

Cleaning Up Diesel Trucks: A Model Rule for States

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About STAPPA and ALAPCO

The State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) are the two national associations of air pollution control officials in the states, territories and major metropolitan areas throughout the country. The members of STAPPA and ALAPCO have primary responsibility for implementing our nation's air pollution control laws and regulations. The associations serve to encourage the exchange of information and experience among air pollution control officials; enhance communication and cooperation among federal, state and local regulatory agencies; and facilitate air pollution control activities that will result in clean, healthful air across the country. STAPPA and ALAPCO share joint headquarters in Washington, DC.

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Acknowledgements

On behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), we are pleased to provide *Cleaning Up Diesel Trucks: A Model Rule for States*. Our associations developed this Model Rule amidst growing concern over continued public statements by representatives of the trucking industry and others suggesting that the U.S. Environmental Protection Agency's 2007 highway diesel rule be delayed or weakened. States and localities across the nation are relying on this landmark rule to comply with their statutory obligations to achieve and sustain health-based National Ambient Air Quality Standards for ozone and fine particulate matter. This Model Rule will facilitate states' use of their authority under the Clean Air Act to pursue adoption of California's 2007 highway diesel standards, which are identical to the federal standards.

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Once again, we believe that *Cleaning Up Diesel Trucks: A Model Rule for States* will serve as a useful and important tool and thank all those who contributed to its development.

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Executive Summary

On January 18, 2001, the U.S. Environmental Protection Agency (“EPA”) promulgated a sweeping set of new regulations (“the Federal 2007 Rule”) that will dramatically reduce pollution from on-highway, heavy-duty trucks commencing in 2007. These vehicles currently are significant sources of ozone and fine particulate matter (“PM”). In addition to its contribution to PM inventories, diesel exhaust PM is of special concern as it has been determined by EPA to be a likely carcinogen. Accordingly, the reduction in PM and ozone precursors required by the Federal 2007 Rule is a critical component in the effort to provide clean air for all Americans.

In the past year a number of companies in the trucking industry have sought to delay the effective date of the Federal 2007 Rule, citing concerns that the technology needed to meet the new limits might not be fully available in time and seeking a federal subsidy for the added cost of the new technology. Some Members of Congress responded to those concerns by requesting a study by the U.S. General Accounting Office (“GAO”) (now known as the Government Accountability Office). GAO reported in a March 2004 report that many fuel refiners who must produce low-sulfur diesel fuel, pollution control equipment manufacturers and diesel engine manufacturers confirmed that they were on track to meet the deadlines in the Federal 2007 Rule. Nonetheless, in the report, GAO recommended the creation of an independent review panel to judge whether the concerns about the new technology were justified and to consider financial incentives to the industry. While EPA has not yet indicated an intention to withdraw or delay the Federal 2007 Rule, it is clear that it is being pressured to do so.

Under the federal Clean Air Act (“CAA”), prevention and elimination of air pollution is the primary responsibility of state and local governments. The State and Territorial Air Pollution Program Administrators (“STAPPA”) and the Association of Local Air Pollution Control Officials (“ALAPCO”) have objected to the trucking industry’s attempt to weaken or delay the Federal 2007 Rule¹ and pledged to facilitate state air agencies’ efforts to ensure that the rule is implemented in a timely fashion. This Model Rule is part of that effort.

¹ See, attached letter of January 30, 2004, from James A. Joy, III and Cory Chadwick, on behalf of STAPPA and ALAPCO, to Bill Graves, President of the American Trucking Association.

In October 2001, the State of California adopted emission standards (“the California 2007 Rule”) that are nearly identical to those in the Federal 2007 Rule. California is now seeking a waiver of the federal preemption on state regulation of motor vehicle emissions that is available to it under section 209(b) of the CAA (the state submitted a waiver request to EPA on July 16, 2004). The rulemaking action by California creates an opportunity for interested states to ensure that the benefits of the Federal 2007 Rule are not delayed. Under section 177 of the CAA, other states need not rely on the Federal 2007 Rule and any actions EPA may take with respect to that rule, but may elect to adopt and enforce the California 2007 Rule instead.

This Model Rule is intended to facilitate the adoption of the California 2007 Rule by interested states. It was developed by STAPPA and ALAPCO in close consultation with officials from California and other states with experience in the use of section 177 of the CAA. Much of the text of the Model Rule and the discussion thereof has been taken from regulatory documents relating to the Federal and California 2007 Rules.

The Model Rule sets out a basic set of provisions for the purpose of adopting the California 2007 Rule by establishing a requirement that heavy-duty diesel trucks sold, leased, or registered for use in the adopting state must have a Certificate of Conformity issued by the California Air Resources Board (“CARB”). In addition, the Model Rule provides optional enforcement and recordkeeping provisions that states may also elect to include in their rulemaking as well as specific provisions that mirror the relevant CARB requirements for states that desire to include those provisions in their rules. Finally, the Model Rule provides, as attachments, the key regulatory documents from the California and federal rulemaking dockets to serve as the basis of an administrative record in the adopting states.

It is important to note that each state will need to adapt the Model Rule to the particular circumstances presented by its respective laws and procedures. A state’s rule must incorporate California’s regulations so as not to create a “third vehicle” in violation of the CAA. Accordingly, it will be critical for each state to work with its legal counsel and others in state government to issue sound, defensible, and workable rules. STAPPA and ALAPCO, therefore, stress the need for all states to conduct their own thorough review and analysis of California’s rule and this Model Rule.

Preamble

Introduction

When it established the CAA in 1970, Congress determined that air pollution prevention and control “is the primary responsibility of States and local governments.” Section 101 of the CAA, 42 U.S.C. 7401. Congress attempted to balance this overall principle with the need of the automobile industry to avoid dozens of potentially conflicting requirements for motor vehicles by providing a general prohibition against state regulation of vehicle emissions, except in California. See, Section 209 of the CAA, 42 U.S.C. 7543. However, Congress also provided that any state that has had a nonattainment plan approved under Part D of the Clean Air Act at some time may adopt and enforce California’s vehicle emission standards. See, Section 177 of the CAA, 42 U.S.C. 7507.

Most Americans currently live in areas that have unhealthy air. According to EPA, 159 million people in this country live in areas that exceed the health-based National Ambient Air Quality Standard (“NAAQS”) for ground-level ozone. Furthermore, while EPA has not yet officially designated the areas that exceed the NAAQS for fine PM, the agency estimates, based on preliminary analyses, that 105 million people live in areas that violate this standard. The adverse health effects of these pollutants include premature mortality, aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions and emergency room visits, school absences, work loss days, and restricted activity days), increased respiratory symptoms, changes to lung tissues and structures, altered respiratory defense mechanisms, chronic bronchitis, and decreased lung function.

Ozone also causes crop and forestry losses, and PM causes damage to materials and soiling of commonly used building materials and culturally important items such as statues and other works of art. Nitrogen oxides (“NO_x”), sulfur dioxide (“SO₂”), and PM each contribute to substantial visibility impairment in many parts of the U.S. NO_x emissions also contribute to the acidification, nitrification, and eutrophication of water bodies, while SO₂ emissions contribute to acid rain that denudes forests and renders streams and lakes in the Eastern U.S. unable to support aquatic life.

Federal, state, and local governments are working to bring ozone and particulate levels into compliance with the NAAQS through attainment and maintenance State Implementation Plans (“SIPs”) and to ensure that in the future air quality reaches and continues to achieve these health-based standards. However, in many instances regulation of stationary sources cannot, by itself, achieve the necessary improvements in air quality.

Emissions from heavy-duty vehicles contribute to the health and welfare effects of ozone, PM, NO_x, SO₂, and volatile organic compounds (“VOCs”). Both NO_x and VOCs contribute to the formation of ground-level ozone, while PM, NO_x, SO₂, and VOCs contribute to PM levels. In particular, emissions from heavy-duty diesel engines account for substantial portions of the country's ambient PM and NO_x concentrations. EPA has estimated that by 2007, heavy-duty vehicles will account for 28 percent of mobile source NO_x emissions and 20 percent of mobile source PM emissions. These proportions are even higher in some urban areas, such as in Sacramento, Atlanta, and Washington, DC, where heavy-duty vehicles contribute over 34 percent of the mobile source NO_x emissions, and in Santa Fe, Los Angeles, and Hartford, where heavy-duty vehicle PM emissions account for 38, 25, and 30 percent of the mobile source PM emissions inventory, respectively. Given the growth in vehicle population and in vehicle miles traveled that is anticipated in the future, these impacts will increase absent further controls.

In addition to its contribution to PM inventories, diesel exhaust PM is of special concern because it has been implicated in an increased risk of lung cancer and respiratory disease. EPA's draft Health Assessment Document for Diesel Exhaust was reviewed in public session by the Clean Air Scientific Advisory Committee (“CASAC”) on October 12-13, 2000.² EPA concluded, and CASAC agreed, that diesel exhaust is likely to be carcinogenic to humans.

State and local governments, in their efforts to protect the health of their residents and to comply with requirements of the CAA, have recognized the need to achieve major reductions in diesel PM emissions, and have been seeking federal action in setting stringent new standards to bring this about.

Over time, EPA regulations have taken NO_x emissions from heavy-duty diesel engines from uncontrolled levels of approximately 13 g/bhp-hr³ to 6 g/bhp-hr (model year (“MY”) 1990⁴), then to 5 g/bhp-hr (MY 1991), 4 g/bhp-hr (MY 1998), and finally to 2.5 g/bhp-hr (MY 2004).⁵ Allowable PM levels have similarly been reduced in an incremental manner

² CASAC's Review of EPA's Health Assessment Document for Diesel Exhaust (EPA 600/8-90/057E), December 2000 (EPA-SAB-CASAC-01-003).

³ Emission standards are set in grams per brake horsepower hour (g/bhp-hr). By way of example, an engine operating at 250 horsepower of load for one hour would emit 1000 g of NO_x under a 4-g/bhp-hr standard, but only 50 grams of NO_x under a 0.2 g/bhp-hr standard.

⁴ Manufacturers have some latitude to start a model year earlier than January of a given year. MY 2007 may start as early as January 2, 2006.

⁵ Seven of the largest heavy-duty diesel engine manufacturers implemented measures to reduce emissions beginning October 1, 2002, to meet the requirements of the Heavy-Duty Diesel Engine Settlement Agreements reached with EPA and CARB in response to lawsuits brought by EPA and violations alleged by CARB pertaining to excess in-use emissions caused by the use of illegal defeat devices. Navistar signed its Settlement

from 0.60 g/bhp-hr (MY 1990) to 0.25 g/bhp-hr (MY 1991) and finally to 0.10g/bhp-hr (MY 1994). The Federal 2007 Rule further reduces NO_x and PM emissions by putting in place even lower limits beginning with MY 2007: 0.2 g/bhp-hr of NO_x (phased in) and 0.01 g/bhp-hr of PM. Identical emission standards are included in the California 2007 Rule.

Reasons for Adopting the California 2007 Rule

STAPPA and ALAPCO have been ardent supporters of the Federal 2007 Rule and states and localities across the nation are relying on the emission reductions to occur from timely implementation of this rule to achieve and sustain clean air and public health goals. However, continued public statements by representatives of the trucking industry and others suggesting that EPA delay or weaken the Federal 2007 Rule have raised serious concerns about the certainty of the rule's future. Fortunately, states have available to them section 177 of the CAA, which allows them to adopt the California 2007 Rule. Perhaps the most compelling reason for a state to consider invoking this authority is to ensure that the provisions of the rule will be implemented even if the federal rule is delayed or weakened. The basic Model Rule provisions provided here offer a simple and straightforward approach for adopting the key elements of California's rule without obligating the state to play an active role in administering the rule once it is adopted. Another reason a state may wish to adopt the Model Rule is to gain the ability to enforce the 2007 rule in its jurisdiction; to assist such states, the Model Rule offers optional additional provisions.

Each state will, of course, decide whether it wishes to adopt the California 2007 Rule and, if so, for what reasons. Each state will also determine the procedural steps necessary to adopt the California 2007 Rule. This Model Rule incorporates a discussion of some of the issues relevant to such a decision. It also contains as attachments underlying documents relating to the federal and California rulemaking actions, including emission modeling that provides state-specific emission benefits of the 2007 rule. These documents should provide an initial basis for a rulemaking proposal by the state that would be supplemented by interested parties during the comment period on the proposed rule. As states proceed through this process, the following background may help inform their decisions.

Heavy-duty, on-road vehicle emissions contribute 15 percent of all NO_x emissions nationally. Without further regulatory action, as the economy grows and vehicle miles traveled increase, heavy-duty diesel truck contributions to air pollution will continue to grow. The 2007 rules, if fully implemented, will reduce heavy-duty on-road vehicle emissions to slightly more than one percent of all NO_x emissions – a huge benefit. As identified earlier, the impact of these rules is even more significant in many metropolitan areas with serious air pollution problems. Thus, the 2007 rules represent a significant opportunity that will greatly assist state and local authorities in fulfilling their obligations to provide clean air for the public. Yet, recent history suggests that full and timely implementation of these rules cannot be taken for granted.

Agreement on October 22, 1998. Cummins, Detroit Diesel Corporation, Caterpillar, Volvo, Mack, and Renault signed their Settlement Agreements on December 15, 1998.

The 1998 Consent Decrees referenced earlier were negotiated agreements that allowed diesel engine manufacturers, who had been caught selling engines with illegal defeat devices for up to a decade, to continue to sell engines with higher emissions than allowed by the CAA for an additional four years in exchange for a guarantee that only cleaner engines would be sold beginning in October 2002. As that deadline approached, however, some engine makers asserted that they were not yet ready and the Consent Decrees came under intense legal and political challenges from engine makers, truck makers, and fleet operators. Fleet operators in particular said they feared significant adverse economic impacts from new engine technologies. A split between some companies that were prepared to meet the deadline and those that were not ready, as well as significant opposition to delay by state and local air agencies and environmental and public health organizations outraged at the attempt to authorize further illegal emissions, enabled EPA and CARB to resist political pressure to modify the deadline. The Court ultimately rejected the legal challenges to the October 1, 2002, deadline mounted by the engine makers, truck makers, and fleet operators and the Consent Decrees were implemented as signed in 1998.

Recently, some of the same groups that sought to relax the 1998 Consent Decrees have begun to raise similar arguments respecting the technologies that will be employed to meet the 2007 rules. Some Members of Congress responded to those assertions by requesting a study by GAO. That study concluded:

“As for the 2007 standards, EPA has taken a number of steps to aid the transition to the new diesel engines and fuel, but some stakeholders would like more help. Most engine, emissions control, and fuel industry representatives said the needed technologies will be ready on time; but other engine, trucking, and fuel representatives have concerns and would like more help to ensure that the technology will be available. For example, manufacturers plan to have limited numbers of prototype engines ready for a few fleets to test by mid- to late-2005—trucking companies say they need new engines 18 to 24 months before the 2007 deadline to test the engines in all weather conditions and to develop their long term purchasing plans. Some companies, however, are concerned that providing test engines to only a few fleets may not provide the industry as a whole with sufficient information to judge the engines’ performance. In addition, they are still concerned that the new engines may be too costly and much less fuel efficient. As a result, they expect companies will again buy more trucks with old engines before the deadline, disrupting industry operations and emissions benefits. The fuel industry representatives said they can produce the low-sulfur fuel the new engines require on time and see no reason to delay the standards. Nevertheless, they worry the fuel initially may not be available nationwide and it may be difficult not to contaminate it with other fuels in the distribution system. Environmental and health groups do not want to delay the standards or the expected emissions benefits. Some stakeholders would like more information on technological progress. In addition, they would like more reassurance—such as from an independent review panel—that the technology will be ready on time and additional assistance—such as economic incentives—to encourage timely purchases of trucks with the new technologies....

GAO recommends that EPA consider ways to address concerns about technology costs, reliability, and availability to meet the 2007 standards—such as better communicating with all stakeholders and using an independent panel to assess progress and consider industry incentives. EPA is concerned about some of GAO’s findings and fears a panel could delay progress. GAO maintains its findings are well supported and that a panel could ultimately help improve communications, avoid delays, and ensure the benefits are achieved.”

GAO Report #04-313: “EPA Could Take Additional Steps to Help Maximize the Benefits from the 2007 Diesel Emissions Standards,” p. 1 (March 2004)

While EPA has not yet indicated an intention to delay or withdraw the Federal 2007 Rule, it is clear the agency is already being pressured to do so. Given the lead time restrictions of the CAA, states that do not adopt the California rules in the near term will find that this option is not available to them if a serious challenge to the rule is mounted in late 2005 or 2006. States that need the emission reductions associated with the 2007 rules can help ensure that they are implemented on time by adopting the California 2007 Rule. The risk of a frivolous challenge to the rule is likely to be substantially reduced if a block of states adopts the 2007 rules and demonstrates to those who might consider such a challenge that their task will not be an easy one.

Importantly, if facts and circumstances develop where there is a serious question as to whether the 2007 rules (either Federal or California) should be implemented on time, those states that have adopted the California 2007 Rule will be more likely to be included in the decision-making process. Depending on the form of adoption chosen, a subsequent act by EPA or CARB to amend their 2007 rules would not automatically revise the law in the adopting state. In such circumstances it is very likely that the adopting state would have to be consulted.

Further, requiring California certification, as recommended in the Model Rule, is a simple way of ensuring that vehicles in the adopting state are as clean as can be required given the phase-in, averaging, banking and trading, and early compliance options of the federal rule.

Optional provisions of the Model Rule also provide the opportunity for the state to protect its air quality by in-use enforcement of the rule. It also provides for enforcement authorities that are not otherwise available to EPA. If the emission controls on a 2007 vehicle are disabled, or if a noncomplying vehicle is imported (either from outside the state or from foreign countries that do not match U.S. emission standards), the resulting NO_x increase can be as much as one ton per year per vehicle. Thus, if a fleet operator disabled the pollution control devices on his heavy-duty diesel engines it could have the same environmental impact as a person constructing a new major stationary source without modern pollution controls.

EPA has identified a problem with illegal imports of uncertified heavy-duty vehicles over the past few years and is working with the Bureau of Customs to address the problem, but both EPA and the Bureau of Customs have limited resources in this area. As the price differential between certified and uncertified vehicles increases, so will the incentive to import uncertified vehicles. In addition, vehicle operators unfamiliar with the new technologies may remove the catalytic converters or other pollution controls, as some pickup truck operators do today. Misfueling 2007 vehicles can also result in an inoperable catalytic converter that may clog and cause vehicle performance problems, encouraging some to remove the catalytic converter rather than bear the expense of replacing it. Further, some technologies under consideration, such as selective catalytic reduction, will not work without active measures (such as adding ammonia) by the operator.

Finally, under the federal rules, EPA can require a manufacturer to offer to correct a defective emission control system, but cannot force the owner of the vehicle to correct the

problem. Owner response rates in the federal program vary widely, depending on the nature of the problem, and can easily be anticipated to be less than 50 percent in some cases. The clean diesel rebuild program under the 1998 Consent Decrees was far less effective than EPA had hoped, providing additional evidence that voluntary recall programs may not be sufficiently effective. In contrast, under California's rules, if a vehicle is the subject of a recall (voluntary, influenced, or mandatory) it cannot be registered unless it has been corrected. This program ensures that nearly 100 percent of recalled vehicles are actually corrected.

EPA has limited resources assigned to mobile source enforcement and several years ago formally disinvested in tampering enforcement. In today's budget climate it is difficult to imagine that EPA will find significant additional resources to devote to these issues.

In each of the circumstances described above, adopting the California 2007 Rule as set out in the Model Rule does not require states to set aside specific enforcement resources. Rather, adoption would provide states (and local authorities under a delegation) with a set of enforcement tools that are available for use if any of these potential problems arise. On the other hand, failing to adopt the California rule may leave states with an emission problem that they cannot correct.

The Federal 2007 Rule

The Federal 2007 Rule marks the first time that heavy-duty trucks will be required to employ aftertreatment devices similar to catalytic converters employed on passenger cars for the past 25 years. This standard will be phased – 50 percent of the new engines sold in MYs 2007 through 2009 are to meet the new NO_x emission standard of 0.2 g/bhp-hr, with full compliance required commencing in MY 2010. When fully implemented, this new rule will require an overall NO_x emission reduction of 98.5 percent from uncontrolled highway cruise levels, and an emission level that is 90 percent below the current standard. The Federal 2007 Rule also establishes a new lower limit on emissions of non-methane hydrocarbons (“NMHC”) of 0.14 g/bhp-hr, phased in the same manner as the NO_x limits. The new rule would further reduce allowable PM emissions to 0.01 g/bhp-hr, to take full effect for diesels in MY 2007. Under the Federal 2007 Rule heavy-duty gasoline engines will be subject to the same standards as heavy-duty diesel-fueled engines based on a phase-in requiring 50 percent compliance in MY 2008 and full compliance in MY 2009.

The technologies needed to meet these more stringent standards for diesel engines are very sensitive to sulfur in the fuel. For this reason the Federal 2007 Rule also requires that low-sulfur diesel fuel be generally available by late 2006. Sulfur in diesel fuel for on-road use is currently limited to 500 parts per million (“ppm”) by weight; the new rule will reduce this limit to 15 ppm sulfur, a 97-percent reduction. All MY 2007 and later diesel-fueled vehicles must be refueled with this new low-sulfur diesel fuel. This rule will also enable cleaner diesel passenger vehicles and light-duty trucks. The availability of low-sulfur diesel fuel enables the use of similar aftertreatment devices in those vehicles in order to meet EPA's Tier 2 emission standards for light-duty highway vehicles (65 FR 6698, February 10, 2000). Low-sulfur diesel will also reduce emissions and maintenance costs in the existing fleet of highway diesel vehicles. These benefits will include reduced sulfate, PM,

and sulfur oxides emissions; reduced engine wear; less frequent oil changes; and longer-lasting exhaust gas recirculation components. Heavy-duty gasoline vehicles will also be expected to have much lower emissions due to the transfer of recent technology developments for light-duty applications, and the recent action taken to reduce sulfur in gasoline as part of EPA's Tier 2 rule.

The Federal 2007 Rule adopts new evaporative emission standards for heavy-duty gasoline engines and vehicles, effective on the same schedule as the gasoline engine and vehicle exhaust emission standards. The new standards for 8,500 to 14,000 pound vehicles are 1.4 and 1.75 grams per test for the three-day diurnal and supplemental two-day diurnal tests, respectively. A standard of 1.9 and 2.3 grams per test, respectively, will apply for vehicles over 14,000 pounds. These standards represent more than a 50-percent reduction in the numerical standards as they exist today.

The Federal 2007 Rule includes a combination of flexibilities available to refiners to ensure a smooth transition to low-sulfur highway diesel fuel. Refiners can take advantage of a temporary compliance option, including an averaging, banking and trading component, beginning in June 2006 and lasting through 2009, with credit given for early compliance before June 2006. Under this temporary compliance option, up to 20 percent of highway diesel fuel may continue to be produced at the existing 500-ppm sulfur maximum standard. Highway diesel fuel marketed as complying with the 500-ppm sulfur standard must be segregated from 15-ppm fuel in the distribution system, and may only be used in pre-2007 MY heavy-duty vehicles. The rule also provides hardship provisions for small refiners who cannot immediately afford to invest in the needed technologies and additional relief for refiners subject to the Geographic Phase-in Area provisions of the Tier 2 gasoline sulfur program, which will allow them the option of staggering their gasoline and diesel investments. Finally, the rule includes a general hardship provision for which any refiner may apply on a case-by-case basis under certain conditions. These hardship provisions, coupled with the temporary compliance option, will provide a "safety valve" allowing up to 25 percent of highway diesel fuel produced to remain at 500 ppm for the transitional years to minimize any potential for highway diesel fuel supply problems.

The California 2007 Rule

On October 25, 2001, CARB approved amendments to the California Code of Regulations (CCR), Title 13, Chapter 1, Article 1.5 and the incorporated "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" to provide for nearly identical emission standards, test procedures, and other requirements contained in the Federal 2007 Rule. Although the California 2007 Rule includes diesel certification test fuel specifications, it does not contain a requirement for the production and sale of low-sulfur diesel fuel in California and does not provide new emission standards for heavy-duty spark-ignited engines. These topics are addressed as part of separate rulemaking actions.⁶ In addition to the emission standards and test procedures, other requirements were incorporated from the Federal 2007 Rule to

⁶ Regulatory documents relevant to California's low-sulfur diesel fuel requirements are attached to this Model Rule.

harmonize federal and California requirements for 2007 and subsequent heavy-duty diesel engines.

Emission Standards

The California 2007 Rule includes the stringent emission standards for 2007 and subsequent model year heavy-duty diesel-cycle engines and medium-duty diesel-cycle engines found in the Federal 2007 Rule. Heavy-duty diesel-cycle engines include diesel-cycle engines fueled with diesel, natural gas, and liquefied petroleum gas. The emission limitations of the California 2007 Rule are 0.20 g/bhp-hr of NO_x, 0.14 g/bhp-hr of NMHC, 0.01 g/bhp-hr of PM, and 15.5 g/bhp-hr of carbon monoxide (“CO”). The adopted optional NO_x and NMHC super ultra low-emission vehicle (“SULEV”) emission standards are set at 83 percent of the newly adopted heavy-duty diesel engine emission standards, while the adopted optional PM and CO SULEV emission standards for medium-duty diesel engines are one-half of the newly adopted heavy-duty diesel engine emission standards (*i.e.*, 0.17 g/bhp-hr of NO_x, 0.12 g/bhp-hr of NMHC, 0.005 g/bhp-hr of PM, and 7.7 g/bhp-hr of CO).⁷ Additionally, for medium-duty diesel engines, the formaldehyde emission standard will remain at 0.050 g/bhp-hr.

As with the Federal 2007 Rule, the NO_x and NMHC emission standards will be phased in. The phase-in period for these emission standards will be four years, as follows: 50 percent for MYs 2007 through 2009 and 100 percent for the 2010 and subsequent model years. There is no phase-in of the PM and CO emission standards. Those standards will be fully implemented beginning with the 2007 model year.

Because of past technological limitations, turbocharged diesel engines are currently exempt from federal and California emission limits on crankcase emissions. However, advances in crankcase filtration have now reached the stage where this exemption is no longer necessary. Accordingly, the California 2007 Rule eliminates this exemption, as does the Federal 2007 Rule.

Similarly, the California 2007 Rule provides incentives for early introduction of lower-emitting engines. Engines that satisfy the adopted requirements and are introduced into the marketplace before 2007 will receive credits equal to 1.5 times the number of diesel-cycle engines that are introduced prior to 2007. Thus, for example, two early introduction engines will reduce the number of required phased-in engines (2007-2009) by three. Each early engine must meet all requirements applicable to the 2007 MY engines to receive full credit. If the engine complies only with the PM requirements, then the offsets may be used only for 2007 PM credits.

Engines that can meet one-half of the adopted NO_x emission standard (0.10 g/bhp-hr) earlier than the phase-in period, in addition to all other requirements applicable to the 2007 model year engines, will be classified as “Blue Sky Series” engines. These engines

⁷ Optional standards are provided for smaller engines to provide incentives for engine manufacturers to introduce lower-emitting engines.

will receive a credit of 2.0 times the number of MY 2007 compliant engines. Thus, two “Blue Sky Series” engines will reduce the number of required phased-in engines by four.

Test Procedures

The Federal 2007 Rule adopted supplemental certification test procedures that apply to 2007 and subsequent model year heavy-duty diesel-cycle engines certified to the 0.20-g/bhp-hr NO_x plus NMHC standard. These test procedures are slightly different from those in the 1998 federal Consent Decrees and California Settlement Agreements, and the 2005 supplemental test procedures adopted by CARB and 13 other states.

The Federal 2007 Rule included several changes to EPA’s 2004 final rule test procedures that will apply to all 2007 and subsequent model year heavy-duty diesel-cycle engines. The amendments adopted in the California rulemaking include identical revisions to the California 2004 final rule test procedures.⁸

Due to the tighter emission standards adopted, the maximum allowable emission limit (“MAEL”) test and the three “mystery points” will be removed from the test procedures for engines with a NO_x family emission limit (“FEL”) less than 1.5 g/bhp-hr. Further, the NO_x Not-to-Exceed (“NTE”) cap will be increased from 1.25 to 1.5 times the FTP-based standard for engines with a NO_x FEL less than 1.5 g/bhp-hr. The PM NTE cap will be increased from 1.25 to 1.5 times the FTP-based standard. There is no change to the CO and NMHC NTE caps. Note that MAEL test requirements and an NTE cap of 1.25 times the FTP-based standard still apply to engines with a NO_x FEL of 1.5 g/bhp-hr or above. The increased NTE cap multiplier is intended to allow increased flexibility when using the test to compare the emissions to the newly adopted emission standards.

In addition to the higher NO_x NTE emissions cap, NO_x and NMHC aftertreatment devices are allowed warm-up time. When the exhaust temperature at the outlet of the aftertreatment device is less than 250° C, the NTE NO_x and NMHC caps do not apply. Another change is the elimination of the PM carve-out areas of the NTE control zone.⁹ Due to the expected effectiveness of advanced diesel PM filters, relief from the NTE test through the PM carve-out areas was deemed unnecessary. However, relief from the NTE test is provided, if necessary, by allowing manufacturers to exclude certain regions of the NTE control zone. This is allowed if the vehicle is not capable of operating at the specific conditions or where operation is minimal.

The California 2007 Rule also modified the sampling time for the NTE test to account for aftertreatment regeneration events.¹⁰ The sampling time for the NTE test will be at least

⁸ The amendments to California’s test procedures on October 25, 2001 included the Federal 2007 Rule test procedure amendments.

⁹ The PM carve-out area is the area within the NTE control area where the NTE cap on PM emissions did not apply under the 2004 rules. Operation in the PM carve-out area does not require compliance with NTE requirements, although all other requirements during operation in that area would still apply.

¹⁰ A regeneration event occurs when the storage media in the aftertreatment device is cleansed. The event can be triggered naturally with higher exhaust heat and extra fuel, or triggered externally using a heating element.

30 seconds. If regeneration of the aftertreatment device occurs during the NTE test, the averaging period will be at least as long as the time between the regeneration events multiplied by the number of complete regeneration events that occur in the sampling period. This revised sampling period will only be allowed for engines that send an electronic signal indicating the start of the regeneration event. In addition, up to three deficiencies from the NTE test may be approved per engine family for the 2010 through 2013 model years.¹¹

The California 2007 Rule also incorporates several changes to the test procedures adopted in the Federal 2007 Rule to improve the precision of emission measurements. One change involves the type of PM filters that are used, improvements to the method of weighing PM filters, and requirements for more precise microbalances. Another change allows lower dilution ratios during emission measurements.¹² The final change adopts a new NO_x calibration procedure that provides more precise and continuous measurements of low NO_x concentrations. Manufacturers are provided the option of using their current test procedures if they are more convenient or cost-effective in the short term.

CAA Section 177 – An Overview

Section 177 of the CAA provides an exception to the general rule that only EPA and the State of California can set motor vehicle emission standards. Section 209 of the CAA states the general rule. Under section 209(a), states and localities are barred from adopting or attempting to enforce such standards. But under section 209(b), EPA is required to grant a waiver of this prohibition for California motor vehicle emission standards if those standards are no less protective of public health than the federal regulations. In 1977, Congress added section 177 to the CAA to allow other states to promulgate standards identical to those issued by California. This is commonly referred to as “opting-in” to the California rules.

Section 177 reads as follows:

Notwithstanding section 7543(a) of this title, any State which has plan provisions approved under this part may adopt and enforce for any model year standards relating to control of emissions from new motor vehicles or new motor vehicle engines and take such other actions as are referred to in section 7543(a) of this title respecting such vehicles if—

(1) such standards are identical to the California standards for which a waiver has been granted for such model year, and

¹¹ Criteria for deficiencies occurring during MYs 2007 through 2009, including phased-in engines, is detailed in the 2007 Final Rule. Deficiencies during this time period are approved on an engine model and/or horsepower rating basis within an engine family. Additionally, deficiencies are applicable for one model year at a time.

¹² A reduced dilution ratio reduces the amount of dilution air during the emission sampling period. This helps to improve measurement of gaseous and particulate emissions.

(2) California and such State adopt such standards at least two years before commencement of such model year (as determined by regulations of the Administrator).

Nothing in this section or in subchapter II of this chapter shall be construed as authorizing any such State to prohibit or limit, directly or indirectly, the manufacture or sale of a new motor vehicle or motor vehicle engine that is certified in California as meeting California standards, or to take any action of any kind to create, or have the effect of creating, a motor vehicle or motor vehicle engine different than a motor vehicle or engine certified in California under California standards (a "third vehicle") or otherwise create such a "third vehicle."

Thus, basic requirements of section 177 are fairly straightforward:

- The adopting state's requirements must be "identical" to the California requirements for which EPA has granted a waiver.
- The adopting state must promulgate the requirements "at least two years before commencement of such model year."
- The adopting state cannot, directly or indirectly, take any action having the effect of creating a motor vehicle or engine different than that certified in California under the California requirements.

On its face, section 177 does not require that the approved Part D SIP provisions ("plan provisions approved under this part") be for ozone or any other particular pollutant. In the Supplemental Notice of Proposed Rulemaking concerning the Ozone Transport Commission Low-Emission Vehicle ("LEV") Rule, in discussing whether the LEV standards must be adopted statewide,¹³ EPA noted that "[s]ection 177 was clearly designed to deal with nonattainment of standards." 59 FR 48664, 48694, September 22, 1994.

However, in the final rule in that matter, EPA addressed this point more specifically and simply stated that "[a]ll states in the OTR have plan provisions approved under Part D of Title I of the Act, and therefore satisfy this prerequisite for eligibility under section 177." 60 FR 4712, 4729, January 24, 1995. The breadth of this interpretation is highlighted by EPA's reliance on the fact that "Vermont¹⁴ has plan provisions approved under Part D related to earlier nonattainment problems." 60 FR 4712, 4729, January 24, 1995. Thus, it appears that, if at any time in the past EPA has approved a SIP submission for any nonattainment area in a state, for any pollutant, that state could be eligible to adopt California's motor vehicle requirements under section 177.

On April 15, 2004, EPA designated areas in 32 states as "nonattainment" for ozone under the 8-hour ozone standard. Each of these states is required to submit an attainment

¹³ EPA determined that the LEV standards did not have to be adopted statewide. Virginia adopted such standards only for Northern Virginia. Presumably this interpretation would apply to the 2007 heavy-duty diesel engine rule as well.

¹⁴ EPA further noted that "[a]ll states other than Vermont have ozone nonattainment areas with associated SIPs approved under Part D." *Id.* Thus, it appears that the "earlier nonattainment problem" referenced by EPA was not ozone nonattainment.

plan under Part D of Title I of the CAA, and would therefore become eligible to opt in under section 177, even if it had not previously submitted an attainment plan.

Procedural Options for Adoption of the California 2007 Rule

The CAA does not require a state that desires to adopt California's emission standards to set out reasons why it should be authorized to do so. Once a waiver is granted to California, section 177 sets out several objective criteria, that if met, authorize the state to adopt California's emission standards. However, adoption of California's emission standards requires a rulemaking or legislative act that is governed by the laws and regulations of the adopting state. Generally, there is no requirement that state legislatures provide reasons for passing laws. Those states that seek to incorporate the California 2007 Rule by legislative action need not prepare a formal statement of reasons and basis for that action. However, they may wish to prepare a less formal document to inform their legislators. Where the state intends to opt in by a rulemaking process, state administrative law requirements ordinarily require development of a statement of reasons (or basis) for the decision to adopt the California 2007 Rule and development of an administrative record that supports the decision.

Outlined below are three procedural options for adopting the emission standards contained in California's 2007 Rule. The "indirect" approach is the simplest and most straightforward and, therefore, the recommended approach. The "direct" approach is the most complicated approach and involves the adopting state essentially "beginning from scratch" to adopt its own set of regulations. A state that pursues this approach risks being challenged by engine manufacturers for creating a "third vehicle" and, therefore, is advised to proceed with caution. The "combined" approach is a hybrid of the indirect and direct approaches that avoids creation of a "third vehicle."

Indirect Adoption

Over the long term the Model Rule relies entirely on California's vehicle certification program and merely requires that all trucks sold, leased, or registered for use in the adopting state have a Certificate of Compliance issued by the State of California. This approach is referred to as indirect adoption and is the recommended approach.

There may be any number of ways to phrase a requirement that vehicles registered for use in the adopting state bear California certification. As long as the effect of the language is to adopt California certification decisions, modifications to the Model Rule language presented are unlikely to run afoul of the CAA section 177 mandates described above. Different states and agencies use their own drafting conventions and are constrained by different legal directives. However, any variance from the California 2007 Rule language for those who elect to adopt and administer the California rule itself will provide some risk of challenge by opponents of the rule. It will be important, therefore, for state policy makers and rule drafters to work closely with their legal counsel in deciding whether modification to the California 2007 Rule language is wise.

The indirect adoption approach requires that 2007 and subsequent model year heavy-duty vehicles equipped with heavy-duty diesel engines and sold, leased, or registered for use in the adopting state be certified by CARB as meeting the California 2007 standards (or be the subject of a California waiver). In this way the state effectively adopts the CARB requirements, exemptions, and administrative practices and ensures that there will not be a “third vehicle” issue. In addition to the basic adoption provision, this Model Rule provides the definitions necessary to properly implement this option and several enforcement options for states to consider.

Direct Adoption

A second approach to opting in to California’s requirements is to promulgate a set of rules virtually identical to the California regulatory scheme, including the California 2007 Rule itself, and so much of the balance of the California regulatory scheme as is necessary to implement the California 2007 Rule. This could be accomplished by drafting a set of regulations that mirrors (as closely as possible) the California regulatory scheme or by incorporating large portions of the California regulations by reference. This option, referred to hereafter as “direct adoption,” is not recommended. It has the potential to become extraordinarily complicated and requires the adopting state to include laws, regulatory language, and test procedures equivalent in stringency (and perhaps other aspects) to the California rules. States utilizing this option will need to be careful not to adopt rules that require the creation of a “third vehicle.” Because the California motor vehicle program is complex, it would be very difficult for a state to begin from scratch and adopt its own laws and regulations mimicking each facet of the California program without creating an illegal “third vehicle.” For example, if California were to grant a waiver for a particular vehicle, or decide that a particular application was an allowable control strategy and not an illegal defeat device, a question could arise as to whether an adopting state could reach a contrary result without raising “third vehicle” objections.

Management of a full motor vehicle emission program, including engine certification and auxiliary emission control device evaluation, can be a complex activity. States that cannot dedicate sufficient resources to properly manage such a program are rightly wary about attempting to do so. Further, in the case of a state that establishes its own emission standards and a requirement that it certify all vehicles intended for use in the state, there is some question about whether it can properly delegate essential governmental functions – permitting and law enforcement – to persons (*i.e.*, CARB) who are not employees of the adopting state. Thus, some would argue that a state that employs direct adoption would actually have to make its own certification decisions. If this is the case, the state would presumably have to provide for administrative review of certification and enforcement decisions under its state law and defend challenges to those decisions in its courts. This could prove problematic where the adopting state did not participate in the underlying decision and had not developed an administrative record to support the decision.

It is reasonable to expect that the California 2007 Rule may be substantively modified as it is implemented over the next few years. If so, a question could then arise as to whether California’s subsequent rulemaking invalidated the adopting state’s rule (if that state did not adopt the later California revisions) because of an after-arising “third vehicle.”

A state that has previously directly adopted other California emission standards may wish to do so here as well. Notwithstanding the issues raised above, heavy-duty diesel emissions may be such a significant portion of the emissions inventory in an area that the state decides that it needs to ensure appropriate implementation of the 2007 rule in its own state. Further, there may be a number of issues – such as approval of cold weather or high altitude emission control strategies – where the adopting state may have a greater interest than California.¹⁵ To accommodate such state issues, the Model Rule provides an editable copy of the California 2007 Rule and other key provisions.

If a state lacks authority to incorporate existing California rules by reference, obtaining such authority from the state legislature might be preferable to attempting to reproduce all the relevant California laws and rules. Enabling legislation could provide that the relevant state agency has authority to adopt by reference California's rules relating to the control of emissions from heavy-duty diesel engines and vehicles equipped with such engines. Alternatively, the legislation could itself adopt the California rules by reference.

A Combined Approach

States may also wish to consider a combined approach whereby the state directly adopts the California 2007 Rule, as set out above, but then provides that, if California or EPA has certified that the vehicle meets the emission limits in the adopting state's rule, additional certification by the adopting state is not required. This approach would make it less likely that a frivolous challenge to the 2007 rule could succeed while avoiding an administrative burden on the industry and the adopting state. Precedent for this approach is found in EPA's treatment of onboard diagnostic devices (see, Title 40, C.F.R. Part 86, 60 FR 70681, December 22, 1998) and aftermarket pollution control devices (see, Addendum to Enforcement Memorandum 1A, 62 FR 55635, October 27, 1997).

Timing Issues

Under the applicable regulations, the "model year" for a particular engine family commences when the manufacturer begins production of engines in that family. For MY 2007 engines, this date can be as early as January 2, 2006 and as late as January 1, 2007. In the ordinary course, one would expect engine manufacturers to commence production of MY 2007 engines in fall 2006. Those manufacturers seeking to take advantage of the early introduction incentives of the federal and California rules may seek earlier certification, but that issue should not interfere with a state opting into the California rules.

California promulgated its 2007 rule in October 2001 and, of course, acted under section 209(b) rather than section 177 of the CAA. New York State adopted the California 2007 Rule in November 2001 under section 177 and attorneys for several states believe that the form of rulemaking conducted in 2001 effectively resolves this issue in their states. However, other states that wish to adopt the California 2007 Rule should consider

¹⁵ A state may also accommodate such special concerns by way of participating in California's administrative processes.

completion of any necessary rulemaking as soon as practicable to ensure that all vehicles subject to the new standards have been afforded the two-year lead time required under CAA section 177.

The Model Rule

The Model Rule is set out in three sections. The first section is what is styled the Basic Rule, which is the minimal rulemaking package for those states that wish to support the implementation of the 2007 emission limitations without investing resources in administration and enforcement of those limitations. The second section is a set of recordkeeping and enforcement provisions for those states that are willing to rely on the State of California for decisions respecting the certification of vehicles but wish to retain their own authorities to ensure that vehicles sold in their state meet those requirements. The third section of the Model Rule is a set of suggested provisions for those states that wish to establish their own emission requirements, but then allow California-certified vehicles in lieu of meeting those standards, in what has been described as the “combined approach.”

The Basic Rule (Model Rule Language Sections 1 through 5)

The Model Rule sets out a basic rulemaking package for those states that desire the simplest form of implementation of the 2007 rules. The Basic Model Rule requires that all MY 2007 and subsequent vehicles sold, leased, or registered for use in the state contain California-certified engines. The Basic Model Rule package has just five provisions: (1) applicability; (2) effective date; (3) definitions; (4) prohibition against registration, sale, or lease of vehicles not certified by CARB; and (5) recall of noncomplying vehicles. It does not contain recordkeeping or enforcement provisions. Rather, the Basic Rule assumes that CARB and/or federal enforcement of the 2007 rules will suffice. This is intended to be the long-term rule and is designed for minimal administrative obligations on the adopting state. This package is most appropriate for those states that wish to ensure that the provisions of the federal rule are not delayed, but do not wish to invest additional resources in administering or enforcing the program.

Optional Enforcement Provisions (Model Rule Language Sections 6 through 16)

A state that uses the indirect or combined approach for rule adoption may choose to add optional enforcement provisions that would allow the state to enforce the rule in its jurisdiction.

States would determine whether to ban the “sale, lease or registration for use” or the “use” in the state of a vehicle that is not properly certified. Adopting states would also determine how to enforce the ban. The Basic Model Rule recommends a ban on “sale, lease or registration for use” in the state but does not set out an enforcement mechanism. Recommended enforcement provisions are provided as an option for states that wish to specify the consequences of noncompliance.

Purchasing patterns for heavy-duty vehicles are substantially different from those for passenger motor vehicles. The majority of new heavy-duty vehicles are purchased by a relatively small number of fleet operators, many of which do business in a number of states. A number of the larger fleets purchase directly from the truck manufacturer, rather than through local dealers. Thus, it would appear to be relatively easy for such corporations to place a purchase order for a substantial number of vehicles in a state that had not adopted the California 2007 Rule.

For this reason a simple ban on the sale of vehicles in the state would likely not achieve the desired result. However, in order to assess highway user fees, a complex set of regulations has developed over the past century to determine when on-road heavy-duty vehicles must be registered for use in a state. Since the state's interest in ensuring registration of vehicles that spend a substantial portion of their time on state highways would appear to parallel its interest in these matters, the Model Rule seeks to piggyback on existing state vehicle registration programs. Thus, where existing state law would require that a vehicle be registered in the state, the Model Rule would require that vehicle to be certified to the California standards for MY 2007 and subsequent years. Basing the restriction on registration has the effect of ensuring that "dirty" used 2007 and later trucks are not subsequently imported into the state. As written, if the operator of a used 2007 vehicle wishes to obtain a vehicle registration, that vehicle must meet 2007 standards, even if it did not have to do so when new (because it was originally sold in another state). This is slightly different from California's registration requirements, which apply only to new vehicles with less than 7,500 miles, but does not create a third class of vehicles.

Some states may also wish to ban the use of vehicles that do not meet their rules. The Model Rule incorporates a provision that provides that the in-state registration of a vehicle that is required to conform to the 2007 rules is void if the vehicle does not possess such a certificate. This is intended to authorize the issuance of a citation to a driver for operating an unregistered vehicle and, in that way, bars the "use" of vehicles that are subject to the registration requirements of the adopting state.

However, the Model Rule does not recommend a provision specifically barring out-of-state vehicles that do not meet the California 2007 Rule from entering the state. Such an approach is likely to be highly controversial and result in litigation based on the protections provided by the Commerce Clause of the U.S. Constitution. States that wish to maximize the environmental and public health benefits of the 2007 rules are encouraged to (1) ensure that the state motor vehicle registration requirement is as broad as constitutionally permissible; (2) work with neighboring states to pass common rules; and (3) use SIP authorities to adopt the low-sulfur diesel fuel requirements.

The Model Rule also provides optional in-use enforcement provisions patterned after similar provisions of the California and/or federal programs. If a fleet of heavy-duty diesel vehicles were illegally imported into the state and misfueled or otherwise tampered with, the increase in emissions could be as large as if a new major stationary source were constructed in the state, ordinarily a matter of significant interest in any state.

The most effective enforcement approach is likely to be a requirement that the operator present some form of documentation that the vehicle is properly certified to the state Department of Motor Vehicles (“DMV”) when the vehicle is registered. States that prefer not to adopt such a provision may prefer to require that the operator simply check a box on the registration form stating that the vehicle is properly certified. Some states may prefer to keep in-use emissions enforcement separate and distinct from DMV activities. In those states in-use enforcement is still reasonably straightforward, because each vehicle with a certified engine must contain a permanent label in a visible location that identifies the emission standard to which the vehicle is certified. Examples of such labels are attached to this Model Rule. These physical attributes should assist in identifying whether a vehicle is compliant with the 2007 rules. Thus, if a vehicle with a MY 2007 Vehicle Identification Number (“VIN”) does not have a label warning that low-sulfur fuel is required, or does not have the appropriate certification label, it likely does not comply with the 2007 rules.

Similarly, if a vehicle with a 2007 or subsequent VIN has had its pollution control devices removed, it would be relatively straightforward to establish a tampering violation. The initial status of the engine can also readily be determined as manufacturers are currently required to maintain lists of certified engines that EPA accesses to determine whether an engine is certified to U.S. standards. Thus, states that wish to audit in-state operators or dealers to determine compliance with the adopted rules can obtain the information necessary to do so from EPA, CARB, and/or the engine manufacturers. The Model Rule provides examples of information-gathering and recordkeeping provisions that can provide a ready means of determining compliance. In addition, at the commencement of MY 2007, EPA, CARB, or the vehicle/engine manufacturer should be able to provide current VIN conventions for identifying MY 2007 vehicles and engines.

In addition to provisions relating to recordkeeping, testing, and inspections, which are generally analogous to state regulations relating to stationary sources, the Model Rule contains optional provisions that address issues that are unique to the regulation of mobile sources and warrant some discussion here. Stockpiling has historically referred to situations where a vehicle manufacturer might seek to acquire engines in excess of normal business needs just prior to the effective date of a new, more stringent emission standard. As drafted in the Model Rule, the prohibition against stockpiling would make the sale of such vehicles unlawful after the effective date of the new emission limitation, as well as acquisition of vehicles by a fleet operator in excess of business needs, where it can be shown that the purchases were made in order to avoid purchasing cleaner engines or vehicles.

The prohibitions against defeat devices and tampering in the Model Rule are intended to protect against situations where the manufacturer (by defeat device prohibition) or a third party (by tampering) acts to eliminate or reduce the effectiveness of the pollution control system installed on the vehicle. Thus, if a truck is equipped with a pollution control device needed to meet the emission limitation, it would be unlawful under these provisions for a person to modify the software controlling the device in such a way as to reduce its effectiveness, or to remove the device.

The provisions respecting recall are intended to ensure that if CARB or EPA orders a recall of trucks (or a manufacturer voluntarily recalls vehicles elsewhere) because the pollution control system is not operating properly, the recall will also apply to vehicles in the adopting state.

To address the phase-in and flexibility issues in the California rule, discussed below, the optional enforcement provisions in the Model Rule include several sections taken directly from the California 2007 Rule to provide the adopting state with the authority to enforce the phase-in provisions of the 2007 rules in its state (if this proves to be necessary) and to administer the averaging, banking and trading and early compliance provisions of the California rules. Under this concept California would continue to be the sole agency certifying engines. The engine manufacturer is required to submit an annual report demonstrating its compliance with the phase-in requirements. It would do so by keeping track of the number of vehicles sold, leased, or registered in the adopting state that were certified (by CARB) to the more stringent emission requirements and comparing that number to similar records for vehicles with engines that were certified (by CARB) to the less stringent standard. The annual demonstration of compliance would also include the manufacturer's accounting of any averaging, banking or trading or early compliance engines for which it sought credit. As in the California rule, the Model Rule conditions the ability to sell any engine that does not meet the more stringent limit on the engine manufacturer's obligation to meet the 50-percent phase-in requirement.

The Federal 2007 Rule provides that for MYs 2007 through 2009 only 50 percent of each engine manufacturer's U.S. production must meet the more stringent NO_x and NMHC standards. The California 2007 Rule incorporates this provision by first requiring 100-percent compliance with the more stringent standards and then providing an option for manufacturers who elect not to meet those standards. Under this option, California will certify "one or more" engine families as in compliance with the California 2007 Rule, if the engine manufacturer certifies that it is in compliance with the federal phase-in requirements. It is not certain how this provision would be administered if the Federal 2007 Rule is delayed. California and New York have each adopted this provision and the time for legal challenges to their rules has expired. Thus, it may be that manufacturers would be required to comply with the federal phase-in if they could not meet 100-percent compliance in New York and California. However, one potential outcome could be that California would administer the phase-in program for vehicles sold, leased, or registered in California, but not in other states. For this reason the Model Rule includes optional provisions that are explicit on this point for those states interested in including them at this time.

Irrespective of how this issue is resolved (if it arises), the California rule also has averaging, banking and trading and early introduction incentives that allow California to certify a certain number of engines to less stringent levels in later years. While there is no specific requirement that adopting states must adopt such provisions, the Basic Model Rule anticipates that engine manufacturers would object if they did not. It is likely that the manufacturers would argue that (1) a state law without such provisions is more stringent than the California rule and (2) that it would lead to the creation of a "third vehicle." The provisions respecting vehicle manufacturer obligations to label and certify and the annual

certification by the engine manufacturer are intended only to address phase-in issues and are recommended to sunset after three years.

Additional Optional Provisions (Model Rule Language Sections A1 through A3)

These provisions are included for those states that pursued rule adoption using the combined approach and wish to adopt a stand-alone requirement to meet specific emission limitations in their states (rather than simply being certified by CARB), but then defer to CARB certification where it is present. These provisions are intended merely to provide a different form of adoption for those states that have expressed this preference and would generally be in lieu of Sections 1 through 5, thus the designation as Sections A1 through A3.

Recommended Procedures for Opting In

1. *Verify that you have legislative authority to adopt the rules.* In some states, environmental agencies have fairly broad authority to adopt regulations such as the California 2007 Rule; in other states, the legislature may have to pass a law granting such authority. Each state agency will need to consult with its legal counsel to determine if legislation is needed. If it is, a bill should be introduced soon.
2. *Study the Model Rule and accompanying materials closely, and circulate them to others involved in setting policy and drafting the rules.* Note, however, that these materials are only a starting point. Procedural and substantive requirements vary and you will need to work within the framework of your state laws. Do not adopt any of the provisions in the Model Rule without first concluding it works for your state.
3. *Consult with the California Air Resources Board.* Remember that your test procedures must be the same as CARB's; your state cannot require the manufacturers to produce a "third vehicle" (or engine). It is therefore important to fully understand the California 2007 Rule, and to ensure that you are not deviating from it in any substantive way.
4. *Consult with states that previously opted in under section 177.* Although the 2007 rules certainly present new issues, a number of states have adopted other California motor vehicle standards – such as those for low-emission vehicles and diesel NTE tests – under the authority of CAA section 177. These states have dealt with many of the policy and legal questions you now face. Tap their expertise and experience.
5. *Decide whether – and how – you can provide for CARB certification as the basic requirement.* This is the easiest way to adopt the requirements; especially where you can automatically adopt future changes to the CARB rules. But state administrative procedure laws vary, so you will need to consult with your agency's legal counsel to determine what is allowed in your state.

6. *Work closely with your Division of Motor Vehicles.* The Division (or whatever it is called in your state) will be a key player in carrying out and enforcing the rules because denial of motor vehicle registration for non-certified vehicles is the best means for ensuring compliance. It is critical to involve your colleagues in the Division of Motor Vehicles concerning the importance of the requirements and how they will be enforced. Depending upon how your state's administrative procedures work, you may even need to propose and adopt the rules jointly with the Division.
7. *Work closely with others who will be involved in enforcement.* If the enforcement division of your state environmental agency will be primarily responsible for preventing illegal registrations, sales, and leases, you will need to involve them in writing the rules – particularly any enforcement provisions you may choose to adopt.
8. *Consult early and often with heavy-duty vehicle dealers.* It will be important for the dealers to understand the rules, so they can abide by them. Do not neglect outreach efforts for this important group.
9. *Pursue your rulemaking carefully, but quickly.* The CAA section 177 two-year lead time for MY 2007 is coming up in the next few months.
10. *Resist the temptation to modify the stringency of the requirements.* Of course, in a rulemaking a state agency must review public comments and act in response to them. But remember that adoption of the heavy-duty diesel engine requirements represents a special kind of rulemaking. If you change provisions or requirements, you could run afoul of the CAA section 177 requirements outlined above.
11. *Do not reinvent the wheel.* In addition to the STAPPA/ALAPCO Model Rule and supporting materials, you have on the accompanying CD an electronic version of the CARB Staff Report supporting the California rules as well as the key documents that support the Federal 2007 Rule. These documents provide a wealth of technical support and explanation for the rules and further background information. Include much of this information in your proposal and final rule preamble as the basis for your state's requirements, but where necessary adapt information, such as the estimated emission reductions, to your state's situation.
12. *Notify EPA, the Engine Manufacturers Association and the Truck Manufacturers Association after you opt in.* CAA section 177 does not require that a state adopting the California 2007 Rule provide special notification to vehicle or engine manufacturers. Rather, promulgation of the rules at least two years in advance of the first model year serves as legal notice. Moreover, there is no requirement to notify EPA that the state has issued motor vehicle requirements under the authority of section 177. Nonetheless, you may wish to notify the Director of EPA's Office of Transportation and Air Quality, CARB and the respective trade associations by letter to aid in coordination – even if individuals at EPA and engine/truck manufacturers are aware of your state's efforts in this regard.

Basic Model Rule

Section 1 – Applicability

Except as specifically provided herein, this section applies to all heavy-duty diesel vehicles sold, leased or registered for use in this State where (1) such vehicle is equipped with a 2007 Model Year or later diesel engine and (2) the engine family for the installed engine was first certified by CARB at least two years after the date of promulgation of this Part.

Section 1.1 – Exemptions

Notwithstanding the above, the requirements set forth in this Part do not apply to:

1. A heavy-duty diesel engine intended for use in an urban bus;
2. A heavy-duty diesel engine of a model year and engine family for which CARB has determined, based upon its technology review, that compliance with its heavy-duty diesel engine standards is not required;
3. A vehicle acquired outside of this State by a resident of this State for the purpose of replacing a vehicle registered to the resident which, while out of this State, was stolen, or was damaged, or became inoperative, beyond reasonable repair; provided that such replacement vehicle is acquired within a reasonable amount of time following the time the previously owned vehicle was either stolen, damaged, or became inoperative;
4. A vehicle transferred by inheritance, or by a decree of divorce, dissolution, or legal separation entered by a court of competent jurisdiction;
5. An emergency vehicle; or
6. A military tactical vehicle or equipment.

Section 2 – Effective Date

This Part shall be effective [*see individual state administrative law requirements, e.g., XX days after it has been published/posted in the _____*].

Section 3 – Definitions

CARB means the California Air Resources Board, as set out in section 39003, California Health and Safety Code. (1999)

The terms “certification”; “diesel-cycle”; “emergency vehicle”; “engine family”; “heavy-duty vehicle”; “heavy-duty diesel engine”; “medium duty vehicle”; “military tactical vehicles and equipment”; “model year”; “urban bus”; and “ultimate purchaser” each shall have the meaning set out in Title 13, California Code of Regulations (“CCR”) and section 165 of the California Vehicle Code.

“Lease” means any commercial transaction recognized under the laws of this State as a means of creating a right to use a good and includes renting. It also includes offering to rent or lease.

“Sell” means any commercial transaction recognized under the laws of this State as a means of transferring ownership of a good and includes barter. It also includes offering for sale.

Section 4 – Prohibition Against Sale or Registration of Noncomplying Vehicles

No person shall sell, lease or register a heavy-duty vehicle for use in this State if (1) such vehicle is equipped with a 2007 Model Year or later diesel engine and (2) the engine family for the installed engine was first certified by CARB at least two years after the date of promulgation of this Part, unless the heavy-duty engine installed in such vehicle has been certified by CARB as meeting all requirements of Title 13, CCR, section 1956.8, and the test procedures incorporated by reference therein that apply to Model Year 2007 and subsequent engines.

Section 4.1 [Optional] – Registration of Uncertified Vehicles Is Void

The registration of a vehicle that is subject to this Part is void if the vehicle does not possess a certificate of conformity issued by CARB.

Section 5 – Recall of Vehicles

If, for any reason, the manufacturer of any vehicle or engine subject to this Part conducts a recall, whether required or voluntary, or a service campaign in any other state that involves any emissions-related component or element of design that is incorporated in vehicles sold, leased or registered in this State, such manufacturer shall notify the Commissioner/Secretary no later than five days after initiating such recall or service campaign and, unless the Commissioner/Secretary determines that the recall or service campaign is unwarranted given the facts of the matter, shall conduct such recall or service campaign on vehicles registered in this State in accordance with a schedule determined by the Commissioner/Secretary.

Section 5.1 [Optional] – Prohibition Against Sale or Registration of Recalled Vehicles

No person shall sell, lease or register a heavy-duty vehicle subject to the requirements of this Part if such vehicle has been the subject of an emissions-related recall, unless the vehicle has been corrected in accordance with a recall plan pursuant to this Part.

Optional Enforcement Provisions

The following additional optional enforcement provisions are for use with either the indirect approach or the combined approach.

Section 6 – Prohibition Against Stockpiling

The purchase of engines or vehicles in excess of normal business needs for the purpose of evading the requirements of this Part shall be unlawful. No heavy-duty vehicle that is manufactured after April 1, 2007, may be sold, leased or registered in this State unless (1) it contains an engine certified by CARB as meeting all requirements of Title 13, CCR, section 1956.8 that apply to Model Year 2007 and subsequent engines and (2) the sale, lease or registration of such vehicle will not result in a violation of the phase-in, averaging, banking or trading or early incentive provisions of this Part.

Section 7 – Prohibition Against Tampering

Section 7.1 – Tampering

No person may at any time remove or render inoperative any device or element of design, installed on or in a heavy-duty vehicle or heavy-duty diesel engine in compliance with this Part, either by act of commission or by act of omission.

Section 7.2 – Sale of Defeat Devices

No person may manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any heavy-duty vehicle or heavy-duty diesel engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with this Part, and where the person knows or should know that such part or component is being offered for sale or installed for such use or is put to such use.

Section 8 – Labeling and Documentation

Section 8.1 – Prohibition of Sale of Unlabelled Vehicles

No person shall sell, lease or register a heavy-duty vehicle for use in this State if (1) such vehicle is equipped with a 2007 Model Year or later diesel engine and (2) the engine family for the installed engine was first certified by CARB at least two years after the date of promulgation of this Part, unless such vehicle has a permanent label on the inside of the left-hand door of the vehicle that certifies (1) the emissions level to which the installed engine has been certified and (2) that the engine manufacturer is in compliance with the phase-in, banking and emission requirements of this Part.

Section 8.2 – Duty of Engine Manufacturer to Certify and Label

The manufacturer of any engine to which this Part applies shall attach a permanent label on a readily visible location of the engine that certifies (1) the emissions level to which the engine has been certified and (2) that the manufacturer is in compliance with the phase-in, banking and emission requirements of this Part.

Section 8.3 – Duty of Vehicle Manufacturer to Certify and Label

The manufacturer of any vehicle to which this Part applies shall attach a permanent label on the inside of the left-hand door of the vehicle that certifies (1) the emissions level to which the engine has been certified and (2) that the manufacturer is in compliance with the phase-in, banking and emission requirements of this Part.

At the time of the initial sale of the vehicle to a consumer and subsequently, upon request of the owner of any vehicle subject to the requirements of this section, the manufacturer of such vehicle shall provide the owner with a certificate of origin, a certificate of compliance and an identification of the emissions level to which the installed engine is certified.

Section 8.4 – Additional Documentation

Upon request of a duly authorized official of this State, the manufacturer of any engine or vehicle subject to the requirements of this Part shall provide such official with a certificate of origin, a certificate of compliance and an identification of the emissions level to which the installed engine is certified.

Section 9 – Recordkeeping

Section 9.1 – Records to Be Maintained by the Manufacturer

Each manufacturer of any engine or vehicle subject to the requirements of this Part shall create and retain for a period of not less than five years records sufficient to determine whether the manufacturer is in compliance with each applicable requirement of this Part **[for Model Years 2007-2009 – i.e., states may wish to sunset this provision by referencing MY**

2007-2009]. This includes, but is not limited to, the emission level to which each subject engine has been certified, by engine identification number; the identification of the vehicle in which the engine was installed, by manufacturer and by vehicle identification number; the identity of the first purchaser; and the State in which the vehicle was first registered.

Section 9.2 – Records to Be Maintained by Seller or Lessor of Subject Vehicles

Each person who sells or leases a vehicle subject to this Part shall retain for not less than three years records sufficient to determine whether such person is in compliance with the requirements of this Part. This includes, but is not limited to, the certificate of compliance for the engine installed in the vehicle, the certificate of origin of the vehicle and, for lessors, the vehicle registration for each applicable year.

Section 10 – Annual Reporting By Engine Manufacturers

On or before July 1, 2008, each manufacturer of any engine subject to the requirements of this Part shall submit to the Commissioner/Secretary a report demonstrating that such manufacturer has complied with all applicable requirements of this Part, including emission phase-in, averaging, banking and trading and early introduction incentives for the period April 1, 2007, to March 31, 2008. This report shall include all sales, leasing, registration and emissions certification data needed to verify an assertion of compliance. If the manufacturer is not in compliance, the report shall so state and shall include all information relevant to the noncompliance.

Thereafter, on or before July 1 of each subsequent year, each manufacturer of any engine subject to the requirements of this Part shall provide such a report for the one-year period ending March 31 of that year.

[States may wish to sunset this provision after three years.]

Section 11 – Authority to Enter, Inspect, Copy Records and Provide Information

[Note: This section assumes that states currently have authority to enter and inspect facilities in their states – and so it does not provide such authority.]

The Commissioner/Secretary may, with respect to any new vehicle engine family, test group or subgroup being sold, offered for sale, or manufactured for sale in this State order the vehicle or engine manufacturer, or any person offering such vehicles for sale, to make available for copying or inspection any record the Commissioner/Secretary believes is necessary to determine compliance with any requirement of this Part.

The Commissioner/Secretary may, with respect to any new vehicle engine family, test group or subgroup being sold, offered for sale, or manufactured for sale in this State order a vehicle manufacturer to make available for compliance testing and/or inspection a reasonable number of vehicles, and may direct that the vehicles be delivered to _____. Vehicles shall be selected at random from sources specified by the Commissioner/Secretary. If the vehicles are selected for compliance testing, the selection and testing of vehicles and the evaluation of data shall be made in accordance with Title 13,

CCR, sections 2136 to 2140. If the Commissioner/Secretary determines that an engine family, test group, or any subgroup within an engine family or test group, exceeds the emission standards for one or more pollutants, the Director of the air pollution control agency shall notify the manufacturer and order a recall in accordance with the requirements of this Part.

Section 12 – Order of the Commissioner/Secretary

Failure to comply with any order of the Commissioner/Secretary issued pursuant to this Part may result in the revocation or conditioning of certification of the engine and/or vehicle and shall be a violation of [cite to state administrative law enforcement authority].

Section 13 – Recall

If the Commissioner/Secretary determines that any vehicle or engine subject to this Part does not comply with all applicable requirements he/she shall require the manufacturer of the vehicle or engine, as appropriate, to submit a plan within 30 calendar days of receipt of his/her determination to bring all such engines or vehicles into compliance. The Commissioner/Secretary shall order execution of the plan with such changes and additions as he/she determines to be necessary. The plan may include the temporary cessation of sales to dealers by the manufacturer and efforts by the manufacturer to prevent the sale of vehicles in possession or control of dealers, until the vehicles are corrected. The plan shall specify the percentage of vehicles subject to recall which must actually be corrected. If, after good-faith efforts, the manufacturer cannot correct the percentage of vehicles specified in the plan by the applicable deadlines, the manufacturer may request the Commissioner/Secretary to modify the percentage of vehicles specified in the plan, setting out in full the good-faith efforts of the manufacturer to comply with the original plan, and the reasons it has been unable to comply. The Commissioner/Secretary shall, on the basis of this request, modify the percentage of vehicles which must actually be corrected if he/she finds in writing that the manufacturer has made a good-faith effort and has shown good cause for the modification. If the manufacturer so requests, the plan shall specify the maximum incentives (such as a tune-up or specified quantity of gasoline), if any, the manufacturer must offer to vehicle owners to induce them to present their vehicles for repair, as a condition of showing that the manufacturer has made a good-faith effort to repair the percentage of vehicles specified in the plan. The plan shall also include a schedule for implementing actions to be taken, including identified increments of progress towards implementation and deadlines for completing each such increment.

If a vehicle is recalled pursuant to this Part, the manufacturer shall make all necessary corrections specified in the plan without charge to the registered owner of the vehicle or, at the manufacturer's election, shall reimburse the registered owner for all costs (except incidental and consequential damages) of making such necessary corrections. The term "all costs" shall not include incidental or consequential damages, except that the manufacturer shall reimburse the registered owner for any damage to the vehicle's emissions control system proximately caused by a defect subject to a recall action under this section or an action by a manufacturer taken pursuant to a plan under this section.

If the plan ordered by the Commissioner/Secretary includes a recall, the manufacturer may, within 20 calendar days of its receipt of the plan, notify the Commissioner/Secretary of its desire to contest the necessity for or scope of that order. Any such notification shall specify the basis of the manufacturer's objections. Upon receipt of such notification, the Director of the air pollution control agency shall stay the recall until the Commissioner/Secretary affords the manufacturer the opportunity, at a public hearing to be scheduled no less than 30 calendar days and no more than 60 calendar days after receipt of such notification, to present evidence in support of its objections in accordance with **[cite to state administrative law procedures for review of Administrative Orders]**. A stay of a recall shall not, unless otherwise ordered, stay any other portion of a plan required herein or any other order issued pursuant to this Part.

Failure by a manufacturer to carry out all corrective actions or recall actions ordered by the Commissioner/Secretary shall constitute a violation of that order and of this Part. If the manufacturer fails to correct the percentage of vehicles subject to recall specified in the recall plan by the deadline(s) included in that plan, each vehicle included in the number of vehicles by which the manufacturer falls short of such percentage shall constitute a separate violation of the order and of this Part.

Section 14 – Penalties

Section 14.1 – Penalty for Sale, Lease or Registration of Nonconforming Vehicle

Any person who violates the provisions of section **XXX** (relating to sale of vehicles with engines not certified by CARB) or section **XXX** (relating to tampering) shall be subject to a fine not to exceed \$_____ per vehicle.

Section 14.2 – Penalty for Violation of Phase-in Provisions

If an engine manufacturer elects to employ the phase-in provisions of section **XXX** and it is subsequently determined that the number of vehicles sold, leased or registered during an annual reporting period was greater than permitted by this section, without regard to fault or negligence on its part, the engine manufacturer shall pay to the State the Noncompliance Penalty (“NCP”) that is in effect for the Federal 2007 Rule for each vehicle in excess of those authorized by this section. If an NCP has not been promulgated for the Federal 2007 Rule, the applicable NCP shall be twice that in effect for the most recent standards or \$5,000 per engine, whichever is greater. In addition, the engine manufacturer shall offset the excess emissions from such engines, in accordance with a plan approved by the Commissioner/Secretary, by two tons for every excess ton of each pollutant.

In addition, if it is further determined that the engine manufacturer

- (1) knew prior to the end of the relevant year (or in the exercise of due diligence should have known) that the phase-in restrictions would be exceeded,
- (2) was negligent in his/her efforts to ensure that the phase-in restrictions would be met or
- (3) failed to develop and implement appropriate downstream controls,

such manufacturer shall be liable for a fine of up to \$25,000 for each vehicle that is in excess of the phase-in requirements and may be required to provide such additional injunctive relief as the Commissioner/Secretary may determine is appropriate.

Section 15 – Failure to Comply

Except where specifically provided herein, violation of any provision of this Part shall be a violation of **[cite to state enforcement authority]** and shall be subject to the fines and enforcement authorities set out therein.

Section 16 – Seizure of Nonconforming Vehicle

The Commissioner/Secretary is authorized to seize any vehicle found to be in violation of the requirements of this Part and to hold such vehicle until the violation is corrected and any costs associated with such seizure are paid by the owner or operator of the vehicle.

Additional Optional Provisions

The following additional optional provisions may be used by states that pursue the combined approach.

Section A1 – Exhaust Emission Standards

The exhaust emissions from 2007 and subsequent Model Year heavy-duty diesel engines subject to this Part shall not exceed 0.2 g/bhp-hr NO_x, 0.14 g/bhp-hr Non-methane Hydrocarbons, 15.5g/bhp-hr Carbon Monoxide or 0.01 g/bhp-hr Particulate Matter as certified by CARB in accordance with Title 13, CCR, section 1956.8 and the test procedures incorporated by reference therein that apply to Model Year 2007 and subsequent engines.

No crankcase emissions shall be discharged directly into the ambient atmosphere from any 2007 or later Model Year heavy-duty diesel engine, with the following exception: heavy-duty diesel engines equipped with turbochargers, pumps, blowers, or superchargers for air induction may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing. Manufacturers using this exception must manufacture the engines so that all crankcase emissions can be routed into a dilution tunnel (or other sampling system approved in advance by the CARB Executive Officer), and must account for deterioration in crankcase emissions when determining exhaust deterioration factors. For the purpose of this section, crankcase emissions that are routed to the exhaust upstream of exhaust aftertreatment during all operations are not considered to be “discharged directly into the ambient atmosphere.”

Section A1.a – NO_x and NMHC Phase-in Options

For Model Years 2007, 2008, and 2009, an engine manufacturer may, at its option, request that CARB certify one or more of its engine families to the combined NO_x plus NMHC standard or Family Emission Limit (“FEL”) applicable to Model Year 2006 under Title 13, CCR, section 1956.8(a)(2), in lieu of the separate NO_x and NMHC standards or FELs applicable to the 2007 and subsequent Model Years. Each engine certified under this phase-in option must comply with all other emission requirements applicable to Model Year

2007 engines. Any such engine certified by CARB may be sold, leased and registered in lieu of an engine that meets all Model Year 2007 emission limits where the engine manufacturer accepts the responsibility for ensuring, and thereafter does ensure, that at least 50 percent of its engines sold, leased or registered for use in this State in each such model year have been certified to the NO_x plus NMHC standards or FELs applicable to 2007 and subsequent model years. Alternatively, an engine manufacturer may qualify for this option if it accepts responsibility for ensuring, and thereafter does ensure, that at least 50 percent of its engines sold, leased or registered for use in the U.S. in each such model year have been certified, either by CARB or the federal EPA, to the NO_x plus NMHC standards or FELs applicable to 2007 and subsequent model years, as set out herein.

In addition, a manufacturer may reduce the quantity of engines that are required to be phased in using the early certification credit program specified in Title 40, Code of Federal Regulations, Part 86, section 86.007-11 (g)(2), as adopted January 18, 2001, and the “Blue Sky” engine program specified in Title 40, Code of Federal Regulations, Part 86, section 86.007-11 (g)(4), as adopted January 18, 2001.

A manufacturer may elect to include any or all of its heavy-duty diesel engine families in any or all of the NO_x emissions averaging, banking, or trading programs for heavy-duty diesel engines, within the restrictions described in "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" incorporated in Title 13, CCR, section 1956.8 (b). If the manufacturer elects to include engine families in any of these programs, the NO_x FEL may not exceed 2.0 g/bhp-hr (0.75 grams per megajoule) for model years before 2010 or 0.50 g/bhp-hr (0.19 grams per megajoule) for model years 2010 and later. This FEL cap applies whether credits for the engine family are derived from averaging, banking or trading programs.

Section A1.b – PM Averaging, Banking and Trading Options

A manufacturer may elect to include any or all of its heavy-duty diesel engine families in any or all of the particulate averaging, banking or trading programs for heavy-duty diesel engines, within the restrictions described in “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles” incorporated by reference in Title 13, CCR, section 1956.8 (b). The particulate FEL for each engine family a manufacturer elects to include in any of these programs may not exceed 0.02 g/bhp-hr (0.0075 grams per megajoule). This FEL cap applies whether credits for the engine family are derived from averaging, banking or trading programs.

Section A1.c – Early PM Compliant Engines

To the extent that heavy-duty vehicles are sold, leased or registered in this State with engines certified to the 2007 and subsequent Model Year PM standard listed in this section (without using credits, as determined in any averaging, banking or trading program described in “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” to comply with the standards) before Model Year 2007, the engine manufacturer may increase the number of engines that are not required to meet the 2007 and subsequent Model Year PM standard listed in Title

13, CCR, section 1956.8 (a)(2), in Model Year 2007, 2008, and/or 2009. To qualify for this option, a manufacturer must satisfy the PM emission requirements pursuant to the methods detailed in Title 40, Code of Federal Regulations, Part 86, section 86.007-11 (g)(2)(ii), as adopted January 18, 2001.

Each manufacturer of heavy-duty engines is strictly liable for compliance with the phase-in, averaging, banking and trading, early introduction incentives and other requirements of this section. Each such manufacturer shall ensure, by contractual arrangements with truck manufacturers or otherwise, that it is in compliance with all applicable requirements.

Section A2 – Test Procedures

The test procedures for determining compliance with standards, provided herein, applicable to Model Year 2007 and subsequent heavy-duty diesel engines and vehicles and the requirements for participation in the averaging, banking and trading programs, are set forth in the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles."

Section A3 [Optional] – Additional Provision Relating to Truck Manufacturers

Each manufacturer of heavy-duty vehicles is strictly liable for compliance with the phase-in, averaging, banking and trading, early introduction incentives and other requirements of this Part. Each such manufacturer shall ensure, by contractual arrangements with truck dealers or otherwise, that it is in compliance with all applicable requirements.

Attachments

Accompanying this STAPPA/ALAPCO Model Rule is a compact disk that contains an electronic version of the Model Rule and the following documents:

1. *Federal Register* notice of Federal 2007 Rule, 66 FR 5001, *et seq.* – January 18, 2001
2. Regulatory Impact Analysis for Federal 2007 Rule, EPA420-R-00-010 – July 2000
3. Technical Support Document for Federal 2007 Rule: Air Quality Modeling and Analysis, EPA420-R-00-028 – December 2000
4. Final Regulation Order for California’s Diesel Fuel Regulations – adopted May 10, 2004 and May 28, 2004; corrected July 15, 2004
5. Description of July 14, 2004 Corrections to the Final Regulation Order for California’s Diesel Fuel Regulations – July 15, 2004
6. Initial Statement of Reasons for California’s Proposed Diesel Fuel Regulations – June 6, 2003
7. Final Statement of Reasons for California’s Diesel Fuel Regulations – June 2004
8. Final Regulation Order for California 2007 Rule, Title 13, CCR 1956.8, *et seq.* – effective November 16, 2002
9. Appendix A to Final Regulation Order for California 2007 Rule
10. Final Statement of Reasons for California 2007 Rule (including summary and response to comments) – October 25, 2001
11. GAO Report: “EPA Could Take Additional Steps to Help Maximize the Benefits from the 2007 Diesel Emissions Standards,” GAO-04-313 – March 2004
12. Letter from James A. Joy, III and Cory Chadwick, on behalf of STAPPA and ALAPCO, to Bill Graves, President of the American Trucking Association – January 30, 2004
13. Examples of engine labels identifying the emission standards to which a vehicle is certified

Numerous additional documents can be found in the EPA docket for the Federal 2007 Rule (Docket #OAR-2001-13).