November 7, 2003

Comment Clerk
U.S. Dept. of Transportation
Docket Management Facility, Room PL-401
400 Seventh Street, SW
Washington, DC 20590-0001


Dear Comment Clerk:

These comments are being submitted on behalf of the Natural Resources Defense Council, a non-profit organization with more than 550,000 members dedicated to protecting public health and the environment. Since 1970, our lawyers, scientists, and other environmental policy analysts have been working to protect the world's natural resources and improve the quality of the human environment. NRDC has offices in New York, NY, Washington, DC, Los Angeles and San Francisco, California. The Coalition for Clean Air is a non-profit environmental organization dedicated to restoring clean healthful air to California by advocating responsible public health policy; providing technical and educational expertise; and promoting broad-based community involvement.

We are submitting these comments because we are very concerned about the significant health threats from diesel trucks and buses.
The Federal Motor Carrier Safety Administration (“FMCSA”) is in the process of preparing a Programmatic Environmental Impact Statement (PEIS) pursuant to the National Environmental Policy Act of 1969 (NEPA) and a General Conformity Evaluation pursuant to the Clean Air Act (CAA) before promulgating the FMCSA's proposed regulations regarding (1) the application process for Mexico-domiciled motor carriers desiring to operate beyond the U.S.-Mexico border commercial zones and (2) the safety monitoring system applicable to all Mexico-domiciled motor carriers. These rules will authorize Mexican-owned trucks to operate on U.S. highways throughout the United States, including within and beyond communities on or near the U.S.-Mexico border. DOT’s proposed action raises serious environmental issues that require appropriate consideration and mitigation where possible.

We do not oppose Mexico-domiciled trucks and buses coming into the US. However, we are concerned that if the FMCSA’s action allows older and dirtier trucks into the US, this will severely impact our ability to achieve clean air. The increased numbers of trucks on U.S. roads, especially by older, more polluting Mexico-domiciled trucks will impact the health of our members and their children. Additionally, the ambient air quality in the communities where NRDC and PCL members and their families live and work would be negatively impacted as a result of increased air pollution from the operation on U.S. roads of Mexico-domiciled trucks that emit greater quantities of air pollutants than U.S.-domiciled trucks. These substantial increases in air pollution will impair air quality in California, Arizona, New Mexico and Texas, and will likely affect air quality throughout the United States, leading to increased risks to human health, especially among young children and the elderly.
FMCSA Must Conduct a Careful Review of the Extensive Scientific Literature on the Health Impacts of Diesel Exhaust

Diesel engines are significant contributors to air pollution. Diesel exhaust is a known carcinogen, is linked to premature death, and has serious negative impacts on the respiratory system. Diesel’s hazardous compounds play a role in ozone formation, particulate matter (soot) pollution, regional haze and acid rain. See Control of Air Pollution From New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements; Final Rule, 66 Fed. Reg. 5001-5050 (Jan. 18, 2001) (“Diesel Rule”). Diesel exhaust makes up as much as 26% of particulate matter (PM) pollution from all sources nationwide, while accounting for an astounding 66% of PM pollution from mobile sources. Diesel is also responsible for 20% of national NOx emissions.¹ The particulate matter (PM) emitted in diesel exhaust is considered to pose the greatest health concern. Numerous studies have found that fine particles impair lung function, aggravate respiratory illnesses such as bronchitis and emphysema, and are associated with premature deaths.²

The FMCSA must review the March 2000 study of air toxic exposures conducted by the South Coast Air Quality Management District, entitled the Multiple Air Toxics Exposure Study II (”MATES II” study), which contained the results of monitoring of more than 30 toxic air pollutants in the South Coast Air Basin in Southern California. This was one of the most comprehensive air toxic exposures studies ever performed, and it found that 71% of the cancer risk from air pollution in the South Coast Air Basin comes from diesel-particulate pollution.³ Other agencies have found similar findings in a range of geographic areas.⁴

Recent research also indicates that the black carbon that spews from older and poorly-maintained diesel trucks, such as many used in Mexico, may also significantly contribute to global warming. Because the Mexican truck fleet is on average older than the U.S.-domiciled fleet, scientific estimates indicate that the fleet, on average, produces significantly higher levels of smog-forming nitrogen oxides (NOx) and volatile organic compounds (VOCs), as well as carbon
monoxide (CO), and particulate matter less than 10 microns in diameter (PM-10 or soot). Sierra Research Inc., *Critical Review of “Safety Oversight for Mexico Domiciled Commercial Motor Carriers, Final Programmatic Environmental Assessment,”* Prepared by John A. Volpe Transportation Systems Center, January 2002, 16-21 (Apr. 16, 2001). These substances, as well as others from diesel emissions, are linked to short and long-term adverse health effects, including cancer, cardiovascular disease, asthma, decreased lung function, acute emergency room visits, hospital admissions, and premature death. See Diesel Rule at 5002. It is critical that the FMCSA conduct a full health risk assessment looking at cancer and other health risks stemming from increased diesel exhaust emissions as part of its PEIS.

FMCSA’s analysis must also look at the impact on sensitive populations. Recent research has shown that even short-term exposure to particulate pollution can be dangerous for some people, particularly the elderly, young children and people with asthma and other respiratory illness. Children are disproportionately vulnerable to the effects of air pollution because they breathe more rapidly and inhale more pollutants per pound of body weight than adults, their airways are narrower than those of adults and their respiratory systems are still developing. Studies in Southern California and other border states have shown that children living in this region today are suffering from adverse health effects, including decreased lung function growth, symptoms of cough, phlegm and wheeze, an increased risk of contracting asthma, and missed school days due to respiratory illness. See Diesel Rule, 66 Fed. Reg. at 5006. A recent study by the University of Southern California also showed a decrease in lung function in children from NOx emissions. Many schools are currently located along major freeways that will be traveled by Mexican trucks. These sites should be mapped in impacted states (Texas, New Mexico, Arizona, and California) and risks to children at these schools from the air pollutants emitted from Mexican trucks should be specifically assessed.

Studies in elderly populations have shown increased hospital admissions due to increased air pollution. Persons with other medical conditions are also at greater risk. A study published by the
The FMCSA Must Carefully Analyze the Localized and Regional Impacts of Increased Truck Traffic

In addition to necessitating a hard look at individuals who will be disproportionately impacted due to their health, the FMCSA must carefully examine the increased risk to the low-income communities of color that typically live near freeways and urban areas with the greatest levels of diesel exhaust. The reality is that allowing additional Mexico-domiciled trucks into the U.S. will likely have important environmental justice impacts. An analysis provided to us by the California Department of Health Services shows that, in the South Coast Air Basin, for example, children of color are more than twice as likely as white children to live in census block groups with high traffic density. This is demonstrated in the chart below.
An estimated 91 percent of Latinos live in urban areas, where air pollution is most likely to be at its worst (versus 70 percent of non-Latino whites). Many of these urban areas are located on major trucking routes running South to North from the U.S.-Mexico border. An estimated 71 percent of U.S. Latinos and 62 percent of African-Americans live in communities that do not meet national air quality standards for smog. These communities include the Mexico border region, California’s Central Valley, along with cities like Chicago, New York and Houston. In the border region alone, over 1.8 million Latinos live in areas that do not meet U.S. EPA standards for ozone (O₃), sulfur dioxide (SO₂), or particulate matter (PM), all of which are associated with health risks (see Table 1). Similarly, both the San Joaquin Valley and the Sacramento Valley air basins in California’s Central Valley, which are home to more than 1.6 million Latinos, continually fail to meet national O₃ and PM10 standards. Therefore, any increase in emissions on freeways and streets from a greater number of Mexico-domiciled trucks would likely have a disproportionately negative health impact upon children of color. These numbers are just a snapshot of what the agency will find once
it examines localized and regional impacts of increased truck traffic by Mexico-domiciled trucks and
is representative of living patterns in cities around the country.

The disproportionate regional and local impacts of increased truck traffic by dirtier Mexico-domiciled trucks will be especially felt in regions of the country currently not in attainment with air quality standards. Areas which deserve a close look include areas in California like the South Coast Air Basin, Imperial County in San Diego, and the San Joaquin Valley; areas in Texas like the Houston and El Paso regions; and non-attainment areas in Arizona like Cochise, Pima, Santa Cruz and Yuma; and New Mexico’s Doña Ana county (all of these areas also happen to be home to large numbers of people of color). These non-attainment areas will have to implement serious mitigation measures in order to deal with the increases in pollution and avoid violations of law.

In addition, the FMCSA needs to consider the different components of the Mexican truck fleet that will be likely to operate in various zones within the U.S. There is a drayage fleet currently operating in the border zone that is generally old, dirty, and poorly maintained. Once travel restrictions are lifted, many of these trucks are likely to continue to operate within a wider geographic range. For example, they may operate within a 500 mile radius of the border rather than a 20 mile radius. In addition, small companies that operate only a handful of trucks in Mexico are likely to begin making trips to cities such as Los Angeles, Phoenix, and even Houston. In contrast, the Mexican long-haul fleet, which may generally be cleaner than the drayage fleet but not up to the standards of the U.S. fleet, is most likely to concentrate on doing the long-haul trips of thousands of miles across the country. It would be utterly inappropriate and unfounded for the FMCSA to assume that all (or even most) truck trips into the U.S. will be made by the Mexican long-haul fleet. In fact, the population of Mexican trucks operating in
Texas, New Mexico, Arizona, and California will likely represent a far dirtier subclass of vehicles. This set of likely circumstances should be reflected in the assessment.

The FMCSA’s conformity review also needs to consider the impact of its regulations where a region has a Clean Air Act State Implementation Plan (SIP) that shows a shortfall in emissions reductions needed for attainment of National Ambient Air Quality Standards. For example, the California Air Resources Board in October adopted an ozone SIP for the South Coast Air Basin of the state that shows a shortfall in emissions reductions of NOx and VOCs of over 300 tons per day by the year 2010. This shortfall makes it all the more imperative that there not be an increase in truck and bus emissions in the region from the FMCSA’s regulations, which would make it almost impossible for the region to meet the federal air quality standards. The San Joaquin region of California also has a SIP for particulate matter that shows a shortfall in emissions reductions needed for attainment, as do other regions near the border. A careful regional analysis is key in order to properly determine the impacts of the FMCSA’s actions.

The agency will also have to determine what the baseline inventory is – meaning the level of emissions before the rule change. FMCSA should work with the South Coast Air Quality Management District (SCAQMD) in Southern California and similar agencies in other regions of the country to answer this question and to help address other issues regarding emissions impacts. FMCSA should additionally prepare an analysis of emissions from the Mexico-domiciled trucks that will travel to interior points in the U.S. as a result of the agency action.

The FMCSA’s Analysis Must Consider the Long-term Impacts Posed by Mexico-Domiciled Trucks Unless More Stringent Controls are in Place

An accurate analysis of impacts of the agency’s actions must look at the impact of Mexico-domiciled trucks entering the U.S. over the next thirty years, not just in the short-term. As U.S. emissions standards and fuel requirements become increasingly stringent over time, the differences
in emissions from U.S. trucks and Mexican trucks will continue to grow. Most U.S. truck engines were required to, and did meet more stringent standards in October 2002; the remaining truck engines will meet these standards in 2004. The California Air Resources Board (CARB) has additionally committed to adopting regulations that will require trucks and buses to reduce their emissions by a retrofit or repowering of their engines by the end of 2005. As part of this commitment, CARB will also include a commitment to reduce NOx emissions from the trucking fleet. Therefore, the FMCSA will have to look at the differences in both PM and NOx between the Mexican and U.S. trucking fleets after 2005, and should continue their analysis throughout the projected lifetimes of these trucks. Therefore we recommend projections that go forward approximately 20 years.

Adoption by U.S. EPA of stringent new rules for diesel trucks requiring the use of low-sulfur diesel fuel in mid-2006 and mandated reduction in new diesel truck emissions by more than 90 percent starting in 2007, Diesel Rule, 66 Fed. Reg. 5001-5050 (Jan. 18, 2001) will also result in the U.S. heavy-duty truck fleet being significantly less polluting within the next ten years. These changes will result in clear health gains for the U.S. population. EPA estimates that by 2030, reductions in particulate pollution alone from its 2007 Heavy-duty Diesel Engine Standards will result in the annual prevention of 8,300 premature deaths; 5,500 cases of chronic bronchitis; 4,500 hospital admissions from chronic obstructive pulmonary disease, asthma and cardiovascular disease; 2,100 emergency room visits for asthma; 175,900 asthma attacks; and 17,600 acute bronchitis cases. The Mexican government, however, has not adopted these regulations, and there is no indication that it has any plans to adopt low sulfur diesel fuel or new emissions standards, so the pollution differences between the U.S. and Mexican fleets are expected to remain and grow with time. NRDC was very involved in the U.S. rulemaking process to adopt the EPA rules, and fears that the U.S. standards could be under-cut by weaker standards in Mexico. If there are no provisions to assure that trucks
domiciled in Mexico meet U.S. emissions standards when they cross the border to do business in the
U.S., U.S. trucking companies could choose to domicile their fleets in Mexico in order to avoid the
costs of compliance with the new EPA standards. Because Mexico has not adopted any of these
standards, the FMCSA’s analysis will need to assume the impact of trucks coming into U.S. that are
not required to meet U.S. emissions standards.

The increase in truck traffic from Mexican-domiciled trucks is particularly troubling in light
of the fact that the Mexican truck fleet is on average older than the U.S. truck fleet. The average age
of the Mexican fleet is 16 years old, and trucks crossing the California border are on average 20
years old according to inspection facility data. Only 20% of the Mexican fleet was manufactured
after 1994, which is significant because only 1994 and later vehicles can be retrofit with a particulate
trap. In fact, U.S. and Mexican emissions standards were different in 1991 and 1992. Only in 1993,
were Mexican trucks required to meet more stringent emissions standards applicable to trucks sold
in the U.S. As a result, emissions from Mexican trucks are expected have higher emissions than US
heavy-duty diesel vehicles from the same model year. Moreover, the fleet on average may be more
poorly maintained. The agency will thus have to carefully consider differences not only in engine
age, but also in the quality of its maintenance.

The Sierra Research consulting firm has estimated that Mexican-domiciled trucks presently
generate approximately one and one-half times the emissions of smog-forming nitrogen oxides
(“NOx”) and twice the emissions of harmful particulate matter (“PM” or “soot”) per mile as
compared to U.S.-domiciled trucks, with the differential predicted to worsen over time. This is likely
to remain true even if the FMCSA determines that some percentage of the Mexican fleet is newer
and cleaner. The reason for this is that while long-haul Mexican trucks may be shown to be newer,
cleaner trucks than the Mexican general trucking population, Mexican trucks that will travel only a
few hours, mainly into areas already in serious non-attainment, will still be more polluting. These
impacts, if left unchecked, will undo hard-earned gains to clean up the environment and will impair future efforts to improve public health through cleaner air.

The FMCSA will also have to take into account the implications of the 1999 Consent Decrees between six manufacturers of heavy duty diesel engines in the United States (representing approximately 95 percent of the U.S. heavy duty diesel engine manufacturing capacity) and the U.S. Environmental Protection Agency (EPA) to settle an enforcement action which alleged that the manufacturers had installed certain computer-based “defeat devices” to adjust the timing of fuel injection in engines for model years 1988-1998 that allowed the engines to pass the tests for new engine certification but rendered the emission control systems less effective. United States v. Caterpillar, Inc., Civ. Action No. 98-02544, U.S. Dist. Ct., Dist. of Columbia, July 1, 1999 (“Consent Decree”). In order to comply with the consent decree, the engines of the trucks with defeat devices will need to be rebuilt over time to remove these devices and restore the appropriate emissions levels. Because Mexico was not part of the consent decree, the FMCSA will need to look at the impact of Mexican trucks with defeat devices continuing to operate without a rebuild and provide a solution to remedy this problem.

Moreover, the FMCSA will have to consider the fact that today, diesel fuel in California is cleaner (at 150 ppm) than the fuel sold in Mexico (at 350 ppm). This difference will become even more pronounced in 2007, when the U.S. adopts 15 ppm diesel fuel. A truck which re-fuels in Mexico then returns to the U.S. is likely to emit more particulate matter because its trap will be clogged. It is possible that this fueling problem could result in voided warranties for new U.S. trucks, thereby creating paradoxical incentives for U.S. trucking companies. For example, U.S. trucking companies may decide to domicile a portion of their fleet in Mexico so that they can purchase trucks that are not equipped with traps or filters. Then their fleet would be able to travel back and forth more easily between the two countries, and refuel in Mexico without any increased maintenance
costs for repairing clogged traps. This scenario is likely to be very real and is thus one of many that the agency’s analysis must consider.

Inspections of Mexico-domiciled Trucks and Comprehensive Monitoring Must be in Place Before Allowing Entry of these Trucks

In order to avoid turning back the clock on the significant gains the U.S. has made towards improving air quality, the impacts of the FMCSA’s actions will have to be monitored and mitigated through a comprehensive inspections program. The FMCSA needs to analyze the level of monitoring required to assess the emissions of trucks coming into the U.S. versus those domiciled in the U.S. in order to determine the environmental, health and socioeconomic impacts of its action. Moreover, any action will need to include an ongoing comprehensive monitoring and inspections program in order to insure compliance with U.S. laws. Currently, there is no infrastructure to support this. California and other states have inspection programs for U.S. trucks, including roadside monitoring programs but the only inspection stations along the border are two small ones in California. Texas and New Mexico have no inspection stations. Arizona has a planned facility but has not yet constructed it. A comprehensive inspections program can make a significant difference by identifying older, more polluting trucks and preventing or penalizing their entry until they comply with U.S. standards. These inspection programs will be the only means by which to identify and control the older more polluting trucks and improve air quality on both sides of the border. In this connection, the agency should investigate the availability of new technologies for measuring tailpipe emissions at the border, such as laser devices. It should also consider targeted air pollution monitoring along major border trucking routes.
Critical Questions Must be Answered as Part of the FMCSA's Environmental Review

As noted in these comments, a comprehensive review of the environmental and public health impacts of the three regulations is essential here. As part of this review, we believe that the FMCSA must research and answer the following critical questions (among others) in order to determine the true impact of its proposed regulations:

1. If a Mexican company buys a truck in Mexico, is the engine typically manufactured in the U.S.?

2. Are there any engines manufactured out of the U.S. that are sold in trucks in Mexico? If so, from where?

3. In scenario (1) or (2), what emissions standard must the truck meet?
   a. During the period from 1990 to October 2002, what standard did the trucks have to meet?
   b. Are the trucks currently meeting the 10/02 Consent Decree standard?
   c. In 2007 will they meet the U.S. 2004 standard? The 2007 standard?
   d. Even if Mexico-domiciled trucks meet U.S. standards when manufactured, can they be modified for sale in Mexico in a way that would increase emissions (e.g., to increase fuel efficiency)?
   e. Is there any effort in Mexico to adopt the U.S. 2004 or 2007 standards?

4. Is low sulfur diesel fuel (15 ppm) currently available in Mexico? Is there any reason to believe it will be available in the future?

5. How does Mexico go about certifying that new engines meet the standards for Mexico for the years 1994 and beyond? Does Mexico have certification facilities that are the equivalent of the U.S. facilities?

6. What are the particulates and NOx emission budgets for the relevant cities, including but not limited to Houston, El Paso, Dallas-Ft. Worth, San Diego, Los Angeles and environs, San Francisco, and the New Mexico and Arizona cities. How do the SIPs in those states accommodate new sources in serious and above nonattainment areas?

7. What percentage of Mexico-domiciled trucks has been retrofit to address the defeat device issue? Are there any plans for their retrofit in the future?

8. What is the average age of a Mexico-domiciled truck that would come across the border as compared to a U.S. truck that it might displace? What percentage of Mexico-domiciled trucks use engines that were manufactured in 1994 or later?
9. Would a Mexico-domiciled truck of the same model year (prior to 10/02) as a U.S. truck have comparable emissions? Or might it be more polluting either because the standard was less stringent or because of poorer maintenance or other issues?

10. Is the fuel currently used in Mexico by trucks and buses different in emissions characteristics than fuel sold for trucks and buses in the U.S. or California?

11. What will be the likely impact on California trucks (as compared to Mexico-domiciled trucks) of heavy duty diesel truck and bus retrofit and repower requirements planned by the California Air Resources Board for 2005?

12. What is the likely effect of the regulation on the total amount of truck traffic in the U.S. (i.e., a net increase in trade increasing total number of trucks).

13. What are the emissions impacts in regions and cities of the U.S. from differences between Mexico-domiciled and U.S.-domiciled trucks, as a result of the factors listed above?

14. What are the projected impacts of higher sulfur diesel fuel in Mexico on U.S. trucks, given that required control equipment to meet 2007 U.S. standards does not tolerate the sulfur levels that would be present in Mexican diesel given that Mexico has not adopted U.S. 2007 fuel and engine standards? Could the lack of availability of low sulfur diesel fuel in Mexico by 2007 cause damage to U.S. trucks resulting in substantially higher emissions?

**The FMCSA Must Consider Alternatives Before Making a Determination**

One of the most important functions of the NEPA process is to force agencies to identify and analyze alternatives that will mitigate adverse environmental impacts of proposed actions. This process is intended to help the agency identify alternatives that may be less environmentally harmful than the alternative that the agency might otherwise choose. Therefore, to comply with NEPA the FMCSA must look at various alternatives to the proposed lifting of the moratorium, including at minimum the impacts of:

1. No action.

2. Brokering an arrangement by which Mexico adopts U.S. standards, starting with the October 2002 requirements.


4. Ensuring that Mexico requires the rebuild of engines with defeat devices to meet the same emissions levels as required by the Consent Decrees.
5. Ensuring that Mexico adopts regulations with the same level of stringency as state standards in California, including the California urban bus rule, new future retrofit and repower requirements, and fuel requirements.

6. Increasing & establishing emissions inspections points at U.S. border crossings. The FMCSA should also consider the possibility that if safety inspections were more stringent, they might also turn away poorly maintained trucks and thus keep out the big polluters.

7. Mexico and/or U.S. develops new monitoring and inspection programs for heavy duty trucks and buses.

We urge you to consider all these issues in your NEPA and conformity analysis.

**Conclusion**

We commend the FMCSA’s decision to prepare a full-fledged Programmatic PEIS and GCE in connection with the process of proposing regulations and appreciate the opportunity to comment. The process of protecting the environment and the well-being of those who will be affected by the increase in Mexican truck traffic will be challenging due to the already challenging set of air quality challenges the most-affected areas face. The impacts however, cannot be denied. Careful analysis by the FMCSA will result in a comprehensive analysis of the impacts stemming form the agency’s actions and hopefully adequate protections for the most heavily impacted areas and their already heavily impacted inhabitants. We look forward to working with the agency to develop a plan which will provide health protections and the necessary protections for the environment.

Sincerely,

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Natural Resources Defense Council

Todd R. Campbell, Policy Director
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South Coast Air Quality Management District, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-II), Diamond Bar, CA, 2000, p. ES-2.

[Cite to CARB study with similar findings]


Need endnote here.


Data prepared by Joseph K. Lyou, Ph.D., Executive Director, California Environmental Rights Alliance, (310) 536-8237; based on data from the California Department of Health Services.

