

Interactive comment on “The municipal solid waste landfill as a source of ozone-depleting substances in the United States and United Kingdom” by E. L. Hodson et al.

Anonymous Referee #2

Received and published: 6 January 2010

This is a timely and needed source of data and information that characterizes ozone depleting substances (ODSs) associated with municipal landfills. Data were obtained from sampling seven landfills in Massachusetts and nine U.K. landfills. The analysis of the data resulted in concluding that landfills are a minor source of ODSs.

I think the authors have done an admirable job of obtaining and analyzing data from U.S. and U.K. landfills to evaluate the significance of ODSs from municipal landfills. I think the paper is well written and the technical approach is clearly documented. As someone in need of data on landfills, I would consider this a significant publication that helps to clarify if landfills are a source of ODSs.

C9363

Here are my comments:

Once waste is landfilled, emissions are generated over decades. Perhaps the authors should consider total emissions over time from products containing ODS? Would this make a difference in the conclusion?

What is the effect of combustion by flares/engines/boilers on ODS? The samples were of header pipe gas prior to combustion and assumptions were based on this gas being released. Actually recovered gas is combusted using variety of technologies. I am not sure if (or how) there would be a difference in the by-product emissions of ODS in landfill gas for different technologies is use.

How is the fraction of uncollected gas accounted for? What gas collection efficiency was assumed?

What about the uncertainty in the national estimate of ODSs? How does considering this uncertainty impact the conclusion?

Need to define what is meant by “recovered” in Figure 1.

Not clear if authors find correlation with landfill size and emissions. Also not clear how landfill size was defined.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 22803, 2009.

C9364