ENVIRONMENTAL DEFENSE FUND
finding the ways that work

December 10, 2008

Chairwoman Mary Nichols and Members of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95812

RE: A National Perspective on the Proposed Statewide Truck and Bus Regulation

Dear Chairwoman Nichols and Board Members:

On behalf of the Environmental Defense Fund, a national environmental non-profit organization with three offices and 100,000 members in California, I respectfully submit these written comments for consideration by the California Air Resources Board in making their final decision on the Proposed Regulation for In-use On-road Diesel Vehicles. I appreciate the opportunity to provide this input.

Background

Environmental Defense Fund has made cleaning up diesel engines of all kinds throughout the United States a top priority for the past decade because they are one of the most significant sources of toxic air pollution. In 2005, EDF published a report entitled "Cleaner Air for America" that laid out the scientific and economic case for addressing the problem of the persistence of older and dirtier diesel engines that would continue to harm public health until they were eventually phased out and replaced by newer, cleaner engines. The report makes these specific points:

- The 20,000 annual deaths throughout the nation, which the new engine rules were predicted to avoid as of 2030 are occurring annually now, and tens of thousands of avoidable deaths will continue to occur unless a comprehensive solution to the existing diesel engine pollution is implemented.
- Investments in reducing diesel engine emissions have a high cost-benefit ratio. The report estimated that a total capital investment of $0.6 to $1.6 billion in diesel retrofit devices would generate a total of $10.6 to $19.2 billion in economic benefits related to avoided deaths and illnesses.
- The U.S. EPA projected that only 50% of the total benefits of the 2004 nonroad diesel rule would be realized by 2020. The onroad diesel rule produced a sizable "pollution gap" related to the considerable lag in engine replacement related to the longevity of diesel engines.

The report called for a national source of funding for diesel retrofits. This recommendation and the efforts of many groups helped lead to the federal Diesel Emissions Reduction Act (DERA) of 2005, which authorized $1 billion in grants over 5 years for retrofitting, repowering and replacing older dirty diesel engines.

These arguments, and the same recognition of the seriousness yet tractability of the diesel pollution problem that resulted in the federal bill, hold true for California as it crafts this rule to require clean up of older dirty on-road diesel engines. Environmental Defense Fund strongly supports this rule and urges the CARB to keep this regulation as comprehensive as possible to provide the broadest possible public health benefits, especially to the most susceptible Californians.

The toll of premature deaths and illnesses from older diesel engine emissions remains unacceptably high

An estimated 21,000 deaths nationwide will be attributable to diesel emissions in the year 2010. The scientific literature is overflowing with studies documenting harm from diesel emissions to the lungs, the immune system, the heart and cardiovascular system, even the developing brain. Because of the development of their lungs, immune systems, and brains, as well as their relatively higher respiratory rates, children are especially susceptible. Studies have shown that exposure to diesel emissions in the first year of life predisposes children to allergy and asthma. A recent study from Boston demonstrates that black carbon, the key element in diesel particulate matter, is associated with IQ loss to a similar degree as maternal smoking and low level lead exposure. A string of recent studies link exposure to heavily trafficked roads, where diesel emissions generally are the dominant source of fine particulates, is associated with both acute and chronic cardiovascular disease in adults. And the evidence that diesel emissions can cause lung cancer continues to accumulate.

And so behind those 21,000 deaths are many hundreds of thousands of lives adversely affected by heart disease, asthma, and possibly loss of IQ. In addition to general population exposures, it is critical to consider the occupational hazard posed by diesel emissions. A recent study in Environmental Health Perspectives showed elevated lung cancer rates in truck drivers. And agricultural workers spending their days around operating and idling diesel equipment can have significant exposures as well.

The rule CARB is considering is part of a nationwide effort to close the "pollution gap" and protect public health from older diesel engines

Other state and local governments across the country are also investing public funds and passing regulations to address the major public health threat posed by older, dirty diesel engines.

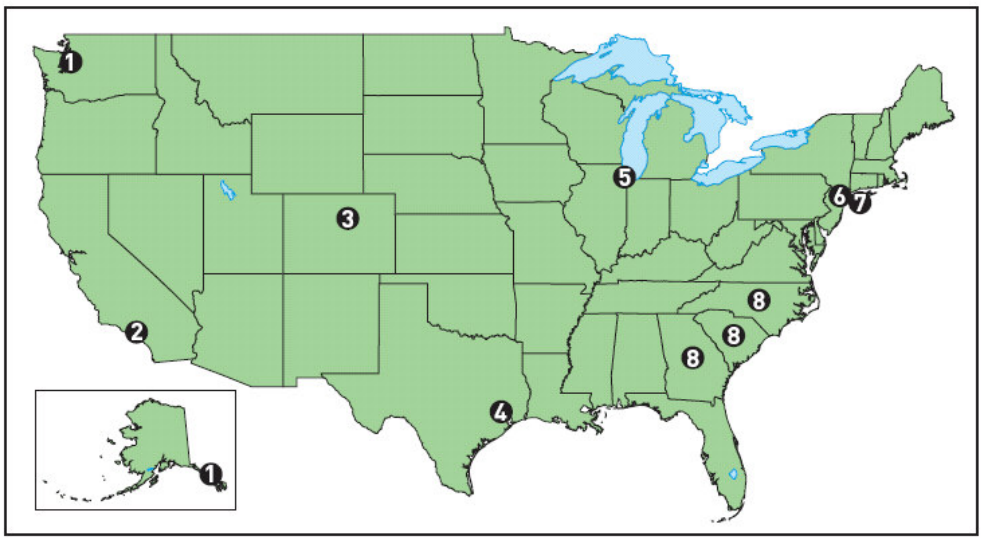
In Massachusetts, where researchers first demonstrated that black carbon from diesel exhaust lowers the IQ's of exposed children, and an estimated 450 people die from diesel exposure annually, lawmakers have introduced bills in their state house and senate that would require retrofits on all state-owned, leased or contracted diesel equipment and all municipal waste trucks by 2011 and 2012 respectively, and established a fund for private fleets.

In New York City, where diesel exhaust is responsible for roughly 90% of the total cancer risk from airborne toxics, local laws require the use of ultra low sulfur diesel and retrofits on all municipal construction projects. The World Trade Center site is a national model for requiring retrofits on construction equipment.

Texas passed the Texas Emissions Reduction Plan in 2001. This has provided an average of $130 million each fiscal year for retrofits, repowering and replacement of highly-polluting diesel engines.

And California broke new ground in 1999 with the Carl Moyer Program, which has provided millions of dollars in grants to speed the replacement of highly-polluting diesel engines. This map from EDF's Cleaner Air for America report, reprinted below, shows the widespread efforts to control diesel pollution.

FIGURE 4
Cleaner air for America success stories



❶ **Seattle and Juneau cruise ship docks.** The West Coast Diesel Emissions Reduction Collaborative facilitated Princess Cruise's project to provide shore-based electric power to its cruise ship docks. Shore power will eliminate 13 tons per year of smog-forming oxides of nitrogen (NO_x) and 2 tons per year of particulate pollution emissions in Seattle.

❷ **Los Angeles: Alternative marine power eliminates ship pollution at berth.** The new China Shipping terminal at the Port of Los Angeles will eliminate 1 ton of NO_x and particulate pollution each day it is in use.

❸ **Denver: Hybrid buses serve downtown passengers.** Hybrid electric and compressed natural gas-fueled buses deliver passengers to a downtown pedestrian mall that links offices, shopping and regional transit.

❹ **Houston locomotive retrofit and repower projects:** The Texas Emissions Reduction Project is funding replacement of old switching engines with newer, cleaner models, and repowering engines with hybrid technology. TERP expects to reduce locomotive NO_x emissions by 3300 tons.

❺ **Chicago Anti-Idling Study.** A cooperative public-private demonstration project estimates that available anti-idle technology would eliminate 12.5 tons of NO_x per year at an average-sized rail switching yard.

❻ **New York: Construction contracts require cleaner diesel equipment.** State law requires best available retrofits and ultra low sulfur diesel (ULSD) fuel in all state-controlled construction projects in Lower Manhattan, including at the World Trade Center site. Local Law 77 makes ULSD and best available emission control technology a requirement of all city contracts.

❼ **Hunts Point Truckstop electrification.** Electrified truck stop facilities are reducing idling emissions at this massive meat and produce market located in a New York City neighborhood where one-third of the children suffer from asthma.

❽ **I-85 Truckstops reduce diesel emissions in Georgia, South Carolina and North Carolina.** Electrified stations eliminate idling emissions and save 263,000 gallons of diesel fuel per year at each of three truck stops. Truckers turning off their engines will eliminate 35 tons per year of NO_x and 1 ton per year of PM emissions at each electrified truck stop.

Various locations: EPA's Clean Schoolbus USA Program is making the ride to school healthier for kids in 47 communities scattered across the country.

The reasons for this national movement are clear. Uncontrolled diesel emissions are probably the most highly significant health threat from air pollution that is present in nearly all neighborhoods around the country. The technology to sharply reduce health risks from these

pollutants is readily available and highly affordable, making diesel clean-up one of the most cost-effective means of protecting human health.

In passing this rule, California will not only be once more demonstrating national leadership in air pollution control, it will also be showing wisdom in staying at the head of a nationwide movement to protect our most vulnerable citizens and reduce health care costs by placing highly cost-effective controls on diesel engines.

Sincerely,

Dr. John Balbus, MD, MPH
Chief Health Scientist
Environmental Defense Fund