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Comments of Public Citizen, International Brotherhood of Teamsters, California Labor Federation, and Environmental Law Foundation Regarding Scope of Programmatic Environmental Impact Statement and General Conformity Evaluation for Proposed Regulations Governing Applications and Safety Monitoring of Mexico-Domiciled Motor Carriers

I. Introduction.

On August 27, 2003, the Federal Motor Carrier Safety Administration ("FMCSA") announced its intention to prepare a Programmatic Environmental Impact Statement ("PEIS") and General Conformity Evaluation ("GCE") for regulations that it will propose to permit Mexico-domiciled trucks and buses to operate in the United States. This action came in response to a decision of the United States Court of Appeals for the Ninth Circuit in *Public Citizen v. Department of Transportation*, 316 F.3d 1002 (9th Cir. 2003). The Ninth Circuit in that case held that FMCSA was required to implement its obligations under the National Environmental Policy Act ("NEPA") and the Clean Air Act ("CAA").

FMCSA has now announced its intention to prepare a full-fledged Programmatic PEIS and GCE in connection with the process of proposing Application and Safety Monitoring regulations to provide more effective safety protections for the driving public, greater health protections for people living in areas that will be adversely affected by the larger air emissions that result from the fleet of Mexico-domiciled trucks, and greater protection to the environment generally. In addition, the PEIS should identify and analyze alternatives that will mitigate adverse environmental impacts of the influx of Mexico-domiciled trucks that will result from the agency's action, especially with respect to human health and safety, endangered species and sensitive environmental areas like National Parks.

Finally, the GCE should identify emissions reductions from existing sources within the affected nonattainment areas that will be achieved in order to offset the additional emissions of Mexico-domiciled trucks resulting from the promulgation of the regulations sufficiently to represent reasonable further progress toward the attainment of the National Ambient Air Quality Standards ("NAAQS") in those areas by the relevant deadlines. This will ensure that the impacts on human health stemming from existing violations of the NAAQS will continue to decline, despite the introduction of Mexico-domiciled trucks into those areas, in accordance with the relevant State Implementation Plans ("SIPs").

Public Citizen, International Brotherhood of Teamsters, California Labor Federation, and Environmental Law Foundation submit these comments for the record on FMCSA's Application and Safety Monitoring regulations. The following comments address both the scope of the PEIS and the relevant conformity issues that the GCE must address. With respect to air quality impacts, these comments rely upon the attached memorandum prepared by Sierra Research, which contains technical comments on the scope of the PEIS and GCE (the "Sierra Research Memo"). These comments are not meant to exhaust all possible issues that may arise during the preparation of the PEIS and GCE, and additional comments will be prepared as issues arise during that process.

We note especially Sierra Research's suggestion that FMCSA "publish a detailed plan describing the information and data that will be developed for the use in the PEIS and General Conformity analysis, the information sources that will be used, and the methodologies and assumptions that will be used." The agency should provide the public an opportunity to review and comment on the work being performed for the PEIS and General Conformity analysis on an on-going basis "so that issues can be identified and dealt with at the earliest possible point in time, rather than at the end of the process after considerable resources and time have been expended."

II. The Programmatic Environmental Impact Statement.

A. The Need to Start Over.

The purpose of the NEPA analysis that the agency is now undertaking is to "insure that environmental information is available to public officials and citizens *before* decisions are made and *before* actions are taken." 40 C.F.R. § 1500.1(b) (emphases added). Similarly Department of Transportation Order 5610.1C provides that Draft Environmental Impact Statements "should be prepared early enough in the process so that the analysis of the environmental effects and the exploration of alternatives are meaningful inputs to the decision making process." DOT Order 5610.1C, September 18, 1979, at 7. Moreover, a "[s]ufficient analysis of such alternatives and their environmental benefits, costs, and risks should accompany the proposed action through the review process in order not to foreclose prematurely options which might enhance environmental quality or have less detrimental effects." DOT Order 5610.1C, Attachment 2, p. 3.

This means that the agency must begin the process of drafting the Application and Safety Monitoring regulations from scratch, considering all reasonably available options and their safety and environmental impacts with an open mind. In particular, the agency cannot give the

previously promulgated regulations any presumptive validity as it goes about considering options for the regulations that it now proposes to promulgate. Otherwise, the critical process of identifying and considering alternatives will be a sham exercise that unlawfully ignores the agency's NEPA obligations. FMCSA has a specific obligation to "identify and assess the reasonable alternatives" for Application and Safety Monitoring regulations "that will avoid or minimize adverse effects of these actions on the quality of the human environment." 40 C.F.R. § 1500.2(e).

Another reason for starting the process of drafting the Application and Safety Monitoring regulations from scratch is the agency's previous failure to "[i]nterpret and administer" its statute "to the fullest extent possible . . . in accordance with the policies" set forth in NEPA and the Council of Environmental Quality implementing regulations. 40 C.F.R. § 1500.2(a). As the agency begins the process of rewriting the regulations, it will discover that many more options are available when it interprets the statute in accordance with NEPA's policies.

B. Reasonable Alternatives that FMCSA Must Consider.

One of the most important functions of the NEPA process is to force agencies to consider a full range of alternatives to proposed actions, focusing in particular on alternatives that may be less environmentally destructive than the alternative that the agency might otherwise prefer from a narrow mission-oriented perspective.

It is especially important for the agency to identify a set of alternatives at the outset of the EIS development process to ensure that accurate data are compiled on the adverse environmental impacts that are likely to result from all of the reasonable alternatives. Moreover, "[a] rigorous exploration and an objective evaluation of the environmental impacts of all reasonable alternative actions, particularly those that might enhance environmental quality or avoid some or all of the adverse environmental effects, are essential." DOT Order 5610.1C, Attachment 2, p. 3. In particular, the agency must analyze "those alternatives not within the existing authority of the responsible preparing office." DOT Order 5610.1C, at Attachment 2, p. 2. In looking at alternatives, the agency should not artificially constrain itself based on the North American Free Trade Agreement ("NAFTA"). Signatories to that Agreement may "adopt, maintain or apply any standards-related measure, including any such measure relating to . . . protection of human . . . life or health, [or] the environment." NAFTA, Chap. 9, Art. 904(1).

As FMCSA has an independent responsibility under NEPA to identify and analyze reasonable alternatives, these comments will not attempt to recommend a comprehensive set of alternatives. Nevertheless, the agency should at the very least consider and analyze the environmental costs and benefits of the following alternatives.

1. Alternatives Available for Reducing Emissions.

FMCSA should consider the option of insisting that Mexico create a fraud-free method of certifying heavy duty diesel engines ("HDDEs") as in compliance with applicable Mexican

emissions standards at the time they are manufactured or imported into Mexico. A certification process alone, however, is not enough. The agency should further consider the option of developing a process through which such certifications can be verified at the border prior to a crossing of trucks containing certified engines.

Although FMCSA has put some effort into building safety inspection stations at critical border crossings, it should consider the option of creating an emissions inspection program capable of identifying and screening out "gross emitters" of particulates, NOx and sulfur dioxide. The agency should ensure that adequate emissions inspection stations are in place at all major border crossings. Currently, the border crossings at El Paso, Laredo, Hidalgo/Pharr, and Nogales conduct no emissions inspections whatsoever. 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.

ICF Consulting has suggested requiring natural gas fueling corridors along NAFTA highways as a mechanism for significantly reducing emissions of Mexico-domiciled trucks. The PEIS should also consider this alternative.

Finally, the agency should look at how safety requirements may have environmental effects. As there may well be a correlation between unsafe trucks and higher polluting trucks, the agency should consider whether tightening safety regulations will be beneficial for the environment (in addition to having safety benefits). FMCSA should also consider partnering with EPA or other federal or state agencies to include emissions tests with safety inspections.

2. Alternatives for Improving Safety.

FMCSA should consider a number of safety-related options as it begins the process of rewriting the Application and Safety Monitoring rules. The agency should consider requiring that logbooks be maintained for travel in Mexico as well as travel within the U.S. A related option to consider is a requirement that Mexico-domiciled trucks contain tamper-free electronic on-board recorders.

The agency should also consider requirements aimed at providing more effective insurance verification. Because border inspectors currently have no way to verify that a carrier's insurance papers properly indicate coverage for that shipment and carrier and are not fraudulent or otherwise inadequate, FMCSA should include the option of requirements that inspectors verify coverage during the inspections process.

FMCSA should additionally consider alternatives to the impact on safety of its regulations allowing carriers to operate under a system of loopholes and exemptions for safety certification purposes. As the agency is aware, all domestic carriers must be certified as in compliance with federal safety standards at the time of their manufacture. In 2002, FMCSA promulgated a final rule providing an exception or "safe harbor" for cross-border trucks lacking this kind of safety certification. This rule may be an act beyond FMCSA's statutory authority. The harmful impact

must be considered as part of the EIS, or if an extension of the time-frame is possible, that must also be considered, and better alternatives considered.

Finally, the agency should provide stringent penalties for any safety-related violations. FMCSA bears the ultimate responsibility for the safety of the transport of goods from Mexico in Mexico-domiciled trucks. Potential violators of FMCSA regulations need to be confident that punishment will be swift and severe if they elect to proceed in violation of FMCSA-imposed requirements.

3. Alternatives for Reducing Risks of Hazardous Materials Transport.

Because a substantial number of Mexico-domiciled trucks are likely to be transporting hazardous waste and materials, including explosives and other highly dangerous chemicals and gases, one of the options that the agency should consider is a requirement that Mexico-domiciled trucks transporting hazardous and explosive materials be subject to more intense scrutiny during safety inspection and be equipped with on-board electronic or GPS tracking devices.

In addition, the agency should consider the option of requiring additional training and advanced certification of drivers of trucks that transport hazardous and explosive materials.

C. Environmental Impacts that FMCSA Must Consider.

1. General – Differences between the U.S.-Domiciled and the Mexico-Domiciled Fleets of Heavy Duty Diesel Trucks.

The increase in air pollutant emissions due to the influx of Mexico-domiciled trucks that will result from the agency action is attributable primarily to differences in the engine emission profiles and differences in the age profiles of HDDEs in Mexico-domiciled trucks as compared to HDDEs in U.S.-domiciled trucks. Other differences may stem from differences in the adequacy of the new engine certification regimes and inspection regimes in Mexico and the U.S., differences in engine maintenance regimes, and the comparative likelihood of emissions-enhancing modifications in engines subsequent to purchase. Finally, differences in the fuels available in the two countries may account for current differences in emissions and for what will probably be very large differences in the foreseeable future. The net result is that the fleet of Mexico-domiciled trucks that is likely to replace U.S. domiciled trucks in transporting goods from the U.S.-Mexico border to interior points within the U.S. will emit much higher levels of pollutants than the trucks that they will be replacing.

a. Engine Differences.

Because U.S. law has for many years required that the engines in heavy duty diesel trucks (“HDDTs”) purchased in the U.S. meet EPA emissions standards, it is probably safe to assume that the U.S. fleet contains few engines, whether manufactured in the U.S. or in other countries, that did not meet U.S. emissions standards for new engines when they were manufactured. It is

not safe to assume, however, that Mexico-domiciled trucks contain engines that met U.S. standards when they were manufactured.

In any given year, some percentage of trucks sold or imported into Mexico will not contain engines that meet the U.S. emissions standards that are applicable to new engines manufactured during that year. This could happen for three reasons. First, the engines could have been manufactured in Mexico. Second, the engines could have been manufactured in some country other than the U.S. or Mexico and imported into Mexico, either in foreign manufactured trucks or for installation into trucks manufactured in Mexico. Third, the engines could have been manufactured in the U.S. for export to Mexico without complying with U.S. standards.

FMCSA should conduct a statistically valid survey of the countries of engines in trucks sold in and imported into Mexico. At the same time, the agency should assemble information on the emissions profiles of all engines manufactured in Mexico or imported into Mexico from countries other than the U.S.

FMCSA may be tempted to assume that all engines manufactured in the U.S. for export to Mexico were in compliance with U.S. standards for new engines. The agency should not, however, make this assumption until it has undertaken a thorough empirical investigation of its validity. First, as discussed below, the agency must take into account emissions differences attributable to the Defeat Device litigation consent decree. For purposes of the inquiry into emissions from engines manufactured for export to Mexico, the agency must determine the extent to which engines manufactured in the U.S. for export to Mexico met the accelerated schedule for attaining the 2004 standards. Second, the agency may not legitimately assume that engines manufactured in the U.S. for export comply with U.S. emissions standards absent a thorough empirical inquiry into the accuracy of that assumption. It is our understanding that the current practice of at least some U.S. HDDE manufacturers is not to require that engines designated for export meet current U.S. standards.

FMCSA may also be tempted to assume that engines manufactured and imported into Mexico during years that the Mexican HDDE emissions standards are identical to the U.S. standards comply with U.S. emissions standards. FMCSA should not, however, assume that all engines in trucks manufactured in or imported into Mexico after 1993 comply with the Mexican HDDE standards for years 1994 and thereafter. The agency should instead conduct an empirical investigation into the lengths to which Mexican authorities go to ensure that engines manufactured in or imported into Mexico do in fact achieve the Mexican standards. This analysis should include the analysis suggested below of the comparative efficacy of the U.S. and Mexican new engine certification regimes.

Based on the surveys, FMCSA should identify the date of manufacture and country of origin of engines in all trucks that can be made available for long-haul trips into the interior U.S. The relevant emissions standards for those trucks, if any, should be identified. A profile of the current fleet of Mexico-domiciled trucks available for long-haul should then be prepared setting out the percentage of trucks containing engines manufactured to each set of relevant emissions

standards with appropriate discounts for any inadequacies in the new engine certification program in place in Mexico.

b. Differences in Standards Applicable to New Engines.

Mexico's emissions standards for new heavy duty diesel engines are contained in regulations called Norma Oficial Mexicana ("NOMs"). Mexico imposed no emissions standards for new diesel engines prior to 1993. The United States Environmental Protection Agency ("EPA") has on several occasions promulgated emissions standards for new heavy duty diesel engines, the most recent of which will become applicable in the 2007 model year. The U.S. standards prior to 1991 were 10.7 gbh for NOx and 0.6 gbh for particulates.¹ For model years 1991-1993, the EPA emission standards were 5.0 gbh for NOx and 0.25 gbh for particulates. 40 C.F.R. § 86.091-11 (2001). Absent strong evidence to the contrary, it is fair to assume that emissions from Mexico-domiciled trucks manufactured prior to 1991 exceed emissions from U.S. trucks manufactured prior to 1991 and greatly exceeded emissions from U.S. trucks manufactured between 1991 and 1993.

Available information indicates that the vast majority of Mexico-domiciled trucks on the road today were manufactured prior to 1994. Relying upon Mexican registration data, the GAO concluded that the average age of federally registered truck tractors in Mexico is 16 years. United States General Accounting Office, North American Free Trade Agreement: Coordinated Operational Plan Needed to Ensure Mexican Trucks' Compliance With U.S. Standards (2001) ("2001 GAO Report"), at 26. In the year 2000, "only 20 percent of the commercial cargo trucks registered for use on Mexican federal highways were manufactured after 1994." 2001 GAO Report, at 10. According to Mexican officials, "trucks manufactured in Mexico prior to this date were not built to U.S. safety and emissions standards." *Id.* Although Mexico-domiciled carriers can apply to have older vehicles certified to be in compliance with U.S. safety standards, "these vehicles might have difficulties meeting U.S. emissions standards." *Id.* In fact, there is no way to retrofit technology into a diesel engine that will cause an older engine to comply with standards with which it did not comply at the time it was manufactured. Once out of compliance, always out of compliance.² Thus, it is possible, indeed probable, that up to 80 percent of the

¹ Environmental Protection Agency, Final Regulatory Impact Analysis: Control of Emissions of Air Pollution from Highway Heavy-Duty Engines 47 (1997). *See also* Environmental Protection Agency, Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines and Fuel Economy of Motor Vehicles; Emissions Certification and Test Procedures, Fuel Economy Test Procedures; Technical Amendments, 52 Fed. Reg. 47853 (1987) (noting that the standard for NOx emissions from heavy-duty diesel trucks that were applicable prior to the 1985 rulemaking proceeding was 10.7 gbh).

² This factor alone serves to distinguish emissions controls from safety requirements. As the GAO report noted, individual trucks can be fitted with safety devices that allow them to pass individual safety inspections at the time they enter the U.S. This was a major consideration in

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trucks that will be traveling to points within the U.S as a result of the implementation of the regulations at issue in this case will be older trucks containing engines that emit higher levels of NOx and particulate matter than their U.S. counterparts.

The state of California has promulgated emissions standards for heavy duty trucks that in the earlier years were in many cases more stringent than the federal EPA standards, and other states have frequently adopted the stricter California standards. *See* 13 C.C.R. § 1956.8(a)(1). The California standards for model years 1985-1987 were 5.1 gbh for NOx with no corresponding standard for particulates. The NOx standard was relaxed to 6.0 gbh for model years 1988-1990 with a corresponding particulates standard of 0.60 gbh. For 1991-1993, the standards were 5.0 gbh for NOx and 0.25 gbg for particulates (0.10 for urban buses).³ During these time periods, Mexico-domiciled trucks were subject to no emissions standards for either pollutant. Thus, Mexico-domiciled trucks for model years prior to 1993 can be expected to emit much higher levels of NOx and particulate matter than trucks of equivalent model years registered in California.⁴ In fact, Environ has calculated that "Mexican trucks produced 3 to 7 g/mile (+15 to 30%) more NOx and 0.3 to 0.6 g/mile (+25 to 75%) more PM than equivalent California trucks

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the conclusion of the NAFTA panel that the United States' outright ban on most Mexico-domiciled trucks had violated its obligations under NAFTA to provide like treatment to Mexican carriers in like circumstances. *See* In the Matter of Cross-Border trucking Services (Secretariat File No. USA-MEX-98-2008-01), Final Report of the Panel 64-65, 72, 81 (February 6, 2001). Unlike safety tests, however, there is no emissions test that can be performed at the border to determine whether an existing engine would have passed the U.S. emissions requirements for new engines at the time that it was manufactured. In the case of emissions standards for new engines, like treatment in like circumstances would require emissions testing of engines at the time of manufacture, and this is no longer possible for existing engines.

³ From model years 1994 and beyond, the California standards are identical to the federal standards.

⁴ California has also promulgated standards for testing on-road emissions of particulate matter. The "puff" tests currently required by California law are aimed at identifying gross emitters of particulate matter. SEMARNAP has promulgated regulations requiring on-road vehicles to pass an emissions test for gross particulate emissions similar to the "puff" test required in California. NOM-045-ECOL-1996 (April 22, 1997), repealing NOM-CCAT-008-ECOL/1993 (October 22, 1993). The fact that the failure rate for this test was 1.5 times greater for Mexico-domiciled trucks than for U.S. domiciled trucks is an indication of the air pollution problems that will result from the increased traffic in Mexico-domiciled trucks throughout the border states as a result of the implementation of the challenged regulations. 2001 GAO Report, at 18 (reporting that the failure rate for U.S. trucks was 8 percent in 2000 while the failure rate for Mexico-domiciled trucks was 12 percent).

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operating in Imperial and other California counties in 2000.” Memorandum to Susan Durbin from Cuong Tran, Chris Lindhjem, and Alison Pollack re: Issues Pertinent to the Emissions Contributions of Mexican Heavy-Duty Diesel Trucks Operating in California, dated October 10, 2001 (“Environ Report”).

In 1997, EPA promulgated emissions standards for new HDDE engines for model years 2004-2006. The United States emission standards for those model years are 2.4 gbh for NO_x and 0.10 gbh for particulates (0.05 gbh for urban buses). 40 C.F.R. § 86.004-11 (2001). Mexico has not promulgated any more stringent emissions standards for new HDDE engines for model years 2004 and beyond. Engines manufactured and imported into Mexico for those years therefore remain subject to those applicable to engines for model years 1998 and beyond, or 4.0 gbh for NO_x and a 0.05 gbh for particulates for urban buses. The U.S. standards for NO_x for model years 2004-2006 are much more stringent than the applicable Mexican standards. Mexico recognizes no international obligation under NAFTA to enforce U.S. standards in Mexico.⁵ Mexican law will not prevent Mexican truck manufacturing companies from installing engines that do not meet the U.S. requirements for model years 2004 and beyond in Mexico-domiciled trucks.

Compliance with the 2004 standards will require manufacturers to incorporate exhaust gas recirculation (“EGR”) systems into HDDE engines. These systems will result in lower NO_x emissions, but no improvement in engine power, operability, durability or fuel economy, and they may decrease engine durability. Thus, there is no reason whatsoever to expect that Mexican engine manufacturers or that manufacturers elsewhere in the world who export engines to Mexico will voluntarily install EGR technologies when not otherwise required by Mexican law.

Because engine manufacturers need a “lead time” to design engines capable of meeting new emissions standards and to retool production facilities, the Clean Air Act provides that EPA must give engine manufacturers at least 4 years from the time that the emissions standard is promulgated to prepare to come into compliance with the standard. 42 U.S.C. § 7521(a)(3)(C). Presumably, Mexican diesel engine manufacturers would need a similar lead time. Any standards applicable to diesel engines manufactured and imported into Mexico applicable to the 2004 model year would therefore have to be on the books already for engine manufacturers to comply by the 2004 model year deadline.

On January 18, 2001, EPA promulgated regulations for new HDDE engines manufactured in the United States for model years 2007 and beyond. U.S. Environmental Protection Agency, Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, 66 Fed. Reg. 5002 (2001). These much more stringent requirements were recently upheld by the United States Court of Appeals for the D.C. Circuit. *National Petrochemical & Refiners Ass’n v. EPA*, 287 F.3d 1130 (D.C. Cir. 2002) (per

⁵ In the Matter of Cross-Border trucking Services (Secretariat File No. USA-MEX-98-2008-01), Final Report of the Panel 22 (February 6, 2001) (“Mexico is under no obligation under NAFTA to enforce U.S. standards”).

curiam). The emissions standards for model years 2007 and later are 0.20 g/bh for NO_x (to be phased in over four years) and 0.01 g/bh for particulates. 40 C.F.R. § 86.007-11 (2001). Because high sulfur levels in fuel make it impossible or at least far more difficult to achieve low emissions with the catalytic converter technologies that are capable of meeting the more stringent emission standards, EPA simultaneously promulgated, pursuant to its authority to regulate any fuel components that significantly impair “the performance of any emission control device or system,” 42 U.S.C. § 7545(c)(1)(B), a fuel standard for diesel fuel that required a 97 percent reduction in the sulfur content of diesel fuel from 500 parts per million (ppm) to 15 ppm. 66 Fed. Reg. at 5002.

SEMARNAP has not proposed standards for the 2007 and beyond model years. Moreover, SEMARNAP has not given the slightest indication that it is even considering promulgating regulations limiting sulfur in fuel that would be a necessary to any standards requiring the use of catalytic converter technologies.

According to the Sierra Research letter of May 20, 2002, the U.S. HDDE engine emission standards for 2007 and following years will require “after treatment control devices” that will add several thousand dollars to the cost of the engines and add to truck operating costs. As with the EGR technologies needed for the 2004 standards, there is no reason whatsoever to expect that Mexican engine manufacturers or that manufacturers elsewhere in the world who export engines to Mexico will voluntarily install after treatment control technologies when not otherwise required by Mexican law.⁶ There is even less reason to suppose that Mexico will require diesel fuel manufacturers and distributors in that country to go to the considerable expense of producing diesel fuel capable of meeting the 15 ppm sulfur level specified by U.S. regulations for 2007 and thereafter.⁷

The table below, which is taken from the Environ Report makes it clear that the emissions standards applicable to new heavy duty diesel engines in Mexico have been identical to the U.S. standards only for the limited time period extending from 1993 through 2003. Prior to 1993,

⁶ See Mexico/U.S./Canada Facing Trans-Border Clean-Diesel Problem Arising From Big NAFTA Decision, 5 Diesel Fuel News 9 (April 30, 2001) (noting that U.S. and Canadian trucking companies “will gradually replace their old, ‘dirty’ diesel trucks with the new, ultra-clean trucks over the coming 10-15 years,” and questioning whether “lower-cost Mexican trucking companies [will] steal away major portions of the NAFTA freight business” if “the same costly investment doesn’t occur at a similar rate in Mexico”).

⁷ See Mexico/U.S./Canada Facing Trans-Border Clean-Diesel Problem Arising From Big NAFTA Decision, 5 Diesel Fuel News 9 (April 30, 2001) (quoting an official with PEMEX, the Mexican state oil company) (“Changing the fuel specifications of automotive diesel in Mexico from 500 ppm sulfur maximum today, to less than 15 ppm, to supply the entire diesel fleet – with an average age of 15 years – is a high cost to pay.”).

there were no emissions standards for Mexico-domiciled trucks. By contrast, California had promulgated standards for trucks containing HDDEs manufactured as early as the 1987 model year.

Table 1. NO_x and PM emission standards for heavy-duty diesel trucks.

Model Year	NO _x Standard (g/bhp-hr)	PM Standard (g/bhp-hr)
US Federal		
1990	6.0	0.60
1991-93	5.0	0.25
1994-97	5.0	0.10
1998-2003	4.0	0.10
2004-2006	2.4 or 2.5 NO _x + NMHC, with limit of 0.5 on NMHC	0.10
2007+	0.2	0.01
California		
1987-90	6.0	0.60
1991-93	Same as Federal	Same as Federal
1994-97	Same as Federal	Same as Federal
1998-2003	Same as Federal	Same as Federal
2004+	Same as Federal	Same as Federal
2007+	Same as Federal	Same as Federal
Mexican		
1993	5.0	0.25
1994-97	5.0	0.10
1998+	4.0	0.10

Although it has been suggested that Mexico will at some point update its standards for new HDDE engines to match the U.S. standards, it has not in fact done so. Consequently, any comparison of future emissions may not assume that Mexican trucks containing engines manufactured in any country other than the U.S. will comply with future U.S. standards. (As noted above, it is also not safe to assume without an additional empirical inquiry that engines manufactured in the U.S. for export are in compliance with U.S. emissions standards.)

c. Differences in Emissions Profiles Attributable to the 1999 U.S. Consent Decree.

A final important difference between emissions from new Mexico-domiciled trucks and U.S.-domiciled trucks stems from a consent decree entered into between EPA and six manufacturers of HDDE engines in the U.S.

On July 1, 1999, six manufacturers of heavy duty diesel engines in the United States (representing approximately 95 percent of the U.S. HDDE engine manufacturing capacity) entered into a Consent Decree with EPA to settle an enforcement action in which EPA had alleged that the manufacturers had installed certain computer-based strategies to adjust the timing of fuel injection in HDDE engines for model years 1988-1998 that were in fact “defeat devices” that allowed the engines to pass the tests for new engine certification but rendered the emission control systems less effective once they were used on the open road. *United States v. Caterpillar, Inc.*, Civ. Action No. 98-02544, U.S. Dist. Ct., Dist. of Columbia, July 1, 1999 (“Diesel Engine Consent Decree”).⁸ The Consent Decrees implemented several important legally binding requirements.

First, the Consent Decrees required the six manufacturers to phase in modifications to engines manufactured after November 1, 1998 to reduce NOx emissions beyond those otherwise required. Diesel Engine Consent Decree, at 19-20. *See* Memorandum of Law of the United States of America in Support of Motion to Enter Consent Decree and response to Public Comments, *United States v. Cummins Engine Co.*, Civ. Action No. 98 CV02456, April 30, 1999, at 15 (“Consent Decree Memorandum”). Second, the Consent Decrees required the manufacturers to “pull ahead” development of exhaust gas recycling technology to comply with the 2004 NOx standards for new HDDE engines by October 1, 2002. Diesel Engine Consent Decree, at 20-21. *See* Consent Decree Memorandum, at 16. Third, in addition to demonstrating that new engines comply with the specified NOx standards over the relevant averaging periods, they must also demonstrate that the engines comply with a “Not-to-Exceed Limit” of 1.25 times the average NOx limit at all points within a specified “Not to Exceed Control Area” of engine performance. Diesel Engine Consent Decree, at 19-20. *See* Consent Decree Memorandum, at 18. Fourth, the Consent Decree imposed “Transient Not-to-Exceed Limits” on engines manufactured after October 1, 2002 to control bursts off pollutants that diesel engines experience on hard accelerations. Diesel Engine Consent Decree, at 24-25. *See* Consent Decree Memorandum, at 18-19.⁹ Finally, the Consent Decree required the diesel engine manufacturers

⁸ The following companies entered into consent decrees with EPA as a result of the diesel defeat device litigation: Caterpillar, Inc., Cummins Engine Company, Detroit Diesel Corporation, Mack Trucks, Inc., Navistar International Transportation Corporation, Renault, V.I., and Volvo Truck Corporation. *See* Memorandum of Law of the United States of America in Support of Motion to Enter consent Decree and Response to Public Comments, *United States v. Cummins Engine Co.*, Civ. Action No. 98 CV02456, April 30, 1999.

⁹ Technically, the Not-to-Exceed requirements in the Consent Decrees expired after the 2004 model year, but a coalition of states followed California in extending the requirements through the 2006 model year, at which point the much more stringent federal standards for the 2007 model year will apply. *See* Coalition of States Adopts California Rules To Limit Heavy-Duty
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to make available "Low NOx Rebuild Kits" at no charge to authorized dealers, distributors, and repair facilities to be installed in trucks manufactured between 1993/94 and 1998 to eliminate the adverse effects of the defeat devices that were installed in those engines at the time they were manufactured. Diesel Engine Consent Decree, at 47-56. *See* Consent Decree Memorandum, at 20-21.

The terms and conditions of the Consent Decree are not binding upon any companies other than six U.S. engine manufacturers that settled the diesel defeat device litigation.¹⁰ The Mexican government has not entered into a similar consent decree with heavy duty diesel engine manufacturers, and nowhere in the Mexican NOMs is there the slightest suggestion that the detailed and comprehensive requirements of the U.S. Consent Decree are applicable to engines manufactured and imported into Mexico. The Consent Decree was meant to accomplish large decreases in emissions from diesel trucks manufactured after 1998 to offset the huge excess emissions allowed by the defeat devices during the previous five years. Mexico-domiciled trucks will not be subject to these additional requirements and will therefore not be required to accomplish equally great reductions in emissions in model years 1998 through 2002. EPA estimated that these changes would reduce NOx emissions from U.S.-domiciled trucks by 2.3 million tons. Consent Decree Memorandum, at 82. The emissions budgets in the California and Texas State Implementation Plans take into account the NOx emission reductions accomplished by the Consent Decree. They do not take into account the fact that there will soon be a large influx of Mexico-domiciled trucks that are not subject to the same requirements and will therefore emit much larger amounts of NOx into the air in serious, severe and extreme nonattainment areas where any additional NOx emissions will increase the severity of ozone pollution and delay the attainment of the standards.

Moreover, the government predicted that modifications of existing 1993-1998 model year engines achieved at the time those engines were rebuilt would "substantially reduce emissions." Consent Decree Memorandum, at 44. In particular, the government predicted that "[t]he Low NOx Rebuild Program will lead to emission reductions of one to two million tons of NOx over the life of the Low NOx Rebuild Engines and will substantially improve air quality in the United States." *Id.*, at 72. In the technical documentation for EPA's recently adopted MOBILE6 model for calculating mobile source emissions, EPA assumes that NOx emissions for 1994-98 model year engines will be reduced by approximately 36 percent because of the Low NOx rebuild program. Environ Report, at 8. These substantial reductions will not be forthcoming from Mexico-domiciled trucks from the same model years. By its terms the Consent Decree "does not

(...continued)

Diesel Engine Emissions, 33 BNA Environment Reporter (Current Developments) 728 (2002).

¹⁰ *See* Consent Decree Memorandum, at 99 ("These emission limits and test protocols do not impose any additional requirements on non-signatories to the decrees.").

apply (at this time) to rebuilds in Canada, Mexico, or other areas of the world.”¹¹ Even those Mexico-domiciled trucks that complied with U.S. standards at the time of manufacture will emit more NOx than U.S.-domiciled trucks in the future as the Low NOx Rebuild Kits become commonplace in older U.S. trucks.

Finally, there is no indication that the Mexican government has implemented the “pull ahead” requirement that new heavy duty engines comply with the 2004 NOx standards by October 1, 2002. Even if Mexico does require model year 2004 engines to meet the U.S. standards for that model year, it would be virtually impossible for Mexico to require vehicles manufactured or imported into Mexico after October 1, 2002 to meet those standards. The Environ Report concluded that “[w]hile Mexican fleet owners might consider purchasing engines meeting the U.S. Consent Decree requirements during this period [2002-04], we expect that such engines would not be available outside the U.S.” Environ Report, at 8.

In sum, the PEIS must take into account the differences in emissions profiles of Mexico-domiciled trucks and U.S.-domiciled trucks attributable to the consent decrees.

d. Differences in the Age of the Relevant Fleets.

The information currently available on the age of the current fleet of Mexico-domiciled trucks suggests that it is much older on average than the current fleet of U.S.-domiciled trucks. By one estimate, only 20 percent of the engines in the current fleet of Mexico-domiciled trucks was manufactured since 1994. Consequently, as much as 80 percent of the current fleet was subject to no Mexican emissions standards at the time they were manufactured or imported into Mexico. Figures 1 and 2 of the Environ Report demonstrates the differences in age distribution between Mexico-domiciled and U.S.-domiciled trucks as determined by the California Air Resources Board based upon actual inspections of heavy duty trucks at California-Mexico border crossings.

FMCSA must factor these age differentials into its emissions profiles for Mexico-domiciled trucks. The Environ Report recommended that “[a] more careful and thorough analysis of differences in both assumed emission rates and age distributions should be conducted.” Now is the time for FMCSA to conduct that analysis.

e. Adequacy of the Mexican Certification Regime.

An accurate estimate of emissions from Mexico-domiciled trucks will require an assessment of the extensiveness and accuracy of the certification procedures in effect in Mexico for heavy duty

¹¹ Letter to Distributors from Cummins Engine Company, dated June 2, 1999 (quoted in Environ Report, at 7).

diesel engines manufactured in or imported into Mexico. To the extent that engines used in Mexico-domiciled HDDTs are not certified in the U.S., it is erroneous to assume that they meet Mexican standards that are equivalent to U.S. standards.

For Mexico-domiciled trucks that were assembled for sale in Mexico or imported from countries other than the U.S., it is not at all clear how border inspectors would go about determining whether the engines contained in such trucks were certified to the Mexican standards for the relevant model years. We are aware of no requirement in the Mexican NOMs that require engines to be labeled as certified to meet Mexican standards. Even if the engines were labeled, there is no requirement for border inspectors to ascertain whether the engines of Mexico-domiciled trucks are so labeled, and there is no indication that border inspectors will inquire into emissions certifications, in any event.

To the extent that engines used in Mexico-domiciled trucks have been manufactured in the U.S. and certified to meet U.S. emissions standards for new HDDE engines, there is currently no process in place for ensuring that any particular engine has in fact been certified to U.S. standards as the truck containing that engine crosses into the U.S. Although it is technically possible to identify HDDE truck engines that have been certified to U.S. emissions standards, the Sierra Research letter of May 20, 2002 makes clear that the inspector would need to access the engine of every truck inspected in order to verify that the certification label was present. The current border inspection requirements for Texas and California do not require the inspector to determine whether the engine was certified to U.S. standards, and there is no indication that border inspectors will inquire into emissions certifications.

f. Increases in Emissions Subsequent to Manufacture.

It is not safe to assume that engines that are designed and manufactured to meet particular standards will actually meet those standards after they are brought into operation. In the defeat device litigation, for example, the defeat devices were built into the engines at the time they were manufactured. It may be possible, however, to install similar defeat devices subsequent to manufacture or otherwise to modify engines to increase fuel economy while reducing the effectiveness of emissions controls. The current in-use inspection regimes in place in both the U.S. and Mexico are incapable of determining whether the engine in a Mexico-domiciled truck has been tampered with. FMCSA should conduct a comparative investigation into the incidence of engine tampering in Mexico and the U.S., and the PEIS should take into account any differences uncovered by that analysis.

Although sophisticated in-use vehicle inspection technologies have been developed for automobiles, much less effort has gone into developing in-use emissions tests for heavy duty diesel trucks. In-use testing is not currently required by federal law in the U.S., but may be

required by the states in the SIPs that they promulgate pursuant to the Clean Air Act. 42 U.S.C. § 7410. *See* 2001 GAO Report at 2. California is the only border state, however, that has required in-use inspections for diesel trucks. *Id.*, at 18. But they are not tests to determine whether engines are emitting more than the amounts for which they were certified when new, and they do not test at all for NOx emissions.

Mexico-domiciled trucks that cross into the United States are inspected for compliance with U.S. on-road safety standards, and they will continue to be tested somewhat more intensively for compliance with these safety standards in the future as FMCSA and the states fully implement section 350 of the FY 2002 DOT and Related Agencies Appropriations Act, Pub. L. No. 107-87, 107th Cong., 1st Sess. (2001). Thus far, however, these inspections do not include any determination whether or not the engines in the trucks being inspected complied with the U.S. emissions standards for NOx and particulate matter at the time that they were manufactured. *See* Letter to Ed Ochoa from Paul E. Jacobs, dated May 20, 2002.

The current in-use inspection regimes are incapable of identifying Mexico-domiciled trucks containing engines that have not been adequately maintained. Because poor maintenance can result in much higher emissions, FMCSA should conduct a comparative analysis of maintenance-related deterioration factors in the U.S. and Mexico. If Mexico-domiciled trucks are generally less aggressively maintained than U.S.-domiciled trucks, the PEIS should take into account the increased emissions from Mexico-domiciled trucks attributable to the maintenance factor. The agency may not legitimately assume that the maintenance of Mexico-domiciled trucks is equivalent to the maintenance of U.S.-domiciled trucks.

g. Differences in Fuels.

To meet future U.S. emissions standards, it will be necessary for trucks containing engines designed and manufactured to meet those standards to burn low sulfur (15 ppm) diesel fuel. Otherwise, the technologies used to meet the future standards will fail and emissions will greatly exceed those standards.

Even if future Mexico-domiciled trucks contain engines that meet future U.S. standards for new engines, if they burn high sulfur diesel fuel, emissions from those trucks will greatly exceed those of equivalent U.S.-domiciled trucks. It is therefore critical to know what steps Mexico is taking to ensure that low sulfur diesel fuel will be available at a price that does not exceed alternative fuels for use in Mexico-domiciled trucks when they are in Mexico. If no steps are currently underway to ensure the availability of reasonably priced low sulfur diesel fuel in Mexico, then FMCSA must assume that emissions from future Mexico-domiciled trucks will not reflect compliance with future U.S. standards and the future emissions profiles for Mexico-domiciled must be increased accordingly.

It is our understanding that U.S.-domiciled trucks may not carry cargo between points in the interior of the U.S. and points in the interior of Mexico. If one of the results of the FMCSA actions currently being proposed will be a decision by Mexico to allow reciprocal rights to U.S. trucks to transport cargo between Mexico and the U.S., then the FEIS should evaluate the air quality impact in the U.S. of the likelihood that sulfur in Mexican fuels used by U.S. trucks while in Mexico will interfere with the emission control devices on U.S. engines.

h. Overall Emissions-Related Differences.

The agency must conduct a cumulative assessment of the differences in emissions between the U.S.-domiciled and Mexico-domiciled fleets. That cumulative assessment must include an analysis of the emissions differences in the year that the Application and Safety Monitoring regulations go into effect. It should also include projections of the cumulative emissions differences in future years as the Mexican standards diverge from the U.S. and California standards.

2. Air Quality Impacts – Criteria Pollutants in Nonattainment Areas.

A major federal action “affects” the environment when it “may have an effect on” the environment (40 C.F.R. § 1508.3), and such “effects” include “[i]ndirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8. The PEIS for the FMCSA regulations must therefore carefully examine the direct and indirect effects on the environment of each of the alternatives examined in the EIS. The PEIS must also account for cumulative effects and connected actions. *See* 40 C.F.R. §§ 1508.7, 1508.25(a)(1), 1508.25(a)(2).

To accurately evaluate the air quality impact of criteria pollutant emissions from the FMCSA action on nonattainment areas, the agency must perform a comparison of emissions in the relevant nonattainment areas in the absence of the influx of Mexican trucks that will result from the action and emissions in those areas that will occur after the agency takes the action. This calculation may not be undertaken on the basis of gross averages on a nationwide basis in order to be an accurate analysis of the effects that the agency action will have on human health and the environment.

This analysis must be performed for each nonattainment area that will be affected by the influx of Mexican trucks that will result from the promulgation of the rules. The Sierra Research Memo suggests that because Mexico-domiciled trucks may be assumed to travel throughout the U.S., this analysis should include every nonattainment area for every pollutant. FMCSA must also analyze the impact on areas that are likely to be nonattainment areas for the recently promulgated revised NAAQS for ozone (8-hour) and PM_{2.5}. The Sierra Research Memo further recommends

that FMCSA evaluate the impact of the agency action “on the same scale as other air quality issues,” such as those used in NAAQS attainment or maintenance plans or, in the case of truck terminals or vehicle inspection stations, on the same scale as project analyses performed for air quality permitting.” This focus on individual nonattainment areas is, in any event, necessary to comply with the agency’s Clean Air Act conformity requirements discussed below.

Finally, the analysis must identify increased emissions over baseline in potential “hot spots” in nonattainment areas, such as the ambient air in the vicinity of inspection stations for Mexico-domiciled trucks.

a. Baseline.

An accurate analysis of air quality impacts must begin with an accurate determination of the “baseline” emissions of U.S.-domiciled trucks that would be carrying cargo originating in Mexico from the border to points within the interior U.S. but for the predicted influx of Mexico-domiciled trucks that will result from the various alternatives for agency action that the agency will be considering. To begin with, the baseline will include an analysis of the emissions from the U.S.-domiciled trucks that are currently transporting cargo originating in Mexico to the interior of the U.S. The agency should compile an age profile of the U.S. fleet and an emissions profile for U.S.-domiciled trucks that matches the age profile. If the profiles may vary from area-to-area within the U.S., then the agency will need to prepare area-specific profiles, at least for nonattainment and maintenance areas that are likely to see an influx of Mexico-domiciled trucks.

The baseline will not be static. As emissions requirements for U.S. trucks become more stringent in the future, the emissions profiles for the U.S.-domiciled trucks that would otherwise be transporting goods generated in Mexico to interior points in the U.S. will change. The baseline analysis of emissions from this hypothetical fleet must reflect reasonably foreseeable changes in emissions standards, including, of course, those changes that are already on the books.

Finally, the baseline analysis must include an assessment of the current air quality in potential “hot spots,” such as inspection stations for Mexico-domiciled trucks, for purposes of a localized analysis of the air quality impact of alternative agency actions on those potential “hot spots.”

b. Emissions Over Baseline Attributable to the Influx of Mexico-Domiciled Trucks.

FMCSA should next 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 analysis should begin with an age profile and an emissions profile of the existing fleet of Mexico-domiciled trucks currently available for transporting goods from Mexico to interior points in the U.S. The

emissions profile of the Mexico-domiciled trucks should characterize the number of vehicles, the age distribution of those vehicles (and the age distribution of the engines used in them, if it differs), and the weight classifications of those vehicles. The analysis must reflect not only the emissions standards applicable to new engines manufactured or imported into Mexico, but also the level of maintenance the engines have received during their service life.

The analysis should next focus on the number of Mexico-domiciled trucks that will be entering each nonattainment area, the distances over which those trucks will travel and the periods during which they will be allowed to idle. The analysis must take into account what are likely to be substantial differences in the number of Mexican-domiciled trucks operating in different areas and in the age and weight distributions of those vehicles. For instance, very different types of trucks may be used to travel from Mexico to Los Angeles versus Chicago. The analysis should calculate the emissions that will occur during travel and idle periods. The analysis should further focus on each nonattainment area and any "hot spots" within any nonattainment areas.

The analysis of emissions from Mexico-domiciled trucks will also change over time. Fleet turnover will result in the replacement of older, more polluting trucks with new trucks that meet Mexico's 1994 emissions standards for emissions from heavy duty diesel engines. The analysis of emissions from Mexico-domiciled trucks traveling to interior points in the U.S. should reflect this fleet turnover. There is currently no basis whatsoever for assuming that Mexico's standards for heavy duty diesel engines will become more stringent in the future, and there is likewise no basis for concluding that Mexico's requirements for diesel fuels will change to allow more stringent requirements on emissions from HDDEs. Therefore, it would not be appropriate for FMCSA to assume that fleet turnover in the future will result in Mexican trucks containing engines that meet the U.S. emissions standards for 2002 (under the consent decree) and subsequent years (under existing U.S. requirements for model years 2004 and beyond). See the discussion above on the differences between the two fleets presently and in the future.

The emissions analysis must calculate the cumulative increase in emissions attributable to Mexico-domiciled trucks because of all of these factors in each affected area. The cumulative analysis prepared by Sierra Research in connection with the March 2002 rulemaking, for example, concluded that by 2010, emissions of NO_x and PM for each mile of travel by Mexico-domiciled trucks will equal two miles worth of emissions of those pollutants from U.S.-domiciled trucks.

One of the most frequently cited reasons for implementing NAFTA is the predicted increase in commerce among the three signatories. Indeed, the expectation of increasing the volume of trade between the U.S. and Mexico was precisely why the Government of Mexico requested the formation of the arbitral panel pursuant to NAFTA. See *In the Matter of Cross-Border trucking Services* (Secretariat File No. USA-MEX-98-2008-01), Final Report of the Panel (February 6,

2001). The enhanced trade resulting from the implementation of NAFTA has already greatly increased the number of northbound truck crossings. According to the recent GAO Report, commercial truck traffic at Texas and California ports of entry has grown more than 60 percent since NAFTA went into effect. 2001 GAO Report, at 4. As the volume of trade increases to still greater levels as a result of the implementation of the regulations being promulgated by FMCSA, an increase in the number of Mexico-domiciled trucks traveling throughout the U.S. is likewise easily foreseeable as is an increase in overall NO_x and particulate emissions.

The analysis of emissions of Mexico-domiciled trucks traveling in the U.S. as a result of the FMCSA action must therefore include reasonable projections of increased emissions resulting from the increased numbers of Mexico-domiciled trucks attributable to increased commerce between the U.S. and Mexico. The analysis of increased traffic should also include reasonable estimates of the increased cargo crossing from Mexico to the U.S. by truck resulting from decisions by importers of goods to the interior of the U.S. to re-route cargo through Mexico to take advantage of lower transportation costs. For example, cargo from Chile that is currently shipped directly to San Francisco for trans-shipment to Chicago by truck may, as a result of the agency action, be shipped to a Mexican port for trans-shipment to Chicago via Mexico-domiciled truck.

Finally, the emissions analysis must include a prediction of emissions in potential "hot spots," such as inspection stations for Mexico-domiciled trucks, for purposes of a localized analysis of the air quality impact of alternative agency actions on those potential "hot spots."

c. Air Quality Impacts.

For each nonattainment area that will be affected by the influx of Mexican trucks resulting from the promulgation of the rules, the agency must then prepare an air quality analysis of the deterioration of air quality that will result from the predicted emissions of nonattainment pollutants and nonattainment pollutant precursors from Mexico-domiciled trucks over baseline emissions. This analysis must also include a localized analysis of the air quality impacts of the proposed alternatives on potential "hot spots," in nonattainment areas, such as the ambient air in the vicinity of inspection stations for Mexico-domiciled trucks.

d. Timing of Air Quality Impacts.

Once the regulations that FMCSA is now in the process of proposing become final, the air quality impacts attributable to the Mexico-domiciled trucks that will thereby be permitted to operate within the interior U.S. will extend into the indefinite future. The Sierra Research Memo therefore recommends that the PEIS evaluate the air quality impacts on a long-term basis extending at least through 2020, the current planning horizon used for air quality planning

purposes in the U.S. The analysis must therefore include an assessment of the future impact of Mexico-domiciled trucks on the recently promulgated, but still unimplemented revised National Ambient Air Quality Standards for ozone and particulates. 40 C.F.R. §§ 50.7, 50.10.

The PEIS should also evaluate short-term air quality impacts. As many air quality projections are made on an annual basis, air quality impacts should also be made on an annual basis from the time at which the regulations are predicted to be finalized through 2020. For particular "hot spots," such as truck terminals or vehicle inspection stations, the much shorter averaging periods may be necessary in order to predict potential exceedences of short term (daily and hourly) ambient air quality standards.

3. Air Quality Impacts – Criteria Pollutants in Attainment Areas.

The air quality impact of expected increases in emissions from Mexico-domiciled trucks will not be limited to nonattainment areas. The increased emissions of sulfur dioxide and particulates from Mexico-domiciled trucks are likely to have an impact on areas that have been designated Class I for purposes of the Clean Air Act's Prevention of Significant Deterioration ("PSD") program. For example, additional emissions from the Presidio crossing could easily degrade air quality in the Class I area that includes the Big Bend National Park. The PEIS must conduct an inventory of Class I PSD areas that will potentially be impacted by increased emissions from the expected influx of Mexico-domiciled trucks. For those areas for which the PSD "baseline" has been established, the PEIS should determine the amount of the existing increment that will be consumed by emissions from Mexico-domiciled trucks. If those emissions exceed the increment, FMCSA will have to persuade the relevant state to amend its SIP to require offsetting emissions reductions from other sources.

The increases in particulate emissions in PSD areas attributable to Mexico-domiciled trucks can be calculated in the much the same manner as particulate emissions in nonattainment areas. The increases in sulfur dioxide emissions attributable to Mexico-domiciled trucks in PSD areas should be based upon a comparison of baseline emissions from U.S.-domiciled trucks and expected emissions from Mexico-domiciled trucks. The calculation of increases in sulfur dioxide emissions, however, must also include sulfur dioxide emissions attributable to differences in diesel fuels in the U.S. and Mexico.

The standards applicable to future U.S.-domiciled trucks will require that low-sulfur diesel fuel be available in the U.S. to protect the emission control technologies in those trucks. As low sulfur fuel becomes available in the U.S., emissions of sulfur dioxide from U.S.-domiciled trucks will decline as well. To the extent that Mexico-domiciled trucks continue to burn high sulfur fuel purchased in Mexico as they travel to the interior of the U.S., sulfur dioxide emissions will exceed those of U.S.-domiciled trucks burning low-sulfur purchased in the U.S. FMCSA must

therefore factor the excess emissions of sulfur dioxide in PSD areas due to fuel differences into its analysis of the impact of Mexico-domiciled trucks on those areas.

4. Air Quality Impacts – Hazardous Air Pollutants.

Heavy duty diesel engines are emitters of many listed hazardous air pollutants that can cause adverse impacts on public health quite apart from any contribution that the emissions make to the failure to attain the National Ambient Air Quality Standards. Diesel exhaust is itself a carcinogen and a likely cause of asthma. EPA has designated a number of hazardous air pollutants as “Mobile Source Air Toxics” (“MSATs”), and many of the constituents of diesel exhaust are MSATs. 66 Fed. Reg. 17,230 (2001). The air quality impact of any increased emissions of diesel exhaust in general and these MSATs in particular must be considered in the PEIS.

As with the analysis of increased emissions of the criteria pollutants, the analysis of increased emissions of MSATs must begin with a baseline assessment of emissions of U.S.-domiciled trucks that would be carrying cargo originating in Mexico from the border to points within the interior U.S. but for the predicted influx of Mexico-domiciled trucks that will result from the various alternatives for agency action that the agency will be considering. Similarly, FMCSA should prepare area-specific age and emissions profiles of U.S.-domiciled trucks for the purpose of estimating baseline emissions of MSATs. Any reductions in MSATs in future years as a result of foreseeable changes in U.S. state or federal emissions standards or fuel requirements must also be factored into the baseline analysis. Finally, the “hot spot” baseline analysis will be especially important for MSATs.

The agency should prepare a similar analysis of MSAT emissions from Mexico-domiciled trucks and compare those emissions to the baseline emissions to estimate the excess emissions of MSATs in affected areas, and especially in potential “hot spots,” attributable to Mexico-domiciled trucks.

5. Air Quality Impacts – Human Health Impacts.

FMCSA must estimate the overall impacts on human health of the additional emissions of criteria and hazardous air pollutants resulting from the influx of Mexican trucks attributable to the agency action. This will require the agency to undertake a risk assessment of those emissions increases.

The human health impact assessment should consist of a formal risk assessment of the health risks attributable to excess diesel, particulate, NO_x, sulfur dioxide and MSAT emissions from Mexico-domiciled trucks. An adequate risk assessment consists of four rather discrete

operations: hazard assessment, dose-response assessment, exposure assessment, and risk characterization. National Academy of Sciences/National Research Council, Risk Assessment in the Federal Government: Managing the Process (1983).

The hazard assessment for diesel exhaust should include studies indicating that diesel exhaust is a known carcinogen, is a probable cause of asthma, and can aggravate asthma symptoms in persons already afflicted with that disease. It should, for example, take into account studies showing that the proximity of a child's school to major roads is linked to asthma and the severity of children's asthmatic symptoms increases with proximity to truck traffic. In addition, the hazard assessment should factor in studies finding that children raised in heavily polluted areas have reduced lung capacity, prematurely aged lungs and increased risk of bronchitis and asthma, compared to children living in less urbanized areas. In preparing the hazard assessment, FMCSA should take full advantage of EPA's collected data on asthma and diesel.

The risk assessment should focus particularly carefully on the impact of the action on sensitive populations, such as urban children with asthma. Environmental justice considerations further require an analysis of any disproportionate impacts on minority populations, especially in the border areas and in the vicinity of any "hot spots" resulting from the action. The agency should ensure that any applicable environmental justice reviews are conducted.

6. Environmental Impacts of Transport of Hazardous Materials.

A substantial number of Mexico-domiciled trucks are likely to be transporting hazardous waste and materials, including explosives and other highly dangerous chemicals and gases. Such materials pose a great risk to human health and safety. Highway accidents can result in explosions or spills of hazardous materials into the waters of the U.S. Explosions and spills can also result from the use of such trucks for terrorist purposes. The PEIS should contain a full assessment of these risks. In addition, in the absence of an insurance coverage verification requirement at the time of inspection, the risk assessment in the PEIS should consider the risk that injured parties in the U.S. will not be able to obtain compensation for damage caused by explosions and spills of hazardous materials transported by Mexico-domiciled trucks.

7. Impacts on Publicly Owned Parklands, Recreational Areas, Wildlife and Waterfowl.

The DOT Order requires EISs to include a description of "any publicly owned land from a public park, recreational area or wildlife and waterfowl refuge" or "any land from an historic site affected or taken by" the action. DOT Order 5610.1C, Attachment 2, p. 6. The influx of Mexico-domiciled trucks will have a foreseeable adverse impact on a number of public parks and recreational areas, including the Big Bend National Park. FMCSA must conduct a

comprehensive survey of all public parks, recreational areas, wildlife and waterfowl refuges, and historic sites that may potentially be affected by the agency action. Once the relevant areas have been identified, the agency must prepare an assessment of the adverse environmental impact of the action on those areas.

8. Threatened and Endangered Species.

The increased emissions attributable to the predicted influx of Mexico-domiciled trucks may adversely affect the habitat of threatened or endangered species or individual members of the species. Similarly, the potential for spills resulting from accidents involving Mexico-domiciled trucks carrying hazardous cargo and materials could adversely affect threatened or endangered plant and animal species. FMCSA must consult with the Fish and Wildlife Service and, if necessary, prepare an assessment of the potential impact of the action on threatened and endangered species.

9. Highway Safety.

An environmental impact statement must detail the adverse effects of a proposed federal action on human safety.¹² The CEQ regulations provide that the “intensity” of an environmental impact depends upon “the degree to which the proposed action affects public health or safety.” 40 C.F.R. § 1508.27(b)(2). Thus, the “safety” impact of a predictable influx of Mexican trucks is just as relevant to the threshold inquiry as its impact on air quality.

Domestic carriers already cause 5,000 deaths every year, many of them in fatigue-related crashes. Yet Mexico-domiciled commercial carriers have no logbook requirement while driving in Mexico, a fact that makes logbooks maintained by cross-border carriers for the sole purpose of crossing the border into the U.S. highly suspect. FMCSA must consider the safety impacts of increased traffic on cross-border trucking routes, and it should consider increasing the stringency of the rules regarding logbooks maintained by Mexico-domiciled carriers to discourage fraud through rules requiring electronic on-board recorders and providing stringent penalties for abuse.

Prior testimony before Congress and FMCSA has comprehensively demonstrated that Mexico-domiciled trucks are generally less safe than U.S. trucks. Safety inspectors must be allowed to conduct on-site or local inspections of carrier records and bookkeeping, and they must be

¹² See *Audubon Soc’y of Cent. Ark. v. Dailey*, 977 F.2d 428, 435 (8th Cir. 1992) (weighing impact of high speed traffic on safety of park users and upon quality and use of park). See generally *Marsh v. Oregon Natural Resources*, 490 U.S. 360, 374 n.20 (1989) (noting that “[t]he degree to which the proposed action affects public health or safety” is crucial for an EIS) (quoting 40 C.F.R. § 1508.27).

permitted to verify logbooks and safety certifications prior to a carrier's authorization to cross the border. In addition, safety inspection station staffing and communication levels must be adequate to assure that all trucks without a current inspection sticker will be inspected at the time of the border crossing. If these options are not implemented, the PEIS must include an analysis of current on-site and local inspections of carrier records, bookkeeping, and staffing and communication levels, and it must predict the additional deaths and injuries that will result from the remaining differences between U.S. safety requirements and Mexican safety requirements.

A major continuing loophole is that, under current FMCSA rules, short-haul, or border-zone only trucks will continue to cross the border under a far less stringent inspection regime than long-haul carriers face. This dual treatment creates an incentive for fraud at the border, and evidence is strong that such fraud will be major temptation. An investigation in the late 1990s by the Department of Transportation Inspector General's Office showed that short-haul, or drayage, trucks had been found far north of the border in states like Maine, Florida and Minnesota. In focusing on long-haul trucks, FMCSA cannot ignore the possibility that trucks labeled as short-haul carriers may nonetheless travel outside the border zone, impacting safety and pollution levels. FMCSA must either tighten its inspection regime for these trucks or, far less favorably, include them in its analysis of adverse safety impacts.

10. Other Socio-Economic Impacts.

The PEIS must include a "description of probable impact sufficient to enable an understanding of the extent of the environmental and social impact of the project alternatives and to consider whether relocation problems can be properly handled." DOT Order 5610.1C, Attachment 2, p. 10. The agency should identify the "general social groups specifically benefited or harmed by the proposed action." DOT Order 5610.1C, Attachment 2, p. 11. This analysis must include an analysis of the particular effects on "the elderly, handicapped, non-drivers, transit dependent, or minorities." DOT Order 5610.1C, Attachment 2, p. 11. For example, the increased emissions attributable to the influx of Mexico-domiciled trucks will have foreseeable effects on persons in affected urban areas who suffer from asthma, bronchitis and similar diseases.

The PEIS must included an analysis of how the action will "facilitate or inhibit . . . access to jobs, educational facilities, religious institutions, health and welfare services, recreational facilities, social and cultural facilities, pedestrian movement facilities, and public transit facilities." DOT Order 5610.1C, Attachment 2, p. 11.

III. The General Conformity Analysis.

Under section 176 of the Clean Air Act, no department, agency or instrumentality of the Federal Government may "engage in, support in any way or provide financial assistance for, license or

permit, or approve, any activity which does not conform to” an approved SIP. 42 U.S.C. § 7506(c). Conformity is defined as conformity to the SIP’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. In particular, the federal activity must not:

- (i) Cause or contribute to any new violation of any standard in any area,
- (ii) Increase the frequency or severity of any existing violation of any standard in any area, or
- (iii) Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

42 U.S.C. § 7506(c). The purpose of the conformity requirement is to integrate federal actions into the state air quality planning process in order “to protect the integrity of the SIP by helping to ensure that SIP growth projections are not exceeded, emissions reduction progress targets are achieved, and air quality attainment and maintenance efforts are not undermined.” Environmental Protection Agency, Determining Conformity of General Federal Actions to State or Federal Implementation Plans, 58 Fed. Reg. 63214, 63215 (1993).

EPA has promulgated regulations to implement the conformity program envisioned by the statute. EPA’s General Conformity Regulations apply to “direct and indirect emissions of criteria pollutants or their precursors that are caused by a Federal action, are reasonably foreseeable, and can practicably be controlled by the Federal agency through its continuing program responsibility.” *Id.* Under those regulations, a Federal agency must “make a determination that a Federal action conforms to the applicable implementation plan in accordance with the requirements of [the regulations] before the action is taken.” 40 C.F.R. § 50.850(b).

The conformity determination requirement is applicable to “each pollutant where the total of direct and indirect emissions in a nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates” specified in section 93.853 of the regulations. 40 C.F.R. § 93.853(b). There can be little doubt that the FMCSA action will result in PM-10 and NOx emissions that exceed the specified levels in many particulate and ozone nonattainment areas throughout the country, and it is likely that the action will result in VOC and SO2 emissions that exceed those levels in some SO2 and ozone nonattainment areas. To begin with, FMCSA must undertake a careful analysis of the emissions of all of these pollutants in all of the possibly affected nonattainment areas throughout the country to identify the SIPs that are applicable to the agency’s general conformity determination.

Next, FMCSA must make a determination that the regulations it is in the process of promulgating conform to all of the SIPs applicable to all of the affected nonattainment and

maintenance areas. The agency may not determine that the action conforms to a given SIP unless it first finds (and adequately supports the finding) that:

the total of direct and indirect emissions from the action is in compliance or consistent with all relevant requirements and milestones contained in the applicable SIP, such as elements identified as part of the reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice requirements.

40 C.F.R. § 93.858(c). In addition, the agency must find (and adequately support the finding) that any of the requirements identified in section 93.858(a) are satisfied. 40 C.F.R. § 93.858(a). The analysis necessary to support the conformity determination must be undertaken consistently with the procedures set out in the EPA General Conformity Regulations. 40 C.F.R. § 93.059-.60.

In short, the Conformity Analysis required by the Clean Air Act must identify those nonattainment areas that are likely to be affected by the influx of Mexico-domiciled trucks that will result from the agency action. The SIPs for each of those areas should contain emissions budgets representing the requirements imposed by the state on sources of the relevant nonattainment pollutant that are consistent with the state's attainment demonstration. FMCSA must then estimate emissions over baseline emissions attributable to the influx of Mexico-domiciled trucks. Finally, it must persuade each affected state to amend its SIP to achieve enforceable emissions reductions from other sources sufficient to accommodate the excess emissions from Mexico-domiciled trucks and still meet the state's emissions budget.

Procedurally, FMCSA must prepare a draft conformity determination and make it and all supporting materials available for public comment. 40 C.F.R. § 93.856. We request that the FMCSA draft conformity determination and supporting materials be made available to us as soon as they are prepared.

IV. Conclusion.

FMCSA has an opportunity to write Application and Safety Monitoring regulations that protect the public health and environment while they are protecting the public safety. This will require a careful analysis of the health, safety and environmental impacts of alternative approaches to the regulations. It will also require the agency to consider a wide range of alternatives. The agency will also have to cooperate with states containing affected nonattainment areas to come up with offsetting emissions reductions from other sources.

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We are prepared to discuss the issues raised in these comments with FMCSA, and we look forward to participating in the ongoing process of evaluating the health, safety and environmental impacts of the Application and Safety Monitoring rules.

Sincerely,

Joan Claybrook
President, Public Citizen

International Brotherhood of Teamsters

California Labor Federation

Environmental Law Foundation

Sent by:
Jonathan Weissglass
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ATTACHMENT TO COMMENTS

November 5, 2003



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Memo to: Al Meyerhoff
Milberg Weiss

From: James M. Lyons 

Subject: Air Quality Issues Related to the Preparation of a Programmatic Environmental Impact Statement (PEIS) and General Conformity Evaluation for Proposed North American Free Trade Agreement Regulations Described in FMCSA's Letter of August 27, 2003 (Reference MC-CC)

At present, the operation of Mexican-domiciled trucks in the United States (U.S.) is limited to commercial zones along the border. Under the proposed Federal Motor Carrier Safety Administration (FMCSA) regulations, Mexican-domiciled trucks would be permitted to carry cargoes from Mexico to any point in the United States, as well as from any point in the U.S. into Mexico. At this time, we understand that trucks domiciled in the U.S. will not be able to carry cargoes from the U.S. into Mexico and from Mexico to the U.S.

The proposed regulations could have substantial adverse impacts on air quality in the U.S., particularly in urban areas that are not in compliance with National Ambient Air Quality Standards (NAAQS). Per your request, we have attempted to identify potential sources of adverse air quality impacts and related issues that we believe should be investigated during the preparation of the Programmatic Environmental Impact Statement (PEIS) and performance of the General Conformity Evaluation by the FMCSA. Please note that the discussion of issues presented here is not intended to be exhaustive and that it is likely that additional factors and issues that must be addressed by FMCSA will come to light during the process of preparing the PEIS and General Conformity Evaluation

At the outset of this process, FMCSA must identify all regulatory alternatives that are going to be evaluated and fully characterize those alternatives. Without this step, it will be impossible to determine exactly what data and analyses need to be developed and performed to assess the air quality impacts of the proposed regulations.

The first issue is the appropriate period of time over which the air quality impacts of the program should be analyzed. As it is expected that, once the regulations are implemented, Mexican-domiciled trucks will operate on a regular basis in the U.S. for the foreseeable future, the impact of the regulations needs to be addressed on a long-term basis. We recommend that the period over which the impacts of the regulations are considered extend through at least 2020, which is, in general, the current planning horizon used for air quality purposes in the U.S. We would also recommend that air

quality impacts be assessed on an annual basis from the time at which the regulations would be implemented through 2020.

The next issue is the appropriate area for study. As Mexican-domiciled trucks would be allowed to operate between any point in the U.S. and Mexico, we recommend that the study area include, at least until data are developed that show that it is unnecessary, all major transportation corridors and urban areas in the U.S. As shown in Figure 5 of our critical review¹ of the Final Programmatic Environmental Assessment for the proposed regulations, U.S.-Mexico truck traffic is expected to be widespread in the U.S. as will be the potential adverse environmental impacts. While the overall study area will be large, it is important that the impact of the proposed regulations be evaluated in detail on the same scale as other air quality issues. For example, emission impacts on ozone concentrations should be considered on the same scale used for assessing ozone NAAQS attainment or maintenance plans. In the case of truck terminals or vehicle inspection stations associated with the proposed regulations, their impacts must be assessed on the same scale as the analysis of similar projects that is performed for purposes of air quality permitting. More specifically, we believe that the air quality impacts of the proposed regulations should be assessed in each and every area of the country that is in nonattainment with any NAAQS. While attainment designations have not yet been finalized for the eight-hour ozone and PM_{2.5} NAAQS, the impacts in those areas likely to be in nonattainment of those standards must also be considered. In addition, impacts with emissions "hot spots," such as inspection stations for Mexican-domiciled trucks, must be evaluated on a highly localized basis. This is of particular concern as Diesel PM and other compounds have been identified by the U.S. EPA as Mobile Source Air Toxic (MSATs).

Once the study period and areas are defined, the goal of the study must be to determine the air quality impacts associated with the operation of Mexican-domiciled trucks in the U.S. and the impact that their operation has on operations of U.S.-domiciled trucks. The primary issues pertain to the following:

1. Number of Mexican-domiciled trucks operating in the U.S., as well as in specific geographical areas,
2. Distances over which those trucks travel and periods during which they are allowed to idle,
3. Amount of emissions that occur during these travel and idle periods, and
4. Impact of those emissions on pollutant concentration levels and levels of public exposure.

The Mexican-domiciled truck fleet that will be operating in each of the different areas of the U.S. identified as requiring study must be accurately characterized in terms of the number of vehicles, the age distribution of those vehicles (and the age distribution of the engines used in them, if it differs), and the weight classifications of those vehicles. Use of default data from the U.S. will not be sufficient for this purpose, and data regarding the Mexican truck fleet likely to operate in the U.S. under the proposed regulations must be

¹ "Critical Review of 'Safety Oversight for Mexico-Domiciled Commercial Motor Carriers, 'Final Programmatic Environmental Assessment,' Prepared by John A Volpe Transportation Systems Center, January, 2000", Sierra Research Report No. SR02-04-01, April 2002.

developed. It is highly likely that there will be substantial differences not only in the number of Mexican-domiciled trucks operating in different areas identified for study, but also in the age and weight distributions of those vehicles. These differences must be taken into account. All data developed must be consistent with the data that are generally used in estimating vehicular emissions.² A similar analysis must also be performed for the U.S.-domiciled trucks that would otherwise handle U.S.-Mexico cargoes in the U.S.

The operations of Mexican-domiciled trucks in the U.S. must be characterized in detail. To the extent that their operations are expected to differ from those of U.S.-domiciled trucks that would otherwise be operating, those differences must be identified and quantified. There are many potential sources of differences. On a local scale, inspections of Mexican-domiciled trucks will likely increase idling times, leading to greater emissions. On a larger scale, if it is less expensive to use Mexican-domiciled trucks compared to U.S.-domiciled trucks, the possibility of an overall increase in the amount of truck traffic due to a higher demand for a low-priced service must be considered. Another potential example might be changes in container shipping patterns, where cargoes destined for the U.S. arrive in Mexico and are brought into the U.S. by Mexican-domiciled trucks. In addition, changes in the level of operation of Mexican-domiciled trucks over time due to growth in trade must also be quantified. Therefore, accurate forecasts of the increase in the volume of U.S.-Mexico truck operations must also be developed and taken into account. Development of data regarding operation of Mexican-domiciled trucks must be analyzed in light of existing laws and regulations, economics, and other factors.

Based on the current situation, the operation of Mexican-domiciled trucks in the U.S. must be analyzed assuming both that U.S.-domiciled trucks will not be allowed to operate in Mexico and that they will be allowed to operate in Mexico. The latter analysis must consider the impacts on the characteristics and operation of U.S.-domiciled trucks resulting from the unavailability of ultra-low sulfur Diesel fuel (fuel with a sulfur content of less than 15 parts per million) in Mexico. This is important because the newest and cleanest U.S. domiciled trucks will not be able to operate in Mexico (without damaging their emission control systems) if ultra-low sulfur fuel is not available. Therefore, U.S. trucks used in transporting goods to Mexico would likely be older, higher emitting vehicles.

With respect to emissions, emission factors must be developed that accurately characterize the average emission levels (in units of grams per brake-horsepower hour) of Mexican-domiciled trucks that will operate in the U.S. These factors will differ as a function of engine age and must reflect not only the emissions standards to which the engines were certified (if any), but also the level of maintenance the engines have received during their service life. In addition, the emission factors must reflect known issues such as elevated NO_x levels during certain operating modes on 1993 to 1999 model-year engines due to use of certain engine calibrations. While the most important pollutants to be considered will be oxides of nitrogen (NO_x) and particulate matter, emissions of hydrocarbons, carbon monoxide and oxides of sulfur must also be considered. In addition, emissions of all MSATs as defined by the U.S. EPA³ must be

² See, for example, <http://www.epa.gov/otaq/models/mobile6/m6flt007.pdf>

³ Federal Register, Vol. 66, No. 61, 17230-17273, March 29, 2001.

considered, not simply Diesel PM emissions. Emission factors must be developed that reflect operation of Mexican-domiciled trucks on Diesel fuels representative of the fuel they are using when they enter the U.S. (i.e., Diesel sold in Mexico), as well as on U.S. Diesel fuels. While some data regarding U.S.-domiciled trucks may apply to Mexican-domiciled trucks, the relevance of those data to Mexican-domiciled trucks must be clearly established. In addition, emission requirements applicable to U.S.-domiciled trucks by virtue of state and local regulations must be accounted for as appropriate.

In order to develop emission estimates using emission factors with units of grams per brake-horsepower hour, conversion factors for generating emission estimates in units of grams per mile are required. The units of these conversion factors are brake-horsepower per mile and they are developed from brake-specific fuel consumption data for the engine (gallons per brake-horsepower hour), fuel density, and vehicle fuel consumption data (gallons per mile). These conversion factors differ as a function of vehicle weight class as well as engine and vehicle age. Again, factors specific for the Mexican-domiciled trucks that will operate in the U.S. under the proposed regulations must be developed, and the relevance of applying data from U.S.-domiciled trucks to Mexican-domiciled trucks must be clearly established.

Only after estimates of the emission impacts have been developed for all of the study areas and alternatives can the impacts of those emissions on air quality be evaluated. For criteria pollutants where NAAQS have been established, this evaluation must be performed in the context of existing requirements related to air quality attainment and maintenance plans. For MSAT compounds, appropriate air quality modeling and risk assessments must be performed.

We believe it is vital for FMCSA to publish a detailed plan describing the information and data that will be developed for use in the PEIS and General Conformity analysis, the information sources that will be used, and the methodologies and assumptions that will be used. We also believe that FMCSA should provide the public with an opportunity to review and comment on the work being performed for the PEIS and General Conformity analysis on an on-going basis so that issues can be identified and dealt with at the earliest possible point in time, rather than at the end of the process after considerable resources and time have been expended.