, one expert mentioned that there was no management of mercury waste from ASGM and many people, including children, are exposed to mercury waste. The expert also mentioned another factor that both amalgamation and cyanidation techniques may cause tailing to contain both mercury and cyanide and become soluble. One expert previously commented that this was not only an issue of human exposure and tailings being “far away”, but that it was necessary to consider volatilization and releases to water bodies.
5. One expert, while questioning the need for establishing thresholds for this type of waste, observed that if any specific thresholds were considered, the natural background levels of mercury at the mine site and the risk of mercury exposure to humans and the environment from these materials needed to be taken into account. In the submissions from the experts in March 2019, one expert disagreed with this because the decision on risk assessment would create a tremendous burden. The expert suggested to stick with simple waste categories or simple threshold testing, but the group should not be attempting to calculate risks. One expert questioned if there is any accessible leachability or leach text data, and the expert pointed out if there is any existing thresholds or guidelines in the countries with mining activities.
6. In the submissions from the experts in March 2019, one expert said that leaching test would be a good approach for thresholds, and this would depend on potential of mercury releases into the environment. One expert previously suggested the use of the leaching test and other measures of releases, noting that mining wastes would never be incinerated. Another expert also proposed setting a threshold based on leachability as the first tier in determining if overburden, waste rock and tailings might be considered a “mercury waste” under the convention. The expert indicated a second tier should come into play only if the leachability threshold was exceeded, and the second tier would be a site-specific threshold based on local precipitation/infiltration, specific chemistry, and risk of exposing downgradient human populations or biota. On the other hand, another expert suggested listing the types of ore tailings subject to the Convention coverage, regardless of concentration.
7. In the submissions from the experts in March 2019, one expert said that thresholds for mercury wastes from the ASGM sector should depend on the geology of the materials being mined and processed. Consideration needs to be given to background values for mercury; some of these may show anomalous values. Some environments have naturally occurring mercury compounds within mineral-rich zones. Disturbance from mining activities release these compounds and exacerbate the situation as it relates to the mercury concentration in the environment. As an example, Guyana has a native mercury containing mineral ‘Potarite”, discovered in the Potaro which is a significant area for the ASGM sector. The commonly held approaches to classification based on total concentration in waste, measures of the release potential and qualitative determination negates the amount of mercury present in the natural environment. Demarcation and identification techniques have to be developed. There exists a need for screening, identifying, isolating and demarcating mercury contaminated areas along with the use of proper designed facilities for the safe disposal and management of mercury. There may also be a need to secure affordable technology for the recovery of mercury from ASGM tailings, especially amalgamation tailings. Research should be done to quantify mercury in these tailings and to define varying thresholds.

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1. This document has not been formally edited. [↑](#footnote-ref-2)