

9 January 1989

INTEROFFICE MEMORANDUM

To: Dr. C. R. Green

From: Dr. Guy B. Oldaker III

Re: Weekly Highlights

Assistance to Center for Indoor Air Research (CIAR)

ETS in Passenger Cabins of Commercial Aircraft:
Scandinavian Airline System (SAS) Project

On 3 and 4 January, Drs. Charles Green and Guy Oldaker and Ms. Mary Ward, RJRT Law, attended meetings of the working group overseeing the Scandinavian Airline System (SAS) project. The SAS project is jointly funded by the Center for Indoor Air Research (CIAR), the Swedish National Manufacturers Association (NMA), and the British American Tobacco Company. Project objectives, similar to those of surveys conducted by RJRT, are: (a) to estimate passenger exposure to ETS; (b) to assess the effect of smoker segregation on exposure; and (c) to characterize smoking behavior in aircraft in order to evaluate models predicting ETS exposures in passenger cabins. Also present at the meetings were: Ms. Mary Pottorff, Dr. R. Fenner, Dr. T. Osdene, Mr. B. Robinson, Dr. H. Reif, and Dr. P. Martin (Philip Morris); Mr. S. Carlson (Philip Morris, but representing the Swedish NMA); Dr. A. Spears (Lorillard); Dr. M. Eisenberg (Executive Director, CIAR); Messrs. J. Rupp and C. Lister (counsel, Covington & Burling); Mr. L. Holcomb (independent consultant regarding the ETS issue); and Mr. C. Caliendi (transportation consultant).

Progress reports relative to the project were provided by Drs. T. Malfors, D. Thorborn, and A. Westlin. Preliminary results show nicotine concentrations higher than those found by previous surveys of ETS in Japan Air lines (JAL) and Piedmont aircraft. In addition, concentrations of respirable suspended particles (RSP) are higher than those measured in the JAL survey. The Douglas aircraft studied have two classes of service each with separate smoking and nonsmoking sections: Business Class and Tourist Class. The data show segregation to be effective for the Business Class; however, such is not shown for the tourist Class where segregation is shown to be at best only marginally effective. This latter result is currently believed to be a consequence of the relatively small size of the Tourist Class the nonsmoking section of which is "sandwiched" between two smoking sections. Nicotine and RSP data could be biased high because they were not corrected for the effect of barometric pressure; Philip Morris agreed to investigate whether such a correction is appropriate. RSP data may be biased high because the design of the sampling system favors collection of particles substantially larger than those associated with ETS. Efforts are underway to analyze RSP samples for ultraviolet particulate matter (UV-PM), a more appropriate indicator of ETS. IT Corp. has been contacted to perform these analyses. Drs. Thorborn, Malfors, and Westlin expect that a first draft of their

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report on the SAS project will be available in early February 1989.

ETS in Passenger Cabins of Commercial Aircraft:
Department of Transportation Awards Contract

The U. S. Department of Transportation (DOT) awarded Versar and Geomet with the contract to investigate air quality within passenger cabins of U. S. commercial aircraft. The DOT request for proposal (RFP) indicates that investigations will focus on ETS. Additionally, the RFP specifies that the contractor perform risk assessments. Versar is the parent company of Geomet. Both organizations have head offices in the Washington, DC suburbs.

Guy B. Oldaker III

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