

March 11, 1992

MEMORANDUM

Re: OSHA RFI Filing: Period from 1/22/92 - 2/14/92

The following comments were filed with OSHA between 1/22/92 and 2/14/92 in response to the Request for Information on Indoor Air Pollutants:

1. Mr. David M. Beem, C.I.H., Manager, Industrial Hygiene, and S. Randy Alewine, P.E., Principal, Terracon Environmental, Inc., Kansas City, Missouri. Mr. Beem and Mr. Alewine submitted a cover letter and comments discussing various aspects of indoor air quality surveys. They did not discuss ETS.

2. Mr. Richard D. Olson, C.I.H., Regulatory Compliance, Dow Environmental Sciences, The Dow Chemical Company, Midland, Michigan. Mr. Olson submitted a cover letter asserting that "employees in offices should [not] be protected at a different level than employees in manufacturing units." He also submitted comments noting that Dow Chemical Company supports a "building systems approach" for improving indoor air quality and that it has "implemented successful smoking policies in manufacturing and non-manufacturing buildings." Dow's 1986 policy encourages "flexibility on the part of the smokers and non-smokers to accommodate the wishes of both groups, while maintaining the primary focus on the health of all. This standard serves as the minimum requirement, and a number of sites have gone further, with several having a vision of a nonsmoking workplace. Many job buildings are now smoke-free as a result of these policies and position." Dow's smoking policy provides that enclosed, private offices may be designated as smoking or non-smoking areas by the occupant. Office professionals who do not have enclosed, private offices cannot smoke at their work stations, unless their supervisor and co-workers agree. This situation "has led to some sense of discrimination. In each case, the situation is referred to the supervisor to accommodate the smoker and non-smoker, alike." In addition, Dow offers smoking cessation assistance to employees who wish to stop smoking and reimburses employees who purchase Nicorette chewing gum to assist with smoking cessation. Mr. Olson also submitted copies of articles discussing the alleged relationship between ETS and respiratory illnesses in children and lung cancer in non-smoking spouses married to smokers.

3. Dr. Mark R. Morey, Ph.D., C.I.H., Manager, Indoor Air Quality Services, Clayton Environmental Consultants, Edison, New Jersey. Dr. Morey submitted a three-

paged letter and various articles, two of which mentioned ETS. First, Indoor Air Quality in Nonindustrial Occupational Environments described the composition of ETS and its alleged effect on health. Second, Healthy Building in the 1990's: Employees Exposures and the Employers' Dilemma discussed the alleged relation between ETS and lung cancer and suggested that "control of ETS is best achieved by smoke cessation" or by restricting smoking to certain designated areas.

4. Mr. Spencer Hess, President, Desiccant Drying Association, Mineola, New York. Mr. Hess submitted a two-paged letter noting that "flood damage is a major cause of [the] \* \* \* sick building syndrome." He did not discuss ETS.

5. Professor J.W. Bridges, Director, Robens Institute of Health and Safety, Surrey. Professor Bridges submitted a five-paged cover letter with comments and a report asserting that "although \* \* \* ETS can be [an] irritant if present in air in high concentrations[,] on the basis of information currently available there is no reasonable evidence that \* \* \* ETS could produce other adverse effects on the health of those working in or using commercial buildings." He noted that "there is no good evidence that workplace exposure to ETS produces a significant increased risk of lung cancer" or of adult cancers associated with active smoking.

6. Mr. Steven A. Tolman, Massachusetts State Legislative Director, Transportation Communications International Union, Brighton, Massachusetts. Mr. Tolman submitted a two-paged letter discussing Amtrak employees' concern with exhaust fumes and encouraging OSHA to adopt ventilation standards.

7. Mr. Mark A. MacKenzie, President, New Hampshire AFL-CIO, Pembroke, New Hampshire. Mr. MacKenzie submitted a one-paged letter urging OSHA to adopt ventilation standards and encouraging businesses to conform to the current ASHRAE standards.

8. Dr. Frances J. C. Roe, Consultant in Toxicology and Adviser in Experimental Pathology and Cancer Research, London, England. Dr. Roe submitted a two-paged cover letter and various papers. One of these papers discussed exposure of hamsters and rats to side stream tobacco smoke and, as noted by Dr. Roe, concluded that "the only effects associated with the exposure of rats to side-stream smoke \* \* \* were minor non-specific changes in the nasal epithelium. No effects were detectable in hamsters."

9. Mr. Eugene St. John, Executive Director, Washington Public Employee Association (WPEA), Olympia, Washington. Mr. St. John submitted a cover letter expressing concern over indoor quality in the workplace and sample correspondence allegedly showing how employee complaints concerning indoor air quality are often ignored. He did not discuss ETS.

10. Mr. Edward J. Phaneuf, Executive Director, American Federation of Teachers, Northern New England Council, AFL-CIO, Pembroke, New Hampshire. Mr. Phaneuf submitted a one-paged letter favoring the schools' adherence to the ASHRAE standards on clean indoor air and supporting legislation to ensure a "clean, healthy environment for teachers and students."

11. Dr. Stanley M. Greenfield, Ph.D., Senior Vice President, Systems Applications International, San Raphael, California. Dr. Greenfield submitted a one-paged letter requesting a general extension of sixty days from the current deadline for submitting comments in connection with the RFI.

12. Mr. F. W. Lunau, Consultant in Occupational Hygiene, Surrey. Mr. Lunau submitted a cover letter and edited versions of the Proceedings of the Indoor Air Quality and Ventilation Conference held in Lisbon in 1990. He did not discuss ETS.

13. Mr. David J. Schlein, American Federation of Government Employees (AFGE), AFL-CIO, Washington, D.C. Mr. Schlein submitted comments urging OSHA to adopt ventilation standards. These comments asserted that, in AFGE's experience, while ETS may be a problem in some situations, "complaints of smoke in the air are generally a symptom of a poorly designed or maintained ventilation smoking system. Nevertheless, some employers seek to ban or restrict smoking to eliminate this visible symptom of poor ventilation, and thus divert attention from a host of unseen toxic substances commonly found in the work environment." The AFGE also noted that collective bargaining processes are the "appropriate vehicle for establishing workplace smoking policies and urge[d] OSHA to refrain from adopting regulations which undermine that process."

14. Mr. Rodney N. Whalen, Occupational Safety and Health Specialist, United University Professions (UPP), Albany, New York. Mr. Whalen submitted a cover letter and comments asserting that in the building where he works no smoking is allowed and that smoke cessation programs are available to employees. Mr. Whalen also enclosed a copy of

New York's law on workplace smoking. This law requires that "each employer shall adopt and implement a written smoking policy" that, among other things, provides nonsmoking employees with a smoke-free area and enables employers to set aside a work area for smoking if all employees assigned to that work area agree to such designation.

15. Mr. Milton H. F. Saul, Assistant Commissioner, State of Maryland, Department of Licensing and Regulation, Division of Labor and Industry, Baltimore, Maryland. Mr. Saul submitted a cover letter and comments on behalf of the Maryland Occupational Safety & Health (MOSH) program. These comments asserted that, while MOSH had no data on the relation between health and ETS, "anecdotally it appears that \* \* \* [ETS] is related to complaints of poor indoor air quality in the great majority of cases". MOSH also noted that "strict smoking policies (that severely limit or prohibit smoking) are met with a short adjustment period that may include employee dissatisfaction, followed by employee acceptance if the policies are strictly enforced." While MOSH asserted that smoking prohibition is usually "the most easily enforced [smoking restriction], \* \* \* [t]here are some workplaces where this may not be feasible" as is the case with a correctional institution. MOSH added that, in its experience, "employers allow smoking in individual offices or other 'designated' areas or use filtering devices."

Mr. Saul also enclosed a copy of the Maryland Governor's Executive Order on smoking in government-controlled buildings. He also attached the Department of Licensing and Regulations smoking policy, which prohibits smoking throughout departmental facilities except in private offices not identified as nonsmoking by the occupants and provides that the Department will assist in the enrollment of smokers in smoking-cessation programs. In addition, Mr. Saul attached various memoranda discussing this smoking policy.

16. Mr. Dennis Fetter, Business Manager, International Union of Operating Engineers (IUOE), AFL-CIO, Portland, Oregon. Mr. Fetter submitted a two-paged letter urging OSHA to adopt ventilation standards. He did not discuss ETS.

17. Mr. Dan Varner, American Federation of State, County and Municipal Employees (AFSCME), Iowa Council 61, Staff Representative, Health & Safety Coordinator, Des Moines, Iowa. Mr. Varner submitted a four-paged letter summarizing various complaints received by his organization concerning indoor air quality in the workplace and urging OSHA to adopt ventilation standards. He did not discuss ETS.

18. Dr. Trent R. Lewis, Ph.D., Toxicology Consultant, Cincinnati, Ohio. Dr. Lewis submitted a cover letter and comments. He noted that "there are no identifiable biological markers of chronic or cumulative exposure to [E]TS which could be used to facilitate investigation of chronic diseases allegedly associated with exposure to [E]TS."

19. Mr. Paul V. Horcher, State Representative, 52nd District, Sacramento, California. Mr. Horcher, a state representative from Wittier, submitted a one-paged letter encouraging OSHA to adopt a practical approach to indoor air quality that "addresses all indoor air pollutants and does not single out one source, such as tobacco smoke, for undue attention at the expense of real improvements in indoor air quality."

20. Dr. J. Wesley Clayton, Ph.D., President, Coronado Environmental Consultant, Tucson, Arizona. Dr. Clayton submitted a three-paged letter noting that two recent studies assessing the toxicology of ETS "are somewhat limited because they were not carried out to elicit chronic effects, \* \* \* [and that there is much more] to be done to ascertain the effect of ETS in animals, especially chronic health effects including lung cancer." He added that the results of studies in MS cannot not be extrapolated to "the effects from ETS inhalation [because] they are entirely different."

21. Mr. John R. Cammidge, Vice President, Bank of America National Trust and Savings Association, San Francisco, California. Mr. Cammidge submitted comments and a cover letter encouraging OSHA to adopt flexible and broadly-stated guidelines for indoor air quality. The comments asserted that his organization adopted a no-smoking policy in April, 1991 that provides employees with information on and referrals to smoking-cessation programs and reimburses them upon completion of such programs. Managers implement the policy at each work site. A violation is treated in the same manner as any other violation of company rules.

22. Mr. Ronald E. Bielinski, P.E., D.E.E., C.I.H., C.S.P., Director of Environmental Hygiene, Adelaide Environmental Health Associates, White Plains, New York. Mr. Bielinski submitted a five-paged letter stressing that an investigation of indoor air quality "requires thought." He did not discuss ETS.

23. Ms. Penelope Miedaner, Executive Director, Arizona Restaurant Association, Phoenix, Arizona. Ms. Miedaner submitted a one-paged letter cautioning that "the temptation to recommend severe smoking restrictions is a

solution that glosses over any true problems with the quality of indoor air." She added that when some restaurant owners in Northern Arizona voluntarily eliminated smoking on certain days, their business was mixed "with in one case a 30% loss of trade which rebounded after smoking was reinstated."

24. Mr. Julius Maddox, President, Michigan Education Association (MEA), East Lansing, Michigan. Mr. Maddox submitted a two-paged letter urging OSHA to adopt indoor air quality standards. He did not discuss ETS.

25. Mr. H. Coleman Robinson, C.I.H., Manager, Environmental Health, RMT, Inc., Greenville, South Carolina. Mr. Robinson submitted a cover letter and comments on behalf of RMT.

26. Dr. Diana Anderson, Ph.D., M.R.C. Path., F.I. Biol., F.A.T.S., F.I.F.S.T., Bibra Toxicology International, Surrey, Great Britain. Dr. Anderson submitted a cover letter and comments alleging that while "there are many anecdotal reports that exposure to [E]TS may have adverse effects [on health]," the "biological and toxicological assumptions that are made in order to arrive at a conclusion that [E]TS is a carcinogen on occupational exposure are not justified." The comments concluded that the results of studies on nonsmoking women married to male smokers should not be extrapolated to the population at large because "the epidemiology data are not sufficiently robust and the biological plausibility of causation has not been adequately demonstrated."

27. Ms. Patricia A. Franco, Kirkland & Ellis, Washington, D.C. Ms. Franco submitted a cover letter and comments on behalf of the mineral wool industry. She did not discuss ETS.

28. Mr. John F. Welch, President, Safe Buildings Alliance, Washington, D.C. Mr. Welch submitted a cover letter and comments discussing asbestos. He did not discuss ETS.

29. Mr. Dave Carson, State Representative, Arizona House of Representatives, Phoenix, Arizona. Mr. Carson, a state representative from Arizona, submitted a letter urging OSHA to adopt a realistic approach to indoor air quality that does not "merely single out" ETS.

30. Mr. Frank Cochran, President, Arizona Licensed Beverage Association, Inc. (ALBA), Phoenix, Arizona. Mr. Cochran submitted a two-paged letter noting that the restaurant, bar and hotel industry does not need an "inflexible edict applicable in all places and all circumstances." He

added that his industry has successfully accommodated smokers and nonsmokers and that "any type of serious restriction [on smoking] which encourages our customers to stay home as opposed to dining out or enjoying our hospitality locations would affect us, our employees and our supplies as well."

31. Mr. Albert L. Conner, II, Virginia Coalition of Smokers' Rights Group, Executive Director, Richmond, Virginia. Mr. Conner submitted a one-paged letter and various articles stressing the weaknesses of studies on the alleged impact of ETS on health.

32. Mr. Paul Plamondon, President, Solidarity, Nashua Area Central Labor Council, Nashua, New Hampshire. Mr. Plamondon submitted a one-paged letter noting that "ventilation problems are the primary cause of contaminated indoor air." He did not discuss ETS.

33. Mr. John J. Sweeney, International President, Service Employees (SEIU), AFL-CIO, CLC, Washington, D.C. Mr. Sweeney submitted a sixteen-paged letter with comments outlining various case studies of indoor air problems faced by members of his organization. In these comments, he asserted that while ETS may contribute to poor indoor air quality "it is poor ventilation that is the real cause of the problem." Mr. Sweeney cautioned that "the rights of smokers and non-smokers alike should be protected [and that s]mokers who work in non-smoking work areas should have access to smoking areas during work and lunch breaks." He suggested that "work areas within a building should be designated as smoking or non-smoking" and that smoking areas should be ventilated directly to the outside. In addition, he noted that smoking policies "should not differ based on the type of workplace," except that where toxic or explosive materials are used, smoking policies must be tailored to protect all workers from toxic exposure or explosion. Mr. Sweeney also enclosed a variety of documents ranging from statewide surveys on indoor air quality to copies of various statutes and rules on indoor air quality and ventilation standards adopted by different states.

34. Ms. Mary Theurer, Director, AFSCME, Minnesota Arrowhead District Council 96, Duluth, Minnesota. Ms. Theurer submitted a cover letter and comments from various employees working in the Government Services Building in Duluth and in the Northland Building in Virginia, Minnesota. In these comments, employees complained about health problems allegedly caused by the quality of workplace indoor air. They did not discuss ETS.

35. Ms. Karen B. Holden, Government Services Center, Duluth, Minnesota. Ms. Holden submitted comments asserting that ETS "was a real problem until we finally got smoking banned in this building" and various documents evidencing worker concerns regarding the indoor air quality of the Government Services Center.

36. Mr. Paul C. Fiduccia, Winston & Strawn, Washington, D.C. Mr. Fiduccia, writing on behalf of the International Council of Shopping Centers (ICSC), submitted a cover letter and comments asserting that when exposure to ETS has been associated with a specific adverse health effect, workplace smoking bans have been imposed.

37. Mr. Thomas J. McKeeber, Jr., General Attorney, Department of Veteran Affairs (VA), Washington, D.C. Mr. McKeeber, who as an Agency Counsel has been involved in bargaining impasse proceedings regarding the elimination of indoor-designated smoking areas, submitted a two-paged cover letter, a copy of a post-hearing brief and hearing exhibits used in a proceeding seeking to eliminate indoor-designated smoking areas in VA's hospitals and substitute them with outdoor shelters. He also enclosed a copy of a paper drafted in connection with the VA's efforts to make the VA Central Office smoke-free which discussed the legal aspects of occupational health in connection with ETS.

38. Mr. Allen C. Davis, Chairman, Steering Committee, Coalition on Smoking Or Health, American Lung Association, Washington, D.C. Mr. Davis submitted a cover letter and comments discussing the alleged health impact of ETS.

39. Dr. Donald H. Bowman, Ph.D., C.I.H., Senior Industrial Hygienist, Ball Corporation, Muncie, Indiana. Dr. Bowman submitted a three-paged letter discussing indoor air quality complaints and conditions in connection with his organization's offices. He asserted that, in most instances, the probable cause of such complaints was ETS.

40. Mr. George R. Phelps, North American Insulation Manufacturers Association (NAIMA), Alexandria, Virginia. Mr. Phelps submitted a three-paged letter discussing various aspects of indoor air quality. He did not discuss ETS.

41. Mr. Howard Egerman, Health & Safety Representative, AFGE, AFL-CIO, Oakland, California. Mr. Egerman submitted a six-paged letter noting that smoking is not permitted in his offices and urging OSHA to adopt the ASHRAE standards for indoor air quality.



42. Mr. Michael L. McGovern, Executive Vice President, Pennsylvania Restaurant Association, Harrisburg, Pennsylvania. Mr. McGovern submitted a two-paged letter encouraging OSHA to "consider leaving the issue of smoking or not smoking in restaurants to the state legislators where, in Pennsylvania, they have taken a very balanced approach to the issue by encouraging the establishment of non-smoking sections as well as permitting the foodservice community the ability to provide an atmosphere for their smoking patrons."

43. Mr. Frank W. McAbee, Senior Vice President, Environmental and Business Practices, United Technologies, Hartford, Connecticut. Mr. McAbee submitted a nine-paged letter asserting that the scientific understanding of indoor air quality "is such that specific causes, effects and solutions can be prescribed by regulation at this time." He added that ETS "is a confounding factor in indoor quality evaluations."

44. Mr. Jack Golodner, President, Department for Professional Employees (DPE), AFL-CIO, Washington, D.C. Mr. Golodner submitted a one-paged letter encouraging OSHA to adopt indoor air quality standards. He did not discuss ETS.

45. Ms. Lyla C. Albin, Industrial Hygienist, Lafayette, Indiana. Ms. Albin, who oversees the indoor air quality program at Purdue University, submitted a two-paged letter discussing indoor air quality. She did not discuss ETS.

46. Mr. Clifford E. Douglas, Associate Director, Government Relations, American Lung Association, Washington, D.C. Mr. Douglas submitted a cover letter, comments and various papers and articles. These materials discussed the alleged health impact of ETS and how to limit exposure to ETS. Specifically, Mr. Douglas included a copy of On the Air: A Guide to Creating a Smoke-Free Workplace and a Morbidity and Mortality Weekly Report entitled State Tobacco Prevention and Control Activity: Results of the 1989-1990 Association of State and Territorial Health Officials (ASTHO) Survey Final Report.

47. Ms. Susan Hebert, Smokers to Arrest Rash Treatment (START), Lacey, Washington. Ms. Hebert submitted a one-paged letter, materials on sampling of carbon monoxide and correspondence dealing with Ms. Hebert's grievances due to an executive order based on the premise that a supposed health hazard justifies a smoking ban.

48. Dr. Jonathan M. Samet, M.D., Professor of Medicine, The University of New Mexico, Albuquerque, New Mexico. Dr. Samet submitted a cover letter, copies of some of his articles and a book edited by him and Dr. John Stangler on indoor air pollution. Two of these articles discussed the alleged relation between ETS and various health problems.

49. Mr. Robert A. Fox, President, Fresh Air for Non Smokers (FANS), Washington, D.C. Mr. Fox submitted a one-paged letter urging OSHA to regulate smoking in the workplace.

50. Mr. William T. Godshall, M.P.H., Executive Director, SmokeFree Pennsylvania, Pittsburgh, Pennsylvania. Mr. Godshall submitted a one-paged letter urging OSHA to protect employees from involuntary exposure to alleged toxic chemicals such as ETS.

51. Ms. Rosemary Jonientz, Program Coordinator, Indoor Air Quality The WorkPlace, Central New York Council on Occupational Safety & Health (CNYCOSH), New York. Ms. Jonientz submitted a three-paged letter urging OSHA to adopt indoor air quality standards and a copy of the Uniform Construction Code Indoor Air Quality Subcode proposed for the State of New Jersey by the Division of Housing and Development. These materials did not deal specifically with ETS.

52. Mr. Rick Spielman, C.I.H., Coors Brewing Company, Golden, Colorado. Mr. Spielman submitted a six-paged letter noting that Coors does not allow employees to smoke except outdoors or in break rooms and provides smoking-cessation classes for its employees.

53. Mr. Theodore D. Sterling, Professor, Simon Fraser University, School of Computing Science, Burnaby, British Columbia. Mr. Sterling submitted a cover letter expressing concern "that smoking is being used to divert attention away from the effects of industrial exposures." He also submitted a couple of articles discussing ETS, one of which asserted that while "the conclusion can never be drawn with certainty that there is no elevation in disease relative risk associated with some form of exposure to ETS \* \* \* the available studies do not appear to support the conclusion that such an association exists."

54. Ms. Ellen Larson, Director of Government Relations, Air Conditioning Contractors of America (ACCA), Washington, D.C. Ms. Larson submitted a three-paged letter noting that "adequate ventilation can eliminate indoor air pollution [and p]roperly designed and maintained HVAC systems

are essential for" providing such ventilation. She did not discuss ETS.

55. Mr. Antonio F. LaSorte, Jr., C.I.H., Division Manager, Industrial Hygiene, The Center for Environmental Assessment, Inc. (CEA), Binghamton, New York. Mr. LaSorte submitted a two-paged letter discussing ventilation systems and indoor air quality. He did not discuss ETS.

56. Mr. John Laperle, C.A.P. Representative, International Union, United Automobile, Aerospace, and Agricultural Implement Workers of America, U.A.W., Farmington, Connecticut. Mr. Laperle submitted a two-paged letter urging OSHA to adopt minimum ventilation standards. He did not discuss ETS.

57. Mr. Jan Pelroy, Business Manager, IUOE, Renton, Washington. Mr. Pelroy submitted a one-paged letter encouraging OSHA to establish ventilation standards that apply to all workplaces. He did not discuss ETS.

58. Mr. D. Joseph Mcinnes, Senior Vice President, Administration, Blount, Inc., Montgomery, Alabama. Mr. Mcinnes, responding to a request from the Alabama Department of Public Health, submitted a two-paged memorandum on Blount's smoking policy. This policy prohibits smoking throughout Blount's Montgomery buildings, facilities and aircraft. As part of this policy, "managers are being asked to encourage employees to stop smoking" and Blount offers professional help to those trying to quit smoking.

59. Mr. Dennis Serafin, Vice President, Communications Workers of America (CWA), Local 3607, AFL-CIO, Greensboro, North Carolina. Mr. Serafin submitted a two-paged letter encouraging OSHA to adopt ventilation standards on indoor air quality. He did not discuss ETS.

60. Mr. H.E. "Barney" Burroughs, I.A.Q. Consultant, Building Wellness Consultancy, Alpharetta, Georgia. Mr. Burroughs submitted a five-paged letter mainly discussing air filtration in connection with indoor air quality. He asserted that "a separate ventilation supply system is not the key to complete control of ETS \* \* \* although this could allow for higher ventilation rates than may be deliverable from the general HVAC."

61. Dr. John M. Faccini, M.D., Fellow of Royal College of Pathologists, Professor, University of Surrey. Dr. Faccini submitted a cover letter and his paper entitled A Review of the Epidemiological Studies on Environmental Tobacco Smoke and Lung Cancer from an Anatomopathological Perspective.

In this paper, Dr. Faccini discussed the limitations of the studies purportedly linking ETS with lung cancer.

62. Mr. Neil Burnside, Operating Engineers No. 832, New York State Building and Construction Trades Council, AFL-CIO, Albany, New York. Mr. Burnside submitted a two-paged letter urging OSHA to adopt ventilation standards. He did not discuss ETS.

63. Mr. Sarosh J.H. Manekshaw, Pennzoil Company, Houston, Texas. Mr. Manekshaw submitted a two-paged letter suggesting that OSHA sponsor a national symposium on indoor air quality. He did not discuss ETS.

64. Mr. Cliff Leo Tillman, Jr., Field Representative, SEIU, Local 616, AFL-CIO, Oakland, California. Mr. Tillman submitted a three-paged letter encouraging OSHA to adopt ventilation standards. He did not discuss ETS.

65. Mr. Robert E. Sheriff, President, American Industrial Hygiene Association (AIHA), Akron, Ohio. Mr. Sheriff submitted a cover letter and comments discussing alleged ETS cross-contamination and asserting that "a total smoking ban may be problematic in workplaces where smokers cannot take an extended trip from their worksite several times a day." He also noted that "local smoking ordinances are often unrealistic or oversimplistic \* \* \* [because m]ost fail to recognize the important role of relative pressurization in protecting nonsmokers." In addition, Mr. Sheriff submitted copies of various AIHA committee reports and policy statements, some of which dealt with ETS. These materials generally asserted that ETS has been associated with various health hazards and recommended implementation of a written smoking policy that would create a smoke-free work area for nonsmoking employees and set aside a lounge area for smoking if all employees assigned to that area agreed to such designation.

66. Mr. Ira Cohen, Chemical Safety Officer, Board of Education of the City of New York, Edward R. Murrow High School, Brooklyn, New York. Mr. Cohen submitted a three-paged letter and additional materials discussing indoor air quality problems faced by his high school. He did not discuss ETS.

67. Dr. Gary R. Oberq, M.D., Immediate Past President, American Academy of Environmental Medicine, Denver, Colorado. Dr. Oberq submitted a cover letter and a copy of his statement entitled An Overview of the Philosophy of the American Academy of Environmental Medicines. These materials did not discuss ETS.

68. Dr. James E. Woods, Ph.D., P.E., Professor of Building Construction, Virginia Polytechnic Institute and State University, Blacksburg, Virginia. Dr. Wood submitted a cover letter and five reprints dealing with indoor air quality. These reprints did not discuss ETS.

69. R. Jackie Ward, Business Manager, International Brotherhood of Electrical Workers (IBEW), Local 2156, Alachua, Florida. Mr. Ward submitted a two-paged letter encouraging OSHA to adopt ventilation standards. He did not discuss ETS.

70. Mr. Richard E. Floyd, California Legislature, Sacramento, California. Mr. Floyd, a state assemblyman from California, submitted a one-paged letter cautioning that "completely banning smoking on the job \* \* \* ignores the fact that proper ventilation and separate areas for smoking can provide for a safe and healthy environment without unduly burdening employees and employers."

71. Mr. Ronald E. VanGelderren, The Carpet and Rug Institute, Dalton, Georgia. Mr. VanGelderren submitted a one-paged letter requesting that any matter pertaining to carpet products and indoor air quality involve The Carpet and Rug Institute. He did not discuss ETS.

72. Mr. John W. Hamilton, Chair, Safety and Health Committee, CWA, Local 7800, AFL-CIO, Seattle, Washington. Mr. Hamilton submitted a three-paged letter encouraging OSHA to strengthen its indoor air quality policies. He did not discuss ETS.

73. Ms. Joan Uebelhoer, Director, District III, State of Indiana, Allen County Department of Public Welfare, Fort Wayne, Indiana. Ms. Uebelhoer submitted a one-paged letter asserting that either the present methods of testing indoor air quality are not sufficient or the allowable level of contaminants is too high for many people. She did not discuss ETS.

74. Mr. Joe C. Daniels, Governmental Affairs Director, International Federation of Professional and Technical Engineers (IFPTE), Local No. 17, AFL-CIO, Seattle, Washington. Mr. Daniels submitted a one-paged letter urging OSHA to adopt ventilation standards. He did not discuss ETS.

75. Mr. Roger Ball, Secretary, Toledo Firefighters, Local No. 92, Toledo, Ohio. Mr. Ball submitted a two-paged letter encouraging OSHA to adopt ventilation standards. He did not discuss ETS.

76. Ms. Charlene Doucette, Secretary, Anderson Laboratories, Inc., Dedham, Massachusetts. Ms. Doucette submitted a cover letter and comments by Dr. Rosalind C. Anderson. She also included a number of articles on measuring indoor air pollutants and their alleged irritancy. These materials did not discuss ETS.

77. Dr. David F. Shearer, Ph.D., Environmental Scientist, Atmospheric Sciences Group, AeroVironment, Inc., Monrovia, California. Dr. Shearer submitted a one-paged letter requesting an additional fourteen days to submit his comments.

78. Mr. John Stark, R.S., Air Toxic Programs, Wichita-Sedgwick County, Department of Community Health, Wichita, Kansas. Mr. Stark submitted a five-paged letter and comments. He did not discuss ETS.

79. Ms. Yvonne V. Hester, Belmont, California. Ms. Hester submitted a cover letter and her article entitled Point of Views, which objects to "the current discrimination against smokers who choose to use a product which is legal in this country."

80. Ms. Matilda A. Babbitz, M.A., R.M., C.O.H.N., Executive Director, American Association of Occupational Health Nurses (AAOHN), Atlanta, Georgia. Ms. Babbitz submitted a cover letter and comments discussing, in part, workplace smoking policies and noting that one business rejected a smoke-free building policy "because the general manager and personnel manager were sensitive to the many Japanese customers who smoke." These comments also discussed the smoking policies adopted by other businesses and some of their costs.

81. Mr. H. K. Thompson, Carterpillar, Inc., Peoria, Illinois. Mr. Thompson submitted a cover letter asserting that the media and the Surgeon General "have our employees thinking that a nonsmoker faces the same hazard as a smoker, [even though] there is a vast difference between these two exposures." He also submitted comments asserting that while "a small minority of employees with upper respiratory problems claim [E]TS aggravates their condition \* \* \* [t]heir situations must be dealt with on an individual basis." Mr. Thompson added that "personally, I feel there is an acceptable level for any contaminant including [E]TS." He noted that his company allows smoking in separate smoking rooms and that most union contracts allow smoking in factories, except in areas containing flammable materials.

82. Mr. Daniel J. Miller, President, Florida AFL-CIO, Tallahassee, Florida. Mr. Miller submitted a two-paged letter urging OSHA to adopt ventilation standards. He did not discuss ETS.

83. Mr. James E. Reynolds, Mabelvale, Arkansas. Mr. Reynolds submitted a three-paged letter alleging that some of his co-workers were experiencing health problems that can be associated with ETS. He also enclosed a copy of the smoking policies adopted by the Arkansas State Highway and Transportation Department, which prohibits smoking in areas of general access and where sensitive materials may be stored but allows employees to designate their private offices as smoking or nonsmoking areas, and by the Arkansas Department of Health and Department of Human Services, which prohibits smoking in all agency buildings.

84. Dr. Stephen Reynolds, Ph.D., C.I.H., Assistant Professor of Industrial Hygiene, The University of Iowa, Iowa City, Iowa. Dr. Reynolds submitted a three-paged letter and enclosed a couple of his articles dealing with the adverse health effects associated with biological organisms. He did not discuss ETS.

85. Ms. Patricia Finch, Chairwoman, Total Quality Management Air Quality Committee, General Services Administration (GSA), Auburn, Washington. Ms. Finch submitted a cover letter and comments asserting that "if smoking is to be allowed in indoor work areas, nonsmokers should be protected from \* \* \* [ETS] by completely removing the smoke from the air before it is recirculated and by completely separating the smokers area from other areas so that nonsmokers do not have to breathe any of the smoke."

86. Mr. James J. Kropid, President, Central Telephone Co. of Nevada (CENTEL), Las Vegas, Nevada. Mr. Kropid submitted a cover letter and comments asserting that his company bans smoking in working areas, conference rooms and training rooms and restricts "smoking to outside buildings and to smoking rooms where [E]TS is vented to outside." This smoking policy was developed by a smoking/nonsmoking committee, including management, nonmanagement, union representatives, smokers, nonsmokers and former smokers after the company, in litigation, won the right to establish a smoke-free environment.

87. Mr. Virgil L. Belfi, Business Manager, Operating Engineers Local 2, IUOE, AFL-CIO, St. Louis, Missouri. Mr. Belfi submitted a two-paged letter urging OSHA to adopt ventilation standards. He did not discuss ETS.

88. Ms. Cathy Carlina, Ventnor, New Jersey. Ms. Carlina submitted a cover letter, correspondence evidencing her efforts to ban smoking in casinos and a petition addressed to the State of New Jersey asking it to require casinos to have a two-thirds nonsmoking area and a state of the art ventilation system.

89. Dr. Michael A. Crane, M.D., Assistant Vice President, Con-Edison, Brooklyn, New York. Dr. Crane submitted a cover letter and comments noting that his company does not permit smoking in common work areas and that this smoking policy is enforced by a supervisor through standard company disciplinary procedures.

90. Mr. H. E. Wolfe, LTC, U.S. Army, Assistant for Occupational Health Policy, Safety and Occupational Policy, Department of Defense, Arlington, Virginia. Mr. Wolfe submitted a one-paged note and comments asserting, in part, that while the Army's initial smoking policy restricted smoking to designated areas, it eventually eliminated smoking in all Army-controlled areas because of alleged complaints about ETS. The Air Force, on the other hand, allows smoking in posted designated areas unfrequented by nonsmokers, provided that there is adequate ventilation. Similarly, the Navy allows smoking in designated areas and provides a smoking-cessation program for employees at no cost.

91. Dr. John A. Hoskins, Medical Research Counsel (MRC) Toxicology Unit, MRC Laboratories, Carshalton, Surrey. Mr. Hoskins submitted a cover letter, an article in Italian entitled La Riforma Medica and its original English version Indoor Air Quality in the U.K.: Risks and Regulation. This article discussed sources of pollution in the United Kingdom and asserted that while "many hundreds of compounds have been discovered to occur in ETS [some of which] \* \* \* have known toxic or carcinogenic properties \* \* \* [it is important to remember that] trace amounts of volatile compounds, for example, in the smoke may, because of their clearance by the body, mainly through respiration, result in a minute and probably biologically insignificant dose."

92. Mr. Roger H. Wood, President, and Matthew G. Cranmer, Chairperson, Health and Safety, CWA, Local 2201, Richmond, Virginia. Mr. Wood and Mr. Cranmer submitted a three-paged letter discussing indoor air quality problems at their workplace and urging OSHA to adopt ventilation standards. They did not discuss ETS.

93. Mr. Steve Holland, Mississippi House of Representatives, Jackson, Mississippi. Mr. Holland, a state



representative from Mississippi, submitted a one-paged letter encouraging OSHA to adopt a practical approach to indoor air quality "that addresses all indoor air pollutants and does not single out one minor source, such as tobacco smoke, for undue attention at the expense of real improvements in indoor air quality."

94. Mr. John Paoluccio, P.E., Consulting Engineers, Inc., Salida, California. Mr. Paoluccio submitted a five-paged letter and diagrams illustrating designs of ventilation systems.

95. Mr. Christopher Cook, Director of Communications, Texas AFL-CIO, Austin, Texas. Mr. Cook submitted a cover letter, a statement and documents regarding indoor air quality concerns of his organization.

96. Mr. J. McQuade, Technical Services Representative, Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA), Chantilly, Virginia. Mr. McQuade submitted a cover letter and comments suggesting that OSHA adopt the ASHRAE ventilation standards. He did not discuss ETS.

97. Mr. Jack Otero, President, Labor Council for Latin American Advancement (LCLAA), Washington, D.C. Mr. Otero submitted a two-paged letter encouraging OSHA to adopt ventilation standards. He did not discuss ETS.

98. Mr. LaMont Byrd, Industrial Hygienist, Safety and Health Department, International Brotherhood of Teamsters, AFL-CIO, Washington, D.C. Mr. Byrd submitted a four-paged letter favoring the building systems approach as the most appropriate method for regulating indoor air quality. He did not discuss ETS.

99. Mr. James G. Cartland, C.I.H., Senior Industrial Hygienist, Corporate Industrial Hygiene, Duke Power Company, Charlotte, North Carolina. Mr. Cartland submitted a cover letter and comments mainly addressing ventilation issues and the ASHRAE ventilation standards. He did not discuss ETS.

100. Mr. Michael R. Greenwood, Sc.D., Dip.R.C. Path., Chairman Toxicology Sub-committee, Liquid Imaging Materials Association (LIMA), Webster, New York. Mr. Greenwood submitted a cover letter and comments dealing with VOCs. He did not discuss ETS.

101. Mr. Gary E. Vandemark, Uniserv Director, Fort Creek Education Association, MEA, Flint, Michigan. Mr.

Vandemark submitted a two-paged letter, a NEMI report on indoor air quality and correspondence dealing with complaints filed with Michigan's Department of Public Health in connection with indoor air quality problems. These materials did not discuss ETS.

102. ASSIST Program, Colorado Department of Health, Division of Prevention Program, American Cancer Society, Denver, Colorado. ASSIST submitted a cover letter, three documents regarding Colorado's experience with ETS, two surveys on tobacco use and employer policies on smoke-free environments, and a copy of Colorado's smoking policy for publicly-owned buildings which provides that "all state buildings will be smoke-free as of January 1, 1991."

103. Mr. Gershon Meckler, P.E., President, Gershon Meckler Associates, P.C., Consulting Engineers, Herndon, Virginia. Mr. Meckler submitted a two-paged letter and comments mainly discussing HVAC systems. He did not discuss ETS.

104. Ms. Marcia P. Martin, Senior Vice President, Personnel, ALFA Insurance, Montgomery, Alabama. Ms. Martin submitted a two-paged cover letter asserting that her company sponsors smoking-cessation clinics and has banned smoking in its building. She enclosed several articles on the alleged health risks of smoking, some of which were published in her company's newsletter.

105. Ms. Midge Slatter, President, C.W.A., Local 7102, Des Moines, Iowa. Ms. Slatter submitted a two-paged letter urging OSHA to adopt ventilation standards. She did not discuss ETS.

106. Mr. M. L. Mlekush, Department of the Navy, Alameda, California. Mr. Mlekush submitted a one-paged cover letter noting that the Naval Aviation Depot, Alameda, will be able to meet the proposed OSHA standards for exposure to methylene chloride. He did not discuss ETS.

107. Ms. Lyn Rothmund, Safety Coordinator, Department of Social Services, Sacramento, California. Ms. Rothmund submitted a one-paged letter requesting an OSHA pamphlet. She did not discuss ETS.

108. Mr. Michael Bennane, Michigan House of Representatives, Lansing, Michigan. Mr. Bennane, a State Representative from Michigan, submitted a one-paged letter encouraging OSHA to adopt a practical approach to indoor air quality "that addresses all indoor air pollutants and does not

single out one minor sources [sic], such as tobacco smoke, for undue attention at the expense of real improvements in indoor air quality."

109. Mr. R. S. Ayers, IBM U.S. Safety and Industrial Hygiene, Purchase, New York. Mr. Ayers submitted a two-paged letter and a copy of an indoor air quality report discussing the alleged presence of ETS in the workplace.

110. Mr. Leon Krametbauer, Manager, Facility Operations, Coca-Cola Foods, Houston, Texas. Mr. Krametbauer submitted a one-paged letter describing Coca-Cola Foods Headquarters' HVAC system. He did not discuss ETS.

111. Mr. Michael E. Benullo, Business Manager/Secretary-Treasurer, Pipefitters' Association, Local Union 537, Boston, Massachusetts. Mr. Benullo submitted a two-paged letter urging OSHA to adopt ventilation standards. He did not discuss ETS.

112. Mr. Peter Babin, III, Secretary-Treasurer, Greater New Orleans AFL-CIO, New Orleans, Louisiana. Mr. Babin submitted a one-paged letter encouraging OSHA to adopt ventilation standards. He did not discuss ETS.

113. Mr. Harry F. Chambers, Business Manager, IUOE, Local 99-99 A-99-C, Washington, D.C. Mr. Chambers submitted a one-paged letter supporting OSHA's interest in indoor air quality. He did not discuss ETS.

114. Mr. Frank M. Coda, ASHRAE, Atlanta, Georgia. Mr. Coda submitted a cover letter and a statement describing ASHRAE and its ventilation standards. These materials did not discuss ETS.

115. Mr. K. P. Steadman, Health and Safety Executive (HSE), London, England. Mr. Steadman submitted a cover letter noting that HSE "publishes a range of materials to assist employers fulfill their responsibilities for the health and safety of their employees." He also attached a report on SBS and a copy of a booklet encouraging employers to adopt workplace smoking policies entitled Passive Smoking at Work.

116. Dr. Claude Earl Fox, M.D., M.P.H., State Health Officer, State of Alabama Department of Public Health, Montgomery, Alabama. Dr. Fox submitted a cover letter, comments and copies of various local ordinances, resolutions and surveys dealing with public support for clean indoor air regulations. The comments submitted asserted that twelve municipalities in Alabama have passed ordinances restricting

smoking and explained why these ordinances were passed. The comments also asserted that "businesses apparently are not facing any great amount of immediate legal pressure to implement" general clean indoor air policies, although "they indicate they anticipate legal pressure to increase as more people and agencies recognize and accept that tobacco smoke is carcinogenic."

117. Mr. Peter N. Lee, P.N. Lee Statistics and Computer, Ltd., Surrey. Mr. Lee submitted a cover letter and a copy of his unpublished project report entitled The Role of Confounding Variables in the Relationship between ETS and Lung Cancer, A First Report. In this report, he concluded that "numerous factors other than smoking have, at various times, been shown to be associated with an increased \* \* \* risk of lung cancer." Mr. Lee added that "despite the need for further evidence, the data considered in this report support the notion that at least a relevant part of the ETS/lung cancer relationship is due to confounding. Other sources of bias, such as misclassification of active smoking status, and publication bias \* \* \* may also contribute to the observed weak association."

118. Dr. Paul A. Cammer, Ph.D., President, Business Council on Indoor Air Quality (BCIA), Washington, D.C. Dr. Cammer submitted a cover letter and comments. These materials did not specifically discuss ETS.

119. Mr. Alan K. Armitage, M.A., D. Phil., D.Sc., Consultant in Product Safety Evaluation, North Yorkshire. Mr. Armitage submitted a cover letter and a book entitled Other People's Tobacco Smoke, which "attempts \* \* \* to assess possible risks to health from ETS in the context of health risks from indoor air pollutants generally." In this book, Mr. Armitage concluded that "if tobacco smoke were colourless and odourless, no-one would get too worked up about it, nor would there be clamour for a ban on smoking in the workplace. If such a ban comes about under the pretext of protecting general health, then employers should also logically adopt a policy of prohibiting attendance at work by employees suffering from common colds and other infections which they may transmit to other members of the workforce."

120. Mr. John W. Olsen, President, Connecticut State AFL-CIO, West Hartford, Connecticut. Mr. Olsen submitted a two-paged letter urging OSHA to adopt ventilation standards. He did not discuss ETS.

121. Mr. Ramon Castellblanch, Health Policy Consultant, California State Employees Association,

Sacramento, California. Mr. Castellblanch submitted a three-paged letter describing problems faced by his organization's members due to poor indoor air quality and encouraging OSHA to set ventilation standards. He did not discuss ETS.

122. Mr. J. Michael Horsley, President, Alabama Hospital Association, Montgomery, Alabama. Mr. Horsley submitted a cover letter and a copy of a survey conducted by his association to determine the number of hospitals with smoking policies and the nature of these policies. According to the survey, 81 out of 131 hospitals either prohibited smoking entirely or allowed it only by patients with doctors' permission. In addition, 48 hospitals restricted smoking to certain areas and only two hospitals had no smoking policies in effect.

123. Mr. Dene Hollis, Vice President, Manager, Employee Relations, SouthTrust Bank of Alabama, N.A., Birmingham, Alabama. Mr. Hollis submitted a cover letter and a copy of his bank's smoking policy.

124. Ms. Mary Lamielle, President, National Center for Environmental Health Strategies (NCEHS), Voorhees, New Jersey. Ms. Lamielle submitted a three-paged letter encouraging OSHA to prohibit smoking in all public and commercial buildings, an article on multiple chemical sensitivity and copies of various statements, press releases and news items issued by her organization. Specifically, her organization's testimony asserted that "tobacco smoke is a major indoor pollutant, perhaps the major indoor pollutant given its known health effects. Yet, the government has failed to ban smoking in public places."

125. Mr. Joseph A. Ventresca, Energy Coordinator, Office of Management and Budget (OMB), Columbus, Ohio. Mr. Ventresca, Project Director of an Urban Consortium Energy Task Force designed to investigate the energy and indoor air quality impact of ventilation systems, submitted a cover letter and two reports summarizing the results of a study examining a building's indoor air quality. These materials did not discuss ETS.

In addition to the comments summarized above, twenty-one individuals submitted letters supporting workplace smoking bans while twenty-eight opposed them. Numerous petitions urging OSHA not to ban smoking in the workplace were also filed. These petitions were submitted partly in response to letters from the American Smokers Alliance (ASA) to its members alerting them to the efforts by antismokers to "ban

smoking in virtually all public places" by encouraging OSHA to adopt antismoking regulations.

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