Reviewer's report

Title: Factors influencing the spatial extent of mobile source air pollution impacts: A meta-analysis

Version: 1 Date: 31 January 2007

Reviewer: Bertil Forsberg

Reviewer's report:

General
This is a good effort to present an overview of reported spatial extent estimates for pollutants from mobile sources and discuss why they vary between studies. However, I have a feeling that there are more relevant published papers, for example using dispersion modelling, that were perhaps not found because they didn't use the spatial extent-related keyword listed here. I would have liked to see them rather than the collected government reports. Now the "meta-analysis" includes only a few studies in some categories.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. How much would a modification of your search criteria (see above) increase the number of relevant studies? If much, would the added studies be different than the included with respect to design and results?
2. What is the important messages to risk assessors and policy makers? In the view of these results, shouldn't the use of relative risks (PM2.5 and mortality...) from between city studies in assessments of road projects or traffic emissions (such as the ExternE method) be questioned?
3. In a way the case-study feels a bit like a separate paper (would not be there if more papers had been included?) could it be excluded or such results be more briefly referred?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.