Reviewer’s report

Title: A comparison of self reported air pollution problems and GIS-modelled levels of air pollution in people with and without chronic diseases

Version: 1 Date: 9 August 2007

Reviewer: Gerard G Hoek

Reviewer’s report:

General

The authors address an interesting and relevant topic in air pollution epidemiology in a large survey in Oslo. Overall, the paper is well written.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

My major problems with the current analysis is that the positive associations between health and APP can be interpreted as overreporting but also as a causal effect. More needs to be done to make the case for overreporting. In particular, the current analyses do not make full use of the fact that data are available on objective and subjective exposures. Table 1 suggests that there is very little relationship between health and objective exposure, which would support the authors’ argument. In addition, table 1 suggests that the difference in NO2 related to APP does not seem to differ for those who report asthma and those who do not, which would argue against overreporting.

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

Age classes are unclear labelled

Statistical analysis section unclear: suggests that health was modelled as an outcome

Discretionary Revisions (which the author can choose to ignore)

Tables are large. I am not convinced that all the different scenarios in tables 2 and 3 are necessary.

Correlation between APP and NO2 is not informative as APP is a 0/1 variable.

The difference between APP and NO2 could be further discussed. APP is probably a more local scale variable than NO2 so one would not expect a very good agreement.
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.