



EEB initial Comments on Draft Commission Decision on specific criteria for the storage of mercury considered as waste and amending Council Directive 1999/31/EC on the landfill of waste

14 September 2010

The European Environmental Bureau (EEB) welcomes the opportunity to comment to the Draft Commission Decision on specific criteria for the storage of mercury considered as waste and amending Council Directive 1999/31/EC on the landfill of waste, following the requirements of the Regulation 1102/2008 on the banning of exports of metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury.

Given the timing, this decision was circulated (end July), time allotted for first feedback is rather short, so our comments are made in light of this. Therefore, we would welcome the opportunity for further discussion at a later stage.

The EEB has followed very closely the process related to setting criteria for mercury storage from the very start. During the discussions on the BiPRO study on '*Requirements for facilities and acceptance criteria for disposal of metallic mercury*' we expressed concerns and many of those were indeed reflected in the final report of BiPRO. Considering that the EC decision does not really follow the final report conclusions, we have several concerns on the storage criteria as they are proposed.

We would like to stress once more that potential time constraints in deciding what is the best way to sequester or store mercury, permanently, should not compromise the safety and the potential for exposure of future generations to mercury. We generally believe that, if determined viable, solidifying the liquid mercury before its final storage/sequestration could be the safest long-term solution and consistent with the global objectives of sequestration, as an emerging technology appears promising at this time. However, at least some specific aspects of these technologies need additional scrutiny before we could fully support them. Therefore, it has to be made clear what are the issues remaining which need to be identified before final solutions are taken and adequate time should be allocated respectively. In the meantime, safe temporary solutions should be given priority in the near term.

Contextual comments

Considering the outcome of the BiPRO study and the discussions held during the relevant meetings – the Draft EC decision raises several concerns:

1. It does not consider the fact that BiPRO recommended three possible options for the storage of metallic mercury:
 - i. *Pre-treatment (Sulphur stabilisation) of metallic mercury and subsequent permanent storage in salt mines (highest level of environmental protection, acceptable costs)*
 - ii. *Pre-treatment (Sulphur stabilisation) of metallic mercury and subsequent permanent storage in a hard rock underground formation (high level of environmental protection, acceptable costs)*
 - iii. *Permanent Storage of metallic mercury in salt mines (high level of environmental protection, most cost effective option)*

2. As a result of the above, it does not discuss at all the possibility or obligation to dispose mercury in solidified form, nor it discusses special conditions and criteria (for the site and the solidified product) if the mercury was to be disposed of in solidified form although these were separately discussed in the study.
3. It does not consider recent developments on solidification, although several issues that were brought up and analysed at the BiPRO report appear to have now been resolved; DELA has recently (July 2010) circulated a fact sheet showing that the solidification of metallic mercury to mercury sulfide can now take place in large industrial scale with an annual capacity of 1000 tons. Minimum environmental and economic requirements, as these were developed by the BiPRO study, appear also to be fulfilled by this process¹.
4. It does not consider that special and different in some cases criteria were identified for permanent and for temporary storage in the same means (e.g. salt mines).
5. No site specific requirements and criteria for choosing the site of temporary storage have been included.
6. It is not clear whether the *General requirements* also apply for temporary storage whether this is in salt mines or in above ground facilities.
7. Furthermore, Article 8, of the EU Regulation 1102/2008 requires that the EC 'keeps under review ongoing research activities on safe disposal options, including solidification of metallic mercury' and 'shall submit a report to the European Parliament (EP) and Council by 1 January 2010'. This has not been done and is very much relevant to above comments and to the draft EC decision on specific criteria for mercury storage.

Considering the above comments (1-6), the EU report should be developed rapidly and should form the basis for summarizing the stabilization data (including the recent commercial testing), answering the outstanding questions, and/or charting a clear path forward to get the answers (i.e, additional testing as needed, etc.).

8. The concern of long – term behaviour of liquid metallic mercury in salt mines is still valid and no study has confirmed that such a process would be environmentally safe. As a result pending this study, no elemental mercury can be permanently stored in a salt mine, making all criteria as outlined in the draft EC decision, not relevant.

To that end, the draft EC decision on specific criteria for mercury storage cannot be considered acceptable at this stage.

Taking into account all above, and given the 2011 export ban date fast approaching, the EC should be focused on adopting temporary storage standards for a few years - maximum for 5 years as suggested by BiPRO. At the same time the EC report for the EP should be prepared swiftly to clarify where we stand and what are potential remaining concerns with respect to solidification (if any), and accordingly to show a path forward to

¹ DELA factsheet on Mercury stabilisation with sulphur – the safe disposal solution for liquid mercury, July 2010

make solidification a technical and regulatory reality. What is now proposed is not helpful if it fails to do these things, and in fact undermines the solidification option and relevant technological developments, by suggesting liquid placement without treatment is acceptable.

With respect to the temporary solutions, given their present experience we don't see the difficulty in the chlor-alkali industry storing onsite temporarily or arranging for a suitable place, provided the time frame is clear. What concerns us, however, is that the EC has partly failed to make recommendations for temporary storage, and this must occur in order to address the 2011 deadline.

In addition, in the case of disposal of solidified mercury, considering that we would be talking about disposal of a solid product, which would eventually fall under the Landfill directive and Decision 2003/33 WAC, further criteria and conditions (e.g. long term leaching, other) need to be considered and defined if the solidified product could be disposed in a salt mine and/or a different underground facility, if appropriate.

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