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COMMENTS ON CALIFORNIA ASSEMBLY BILL NO. 13

MARCH 3, 1993

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Thank you Mr./Ms. Chairperson and the committee members for holding these hearings and giving me the opportunity to speak to the Committee on AB 13.

The National Energy Management Institute (NEMI) is a national, not-for-profit labor/management trust of the sheet metal industry. NEMI was organized in California in 1981 to develop and provide educational programs, to disseminate technical information, and to provide training and technical support for sheet metal workers and contractors in the fields of energy management and indoor air quality. Today, NEMI has offices in eleven cities across the country, including two in California.

It is important to emphasize that NEMI, both on a national scale and in California has been actively involved in the detailed identification and practical solutions to indoor air quality (IAQ) problems for over six years. As a result of investigating over 40 commercial and

institutional buildings, NEMI concludes that ventilation system deficiencies were the primary cause of worker IAQ complaints. In nearly every building, the situation which caused the complaint and/or health problems involved the improper use, operation or maintenance of the ventilation system, regardless of whether smoking was or was not permitted.

Based on that practical experience, NEMI believes the state would be better served by legislation focused on effective ventilation system design, operation and maintenance. As a registered mechanical engineer, I know that it is possible and practical to design and install ventilation systems, following the guidelines of the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE) Standard 62-1989, to effectively isolate one area from another. This is now the standard in the electronics industry, the pharmaceutical industry and in hospital operating rooms. Effective ventilation systems can be installed to segregate airflows so that one specific area does not mix with another. Depending on the building design, this may only involve minor modifications to the ventilation system controls (with minor cost impact) or it may involve ventilation system changes.

My emphasis on effective ventilation is presented to this committee to demonstrate that if the goal is to protect workers from exposure to indoor contaminants, this can be done -- not by dilution ventilation -- but by using directional displacement ventilation and high quality air treatment. In commercial and institutional buildings today, limiting exposure is not only technically achievable, but also desirable from a comfort and energy efficiency standpoint.

This can readily be achieved in new building design and major retrofit. Why not provide an incentive to building owners that provides them the opportunity to improve their ventilation effectiveness and energy efficiency?

In 1986 the California Occupational Safety and Health Standards Board adopted a requirement that the ventilation system be maintained and operated to provide at least the original volume of outside air required by their state building code, in effect at the time the building permit was issued. In addition, the CAL-OSHA ruling requires that the ventilation system be continuously operated during the building's normal working hours. Further, CAL-OSHA requires an annual inspection of the HVAC system with written documentation of the findings. NEMI believes that this type of regulatory activity should be the basis for truly effective indoor air quality legislation.

The experience of NEMI contractors has verified the findings published by NIOSH (National Institute of Occupational Safety and Health) that the majority of IAQ problems are caused by inadequate ventilation systems. NEMI contractors have reviewed and corrected ventilation-related problems in many commercial and institutional buildings. For example, installation in the Blue Cross/Blue Shield Michigan headquarters building of effective ventilation systems for designated smoking areas, designed in accordance with the recommendations provided by ASHRAE Standard 62-1989, has allowed their workers who choose to smoke to use these dedicated rooms and not disrupt their fellow workers.

NEMI recently worked with the American Federation of Government Workers in the Social Security Administration Building in Richmond, California to respond to a lethal outbreak of Legionnaire's Disease in 1991. As shown by the experience of these federal workers in non-smoking buildings, removal of a single indoor air element does not guarantee an acceptable and safe indoor environment.

In closing, I would like to confirm that NEMI is looking forward to working with California in developing legislation that will address effective ventilation strategies to result in improved air quality.