Reviewer's report

Title: Modeling Personal Polycyclic Aromatic Hydrocarbon (PAH) Exposure in Human Subjects in Southern California

Version: 1 Date: 13 April 2012

Reviewer: Antonio Miguel

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The PAS 2000 CE* instrument used in the reported study detects only particle-bound Polycyclic Aromatic Hydrocarbons (PAHs) on ultrafine particulate matter. It does not detect vapor-phase PAHs. In urban environments, including the Los Angeles Air Basin in Southern California, most of the PAH mass is found in the vapor-phase**. Accordingly, human exposure to PAHs occurs mainly from PAHs present in the vapor-phase. This very important distinction is missed by the authors. The manuscript is well written, addresses an important issue, but needs to be revised before further assessment. Revision topics include: Abstract, Background, Methods, Results, Conclusions, and Key words.

The interpretation of the results needs to reflect this very important distinction. An appropriate title for a revised manuscript would be

Modeling Personal Particle-Bound Polycyclic Aromatic Hydrocarbon (PAH) Exposure in Human Subjects in Southern California.

* http://www.ecochem.biz/PAH/PAS2000CE.htm

**Over the last two decades, several studies have been reported in the open literature on particle- and vapor-phase PAH concentrations measurements in Southern California.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

no, to all questions.