

Reducing Diesel Emissions from California's Heavy Duty Diesel Trucks

An Open Letter from California Health Experts

December, 10, 2008

Dear California Air Resources Board Members and Staff,

As researchers, public health, and medical experts from across California, we are deeply concerned about the effect of diesel pollution on public health. We urge the California Air Resources Board (CARB) to adopt a strong regulation to clean up the state's largest source of diesel pollution – heavy-duty trucks.

Exhaust from diesel trucks contains a toxic mixture of gases and particles that are harmful to our health.

- **Fine particulate matter (PM)** in diesel exhaust can bypass the body's natural defenses penetrating deep into the lungs where it may cause or exacerbate respiratory and cardiovascular illnesses, and even premature death. California has identified diesel PM as a toxic air contaminant and estimates 70 percent of the cancer risk from the air we breathe is attributable to diesel PM.¹
- **Nitrogen oxide (NOx)** emissions from diesel engines contribute to smog formation which has been linked to increases in hospital admissions for asthma and is most dangerous to children, the elderly, and those with preexisting respiratory and cardiovascular disease. NOx emissions also react with other air pollutants to increase the level of particulates in the air.
- The state of California estimates that diesel pollution from trucks and buses alone will be responsible for 4,500 premature deaths in California in 2008.² When combined with estimates for hospitalizations, asthma attacks, missed work days and school absences from exposure to particulate matter and smog, the total economic cost to Californians in 2008 is estimated to be \$40 billion.³

Together, these pollutants are taking a serious toll on California's public health. Much of this morbidity and mortality can be avoided by cleaning up heavy-duty trucks. While the US EPA has adopted more stringent standards for new heavy-duty truck engines, long lasting truck engines operating today will continue to pollute for decades. This is too long to wait

To protect the health of Californians, we urge CARB to adopt a strong regulation that requires cleaning up in-use on existing diesel trucks through pollution control retrofits and the replacement of the oldest, most polluting engines with cleaner alternatives.

In addition, heavy-duty trucks also account for more than 7 percent of California's total global warming pollution. CARB must adopt a strong Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure to reduce the truck pollution that causes global warming and meet our commitments under the landmark Global Warming Solutions Act of 2006 (AB 32).

Sincerely,

Dean Baker, M.D., M.P.H.
Professor and Director
Center for Occupational and Environmental Health
University of California, Irvine

Rajiv Bhatia, M.D., M.P.H.
Director, Occupational & Environmental Health,

continued

San Francisco Department of Public Health
Assistant Clinical Professor of Medicine
University of California, San Francisco

Curt Eckhart, Ph.D.
Professor of Environmental Health Sciences and Molecular Toxicology
Co-PI of the Lead Campus on Nanotoxicology of the UC Toxic Substances Research and Training Program
University of California, Los Angeles

Robert M. Gould, M.D.
President
SF-Bay Area Chapter
Physicians for Social Responsibility

Robert Harrison, M.D., M.P.H.
Professor of Medicine
Division of Occupational and Environmental Medicine
University of California, San Francisco

Richard J Jackson, M.D., M.P.H.
Professor and Chair, Environmental Health Sciences
School of Public Health
University of California, Los Angeles
California State Public Health Officer 2003-4
Director, CDC National Center for Environmental Health 1994-2003

Ann Lindsay, M.D.
Humboldt County Health Officer
President, California Conference of Local Health Officers

Rob McConnell, M.D.
Professor of Preventive Medicine
Keck School of Medicine
University of Southern California

Anthony Molina, M.D.
California State University, Fresno
University Health and Psychological Services (Staff Physician)

Suzanne Paulson, Ph. D.
Professor of Atmospheric Chemistry
Department of Atmospheric and Oceanic Sciences
University of California at Los Angeles

Beate Ritz, M.D., Ph.D.
Vice Chair, Department of Epidemiology
Professor of Epidemiology, Environmental Health Sciences, and Neurology
Schools of Public Health and Medicine
University of California, Los Angeles

Linda Rosenstock, M.D., M.P.H.
Dean, School of Public Health
University of California, Los Angeles

continued

Arthur M. Winer, Ph.D.
Distinguished Professor
Environmental Science and Engineering Program
Environmental Health Sciences Department
School of Public Health
University of California

References

1. 70% cancer risk figure from Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-II), Published March 2000, <http://www.aqmd.gov/matesiidf/matestoc.htm>.
2. California Air Resources Board. Proposed Regulation for In-Use On-Road Diesel Vehicles, October 2008 Appendix D.
3. Cost estimate calculated based on health endpoint valuations listed in source data: California Air Resources Board. Proposed Regulation for In-Use On-Road Diesel Vehicles, October 2008 Appendix D.