

***Interactive comment on “A laboratory based experimental study of mercury emission from contaminated soils in the River Idrijca catchment” by D. Kocman and M. Horvat***

**Anonymous Referee #2**

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Review on manuscript submitted to ACP Title: A laboratory based experimental study of mercury emission from contaminated soils in the River Idrijca catchment Author(s): D Kocman and M Horvat MS No.: acp-2009-674 Iteration: Initial Submission Special Issue: Atmospheric mercury (ICMGP2009)

General comment: The authors conducted an experimental study on 7 soil samples collected from the Idrijca catchments to investigate mercury emission fluxes at various conditions using a well established laboratory flux measurement system (LFMS). The outcome from this study is of great importance to understand mercury emission fluxes from soil in this region. A few drawbacks of the experimental designs do exist. First

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of all, A Lumex RA-915+ was used in the experiment. It is well known that Lumex can only accurately measure mercury concentrations in ambient air with Hg concentrations up to 10 ng m<sup>-3</sup>. At low concentration levels, the uncertainty is very large. The soil texture was not quantitatively measured so that it is not easy to explain the correlation between Hg flux and soil moisture. Thirdly, only total Hg concentrations in soil samples were analyzed, but the speciation information was not determined. It will be good to compare the actual speciation data with Hg flux instead of using results from previous study.

Specific comments: A discussion section needs to be added to address how the current study will contribute to estimate Hg emission from soil in the River Idrijca catchment.

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