Atmos. Chem. Phys. Discuss., 10, C5258–C5259, 2010
www.atmos-chem-phys-discuss.net/10/C5258/2010/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Release of mercury halides from KCl denuders in the presence of ozone" *by* S. N. Lyman et al.

S. N. Lyman et al.

slyman@uw.edu

Received and published: 13 July 2010

Thank you for reviewing this manuscript.

We will be happy to expand our description of the KCl denuders in the revised manuscript.

We feel the issue of the release of mercury from natural substrates by ozone is an extremely salient topic as it relates to the mercury biogeochemical cycle, and that our research helps inform this issue. Several other studies have pointed to daytime atmospheric oxidants as drivers of release of mercury from substrates as diverse as soils, laboratory walls, and coal combustion waste products (e.g. Zhang et al. 2008, Watras et al. 2009, Gustin and Ladwig 2010). Our work shows that ozone reacts with specific

oxidized mercury compounds on inert surfaces (uncoated quartz denuders), which we feel is a step towards understanding the chemistry of this phenomenon in the natural environment. Current atmospheric mercury models assume that mercury deposited to surfaces stays in place, but the research cited above, including our study, paints a very different picture.

If given the opportunity to revise this manuscript we will add the references given above and modify the manuscript to clearly state how our work relates to the broader issue of release of mercury from substrates by ozone.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 12563, 2010.