

RJR INTEROFFICE MEMORANDUM

BIO/BIO R&D - ENVIRONMENTAL TOBACCO SMOKE

TO: Dr. C. R. Green

DATE: 18 July 1988

FROM: Dr. G. B. Oldaker III

RE: Weekly Highlight

ETS Exposure Data Base: Restaurants
(McBride and Oldaker)

On 11 July, Mr. Randy McBride, summer student, and Dr. Guy Oldaker met with representatives of Lorillard to review the status of the survey of ETS in offices and restaurants in Washington, DC, and to discuss the statistical implications of the restaurant data relative to the larger ETS exposure data base for restaurants. Present from Lorillard were Mr. Ross DePinto, Statistician, Dr. Leonard Rhyne, Director of Operations Research, and Mr. Bill Crouse, Senior Research Chemist and director of the Washington survey, which is being funded by the Center for Indoor Air Research (CIAR). According to Mr. Crouse, sampling operations proceeded smoothly and analyses were in progress. Sampling operations were audited during a site visit on 23 June by Dr. Roger Jenkins of Oak Ridge National Laboratory; in the letter report to the CIAR, he stated that the survey was well planned, all technicians appeared adequately trained, and data recording and reduction procedures were well designed and implemented. Mr. Crouse expects to present the restaurant results from the Washington ETS survey at the Air Pollution Control Association (APCA) Speciality Conference on Combustion Processes and the Quality of the Indoor Environment which is to be held in Niagara Falls, NY, September 27 through 29, 1988. (Because of time constraints, office data will not be presented there; decisions regarding the presentation of the office data have not yet been made.) Co-authors on the paper will include Mr. McBride and Dr. Oldaker. Statistical analyses are being conducted at RJRT and Lorillard in order to test for differences among the data bases for surveys performed in New York, NY, Dallas, TX, Winston-Salem, NC, Greensboro, NC, Knoxville, TN, Hong Kong, and Washington, DC. Lorillard's statisticians also are pursuing the issue whether additional surveys are warranted to estimate exposure to ETS in restaurants. The above issues were discussed with Dr. Alex Spears, Vice President, Lorillard at the conclusion of the meeting.

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ETS in Passenger Cabins of Commercial Aircraft: Discussion with
Representatives of Combustion-Engineering Environmental

On 19 July, Dr. Guy Oldaker met with representatives of Combustion-Engineering (C-E) Environmental to discuss the U. S. Department of Transportation's (DOT's) request for proposal (RFP) to research air quality within passenger cabins of U. S. commercial aircraft. Representing C-E Environmental were Dr. Jim Flanagan, Dr. Jon Berntsen, Engineering Manager, Dr. Jack Roger, Toxicologist, and Mr. Dale Wolf. The portable air sampling system (PASS) was demonstrated and results from the industry's surveys were shared as well as results reported by Lufthansa. Mr. Wolfe, citing the precedent of cooperative efforts on government projects undertaken by member companies of the Electric Power Research Institute (EPRI) and the U. S. Environmental Protection Agency (EPA), enquired if R. J. Reynolds might be willing to bid on the proposal with C-E Environmental. Mr. Wolfe was informed that the issue would be discussed with RJRT management and a reply would be provided.

ETS in Passenger Cabins of Commercial Aircraft:
Scandinavian Airlines

Philip Morris International is pursuing additional ETS surveys in passenger cabins of commercial aircraft. Ms. Mary Pottorff, Manager, Corporate Affairs, has obtained approval from Scandinavian Airlines (SAS) to cooperate in surveys involving their fleet. (Ms. Pottorff was instrumental in enlisting the support of Japan Air Lines (JAL) for the December 1987 survey of B747 aircraft on flights connecting New York, Tokyo, and Hong Kong.) TNO, a laboratory located in Delft, the Netherlands, has been tentatively identified as a contractor to perform sampling and analyses. Philip Morris USA and RJRT are currently pursuing funding of SAS efforts through the Center for Indoor Air Research (CIAR). Ms. Pottorff has requested that Dr. Oldaker provide technical assistance in formulating the survey's experimental design.

ETS in Passenger Cabins of Commercial Aircraft: Publication in
Environmental Science & Technology

The manuscript authored by Dr. Guy Oldaker and titled "Response to 'Evaluation of the Effect of Environmental Tobacco Smoke on Airliner Cabin Air Quality'" has been accepted for publication in the journal *Environmental Science & Technology*. This manuscript responds to comments raised by J. Repace and A. Lowrey in connection with the 1987 publication by Dr. Oldaker and Mr. Fred Conrad appearing in that same journal. This paper described a survey of ETS in passenger cabins of commercial aircraft; results indicated that ETS exposures were very low and that smoker segregation significantly reduced exposures of persons seated in non-smoking sections to ETS. In their evaluation, Messrs. Repace and Lowrey attempt to support

their political conclusion that smoking should be banned on all flights by assuming relations between nicotine and particulate matter, which was not measured. The response discusses the absence of technical support for their evaluation.