MEMORANDUM

SUBJECT: Statistical information on air quality data from additional epidemiologic studies

FROM: Mary Ross and John Langstaff

TO: PM NAAQS Review Docket (OAR-2001-0017)

DATE: April 5, 2006

This memorandum supplements the statistics reported in the memorandum "Updated statistical information on air quality data from epidemiologic studies" (Ross and Langstaff, 2005) with statistics for six additional epidemiologic studies.

In Fall 2005, we made an additional effort to contact investigators of $PM_{2.5}$ studies for which upper percentile data weren't available. These studies used PM air quality measurements that were made independently by the investigators and thus not available in EPA's air quality system. We were able to obtain air quality data that had been used in a number of studies; attached is a compact disk containing the data files provided (Attachment A). The following are the mean and 98th percentile $PM_{2.5}$ concentrations for those studies:

Study	**Mean ($\mu g/m^3$)**	**98^{th} percentile $PM_{2.5}$ ($\mu g/m^3$)**
Peters et al., 2000	12.7	31.7
Peters et al., 2001	12.1	28.2
Neas et al., 1995	24.5	60.0
Neas et al., 1996	23.5	69.0
Neas et al., 1999	22.2	44.9
Schwartz et al., 1994	18	48.0

References:

Neas, L. M.; Dockery, D. W.; Koutrakis, P.; Tollerud, D. J.; Speizer, F. E. (1995) The association of ambient air pollution with twice daily peak expiratory flow rate measurements in children. Am. J. Epidemiol. 141: 111-122.

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Neas, L. M.; Dockery, D. W.; Koutrakis, P.; Speizer, F. E. (1999) Fine particles and peak flow in children: acidity *versus* mass. Epidemiology 10:550-553.

Peters, A.; Liu, E.; Verrier, R. L.; Schwartz, J.; Gold, D. R.; Mittleman, M.; Baliff, J.; Oh, J. A.; Allen, G.; Monahan, K.; Dockery, D. W. (2000) Air pollution and incidence of cardiac arrhythmia. Epidemiology 11: 11-17.

Peters, A.; Dockery, D. W.; Muller, J. E.; Mittleman, M. A. (2001) Increased particulate air pollution and the triggering of myocardial infarction. Circulation 103:2810-2815.

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