

Interactive comment on “Source apportionment of mercury in dust fallout at urban residential area of Central India” by S. Pervez et al.

Anonymous Referee #1

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General comments:

This manuscript has obvious major deficiencies in quality, so I was startled to see that it was included in ACPD.

It is partially very poorly organised and therefore time consuming to read thoroughly. The language is also of highly irregular standard, where the lowest level is clearly unacceptable with fragmentary or clearly defective sentences. These sentences are too many to be included in this review. As the paper reports alarmingly high dust fallout to an urban area and therefore being intrinsically controversial, the clarity of the

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paper need be significantly improved in order to gain any credibility.

The authors have inconveniently not checked the paper for references present in body text but missing in the list. The references are in addition not listed alphabetically. Moreover, a few refer to drafts rather than the corresponding final documents. The list should also benefit from being updated to cover some recent publications on Hg.

It is only reasonable to initially give account for the actual Hg concentration ($\mu\text{g g}^{-1}$) levels of the dust measured in the study, present a typical national background concentration, exercise calculation of enrichment factor (EF) etc. The only data tabulated are in fact fluxes. Another obvious weakness of the paper is that the analytical section does not include any information of method QA/QC (precision and accuracy; recovery). Such information must be given. It is imperative to also use standard reference materials.

The authors do not strictly address quantities with usual SI-notation and relevant unit (e.g. alternatively using m for month). I found it rather aggravating to observe the use of concentration when actually discussing Hg dust fall-out (flux). The unit $\text{mt km}^{-2} \text{month}^{-1}$ ($\text{Mg km}^{-2} \text{h}^{-1}$) appear to be out of place. Dry deposition fluxes in the literature are normally given in $\mu\text{g m}^{-2} \text{d}^{-1}$. As the fluxes reported in this paper are alarmingly high, the unit of $\text{mg m}^{-2} \text{d}^{-1}$ is appropriate.

In its current status, the paper should be rejected.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 21915, 2009.

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