

Date: Wed, 20 Aug 2008 17:58:45 -0700  
To: "C. Arden Pope" <cap3@byu.edu>  
From: "James E. Enstrom" <jenstrom@ucla.edu>  
Subject: PM2.5 and Mortality in California & CARB Petition

August 20, 2008

C. Arden Pope, Ph.D.  
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Dear Dr. Pope:

During our July 11, 2008 CARB teleconference you indicated some willingness to work with me on air pollution epidemiology in California. Thus, I have attached my July 11, 2008 comments regarding the May 22, 2008 CARB Draft Staff Report "**Methodology for Estimating Premature Deaths Associated with Long-term Exposures to Fine Airborne Particulate Matter in California**". Also, I have attached the June 17, 2008 letter by a group of California professors petitioning CARB to reassess its 1998 declaration of diesel particulate matter as a toxic air contaminant (TAC). This TAC declaration has led to the May 22, 2008 CARB estimate that diesel particulate matter is responsible for 3,900 premature deaths in California annually. However, there is extensive California-specific evidence, not used by CARB to make their May 22, 2008 estimate, indicating that fine particulate matter does not currently cause premature mortality in California. This evidence is described in detail in my July 11, 2008 comments and is summarized in the May 27, 2008 *Washington Times* commentary by Henry Miller, M.D., "**Diesel risks mostly hot air?**" (<http://www.washingtontimes.com/news/2008/may/27/diesel-risks-mostly-hot-air/>).

You are in a position to provide important additional California-specific epidemiologic evidence. Thus, I request that you complete sections 4a) and 4b) of my July 11, 2008 comments regarding calculation of relative risks in the ACS CPS II cohort. Using the same ACS CPS II database and proportional hazards methodology used in your 2002 paper (*JAMA* 2002;287:1132-1141 <http://jama.ama-assn.org/cgi/reprint/287/9/1132>), calculate the all cause mortality relative risk (RR) and 95% confidence interval (CI) associated with a 10-ug/m<sup>3</sup> increase in PM<sub>2.5</sub>, similar to RRs shown in *JAMA* Table 2. Specifically:

a) Calculate age-sex-adjusted RRs and fully adjusted RRs based on all 61 metropolitan areas for 1979-1983, 1999-2000, and average PM<sub>2.5</sub> related to all causes of death during three time periods: September 1, 1982 through December 31, 1998, September 1, 1982 through December 31, 1989, and January 1, 1990 through December 31, 1998 [2 x 3 x 3 = 18 RRs]. For instance, fully adjusted RR (1979-1983 PM<sub>2.5</sub>, 1982-1998 deaths) = 1.04 (1.01-1.08).

b) Calculate age-sex-adjusted RRs and fully adjusted RRs based on the metropolitan areas in California for 1979-1983, 1999-2000, and average PM<sub>2.5</sub> related to all causes of death for the three time periods: 1982-1998, 1982-1989, and 1990-1998 [2 x 3 x 3 = 18

RRs]. Specify the definition of the California metropolitan areas used in the *JAMA* paper and the number of CPS II subjects and deaths in each area used in the calculation of each RR.

California-specific results are highly relevant and timely because they have direct relevance to the CARB regulations designed to control diesel emissions in California. In order to understand the severe economic consequences of these regulations, please view the August 28, 2007 YouTube video "**Air Quality & Our Ports**" (<http://www.youtube.com/watch?v=US4bkqHDx1c>), read the August 2008 report "**Foreclosure on Wheels: Long Beach's Truck Program Puts Drivers at High Risk for Default**" (<http://www.lulac.org/advocacy/press/2008/ForeclosureOnWheels.pdf>), and examine the current "**Driving Toward A Cleaner California**" website (<http://drivecleanca.org/>). Given the severe economic consequences of CARB regulations, I hope that you will calculate the California-specific relationship between PM2.5 and mortality among CPS II subjects, as requested above. Please send your results to Hien Tran, Ph.D., as soon as possible, in your role as a key scientific advisor for the May 22, 2008 CARB report.

I hope to hear from you soon. However, if you do not respond I will assume the calculations that I have requested will not be conducted.

Thank you very much for your consideration regarding this important issue.

Best regards,

Jim  
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[Petition Challenging CARB Diesel TAC Declaration 0617084.pdf](#)



[CARB Enstrom Comments Re PM2.5 Mortality Report 0711086.pdf](#)