SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Staff Report

Proposed Rule 1191 – Clean On-Road Light- and Medium-Duty Public Fleet Vehicles

June 2000

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INTRODUCTION

The South Coast Air Quality Management District (AQMD) is proposing a rule that would require the public sector fleet operations that have 15 or more light- and medium-duty vehicles to acquire lower-emitting gasoline or alternative fuel vehicles (AFVs) when procuring or leasing these vehicles in the AQMD. In addition, any new public fleets will be required to purchase lower-emitting gasoline or alternative-fueled light- and medium-duty vehicles. Examples of fleets affected by this proposal include those operated by federal, state, county, and city agencies, as well as airports, and special districts - such as air, water, transit and school districts. Emergency vehicles are specifically exempted from this requirement, unless the AQMD Governing Board determines that sufficient refueling stations are available to the extent that their emergency response capabilities are not impaired. For the purposes of this proposed rule, emergency and rescue vehicle fleets will be exempt from rule compliance.

This proposal is based on Health and Safety Code Section 40919, which allows certain nonattainment air districts (those that are designated serious or above for ozone) to adopt measures requiring fleets to use a significant number of low-emission vehicles. A "low-emission vehicle" (LEV) is defined in Health and Safety Code Section 39037.05. This regulatory authority is being implemented in the proposed rule in a two-phase approach. In the initial first years of rule implementation, affected public fleets will be required to purchase gasoline or alternative fuel vehicles that are certified by the California Air Resources Board (ARB) as low-emission vehicles or cleaner. This LEV standard currently is approximately the same as a hydrocarbon standard twice as stringent as otherwise allowed, as specified in Section 39037.05. This requirement will become more stringent after several years of rule implementation by requiring affected fleets to purchase ultra-low-emission vehicles (ULEVs) or cleaner when a majority of vehicles sold by manufacturers are ARB certified to these vehicle categories. At that time, ULEVs will equate to approximately twice as stringent as the applicable hydrocarbon standard as defined under Section 39037.05. In addition, Section 40447.5 specifically authorizes the AQMD to regulate fleets.

Despite the significant progress that has been made in reducing both mobile and stationary emissions over the past twenty years, the South Coast Air Basin (Basin), which includes Los Angeles, San Bernardino, Riverside, and Orange Counties, continues to experience extremely serious air quality problems, dominated by motor vehicle pollution. The Basin is still the only area in the country classified by U.S.EPA as an extreme nonattainment area. Based on the latest information available, on-road motor vehicles contribute more than half of all hydrocarbons, oxides of nitrogen, and carbon monoxide to the entire emissions inventory. In addition, on-road motor vehicle pollution, specifically from two significant gasoline hydrocarbon compounds - benzene and 1,3 butadiene and exhaust emissions from diesel vehicles, has been identified as the principal source of public exposure to air toxics, based on recent work conducted by the AQMD and other agencies.

This proposed rule is being developed in an effort to reduce public exposure to motor vehicle pollution, including both toxic and ozone precursor emissions. It is intended that these benefits be surplus to existing state and federal regulations governing emission levels from on-road motor vehicles.

Public fleets have been identified in the proposed rule because government agencies have an opportunity to take a leadership position in utilizing the cleanest vehicle technologies. Many government fleets, for example, have implemented policies that promote the purchase of clean low-emission or alternative-fuel vehicles in an effort to improve air quality in their area of jurisdiction. As a result of these policies, these fleets have significant experience demonstrating the feasibility of these vehicles in normal fleet operations. In addition, many of these fleets emit air emissions, including air toxics, into highly urbanized pedestrian breathing zones and neighborhoods adjacent or in close proximity to airports. Public fleets also make up a significant share of fleet vehicles in the region.

Proposed Rule 1191 is one of a series of rules being proposed that affect vehicle fleet operations in the AQMD. The AQMDs' objective is to promote the use of clean vehicle technologies to as many vehicle fleets as possible, not just those under consideration in Proposed Rule 1191, to maximize the air quality benefits of clean vehicle technologies. Depending on the effectiveness in the implementation of Proposed Rule 1191 and the other fleets rules under consideration, the AQMD intends to expand the scope of these rules, as feasible, to maximize the air pollution benefits of clean vehicle operation within the AQMD's four-county jurisdiction.

BACKGROUND

Two important efforts to evaluate and identify air toxics include the AQMD's Multiple Air Toxics Exposure Study II (MATES II) and the California Air Resources Board's (ARB) identification of particulate matter from diesel engine exhaust as a surrogate for all diesel exhaust emissions including hydrocarbons as toxic air contaminant (TAC). The development of this proposed fleet rule is in large measure being driven by the results of these two very important research and regulatory efforts. The development of the fleet rule is also affected by recent state and federal rulemaking efforts and actions that are intended to, or have resulted in, lowering on-road mobile source emissions by reducing tailpipe emissions and/or requiring the sale or purchase of alternative fuel vehicles. Some of these more important rulemaking activities, as well as their significance to the proposed fleet rule, will be described, including the ARB's Low-Emission Vehicle (LEV) Program and the U.S. Energy Policy Act (EPAct) requirements.

MATES II

In November 1999 the AQMD issued a draft final report for the MATES II study. The objectives of this study were to monitor and evaluate urban air toxics, as well as update the toxics emission inventories for the Basin and conduct air toxic dispersion modeling to simulate the monitored data. During the course of the study, the ARB listed diesel particulate emissions as an air toxic contaminant. As such, the study provided an analysis of the potential air toxic impacts of diesel emissions. The study represented one of the most comprehensive air toxics programs ever conducted in an urban environment. The scope of the study included the monitoring of more than 30 toxic air pollutants at 24 sites over a one-year period ending last spring. The AQMD collected more than 4,500 air samples and together with the ARB performed more than 45,000 separate laboratory analyses of these samples.

The findings of this study indicated that the cancer risk from some air toxics in the Basin has declined by as much as 75 percent over the last decade. However, it also showed that based upon more extensive monitoring of the variety of toxic compounds in the air, the current cancer risk from toxic air pollution averages about 1,400 in a million in the region. As shown in Figure 1, the study found that 71 percent of this cancer risk is attributable to diesel particulate. Other important toxic species contributing significantly to this cancer risk, originating from both gasoline- and diesel-powered mobile sources as well as stationary sources, are 1,3 butadiene (8 percent of risk), benzene (7 percent of risk), and carbonyls which include formaldehyde and acetaldehyde (3 percent of risk). One of the primary objectives of proposed Rule 1191, based on the findings of this study, is to reduce the contribution of overall toxic risk of diesel exhaust emitted by public fleets and the gaseous air toxic compounds associated with gasoline vehicles in the region, by accelerating the implementation of currently available low-emission vehicle technology.

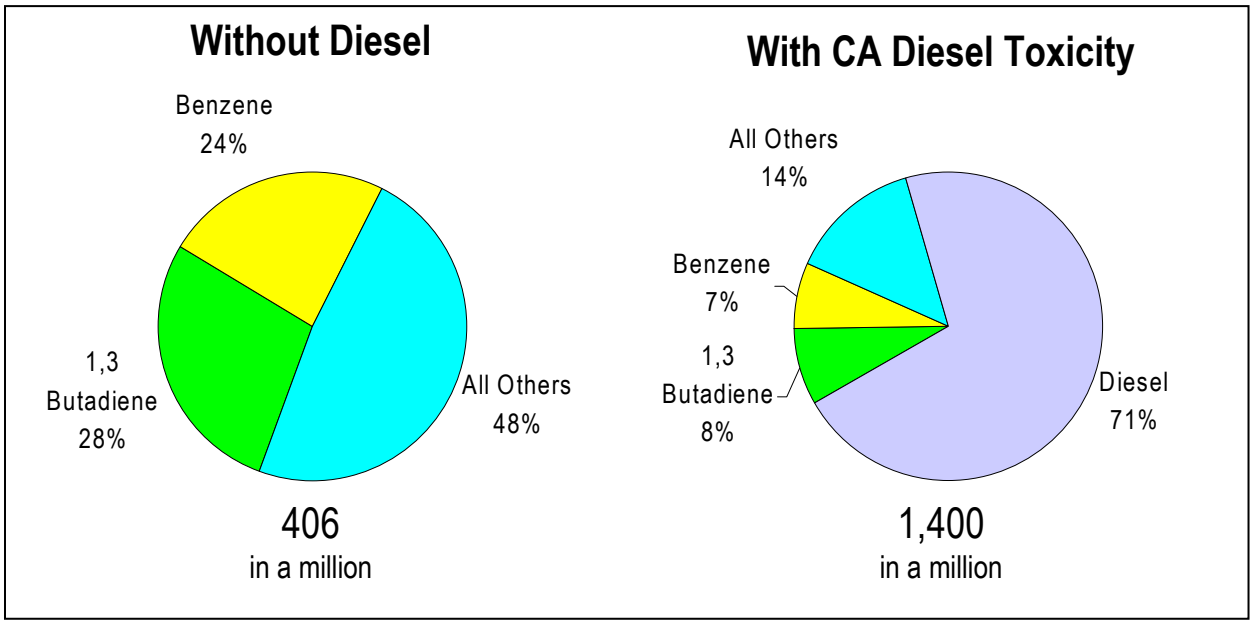

Figure 1
Estimated Average South Coast Air Basin Toxic Risk Contributions
based on findings from the MATES-II Study

ARB Identification of Diesel Emissions as a Toxic Air Contaminant

In the early 1980's, the ARB established one of the nation's first comprehensive state air toxic programs — the California Air Toxics Program. Its goal is to protect public health by reducing air toxic emissions that pose the highest risk to Californians. This requires two separate steps. During the first step, risk assessment, the ARB identifies the highest risk substances called toxic air contaminants. In the second step or risk management step, the ARB and local air pollution control districts investigate and adopt measures requiring air toxics sources to minimize risk to public health.

There are approximately 200 substances on the TAC list. On August 27, 1998, the TAC was expanded to include particulate emissions from diesel-fueled engines, culminating a near-decade long scientific investigation into the health effects of exposure to the fine particles and other pollutants in diesel exhaust. Similar to the findings of the MATES II study, the ARB identification of diesel exhaust particulate matter as a surrogate for all diesel exhaust emissions, as a TAC provides another driving force for the AQMD to pursue the development of a cleaner vehicle fleet rule as a strategy to mitigate public exposure to this pollutant.

ARB's Low-Emission Vehicle Program

In adopting the LEV regulations in 1990-91, the ARB established the most stringent exhaust regulations ever for light- and medium-duty vehicles. The regulations include three primary elements — (1) tiers of exhaust emission standards for increasingly more stringent categories of low-emission vehicles, (2) a mechanism requiring each manufacturer to phase in a progressively cleaner mix of vehicles from year to year, and (3) a requirement that a specified percentage of passenger cars and lighter light-duty trucks be zero-emission vehicles (ZEVs).

Since the beginning of ARB's LEV rule implementation in 1994, light- and medium-duty vehicle original equipment manufacturers (OEM) have produced an array of vehicle models with varying types of control technologies that reduce vehicle emissions in varying degrees. The dominant emission control strategy has been the development of sophisticated engine control systems (computerized control of the vehicle fuel system) in combination with extremely efficient aftertreatment hardware (advanced catalytic converters) as applied towards gasoline vehicles. In addition, these control technologies have also been employed on a number of commercially available alternative fuel vehicles powered by natural gas, M85 (a mixture of 85 percent methanol and 15 percent gasoline), and liquefied petroleum gas. As mentioned above, OEMs have been required, and in some cases have voluntarily chosen, to produce for sale limited numbers of dedicated electric vehicles and hybrid electric vehicles. One of the objectives of the proposed rule is to require the purchase of the cleanest vehicles for fleets, taking advantage of the varying levels of emission control relative to the wide array of vehicles being produced for compliance with the LEV regulation. It is noteworthy that, other than zero-emission vehicles, the cleanest internal combustion engine light-duty vehicle commercially available today is the year 2000 model year Honda Civic, powered by compressed natural gas. This vehicle is 90 percent cleaner than the average new 2000 model year vehicle, and it is certified as a super-ultra-low-emission vehicle (SULEV), according to ARB's LEV regulations.

Attachment 5 tabulates exhaust standards for nonmethane organic gases (NMOG), carbon monoxide (CO), and oxides of nitrogen NOx emission standards specified in the ARB LEV Regulations, where LEV-I applies to model years 1998 through 2003 and LEV-II applies to subsequent model years, beginning with 2004. These emission standards apply to the vehicle manufacturers. The emission standards illustrate the relative magnitude of exhaust emissions for the various categories of low-emission vehicles, and form the basis for emission reductions that are expected on a per-vehicle basis as a result of PR1191.

U.S Energy Policy Act Requirements

The U.S. Energy Policy Act (EPAct) is administered by the U.S. Department of Energy (DOE) and is designed to reduce dependence on foreign oil supplies and increase the use of alternative fuel vehicles. By passing this legislation, Congress recognized that fleets are uniquely suited for introducing new fuel and vehicle technologies. According to U.S. DOE, fleet vehicles typically accumulate higher mileage than private vehicles and are replaced more frequently. Basically, beginning in 1997, federal, state, and alternative-fuel-provider fleet operators must acquire new alternative fuel vehicles as a percentage of new vehicle acquisitions. This percentage starts out at 10 to 33 percent depending on fleet type, and gradually increases over time. By the year 2002, EPAct alternative fuel vehicle purchase requirement is 75 percent for federal and state fleets, and 90 percent for fuel provider fleets. Municipal and private fleet operator participation in EPAct is currently in question; U.S. DOE is due to rule on this issue by April 2000. If these fleets are ultimately included in EPAct, alternative fuel vehicle purchase requirements for these fleet operators will probably begin in 2002.

Basically, EPAct requirements are limited to fleets with 50 or more light- and medium-duty vehicles (up to 8,500 lb. GVWR), operating at least 20 of these vehicles in cities that had a population of at least 250,000 at the time of the 1980 U.S. census. In general, urbanized areas with the AQMD meet this criterion and are therefore subject to EPAct requirements. Examples of alternative fuels that can be used to power fleet vehicles under EPAct include methanol, ethanol, natural gas, liquefied petroleum gas, hydrogen, and electricity.

EPAct set a regulatory precedent by requiring large-scale purchases of alternative fuel vehicles by government and certain private fleets. The regulations have been in place since 1992, and thus EPAct-affected fleets, which constitute a significant proportion of vehicle fleets within the scope of the AQMD's proposed fleet rule, have been preparing for and have been gaining significant experience in the operation of light- and medium-duty alternative fuel vehicles. In essence, the AQMD's proposed fleet rule builds upon federally mandated alternative fuel fleet requirements that have been in place for nearly a decade.

Since EPAct requires certain public fleets and some private fleets to purchase alternative fuel vehicles, Proposed Rule 1191 has different requirements on public fleets that will allow purchases of cleaner gasoline powered vehicles or alternative fuel vehicles and would not be considered duplicative within the meaning of Health and Safety Code Section 40727.2

GENERAL DESCRIPTION AND EXPLANATION OF RULE REQUIREMENTS

Applicability

The rule applies to public fleets operating in the AQMD with 15 or more on-road light- and medium-duty vehicles. These fleets include all government/public fleets operating within the boundaries of the AQMD. Examples of these fleets include those operated by federal, state, county, city, special district, regional agency, airports, and joint-power authorities.

Many government entities have begun converting to alternative fuels or to other clean vehicles in their fleets, both as a result of mandates and as a result of incentives programs. Cities and counties in the South Coast are granted AB2766 subvention funds specifically to reduce motor vehicle air pollution. Government fleets are thus well-suited for early implementation of clean vehicle requirements. It is also important for governments to play a leadership role in reducing air pollution from motor vehicles. Precedent for such an approach is in the Energy Policy Act. Public sector fleets account for about 25 percent of the total fleet population. They also tend to be in more urbanized areas where the benefits of reducing emissions will be the greatest.

Vehicle Purchase Requirements

The primary air quality objective of Proposed Rule 1191 is to reduce air emissions and toxic risk levels within the AQMD. For light- and medium-duty gasoline vehicles, VOCs including benzene and 1,3-butadiene are the primary hydrocarbon compounds that have significant contributions to the overall toxic risk level. For medium-duty vehicles operating on diesel engines, particulate emissions primarily contribute to overall toxic risk levels.

The rule requires the purchase of clean low-emission vehicles by public agencies operating 15 or more light- and medium-duty vehicles. Under California Health and Safety Code Section 40919, certain nonattainment air districts (those that are designated serious or worse for ozone) may adopt measures requiring fleets to use a significant number of low-emission vehicles. California Health and Safety Code Section 39037.05 defines a low emission vehicle as "a motor vehicle which has been certified by the state board [ARB] to meet all applicable emission standards and which meets at least one of the following additional requirements:

(a) Is capable of operating on methanol, as determined by the state board, and will have an adverse impact on ambient ozone air quality not greater than a vehicle which meets the requirements of subdivision (c).
(b) Is capable of operating on any available fuel other than gasoline or diesel and, in the determination of the state board, will have an adverse impact on ambient ozone air quality not greater than a vehicle operating on methanol.
(c) Operates exclusively on gasoline and is certified to meet a hydrocarbon exhaust emission standard which is at least twice as stringent as otherwise applicable to gasoline vehicles of the same year and class."

Given the specific criteria set forth in Health and Safety Code Section 39037.05, diesel-fueled vehicles would not be considered "low-emission vehicles." It is proposed that compliant light- and medium-duty vehicles be powered by any fuel-type engine that meets the definition of LEV as provided in Section 39037.05. A qualifying purchase may be a new vehicle or a used vehicle that meets these requirements. For vehicles that are exclusively gasoline-powered, the vehicle must meet the requirements of Section 39037.05(c).

To meet the requirements of Section 39037.05, staff is proposing that beginning July 1, 2001, public fleets be required to purchase only vehicles meeting ARB certification of low-emission vehicles or cleaner during the initial first years of rule implementation. As mentioned previously, ARB will require vehicle manufacturers to sell vehicles meeting various tiers of exhaust emission standards for hydrocarbon, carbon monoxide, and oxides of nitrogen. In order of increasing stringency, ARB vehicle emission categories include: Tier

1, transitional low-emission, low-emission, ultra-low emission, super-ultra-low-emission, and zero-emission vehicles. Over time, the ARB low-emission vehicle regulation will require the mix of vehicles sold by manufacturers to become cleaner as a result of compliance with fleet average hydrocarbon standards. By requiring the acquisition of ARB-certified low-emission vehicles or cleaner when public fleets add or replace vehicles, the purchase of higher polluting Tier 1 and transitional-low-emission vehicles will be prevented. Taking into account the emission standards for each individual vehicle emission category as well as the fleet average hydrocarbon level, staff believes that by restricting fleet acquisitions to ARB certified low-emission vehicles or cleaner, AQMD is implementing Section 39037.05(c) of the Health and Safety Code. Relative to vehicle purchases, any passenger car or light-duty vehicle certified as an LEV or better may be purchased. The low-emission vehicle standard has been in place since 1998.

After the initial first years of rule implementation, as noted previously, public fleet acquisitions of light- and medium-duty vehicles will be restricted to vehicles meeting ARB certifications of ultra-low-emission vehicles or cleaner. This will be triggered when at least 50 percent of the vehicle sales of light- and medium-duty vehicles, determined separately for each of these categories, are ARB certified as ultra-low-emission vehicle or cleaner. This is projected to occur around 2004, using ARB vehicle sales projections. Staff believes that this requirement is also consistent with Section 39037.05(c) of the Health and Safety Code since the highest emission standards (namely Tier 1 and transitional low-emission vehicle or TLEV) will no longer be allowed under the ARB LEV program.

In order to implement these fleet acquisition requirements, the AQMD will publish a list of vehicle/engine models that meet ARB certifications of low-emission vehicle and cleaner, or ultra-low-emission vehicle or cleaner. It is intended that fleet managers will simply choose vehicles from this list for rule compliance purposes when vehicles need to be acquired for their vehicle fleet. Since manufacturers certify their vehicles with ARB throughout the year, the list of compliant vehicles will be updated every six months. Attachment 3 lists model year 2000 vehicles that would qualify for the proposed rule, if it were in effect today. In addition, ARB-certified vehicles not on the list would also qualify.

MODEL AVAILABILITY

AQMD staff believes that, based on ARB projections of the numbers of low-emission vehicles that will be available now and in the future as well as the proposed July 1 2001 implementation date of the rule, there should generally be sufficient model availability for compliance with rule requirements in the light- and medium-duty vehicle categories. The July 1, 2001 implementation date was specifically chosen to be consistent with the fiscal year budgeting process of most government agencies. For certain types of specialty medium-duty vehicles (engine-certified), ARB's LEV regulation may not require manufacturers to sell sufficient amounts of vehicles or models prior to this date to satisfy fleet operational needs and still comply with PR1191 purchase requirements. However, beginning with model year 2002, ARB's LEV regulation specifies that manufacturers must sell 100 percent of their engines to meet the LEV emission level. With the July 1, 2001 implementation date, procurement of engine certified specialty vehicles in the medium-duty category will not be a significant issue, since manufacturers will be offering model year 2002 compliant engines beginning in the later part of 2001.

Notwithstanding the above discussion, there still may be a model availability issue since fleet operators are indicating that there are potentially many specialty diesel-powered medium-duty vehicles where the availability of corresponding gasoline or alternative fuel vehicles is uncertain. (Note that PR1191 only allows compliant gasoline and alternative-fueled vehicles to be purchased.) To address this issue, non-compliant vehicle purchases will be allowed if vehicle fleets have sufficient prior purchases (before Proposed Rule 1191 implementation) of alternative-fueled ultra-low-emission vehicles or cleaner, or the fleet operator purchases sufficient numbers of alternative-fueled super-ultra-low-emission vehicles or cleaner, according to a specific formula. This provision also serves the dual purpose of recognizing fleets that have taken a leadership role by purchasing clean vehicles prior to Proposed Rule 1191 implementation. Despite the alternative fuel purchase crediting mechanism, some public fleets may not be able to use an alternative fuel light-duty vehicle so that a non-compliant medium-duty vehicle could be purchased. As such, PR 1191 will allow for a purchase of non-compliant medium-duty vehicle if there is a demonstration of such a need.

A comment was made that some entities purchase used vehicles and convert these vehicles to operate on alternative fuels with CARB certified conversion kits. In recognition of such activities, PR 1191 would allow for such purchases if the conversion was to meet the "low-emission vehicle" standard or cleaner. At the time that ULEV purchases would be required, conversion kits used on used vehicles shall meet ULEV emission standards.

Exemptions

With regard to vehicle acquisitions that are exempted from rule requirements, the proposed rule contains language that is intended to allow fleets to continue purchasing current gasoline or diesel powered vehicles for emergency vehicle applications. Emergency vehicles are basically vehicles used in situations where threats to life or property exist. At this time, staff is proposing to exempt the types of emergency vehicles as defined in Vehicle Code Section 165 that are equipped with at least one steady burning red warning lamp as permitted by Vehicle Code Sections 25269 and 27002 to be considered emergency vehicles for PR1191 exemption purposes. In addition, the AQMD would consider undercover and police surveillance vehicles to qualify as emergency vehicles; however, vehicles used for the primary purpose of enforcing parking ordinances or used for personnel transportation would be subject to the proposed rule.

Additional categories of vehicles exempted from the proposed rule include heavy-duty vehicles, manufacturer evaluation/test vehicles, and vehicles acquired as a result of signed contract agreements as of the date of adoption of the proposed rule. PR1191 is also not intended to be applicable to private vehicle fleets that are operating on behalf of a public agency in providing contract services to the public agency. Examples of these companies that may use their own fleet vehicles to provide the contracted service(s) to the public agency include landscape service companies and office supply companies.

SUMMARY OF DATA COLLECTION/ANALYSIS OF FLEET CHARACTERISTICS

Attachment 2 summarizes vehicle population data of public fleets potentially affected by the proposed rule. These data include information solicited from hundreds of affected fleets operating within the AQMD involving a variety of applications. These fleets include special district (e.g., utility) and municipal fleets, with functions regarding water supply/runoff, electric power supply, public works, and other city maintenance departments. There are also many state and federal fleets, including local postal delivery and Caltrans fleets. In addition, airports operate their own fleets for a variety of functions.

The data have been compiled using various sources of information, including direct surveying of public fleets, existing reports which include information on fleet vehicle population characteristics, associations/organizations that represent public fleets, and public agencies including the California Department of Motor Vehicles, California Energy Commission, ARB, U.S. EPA Region IX, and the U.S. Department of Energy.

COST ANALYSIS

Fleet Cost Impacts

The cost impacts of the proposed rule are expected to be minimal since the cleaner gasoline vehicles are promoted by the rule. Staff has evaluated the cost of wide variety of current vehicle models that are ARB certified to the low-emission vehicle level or cleaner and has determined that this cost range basically coincides with current vehicle costs. In addition, proposed rule provisions as previously discussed to address model unavailability of compliant vehicles for specialty diesel-powered medium-duty vehicle applications will also minimize cost impacts associated with rule implementation. Staff is working on a funding mechanism document, which will be available separately, and it will provide additional information on funding sources and needs.

Incremental Cost Analysis

Health and Safety Code Section 40920.6 requires an assessment of incremental cost effectiveness for proposed regulations relative to ozone, CO, SOx, NOx, and their precursors. Incremental cost effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options that can achieve the same emission reduction goal of a regulation. Compared to Proposed Rule 1191, incremental cost effectiveness of requiring alternative fuel vehicles for the first three compliance years is $133,900 per ton of combined pollutants (VOC, NOx, and one-seventh of CO) assuming no funding. An approximate 85 CNG refueling stations would be required for the alternative fuel light- and medium-duty vehicles (19,812 and 6,246, respectively).

Funding Programs

For those public fleets that pursue the acquisition of AFVs, financing is a central issue in any effort to acquire and use these vehicles. There are a wide variety of incentives offered to encourage the expanded use of AFVs. Federal, state, and local monies/incentives are available that could potentially be used to offset costs incurred by rule compliance. Generally, incentives are available to fund differential (premium) capital costs, as well as subsidizing the capital cost of AFV refueling equipment or facilities, which would lead to significantly lower fuel cost. It should also be noted that CNG or LPG refueling equipment can potentially be installed at no capital cost by means of a long-term contract arranged between the fleet and the alternative-fuel provider. Private funds and in-kind services may also be available that would result in lower overall fuel costs.

A list of funding sources, including identification of public or private sources, purpose of funds, limitations, contact person, and relevant Internet sites follows. It is a compiled from Internet Web sites and published material based on staff research and input received from personal contacts from relevant sources in government and private organizations. The purpose in providing the information is to facilitate use of the funds for Proposed Rule 1191 compliance.

Federal Incentives and Regulations

U.S. Department of Energy (DOE) 1000 Independence Avenue, SW, Washington, DC 20585. General telephone number: (202) 586-5000, fax (202) 586-5049.

Energy Policy Act of 1992 (EPAct). Congress passed EPAct, or Public Law 102-486, on October 24, 1992, to accelerate the use of alternative fuels in the transportation sector. With EPAct in place, DOE's primary goals are to decrease the nation's dependence on foreign oil and increase energy security through the use of domestically produced alternative fuels. DOE's overall mission is to replace 10% of petroleum-based motor fuels by the year 2000 and 30% by the year 2010. EPAct mandates **federal, state, and alternative fuel provider fleets** to purchase AFVs.

Federal fleets must follow guidelines established in Executive Order 12844 (April 21, 1993) and subsequently reinforced by Executive Order 13031 (December 13, 1996). An AFV guide for federal fleets is located at http://www.whitehouse.gov/WH/EOP/OMB/html/mheda/afvguide.html. State and fuel provider fleets must meet the requirements outlined in the Alternative Fuel Transportation Program, Final Rule [10CFR Part 490], located at the Web site: http://www.afdc.doe.gov/ottdocs/fprovrule.pdf.

Clean Cities Program. DOE's Clean Cities Program coordinates voluntary efforts between locally based government and industry to **accelerate the use of alternative fuels and expand AFV refueling infrastructure.** For more information, please see the Clean Cities Section of this guide on pages 1-13.

State and Alternative Fuel Provider Fleets AFV Credits Program. Congress created the credits program to encourage fleets or covered fleet operators to use AFVs early and aggressively. Credits are allocated to state fleet operators and covered Alternative Fuel Provider fleet operators when AFVs are acquired over and above the amount required, or earlier than expected. Since credits can be traded and sold, fleets have the flexibility to acquire AFVs on the most cost-effective schedule without impeding the achievement of

EPAct national oil displacement goals. Please see the AFV Acquisition and Credits Web site for more information on the credits program at www.ott.doe.gov/credits, or call the National Alternative Fuels Hotline at (800) 423-1DOE or (800) 423-1363 or email at hotline@afdc.nrel.gov.

ANOPR. DOE published an advance notice of proposed rulemaking (ANOPR) for **AFV acquisition requirements for private and local government fleets** on Friday, April 17, 1998. Programs potentially created by the ANOPR would help ensure that DOE meets its energy replacement goals. Public feedback will be incorporated into the rulemaking, which was scheduled to be finalized by April 1, 2000. A copy of the ANOPR is available on the *Federal Register Web site* at http://www.access.gpo.gov/su_docs/aces/aces140.html or directly from the Web site at http://www.ott.doe.gov/pdfs/anopr.pdf.

State Energy Program. States will promote the conservation of energy, reduce the rate of growth of energy demand, and reduce dependence on imported oil through the development and implementation of a comprehensive State Energy Program. The State Energy Program is the result of the consolidation of two formula grant programs - the State Energy Conservation Program and the Institutional Conservation Program. The State Energy Program includes provisions for competitively awarded financial assistance for a number of state-oriented special project activities, including alternative fuels. In addition to funding for special project activities, states may choose to allocate base formula funds to program activities to increase transportation efficiency, including programs to accelerate the use of alternative transportation fuels for government vehicles. For more information, contact your State Energy Office or the DOE Regional Office for your region, listed under the Points of Contact section for your state, or contact Ron Santoro at DOE Headquarters at (202) 586-8296.

AQMD Incentives

Motor Vehicle Registration Fees (AB 2766 funding)

Mobile Source Air Pollution Reduction Review Committee's **(MSRC)** Discretionary Funds. This annual work program, that typically includes an HDV incentive program, pays the incremental cost for the purchase of new OEM alternative-fuel engines and vehicles. For LDVs the incentives for dedicated alternative-fuel OEM vehicles are based on emissions certification: $5,000 for ZEVs, $3,000 for ULEVs, $1,000 for LEVs. Contracts are with OEMs; consumer price includes incentive. The current program sunsets January 1, 2001.

Thirty percent of the funds collected each year from a $4 surcharge on vehicle registration created by **AB 2766** (Sher) goes to the Mobile Source Air Pollution Reduction Review Committee **(MSRC)** to be used to implement programs to reduce mobile source emissions. Managers of the program have apportioned the available funding into several technology-specific categories, including: heavy-duty vehicles; zero-emission/ultra-low emission vehicles; research, development and demonstration of advanced low-emission transportation technologies; transportation control measures; and intelligent transportation systems.

The AQMD contact is Ray Gorski (MSRC Technical Advisor) at 909-396-2479.

Local Government Subvention Funds

Forty percent of the **AB 2766** funds collected go to cities and counties based on a pro-rated share of population and must be used to reduce mobile source emissions. This totals about $18 million per year. Cities can use their funds to purchase alternative-fuel vehicles or

engines. While these funds are used primarily by municipalities for their own projects, these monies can be allocated by the city for public-private partnerships to pursue AFV and EV projects. Funds not expended carry over from year to year.

The AQMD staff contacts are Larry Rhinehart (AQMD) at 909-396-3780 and Oscar Abarca (AQMD) at 909-396-3242.

Utilities/Private Incentives

Ford Motor Company is offering a $2,000 incentive on its dedicated F-Series NGVs and dedicated and bi-fuel Econoline NGVs. Incentives for the Crown Victoria NGV range from $1,500 to $2,025 depending on the purchase of Ford's Extended Range Package. Other incentives include $1,500 for the bi-fuel propane F-Series pickup and bi-fuel propane Econoline Van, and $1,000 for the Taurus Flexible Fuel Vehicle (FFV). For more information on pricing and incentives for fleets, contact Ford at 877-ALT-FUEL or at http://www.fleet.ford.com.

EMISSION BENEFITS

The goal of the proposed fleet rule is to generate emission benefits beyond or surplus to existing and proposed on-road mobile source rules from ARB and U.S. EPA. These emission benefits are expected to consist of reduced toxic exposure to certain types of chemical species, including but not limited to diesel particulate matter, 1,3 butadiene, benzene, and carbonyls (formaldehyde and acetaldehyde). Emission benefits may also include reduced generation of criteria pollutants including hydrocarbon, carbon monoxide, and oxides of nitrogen. Since the release of the preliminary draft report, AQMD staff received more detailed information on the vehicle population for many public fleets. This information indicated that the original public fleet vehicle population estimate was somewhat higher than actual. Thus, the current emission benefits estimated are somewhat lower than those estimated in the preliminary draft report. The emission benefits are estimated for the year 2010 to be as follows:

2010 EMISSION BENEFITS (t/yr)		
Hydrocarbons	**Carbon Monoxide**	**Oxides of Nitrogen**
6.2	252	1.45

The proposed fleet rule is specifically based on achieving emission reductions beyond the ARB Low Emission Vehicle regulation. For light- and medium-duty vehicles, ARB Low Emission Vehicle (LEV I/II) regulations basically require manufacturers to sell vehicles certified to various emission-based categories, with a specific set of NMOG (basically hydrocarbon), carbon monoxide (CO), and oxides of nitrogen (NOx) emission standards assigned to each category. These categories, in descending order of emissions, are Tier 1, transitional low-emission, low-emission (LEV), ultra-low-emission (ULEV), super-ultra-low-emission (SULEV), and zero-emission vehicles (ZEV). The ARB LEV I/II regulations achieve emission reductions by requiring manufacturers to sell progressively cleaner mixes of vehicles over time.

For passenger cars and light-duty trucks, manufacturers sell a specific mix of vehicles certified to the various categories of low-emission vehicles to ensure compliance with a fleet-average NMOG emission level. Emission reductions are achieved over time by the gradual reduction of this fleet average NMOG standard. The fleet-average NMOG emission level for passenger cars, for example, is specified at 0.07 g/mi for the 2001 model year. This level is reduced annually, lowering to 0.035 g/mi for the 2010 model year. In the medium-duty vehicle category, the ARB LEV regulation achieves emission reductions by requiring all vehicles to be certified to more stringent emission categories in specified model years (i.e., LEV in 2002 and ULEV in 2004). Notwithstanding the requirement schedule, medium-duty vehicle manufacturers also have the flexibility, similar to that of light-duty vehicles, to balance the sale of higher emitting vehicle models (e.g., vehicles certified to Tier-1) with vehicles certified to more stringent emission standards (e.g., vehicles certified to ULEV).

Emission reductions of the proposed fleet rule will be the result of affected vehicle fleets purchasing a cleaner mix of vehicles than they would have otherwise purchased. Specifically, fleets are required to purchase vehicles certified to the LEV category or cleaner. Using ARB manufacturer sales projections and staff projections of low-emission vehicles to be purchased by fleets as a result of the proposed fleet rule, corresponding fleet average emission rates by pollutant can be calculated and combined with vehicle population data to estimate overall emission benefits. It should be noted that at some point in the future, which is assumed to be 2004 for emission benefit quantification purposes, the proposed rule would restrict vehicle fleet purchases to ULEV or cleaner. This more stringent requirement is triggered when the percentage of manufacturer sales of ULEV or cleaner vehicles will be 50 percent or greater. The year 2004 was chosen based on ARB manufacturer sales projections.

COMPLIANCE AUDITING AND ENFORCEMENT

PR1191 will require that affected public agencies keep sufficient records to document to document rule compliance, and that these records be maintained for a minimum of two years. The AQMD intends to audit these records at the vehicle fleet location or by requesting appropriate documents to be submitted to the AQMD for review. The specific records to be kept by vehicle manufacturers include vehicle purchase date, vehicle make, model, model year, and ARB engine family number. If a public agency is found to be in non-compliance with rule requirements, then the public agency will be subject to penalties specified in Health and Safety Code Division 26, Part 4, Chapter 4, Article 3. The AQMD also plans to develop an enforcement guideline document that will stress the implementation of corrective actions by public fleets rather than punitive monetary penalties during the initial years of rule implementation, for first time violators.

To facilitate compliance by affected public agencies and minimize AQMD enforcement actions, any procurement materials that are used to acquire vehicles by the public agency (e.g., Request for Proposals, Request for Bids, and Request for Quotations) must include language that requires only Rule 1191 compliant vehicles be supplied to the public agency. For example, the following language could be used; "Vehicles shall be certified as Low emission Vehicle (LEV), Ultra-Low-Emission Vehicle (ULEV), Super-Ultra-Low-Emission

Vehicle (SULEV), or Zero-Emission Vehicle (ZEV) by the California Air Resources Board, and shall comply with all applicable state and federal regulations."

PUBLIC COMMENTS

Comments and Responses

The following summarizes public comments and staff responses regarding the development of Proposed Rule 1191 – Clean On-Road Light- and Medium-Duty Public Fleet Vehicles. These comments were received in writing and in discussions at various meetings between staff and interested parties, including public workshops and focused working group meetings. The AQMD received comments from representatives of federal, state, and local agencies, as well as fuel suppliers, engine manufacturers, and environmentalists.

Comment 1. The proposed rule takes away a government agency choice in vehicle purchasing.

Response 1. Proposed Rule 1191 requires affected public fleets to purchase the cleanest vehicles being offered by automobile manufacturers. The stringency of the proposed takes into account the AQMD's goal of maximizing emission reductions and at the same time allowing for sufficient model availability to ensure that affected government agencies can procure vehicles that would meet their performance standards with little or no cost impact.

Comment 2. The proposed rule does not provide adequate funding for the purchase of compliant vehicles.

Response 2. From a vehicle procurement capital cost standpoint, staff has analyzed the manufacturer list prices of vehicles that would be allowed by the proposed rule, and has determined that this price range is consistent with the overall price range of vehicles being offered by vehicle manufacturers. In addition, since PR1191 essentially requires cleaner gasoline vehicles, PR1191 should not result in increased operating costs relative to current vehicle being procured by affected vehicle fleets. Therefore, staff does not believe funding availability is a significant issue relative to PR1191 implementation. In the medium-duty area, the rule allows fleets to still purchase diesel powered vehicles where there is model unavailability, as long as the fleets use equivalent compliance methods specified in the rule. Also, if a fleet cannot use equivalent compliance methods or a complying vehicle is not available, an exemption is allowed. This rule flexibility should minimize any increased costs.

Comment 3. Model availability for the medium-duty vehicle sector may be problematic since PR1191 would disallow the purchase of diesel powered vehicles, and many specialty vehicles normally purchased by public fleets are powered with diesel engines.

Response 3. Proposed Rule 1191 contains provisions that allow the purchase of non-compliant vehicles under specific circumstances. First, if a fleet has sufficient prior purchases of alternative-fueled vehicles certified to the ULEV emission category or cleaner, or if a fleet purchases alternative-fueled vehicles in sufficient quantities that are certified to the SULEV emission category or cleaner, then non-compliant vehicle purchases are allowed. Secondly, provisions are provided that would allow non-compliant vehicles without equivalency when a compliant vehicle is unavailable.

Comment 4. PR1191 should recognize the proactive efforts that public fleets have implemented to purchase clean alternative-fueled vehicles in recent years, and PR1191 should reflect this in providing compliance credit to these fleets.

Response 4. As mentioned in the response to Comment 3, PR1191 contains a provision to allow for the purchase of non-compliant vehicles provided that the fleet has purchases sufficient quantities of alternative fueled vehicles that are certified to ULEV emissions level or cleaner. Staff believes that this adequately recognizes the leadership role that specific public fleets have demonstrated to advance clean fuel vehicle technologies in their fleets.

Comment 5. The AQMD needs to provide a mechanism to allow for the efficient dissemination of information regarding the list of vehicles that public fleets may purchase for compliance with PR1191.

Response 5. The AQMD plans to post a list of compliant vehicles on its Internet Site (www.aqmd.gov) and request that ARB provide update vehicle certification information to AQMD staff to allow for semi-annual updates of this list.

Comment 6. PR1191 should expand the applicability of the emergency vehicle exemption since it only applies to vehicles that are exclusively used to respond to emergency situations (where threats to life or property exist), since many emergency vehicles are also used in non-emergency situations are part of their normal course of operation.

Response 6. The AQMD is revising the emergency vehicle exemption provision to allow for emergency vehicles as defined in Vehicle Code Section 165 that are equipped with at least one steady burning red warning lamp as permitted by Vehicle Code Sections 25269 and 27002 to be considered emergency vehicles for PR1191 exemption purposes. The intent of this revision is to incrementally expand the applicability of this emergency exemption provision to ensure that vehicles that are truly used in emergency situations are included within the scope of this exemption.

Comment 7. The penalties associated with noncompliance with PR1191 are not clear.

Response 7. The AQMD intends to enforce PR1191 using its enforcement authority as specified in Health and Safety Code Division 26, Part4, Chapter 4, Article 3. The AQMD also plans to follow an enforcement guideline document that will stress the implementation of corrective actions by public fleets rather than punitive monetary penalties for first time violators during the initial years of rule implementation.

Comment 8. It is not clear why the PR1191 focuses on Public Fleets.

Response 8. Based on fleet vehicle population data, the public sector fleets represent about 25 percent of the total fleet population. In addition, public fleet vehicles tend to operate in highly urbanized areas where the benefits of clean vehicle technologies will be maximized. Finally, EPACT (established in 1992) set a precedent for applying fleet requirements initially to government agency fleets.

Comment 9. PR1191 should be clarified regarding the applicability of the rule to private companies that utilize their own private fleet vehicles to fulfill the contract for services between a public agency and that company.

Response 9. PR1191 is not intended to be applicable to private vehicle fleets that are operating on behalf of the city as a result of a contract between the company that owns/operates the vehicle fleet and the city. Examples of these companies that may use their own fleet vehicles to provide the contracted service(s) to the city include landscape service companies and office supply companies.

Comment 10. PR1191 does not address the acquisition of used vehicles by affected public agencies.

Response 10. The AQMD believes that PR1191 would not preclude the acquisition of used vehicles by affected public agencies, provided that these vehicles are certified to a LEV emission certification level or cleaner. A variety of LEV certified vehicles are available back to the 1998 model year. The rule now allows used vehicles to be converted with specified CARB certified conversion kits.

Comment 11. AQMD's legal authority to regulate fleets may be preempted by the Clean Air Act.

Response 11. PR1191 is not a rule setting motor vehicle emission standards as contemplated by the Clean Air Act's preemption provision, but is a requirement that fleets purchase the cleaner of available vehicles. Staff

believes that, such fleet requirements are consistent with the Clean Air Act.

Comment 12. AQMD does not have the legal authority to allow affected fleets to use diesel vehicles and still comply with the rule.

Response 12. The AQMD has the authority to allow alternative equivalent methods of compliance as it has in many rules. Even without this language, staff believes the AQMD has the inherent authority to allow exemptions where there is a rational basis for them. In addition, California Health and Safety Code Section 40447.5 provides that the AQMD can require fleets "to purchase vehicles which are capable of operating on methanol or other equivalently clean burning alternative fuel and to require that these vehicles be operated, to the maximum extent feasible, on the alternative fuel." The use of the term "maximum extent feasible" allows alternative methods of compliance. In addition to Section 40447.5, Health and Safety Code Section 40919, allows the AQMD to require fleets to use a "significant number of low-emission vehicles," but does not require all vehicles to be low-emission vehicles.

Comment 13. Requiring low-emission vehicles or cleaner does not provide air quality benefits.

Response 13. The ARB LEV regulations allow vehicle manufacturers to produce vehicles that emit at higher levels than low-emission vehicles, including vehicles certified to Tier 1 and transitional-low-emission vehicle standards, through the year 2002. To the extent that the proposed rule limits the purchase of these vehicles, there will be an emission benefit from the LEV or cleaner purchase requirement.

Comment 14. The proposed rule should not allow compliance credit for past purchases of ultra-low-emission vehicles (ULEVS).

Response 14. The proposed rule allows compliance credit for fleet operator purchase of alternative fueled ULEVs, based on AQMD staff belief that affected fleets should be given limit compliance credit for past proactive efforts to utilize clean vehicle technology prior to rule implementation.

Comment 15. The ULEV or cleaner purchase requirement should be implemented when corresponding manufacturer sales constitute 20 percent rather than 50 percent of vehicle sales.

Response 15. Based on model availability concerns in terms of the wide variety of vehicle applications used by public fleet operators, AQMD staff believes that the 50 percent sales criterion is necessary to ensure adequate ULEV model availability. Subsequent to rule implementation, AQMD staff intends to monitor ULEV model availability and may propose rule

language modifications in the same vein as the comment if model availability can be assured.

Comment 16. Private vehicle fleets should be included within the scope of the proposed rule.

Response 16. AQMD staff intends to monitor the implementation of the proposed rule, and if it is successful, future rules may be proposed to require clean vehicles purchases in private fleets.

Comment 17. Alternative fuel/low emission vehicles are not available at a relative incremental cost.

Response 17. Since the proposed rule allows for the use of gasoline vehicles that are certified at LEV or cleaner, or ULEV or cleaner if manufacturer sales constitute at least 50 percent of these vehicles, then there should not be a significant cost impact for affected fleets. For certain specialty medium-duty vehicles, there may not be a suitable gasoline vehicle commercially available; however, this should be addressed by the provision of the rule allowing compliance credit for qualifying past or current purchases of ULEVs and cleaner. If affected vehicle fleets cannot take advantage of this compliance credit provision, then the proposed rule allows a model unavailability exemption.

Comment 18. Fleet turnover may be adversely affected by the proposed fleet rule, in that an affected fleet may opt to delay the purchase of a compliant vehicle due to higher cost.

Response 18. AQMD staff does not believe that the proposed rule will result in significant cost increases to the affected fleets. This is because the rule language allows clean gasoline vehicles to be purchased by fleets as well as additional provision that allow the purchase of non-compliant vehicles (see Response to Comment No. 14).

Comment 19. The proposed rule should be fuel neutral and compliant vehicles should be based on a methanol standard.

Response 19. For the purposes of compliance flexibility and consistency with Health and Safety Code Section 40919, the proposed rule requires that compliant alternative or gasoline powered low-emitting vehicles are purchased. Diesel powered vehicle purchases are not allowed, unless the vehicle purchase qualifies for an exemption (See Response to Comment No. 17).

Comment 20. The rule should consider operators purchasing used vehicles that are converted to run on alternative fuels using an ARB certified conversion kit.

Response 20. The most current version of PR 1191 provides language addressing this comment. This language is provided in subparagraph (e)(5) of PR 1191.

Comment 21. There is a need for greater assurance that medium-duty engine/chassis configurations be made available to operators who cannot make use of the alternative fuel purchase credit mechanism.

Response 21. The most current version of PR 1191 provides an exemption, upon demonstration, that an operator cannot purchase a compliant medium-duty vehicle. This language is provided in subparagraph (f)(8) of PR 1191.

Comment 22. The credit mechanism should be expanded to cover all vehicles certified to ULEV or cleaner, not just alternative fueled vehicles.

Response 22. The credit mechanism is provided based on comments from local governments that there should be recognition of pioneering efforts made to use alternative fuel vehicles. The credit mechanism serves as an incentive to promote the development of alternative fuel engine technology and their usage. Expanding the credit mechanism to include gasoline-fueled vehicles is not allowed in the current version of PR 1191 since this the main implementation approach of PR 1191.

Comment 23. The rationale for the vehicle crediting provision has not be explained, relative to the number of ULEVs or cleaner that allow for the purchase of a noncompliant vehicle.

Response 23. The rationale is summarized as follows. The crediting mechanism is based on three principles: simplicity, promotion of the lowest-emitting vehicle technologies, and emissions equivalency. In terms of simplicity, the fleet operator can only generate discrete units of credit -- each unit allowing the purchase of one non-compliant vehicle. In addition, there are only four specific actions listed under paragraph (e)(4) that can be used to generate these vehicle credits. The crediting mechanism promotes lowest emitting vehicle technologies by focusing on the generation of vehicle credit through the purchase of alternative-fuel vehicles that are classified by ARB as ultra-low-emission vehicles, super-ultra-low-emission vehicles, and zero-emission vehicles.

The following formula is used to calculate credits, based on 50,000 mile emission-based hydrocarbon certification* values; on a per vehicle basis

$$\text{Vehicle credit value} = \frac{\text{Emission Reduction Foregone…….}}{\text{Qualifying Vehicle Emission Reduction}}$$

Emission reduction Foregone = MDV Tier1 Std - MDV LEV Std

Qualifying Vehicle Emission Reduction = LEV Cert. Level - Qualifying Cert Level

The following two tables detail certificate values, formulas and specific rationale used in developing the vehicle credit values.

SULEV for passenger car is a 120,000 mile standard

Credit Generated Vehicle Purchases	Calculation	Ratio	Ratio Used in Rule	Rationale
MDV ZEV	$\frac{(0.4425-0.221)}{(0.221-0)}$	1	1	(1)
LDV ZEV	$\frac{(0.4425-0.221)}{(0.075-0)}$	3	1	(2)(3)
Alt. Fuel MDV ULEV	$\frac{(044255-0.221)}{(0.221-0.067)}$	1.4	1	(1)
Alt. Fuel LDVS ULEV	$\frac{(044255-0.221)}{(0.075-0.01)}$	3.4	2	(2)(3)
Alt Fuel MDV ULEV	$\frac{(0.4425-0.221)}{(0.075-0.04)}$	6.3	10	(1)(3)
Alt Fuel MDV ULEV	$\frac{(0.04425-0.221)}{(0.221-0.133)}$	2.5	3	(1)

Rational
(1) Approximate calculated value as utilized in proposed rule language
(2) Reward fleet for purchasing very low emitting vehicle
(3) Promote ZEV technology purchases

HC Certification Levels

Vehicle Category	Tier I	LEV	ULEV	SULEV	ZEV
MDV[1]	0.4425	0.221	0.133	0.067	0
PC	0.25	0.075	6.04	00.1	0

[1] MDV HC Certification levels are averaged over for MDV weight classification

SUMMARY AND DRAFT FINDINGS

Summary

Proposed Rule 1191 is part of the AQMD's strategy to attain federal and state ambient air quality standards. Long-term air quality benefits are expected from attaining and maintaining the ambient air quality standards for particulate matter, nitrogen dioxide, and ozone. Improved air quality will ultimately reduce negative public health impacts from these criteria pollutant. Moreover, Proposed Rule 1191 will reduce toxic emissions from light- and medium-duty vehicles operated in the District's populated areas.

Proposed Rule 1191 is technologically feasible and cost-effective, while reducing primarily hydrocarbon and nitrogen oxide emissions from gasoline-fueled vehicles; and the proposed rule addresses concerns raised by the public, wherever possible. Therefore, staff recommends the adoption of Proposed Rule 1191. Since Proposed Rule 1191 does not affect emissions beyond the significance level established by the District CEQA guidelines, and does not substantially limit the ability of fleets to use available vehicles, it is not a rule "significantly affecting air quality or emissions limitations."

Draft Findings Required by the California Health and Safety Code

Health and Safety Code Section 40727 requires the AQMD to adopt written findings of necessity, authority, clarity, consistency, non-duplication and reference.

Necessity - The emission reductions associated with Proposed Rule 1191 are needed for the following reasons:

a) State and federal health-based ambient air quality standards for particulate matter and ozone are regularly and significantly violated in the South Coast Air Basin. The reduction of hydrocarbon and nitrogen oxide emissions from gasoline-fueled vehicles from Proposed Rule 1191 is needed to meet federal and state air quality standards.

b) By exceeding state and federal air quality standards, the health of people within the South Coast Air Basin is impaired.

c) By exceeding state and federal air quality standards, the quality of life is reduced in the South Coast Air Basin in numerous respects.

d) The California Clean Air Act (CH&SC Section 40910 et seq.) requires that the air districts make every effort to attain federal and state ambient air quality standards as soon as practicable. Proposed Rule 1191 makes progress toward that goal. Section 40919 requires air districts to include measures in their plans to achieve the use of a significant number of low-emission vehicles in fleets.

e) About 15 percent of cancer risk from air toxics is attributed to several key gasoline components of light- and medium-duty vehicle exhaust emissions, which would be reduced by the proposed rule.

Authority - The AQMD Board obtains its authority to adopt, amend, or repeal rules and regulations from Health & Safety Code Sections 40000, 40001, 40440, 40441, 40447.5, 40463, 40702, 40725 through 40728, and 40910 through 40920.5, inclusive.

Clarity - The AQMD Board determines that Proposed Rule 1191 is written or displayed so that its meaning can be easily understood by persons directly affected by it.

Consistency - The AQMD Board determines that Proposed Rule 1191 is in harmony with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions, or regulations.

Non-Duplication - Proposed Rule 1191 does not impose the same requirements as any existing state of federal regulation and is necessary and proper to execute the powers and duties granted to, and imposed upon, the AQMD.

Reference - In adopting this proposed rule, the Board references the following statutes which the AQMD hereby implements, interprets or makes specific: H&S Code Sections 40001 (rules to achieve ambient air quality standards), 40440(a) (rules to carry out AQMP), and 40447.5(a) (rules to require fleets of 15 or more vehicles operating substantially in the AQMD to purchase vehicles powered by methanol or other equivalently clean burning alternative fuel when adding or replacing vehicles), and 40919(a)(4).

ATTACHMENT 1

PROPOSED RULE LANGUAGE

PROPOSED RULE 1191 IS PROVIDED IN AN EARLIER PART OF THE BOARD PACKAGE AND WILL BE INSERTED HERE UPON ADOPTION BY THE AQMD GOVERNING BOARD.

(1)

ATTACHMENT 2

VEHICLE POPULATION DATA

Government Agency Vehicle Population

VEHICLE FLEET CATEGORY	Total	ALL VEHICLES				LIGHT-DUTY VEHICLE							MEDIUM-DUTY VEHICLE						
	Vehicles	Gasoline	Diesel	Alt-Fuel	Unspec	Gasoline	Diesel	Meth	LPG	CNG	LNG	EV	Gasoline	Diesel	Meth	LPG	CNG	LNG	EV
Cities[1]	18,510	15,696	283	1,396	1,135	10,269	17	67	89	798		236	5,427	266	31	16	150		9
Counties[1]	9,805	2,683	69	81	6,972	2,304	29	62	1	5		13	379	40					
School Districts[2]	8,077	7,887	82	108		3,789	46		6	12		24	4,098	36		32	34		
Private Bus Contractors to Schools	38	37	1			9							28	1					
Universities/Colleges[1]	1,534	814	4	51	665	515		6	4	20		13	299	4			8		
Transit Agencies[2]	1,082	1,059	0	23		1,033				4		2	26				17		
Special Districts[2] (Air, Water, Irrigation, Sanitation)	2,580	2,372	71	137		1,294	3		29	44		33	1,078	68		15	16		
State Agencies[2]	2,144	1,739	350	55		1,439		49					300	350		5	1		
Federal Agencies[3]	16,521	15,183	0	1,338		15,002		316		987		35	181						
Public Fleets Servicing Airports[4]	512	274	0	238		254			16	191		22	20			9			
TOTAL	60,803	47,744	860	3,427	8772	35,908	95	500	145	2,061		378	11,836	765	31	77	226		9

[1] Data based on AQMD staff survey; and Municipal EV Fleets: 1996-1998, Southern California Edison, March 1999; and Interstate Clean Transportation Corridor, Phase II, Gladstein & Associates, November 1998.

[2] Data based on AQMD staff survey.

[3] Based on input from US EPA Region IX staff.

[4] Los Angeles and Ontario airports.

ATTACHMENT 3

ARB-CERTIFIED ENGINES/VEHICLES QUALIFYING UNDER PROPOSED RULE 1191(e)

List of Certified Engines Qualifying Under Paragraph(e)

MODEL YEAR 2000 - PASSENGER CARS

Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
AUDI	Gaso	DED	YADXV02.8334	A4/A4 AVANT, A4, A4 AVANT, PASSAT, PASSAT VARIANT
AUDI	Gaso	DED	YADXV01.8332	A4, A4 QUATTRO, PASSAT, PASSAT WAGON, A4 WAGON QUATTRO
BMW	Gaso	DED	YBMXV02.8LEV	528i, 528iA
BMW	Gaso	DED	YBMXV04.4LEV	740i, 740i Sport, 740iL, 740iL Protection
BMW	Gaso	DED	YBMXV05.4LEV	750iL, 750iL PROTECTION
CHRYSLER/DODGE	Gaso	DED	YCRXV0148V30	BREEZE, CIRRUS, STRATUS
DODGE/PLYMOUTH	Gaso	DED	YCRXV0122V30	NEON
CHRYSLER/DODGE	Gaso	DED	YCRXV0165V30	CONCORDE, INTREPID
DODGE/PLYMOUTH	Gaso	DED	YCRXV0122V31	BREEZE, STRATUS
CHRYSLER/DODGE	Gaso	DED	YCRXV0215V30	300 M, CONDORDE LXI, INTREPID, INTREPID R/T, LHS
DAEWOO	Gaso	DED	XDWXV02.2D02	NUBIRA 2.0-NB, HB, WGN
DAEWOO	Gaso	DED	XDWXV01.6D02	LANOS 1.6-HB AND NB
DAEWOO	Gaso	DED	XDWXV01.6D02	LANOS 1.6-NB
FORD	Gaso	FF	YFMXV03.0VF9	TAURUS FFV ETHANOL
LINCOLN	Gaso	DED	YFMXV03.9VF5	LS8
FORD	Gaso	DED	YFMXV03.0VF2	LINCOLN LS6
FORD, MERCURY	Gaso	DED	YFMXV03.0VF5	TAURUS, TAURUS WAGON, SABLE, SABLE WAGON
FORD	Gaso	DED	YFMXV02.0VF5	ESCORT ZX2, ESCORT S/R
FORD, MERCURY	Gaso	DED	YFMXV03.0VF3	TAURUS, TAURUS WAGON, SABLE, SABLE WAGON
FORD	Gaso	DED	YFMXV03.8VF5	MUSTANG
FORD	Gaso	DED	YFMXV02.0VF3	FOCUS SDN/WGN
FORD, MERCURY, LINCOLN	Gaso	DED	YFMXV04.6VFR	CROWN VICTORIA, GRAND MARQUIS, TOWN CAR
FORD	Gaso	DED	YFMXV02.0VF2	FOCUS SDN/WGN
SUBARU	Gaso	DED	YFJXV02.5JEH	LEGACY, FORESTER, IMPREZA
CHERVOLET, OLDSMOBILE, PONTIAC	Gaso	DED	YGMXV03.8043	MALIBU
SATURN	Gaso	DED	YGMXV01.9002	SC/SL/SW
CADILLAC	Gaso	DED	YGMXV03.0061	CATERA

DED = Dedicated; DF = Dual Fuel; FF = Flexible Fuel; CNG = Compressed Natural Gas; Gaso = Gasoline.

MODEL YEAR 2000 - PASSENGER CARS

Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
CHEVROLET	Gaso	DED	YGMXV05.7084	CORVETTE (A4,M6)
OLDSMOBILE	Gaso	DED	YGMXV04.6066	AURORA
CHEVROLET,PONTIAC	Gaso	DED	YGMXV05.7083	CAMARO, FIREBIRD/TRANS AM
OLDSMOBILE	Gaso	DED	YGMXV03.5064	AURORA
CHEVROLET, PONTIAC	Gaso	DED	YGMXV02.4022	SUNFIRE(AUTO), CAVALIER(AUTO)
HONDA	Gaso	DED	YHNXV02.0MA3	S2000
HONDA	Gaso	DED	YHNXV01.6CA3	CIVIC COUPE DX/SE, CIVIC SEDAN DX/LX/EX/DX-V, CIVIC HB CX/DX
HONDA	Gaso	DED	YHNXV03.0FA3	ACCORD EX V6 COUPE/SEDAN, LX V6 COUPE/SEDAN
ACURA	Gaso	DED	YHNXV03.2AA3	NSX (AUTO)
HONDA	Gaso	DED	YHNXV02.3PA3	ACCORD DX SEDAN
HONDA	Gaso	DED	YHNXV01.6TA3	CIVIC COUPE EX / Si, CIVIC SEDAN EX, 1.6EL RS/TS, 1.6EL RS/TS/XS
HONDA	Gaso	DED	YHNXV02.3PF2	ACCORD LX/EX COUPE, ACCORD LX/EX SEDAN
HONDA	Gaso	DED	YHNXV03.5YA3	3.5RL
HYUNDAI	Gaso	DED	YHYXV01.5G3S	ACCENT
HUYNDAI	Gaso	DED	YHYXV02.0G3S	ELANTRA SEDAN/ WAGON, TRIBURON COUPE
CHEVROLET	Gaso	DF	YTJXV02.2022	CAVALIER
CHEVROLET	CNG	DF	YTJXV02.2022	CAVALIER
JAGUAR	Gaso	DED	YJCXV04.0BN4	4-DR SEDANS, 2-DR SPORTS, CONVERTIBLE
KIA	Gaso	DED	YKMXV01.8A03	SEPHIA
MAZDA	Gaso	DED	YTKXV01.8VFM	PROTÉGÉ
MAZDA	Gaso	DED	YTKXV01.8VFN	MX-5 MIATA
MERCEDES-BENZ	Gaso	DED	YMBXV05.0GNB	S430, E430, SL500, S500
MERCEDES-BENZ	Gaso	DED	YMBXV05.5GNB	E55 AMG
MERCEDES-BENZ	Gaso	DED	YMBXV05.0GNB	S 430, E430(RWD), E430(4WD-FT), SL500, S500
MERCEDES-BENZ	Gaso	DED	YMBXV03.2GNB	C 280, CLK320
MITSUBISHI	Gaso	DED	YMTXV01.8GNG	MIRAGE
MITSUBISHI	Gaso	DED	YMTXV01.5GND	MIRAGE
MITSUBISHI	Gaso	DED	YMLXV03.5GNG	DIAMANTE
MITSUBISHI	Gaso	DED	YDSXV02.4GNG	ECLIPSE, GALANT
MITSUBISHI	Gaso	DED	YDSXV03.0GNG	ECLIPSE
NISSAN	Gaso	DED	YNSXV03.036A	MAXIMA, I30

DED = Dedicated; DF = Dual Fuel; FF = Flexible Fuel; CNG = Compressed Natural Gas; Gaso = Gasoline.

MODEL YEAR 2000 - PASSENGER CARS

Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
INFINITI	Gaso	DED	YNSXV02.0C9B	G20
NISSAN	Gaso	DED	YNSXV02.0C9B	SENTRA
NISSAN	Gaso	DED	YNSXV02.433A	ALTIMA
CHEVROLET	Gaso	DED	YNTXV01.8FFA	PRIZM
SAAB	Gaso	DED	YSAXV02.3TV2	9-3 CONVERTIBLE, 9-3 VIGGEN, 0-3 VIGGEN W/CONVERTIBLE, 9-5 WAGON
SAAB	Gaso	DED	YSAXV02.3TE2	9-5 WAGON
SUZUKI	Gaso	DED	YSKXV1.84LHS	ESTEEM SEDAN/WAGON
CHEVROLET , SUZUKI	Gaso	DED	YSKXV1.30LNA	METRO HATCHBACK, METRO SEDAN, SWIFT HACTHBACK
TOYOTA	Gaso	DED	YTYXV03.0FFC	AVALON
TOYOTA	Gaso	DED	YTYXV03.0FXB	CAMRY, CAMRY SOLARA, CAMRY SOLARA CONVERTIBLE
TOYOTA	Gaso	DED	YTYXV01.5FFA	ECHO
LEXUS	Gaso	DED	YTYXT03.0FFE	RX 300, RX 300 4WD
LEXUS	Gaso	DED	YTYXV03.0FFD	GS 300
TOYOTA	Gaso	DED	YTYXV01.8FFD	MR2
TOYOTA	Gaso	DED	YTYXV01.8FFA	COROLLA
VOLKSWAGEN	Gaso	DED	YVWXV02.0227	JETTA, GOLF, NEW BEETLE
VOLKSWAGEN	Gaso	DED	YVWXV02.8224	JETTA GLX VR6, GOLF GTI VR6
VOLVO	Gaso	DED	YVVXV1.95MJ1	S40/V40
VOLVO	Gaso	DED	YVVXV2.43TF3	S70/V70
VOLVO	Gaso	DED	YVVXV2.92BU3	S80
VOLVO	Gaso	DED	YVVXV2.43PA3	V70/V70XC/S70, S70/V70/C70, V70

DED = Dedicated; DF = Dual Fuel; FF = Flexible Fuel; CNG = Compressed Natural Gas; Gaso = Gasoline.

MODEL YEAR 2000 - PASSENGER CARS

Ultra-Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
DODGE, PLYMOUTH	Gaso	DED	YCRXV0122V41	NEON
DODGE, PLYMOUTH	Gaso	DED	YCRXV0122V40	NEON
FORD	CNG	DED	YFMXV04.6VP5	CROWN VICTORIA CNG
PONTIAC, BUICK, CHEVROLET	Gaso	DED	YGMXV03.8901	BONNEVILLE, LESABRE, PARK AVENUE, IMPALA, GRAND PRIX, REGAL
PONTIAC, CHEVROLET, BUICK	Gaso	DED	YGMXV03.8044	BONNEVILLE, IMPALA, LUMINA/MONTE CARLO, LESABRE, REGAL, PARK AVENUE, GRAND PRIX
HONDA	Gaso	DED	YHNXV02.3PL4	ACCORD EX, LX SEDAN, EX, LX COUPE
HONDA	Gaso	DED	YHNXV03.2GL4	3.2TL
HONDA	Gaso	DED	YHNXV01.0LA4	INSIGHT
MAZDA	Gaso	DED	YTKXV01.6VJM	PROTÉGÉ
MAZDA	Gaso	DED	YTKXV02.0VJM	626
TOYOTA	CNG	DED	YTYXV02.2PPA	CAMRY (CNG)
TOYOTA	Gaso	DED	YTYXV02.2JJB	CAMRY, CAMRY SOLARA, CAMRY SOLARA CONVERTIBLE

Super Ultra-Low-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
HONDA	Gaso	DED	YHNXV02.3NL5	ACCORD
HONDA	CNG	DED	YHNXV01.6KA5	CIVIC GX
NISSAN	Gaso	DED	YNSXV01.85BA	SENTRA CA 4-DR

Zero-Emission Vehicles Passenger Car Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
General Motors EV-1	Elec	DED	N/A	EV-1
Honda EV Plus	Elec	DED	N/A	EV Plus
Hyundai Accent EV	Elec	DED	N/A	Accent EV
Nissan Altra EV	Elec	DED	N/A	Altra EV
Solectria FORCE	Elec	DED	N/A	FORCE
General Motors S-10	Elec	DED	N/A	S-10
Toyota RAV 4 EV	Elec	DED	N/A	RAV 4 EV

DED = Dedicated; Elec = Electric; CNG = Compressed Natural Gas; Gaso = Gasoline; N/A = Not Applicatble

MODEL YEAR 2000 - LIGHT-DUTY TRUCKS

Low-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
up to 3,750 lbs				
CHRYSLER	Gaso	DED	YCRXT0242130	CHEROKEE CLASSIC 2WD, LIMITED 2WD, SE 2WD/4WD, SE 2WD RHD, SPORT 2WD/4WD
FORD, MAZDA	Gaso	DED	YFMXT02.51FC	RANGER PICKUP 2WD (AUTO), B2500 2WD (AUTO)
FORD, MAZDA	Gaso	DED	YFMXT04.01F5	RANGER PICKUP 2WD (AUTO), B4000 2WD (AUTO)
CHERVOLET, GMC, ISUZU	E85	FF	YGMXT02.2122	S10 PICKUP 2WD, SONOMA 2WD, HOMBRE PICKUP 2WD
CHEVROLET, GMC	Gaso	DED	YGMXT04.3187	S10 PICKUP 2WD(AUTO), SONOMA 2WD(AUTO)
CHERVOLET, GMC, ISUZU	Gaso	FF	YGMXT02.2122	S10 PICKUP 2WD, SONOMA 2WD, HOMBRE PICKUP 2WD
KIA	Gaso	DED	YKMXT02.0B03	SPORTAGE
SUZUKI	Gaso	DED	YSKXT2.49LHA	GRAND VITARA
CHEVROLET, SUZUKI	Gaso	DED	YSKXT1.59LMA	TRACKER, VITARA
CHEVROLET, SUZUKI	Gaso	DED	YSKXT2.00LMA	TRACKER, VITARA
TOYOTA	Gaso	DED	YTYXT03.4FFH	TACOMA-2WD
TOYOTA	Gaso	DED	YTYXT02.0FFJ	RAV4 2WD, RAV4 4WD, RAV4 SOFT TOP 2WD/4WD
TOYOTA	Gaso	DED	YTYXT02.7FFJ	TACOMA-2WD, TACOMA-4WD
TOYOTA	Gaso	DED	YTYXT02.4FFJ	TACOMA 2WD
> 3,750 lbs				
BMW	Gaso	DED	YBMXT04.4E53	X5
CHRYSLER	Gaso	DED	YCRXT0287231	GRAND CHEROKEE (LAREDO 2WD/4WD, LIMITED 2WD/4WD)
DODGE/PLYMOUTH	Gaso	DED	YCRXT0148230	CARAVAN 2WD, VOYAGER 2WD
DODGE	Gaso	DED	YCRXT0287232	DAKOTA PICKUP 2WD/4WD
CHRYSLER, DODGE, PLYMOUTH	Gaso	DED	YCRXT0232230	CARAVAN LE/SE 2WD, GRAND CARAVAN ES/LE/SE 2WD, GRAND VOYAGER SE 2WD, TOWN & COUNTRY LX/SX/LIMITED 2WD, VOYAGER SE 2WD
CHRYSLER, DODGE, PLYMOUTH	Gaso	DED	YCRXT0201230	CARAVAN 2WD, CARAVAN LE/SE 2WD, GRAND CARAVAN LE/SE 2WD, GRAND VOYAGER 2WD, GRAND VOYAGER SE 2WD, TOWN & COUNTRY LX/SX 2WD, VOYAGER 2WD, VOYAGER SE 2WD
CHRYSLER JEEP	Gaso	DED	YCRXT0242230	CLASSIC 4WD, LAREDO 2WD, LIMITED 2WD/4WD, SE 4WD. SAHARA 4WD, SPORT 4WD
FORD, MERCURY	Gaso	DED	YFMXT04.02F3	EXPLORER 2WD/4WD (AUTO), MOUNTAINEER 4WD(AUTO)
FORD, MERCURY	Gaso	DED	YFMXT05.02F5	EXPLORER 2WD/4WD (AUTO), MOUNTAINEER 4WD(AUTO)

DED= Dedicated; FF= Flexible Fuel; E85 = 85% Ethanol; Gaso = Gasoline.

MODEL YEAR 2000 - LIGHT-DUTY TRUCKS

Low-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
MERCURY	Gaso	DED	YFMXT03.335B	VILLAGER FWD WAGON
FORD, MAZDA	Gaso	DED	YFMXT04.02F2	RANGER PICKUP 2WD/4WD(AUTO), B4000 2WD/4WD(AUTO), EXPLORER 2WD/4WD
FORD	Gaso	DED	YFMXT04.22FC	F-150 PICKUP 2WD/4WD
FORD, MERCURY	Gaso	DED	YFMXT04.02F4	EXLORER 2WD/4WD (AUTO), MOUNTAINEER 2WD/4WD (AUTO)
FORD	Gaso	DED	YFMXT03.02F5	WINDSTAR
CHEVROLET, PONTIAC, OLDSMOBILE	Gaso	DED	YGMXT03.4142	VENTURE FWD, MONTANA FWD, SILHOUETTE FWD
CHEVROLET, GMC, ISUZU, OLDSMOBILE	Gaso	DED	YGMXT04.3188	S10 PICKUP 2WD/4WD, BLAZER 2WD, SONOMA 2WD/4WD, JIMMY 2WD/4WD, HOMBRE PICKUP 4WD, BLAZER 2WD/4WD, JIMMY 2WD/4WD, BRAVADA AWD, ASTRO 2WD CARGO/PASSENGER(AUTO), ASTRO AWD CARGO(AUTO), SAFARI 2WD CARGO/PASSENGER(AUTO), SAFARI AWD CARGO(AUTO)
HONDA	Gaso	DED	YHNXT03.5EA3	ODYSSEY EX / LX / VAN
ISUZU, HONDA	Gaso	DED	YSZXT03.52JK	RODEO, PASSPORT
MAZDA	Gaso	DED	YTKXT02.52FM	MPV
MITSUBISHI	Gaso	DED	YMTXT03.5GNH	MONTERO
MITSUBISHI	Gaso	DED	YMTXT03.0GNG	MONTERO SPORT 2WD/4WD
MITSUBISHI	Gaso	DED	YMTXT03.5GNG	MONTERO SPORT 2WD/4WD
NISSAN	Gaso	DED	YNSXT03.335B	QUEST VAN
NISSAN	Gaso	DED	YNSXT03.335A	FRONTIER V6 TRUCK
TOYOTA	Gaso	DED	YTYXT03.0FFS	SIENNA
TOYOTA	Gaso	DED	YTYXT03.4FFR	TUNDRA 2-WHEEL DRIVE, TUNDRA 4-WHEEL DRIVE
TOYOTA	Gaso	DED	YTYXT02.7FFR	4RUNNER 2WD, 4RUNNER 4WD, TACOMA 4WD

Ultra-Low-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
FORD	Gaso	DED	YFMXT03.82JC	WINDSTAR
FORD	Gaso	DED	YFMXT03.82J5	WINDSTAR

Zero-Emission Vehicles Light-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
Dodge Caravan	Elec	DED	N/A	Caravan
Ford Ranger pickup	Elec	DED	N/A	Ranger
Plymouth Voyager Epic EV	Elec	DED	N/A	Voyager Epic EV
Plymouth Voyager EV	Elec	DED	N/A	Voyager EV

DED= Dedicated; Elec = Electric; Gaso = Gasoline; N/A = Not Applicatble

MODEL YEAR 2000 - MEDIUM-DUTY TRUCKS

Low-Emission Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
BMW	Gaso	DED	YBMXT04.453M	X5
DODGE	Gaso	DED	YCRXA0360H32	DAKOTA PICKUP 4WD, DURANGO 2WD/4WD SUV
DODGE	Gaso	DED	YCRXA0360J31	RAM 1500 PICKUP 4WD; RAM 2500/3500 PICKUP 4WD, 2500 PICKUP HDV 2WD/4WD, 3500 PICKUP 2WD HDV
DODGE	Gaso	DED	YCRXA0360H31	RAM 1500 PICKUP 2WD/4WD
FORD	Gaso	DED	YFMXA05.4JGP	F-250 PICKUP 2WD/4WD; F-350 PICKUP 2WD/4WD; EXCURSION 2WD/4WD (AUTO)
FORD	Gaso	DED	YFMXA05.4HGC	F-150 PICKUP 2WD/4WD SHORT WHEELBASE (AUTO); F-150 PICKUP 2WD/4WD LONG WHEELBASE (AUTO)
FORD, LINCOLN	Gaso	DED	YFMXA05.4RF7	EXPEDITION 2WD; EXPEDITION 2WD/4WD, NAVIGATOR 2WD/4WD (4-VALVE); F-150 PICKUP 2WD/4WD SHORT WHEELBASE (AUTO)
FORD	Gaso	DED	YFMXA04.6HGC	F-150 PICKUP 2WD/4WD SHORT WHEEL BASE
FORD	Gaso	DED	YFMXA06.8JGC	E350 2WD
FORD	Gaso	DED	YFMXA04.2JGC	E-150 ECONOLINE 2WD, E-250 ECONOLINE 2WD, E-250 CAB CHASSIS 2WD, E-250 STRIP CHASSIS 2WD, E-150 CLUB
FORD	Gaso	DED	YFMXA04.66FF	EXPEDITION 2WD; EXPEDITION 2WD/4WD; E-150 ECONOLINE 2WD, E-150 CLUB WAGON
FORD	Gaso	DED	YFMXA04.2HGC	E-150 ECONOLINE 2WD
FORD	Gaso	DED	YFMXA06.8JGN	F250 PICKUP 2WD/4WD, F350 PICKUP 2WD/4WD, EXCURSION 2WD/4WD
CHEVROLET, GMC	Gaso	DED	YGMXA05.3184	C1500 TAHOE 2WD, K1500 TAHOE 4WD, C1500 YUKOU 2WD, K1500 YUKOU 4WD; C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD, C1500 YUKOU XL 2WD, K1500 YUKOU XL 4WD
CHEVROLET, GMC	Gaso	DED	YGMXA04.3192	G1500/G2500 VAN 2WD, G1500/G2500 EXPRESS 2WD, G1500/G2500 SAVANA PASSENGER VAN, G1500/G2500 SAVANA 2WD
CHEVROLET, GMC	Gaso	DED	YGMXA05.3183	K-1500 SILVERADO 4WD, K1500 SIERRA 4WD, C1500 SILVERADO 2WD, C1500 SIERRA 2WD
CHEVROLET, GMC	Gaso	DED	YGMXA05.7194	C1500 TAHOE 2WD, C1500 YUKON 2WD
CHEVROLET, GMC, CADILLAC	Gaso	DED	YGMXA05.7185	G1500/G2500 VAN 2WD, G1500/G2500 EXPRESS 2WD, G1500/G2500 SAVANA PASSENGER VAN; K1500 TAHOE 4WD, K1500 YUKON 4WD, ESCALADE 4WD; C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD
CHEVROLET, GMC	Gaso	DED	YGMXA04.3190	C1500 SILVERADO 2WD, K1500 SILVERADO 4WD, C1500 SIERRA 2WD, K1500 SIERRA 4WD
MERCEDES-BENZ	Gaso	DED	YMBXT04.3GNB	ML430

DED= Dedicated; Gaso = Gasoline.

MODEL YEAR 2000 - MEDIUM-DUTY TRUCKS

Low-Emission Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
MERCEDES-BENZ	Gaso	DED	YMBXV05.5GNB	ML 55 AMG
MERCEDES-BENZ	Gaso	DED	YMBXT03.2GNB	ML 320
ROVER, LAND ROVER	Gaso	DED	YLRXT04.6002	DISCOVERY, RANGE ROVER
TOYOTA	Gaso	DED	YTYXT04.7GBX	LAND CRUISER WAGON
TOYOTA	Gaso	DED	YTYXT04.7GXW	TUNDRA 2-WHEEL DRIVE, TUNDRA 4-WHEEL DRIVE

Ultra-Low-Emission Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
DODGE	Gaso	DED	YCRXA0287H41	DURANGO 2WD/4WD SUV
CHEVROLET, GMC	Gaso	DED	YGMXA04.3189	ASTRO AWD CARGO/PASSENGER (AUTO); SAFARI AWD CARGO/PASSENGER (AUTO)

Super-Ultra-Low-Emis Vehicles Medium-duty Truck Manufacturer	Fuel	Veh Type	Engine Family	Vehicle Model
CHRYSLER	CNG	DED	YCRXT05.26RC	RAM VAN 2500/3500/B3500 2WD, RAM WAGON 2500 W\2WD, RAM WAGON 3500 2WD HDV
FORD	CNG	DED	YFMXT05.4RP5	F-150 PICKUP NATURAL GAS
FORD	CNG	DED	YFMXT05.4RP6	E-250 NATURAL GAS, E-350 NATURAL GAS

DED = Dedicated; CNG = Compressed Natural Gas; Gaso = Gasoline

ATTACHMENT 4

ARB-CERTIFIED ENGINES/VEHICLES NOT QUALIFYING UNDER PROPOSED RULE 1191(e)

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
PASSENGER CARS

MANUFACTURER	STD	MAKE COMBO	MODELS COMBO
ASTON MARTIN	TIER 1	ASTON MARTIN	DB7 VANTAGE COUP, DB7 VANTAGE VOLANTE
AUDI	TLEV	AUDI	TT COUPE, TT ROASTER
AUDI	TLEV	AUDI	AUDI S4
AUDI	TLEV	AUDI	AUDI S6, A6 QUATTRO, A6 AVANT QUATTRO
AUDI	TLEV	AUDI	A8 QUATTRO
AUDI	TLEV	AUDI	AUDI S4, AUDI A6
BMW	TLEV	BMW	M ROADSTER, M COUPE
BMW	TLEV	BMW	M5, Z8
CHRYLER	TIER 1	PLYMOUTH	PROWLER
CHRYLER	TLEV	CHRYSLER, DODGE	CIRRUS, SEBRING COVERTBLE, STRATUS
CHRYLER	TIER 1	DODGE	BREEZE, STRATUS
CHRYLER	TIER 1	CHRYSLER	VIPER COVERTIBLE, VIPER COUPE
FERRARI	TIER 1	FERRARI	550 MARANELLO, 456 M
FORD	TIER1	FORD, MERCURY, LINCOLN	CROWN VICTORIA POLICE, GRAND MARQUIS, TOWN CAR
FORD	TIER 1	FORD	MUSTANG COBRA
FORD	TLEV	FORD, MERCURY	CONTOUR, MYSTIQUE, COUGAR
FORD	TIER1	FORD, MERCURY	CONTOUR, CONTOUR SVT, MYSTIQUE, COUGAR
FORD	TLEV	LINCOLN	CONTINENTAL
FORD	TLEV	FORD	MUSTANG GT
FORD	TLEV	LINCOLN	LS6
GFI	TLEV	FORD	CONTOUR

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
PASSENGER CARS

MANUFACTURER	STD	MAKE COMBO	MODELS COMBO
GM	TIER 1	OLDSMOBILE, CADILLAC	AURORA, SEVILLE, ELDORADO, DEVILLE
GM	TLEV	PONTIAC, CHEVROLET	SUNFIRE (manual), CAVALIER (manual)
HONDA	TLEV	HONDA	INTEGRA 3 DR GS-R, INTEGRA 4 DR GS-R
HONDA	TIER 1	HONDA	PRELUDE
HONDA	TIER 1	HONDA	INTEGRA 3 DR TYPE-R, INTEGRA 3 DR TYPE-R
HONDA	TLEV	HONDA	INTEGRA 3 DR LS, INTEGRA 3 DR GS, INTEGRA 4 DR LS, INTEGRA 4 DR GS
HONDA	TLEV	HONDA	CIVIC COUPE HX
HONDA	TLEV	HONDA	CIVIC COUPE Si/SiR
HYNDA	TLEV	HUYNDAI	SONATA
JAGUAR	TIER 1	JAGUAR	XJR, VANDEN PLAS, XKR COUPE, XKR CONVERTIBLE
JAGUAR	TLEV	JAGUAR	JAGUAR X200 V6 (S-TYPE)
JAGUAR	TLEV	JAGUAR	S-TYPE
MAZDA	TLEV	MAZDA	626
MAZDA	TIER 1	MAZDA	MILLENIA 2.5 L
MAZDA	TIER 1	MAZDA	MILLENIA 2.3 L
MERCEDES-BENZ	TIER 1	MERCEDES-BENZ	SL 600
MERCEDES-BENZ	TLEV	MERCEDES-BENZ	C 230, SLK 230
MMMA	TLEV	CRYSLER, DODGE	SEBRING, AVENGER
NISSAN	TIER 1	NISSAN	Q45
ROLLS-ROYCE	TIER 1	BENTLEY, ROLLS-ROYCE	CORNICHE

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
PASSENGER CARS

MANUFACTURER	STD	MAKE COMBO	MODELS COMBO
ROLLS-ROYCE	TIER 1	ROLLS-ROYCE	SILVER SERAPH, PARK WARD
SAAB	TIER 1	SAAB	9-5, 9-5 WAGON
SUZUKI	TLEV	SUZUKI	ESTEEM SEDAN/WAGON
SUZUKI	TLEV	CHEVROLET	METRO HATCHBACK
TOYOTA	TLEV	TOYOTA	CELICA
TOYOTA	TIER 1	TOYOTA	CAMRY, CAMRY SOLARA
TOYOTA	TLEV	LEXUS	LS 400, SC 400
TOYOTA	TLEV	LEXUS	SC 300
VOLKSWAGEN	TLEV	VOLKSWAGEN	NEW BEETLE
VOLVO	TLEV	VOLVO	S80

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
LIGHT-DUTY VEHICLES

MFR	STD	MAKE COMBO	MODELS COMBO
CHRYSLER	TIER1	CHRYSLER, DODGE	GRAND CARAVAN ES/LE/SE (AWD), TOWN & COUNTRY LX (AWD), TOWN & COUNTRY LIMITED (AWD)
CHRYSLER	TLEV	DODGE	DAKOTA PICKUP 2WD/4WD
CHRYSLER	TLEV	DODGE, CHRYSLER	DAKOTA PICKUP 2WD, CHEROKEE SE 2WD/4WD, WRANGLER SE 4WD
CHRYSLER	TLEV	DODGE	DAKOTA PICKUP 2WD
FORD	TLEV	FORD, MAZDA	RANGER PICKUP FFV ETHANOL 2WD/4WD,B3000 FFV ETHANOL 2WD/4WD
FORD	TLEV	FORD	POSTAL VEHICLE
FORD	TLEV	FORD, MAZDA	RANGER PICKUP 2WD (MANUAL), B4000 2WD (MANUAL)
FORD	TLEV	FORD, MAZDA	RANGER PICKUP 2WD/4WD (MANUAL), B4000 2WD/4WD (MANUAL)
FORD	TLEV	FORD, MAZDA	RANGER PICKUP FFV ETHANOL 2WD, B3000 FFV ETHANOL 2WD
FORD	TLEV	FORD, MAZDA	RANGER PICKUP 2WD (MANUAL), B2500 2WD (MANUAL)
FORD	TLEV	FORD	POSTAL VEHICLE
FORD	TIER1	FORD	FORD F-150 PICKUP 2WD LIGHTNING
GM	TLEV	CHEVROLET, GMC	S10 PICKUP 2WD(MANUAL), SONOMA 2WD(MANUAL)
HONDA	TLEV	HONDA	CR-V EX/LX
ISUZU	TLEV	ISUZU, HONDA	VEHICROSS, RODEO, PASSPORT, AMIGO 4WD
ISUZU	TLEV	ISUZU	RODEO 2WD, AMIGO 2WD
NISSAN	TLEV	NISSAN	FRONTIER REG CAB/KING CAB
NISSAN	TLEV	NISSAN	FRONTIER 4WD REG CAB/KING CAB, XTERRA
NISSAN	TLEV	NISSAN, INFINITI	PATHFINDER, QX4
VOLKSWAGEN	TIER1	VOLKSWAGEN	EUROVAN VR6/MV, EUROVAN GLS VAN, EUROVAN MV POP TOP

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
MEDIUM-DUTY VEHICLES

MFR	STD	MAKE COMBO	MODELS COMBO
CHRYSLER	TIER1	DODGE	RAM 1500 PICKUP 2WD/4WD, VAN 2500 2WD, WAGON 2500 2WD, 2500 PICKUP 4WD, 3500 PICKUP 4WD, VAN 3500 2WD/4WD
CHRYSLER	TIER1	DODGE	RAM 2500 PICKUP 4WD, 2500 PICKUP HDV 2WD/4WD, 3500 PICKUP 2WD/4WD, 3500 PICKUP 2WD HDV
CHRYSLER	TIER1	DODGE	RAM 3500 PICKUP 4WD
CHRYSLER	TIER1	DODGE	RAM 1500 PICKUP 2WD, RAM 1500 PICKUP 2WD, VAN 1500 2WD, WAGON 1500 2WD
CHRYSLER	TIER1	DODGE	RAM 1500 PICKUP 2WD/4WD, RAM 1500 PICKUP 2WD/4WD, VAN 1500 2WD, WAGON 1500 2WD
EUROPA	TIER1	EUROPA	G500, G500 SPORT, G500 OPEN TOP
GM	TIER1	CHEVROLET, GMC	K2500/3500 PICKUP 4WD, C2500/3500 PICKUP 2WD, K2500/3500 SIERRA 4WD, G3500 SAVANA 2WD PASSENGER, G3500 SAVANA CARGO, C2500/3500 SIERRA 2WD, G3500 EXPRESS 2WD, G3500 VAN 2WD, C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD, C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD
GM	TIER1	CHEVROLET, GMC	K-1500 SILVERADO 4WD, K1500 SIERRA 4WD, C1500 SILVERADO 2WD, C1500 SIERRA 2WD
GM	TIER1	CHEVROLET, GMC	G1500 VAN 2WD, G1500 SAVANA CARGO, C1500 TAHOE 4WD,C1500 YUKON 2WD
GM	TIER1	CHEVROLET, GMC, CADILLAC	K1500 TAHOE 4WD, K1500 YUKON 4WD, ESCALADE 4WD, G1500/G2500 VAN 2WD, G1500/G2500 EXPRESS 2WD, G1500/G2500 SAVANA PASSENGER, G1500/G2500 SAVANA 2WD, C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD, C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD
GM	TIER1	CHEVROLET, GMC	C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD, C2500 YUKON XL 2WD, K2500 YUKON XL 4WD
GM	TIER1	CHEVROLET, GMC	C1500 SILVERADO 2WD, K1500 SILVERADO 4WD, C1500 SIERRA 2WD, K1500 SIERRA 4WD, C2500 SIERRA 2WD
GM	TIER1	CHEVROLET, GMC	K2500/3500 PICKUP 4WD, C2500/3500 PICKUP 2WD, C2500/3500 SIERRA 2WD, G1500/2500/3500 SAVANA 2WD CARG, K2500/K3500 SIERRA 4WD,G1500/2500/3500 SAVANA PASSENGER, G1500/2500/3500 EXPRESS 2WD, G1500/2500/3500 VAN 2WD, C2500 SUBURBAN 2WD, K2500 SUBURBAN 4WD

NON-COMPLIANT VEHICLES FOR RULE 1191
MODEL YEAR 2000
MEDIUM-DUTY VEHICLES

MFR	STD	MAKE COMBO	MODELS COMBO
GM	TIER1	CHEVROLET, GMC	C20903, K20903, K30943 (C2500 PICKUP 2WD, K2500/3500 PICKUP 4WD, C2500 SIERRA 2WD, K2500/3500 SIERRA 4WD)
WINNEBAGO	TIER1	WINNEBAGO	RIALTA

ATTACHMENT 5

ARB LEV REGULATIONS

EXHAUST MASS EMISSION STANDARDS

ARB LEV REGULATIONS

EXHAUST MASS EMISSION STANDARDS												
LEV - I (current)							**LEV - II** (starting 2004)					
Vehicle Type	Mileage for Compliance	Vehicle Emission Category	NMOG (g/mi)	CO (g/mi)	NOx (g/mi)		Vehicle Type	Mileage for Compliance	Vehicle Emission Category	NMOG (g/mi)	CO (g/mi)	NOx (g/mi)
All PC & LDT1 (0-3750 lb LVW)	50,000	Tier 1	0.25	3.4	0.4		**All PC & LDT** (0-3750 lb LVW) ---------- Tested at LVW = curb weight + 300 lb	50,000	TLEV	0.125	3.4	0.4
		TLEV	0.125	3.4	0.4				LEV	0.075	3.4	0.05
		LEV	0.075	3.4	0.2				LEV[(1)]	0.075	3.4	0.07
		ULEV	0.040	1.7	0.2				ULEV	0.040	1.7	0.05
LDT2* (3751-5750 lb LVW)	50,000	Tier 1	0.32	4.4	0.7			120,000	TLEV	0.156	4.2	0.6
		TLEV	0.160	4.4	0.7				LEV	0.090	4.2	0.07
		LEV	0.100	4.4	0.4				LEV[(1)]	0.090	4.2	0.10
		ULEV	0.050	2.2	0.4				ULEV	0.055	2.1	0.07
MDV2* (3751-5750 lb TW)	50,000	Tier 1	0.32	4.4	0.7				SULEV	0.010	1.0	0.02
		TLEV	0.16	4.4	0.4			150,000	TLEV	0.156	4.2	0.6
		LEV	0.100	4.4	0.4				TLEV[(2)]	0.0125	4.2	0.5
		ULEV	0.050	2.2	0.2				LEV	0.090	4.2	0.07

MDV3* (5751-8500 lb TW)	50,000	Tier 1	0.39	5.0	1.1				LEV[(1)]	0.090	4.2	0.10
		LEV	0.195	5.0	0.6				ULEV	0.055	2.1	0.07
		ULEV	0.117	5.0	0.6				SULEV	0.010	1.0	0.02
		SULEV	0.059	2.5	0.3		**MDV** (8500-10,000 lb GVWR)	120,000	LEV	0.195	6.4	0.2
MDV4 (8501-10,000 lb TW)	50,000	Tier 1	0.46	5.5	1.3				ULEV	0.143	6.4	0.2
		LEV	0.230	5.5	0.7				SULEV	0.100	3.2	0.1
		ULEV	0.138	5.5	0.7		**MDV** (10,000-14,000 lb GVWR)	120,000	LEV	0.230	7.3	0.4
		SULEV	0.069	2.8	0.35				ULEV	0.167	7.3	0.4
MDV5 (10,000-14,000 lb TW)	50,000	Tier 1	0.60	7.0	2.0				SULEV	0.117	3.7	0.2
		LEV	0.300	7.0	1.0							
		ULEV	0.180	7.0	1.0							
		SULEV	0.09	3.5	0.5							

TW = Test Weight = 0.5 * (LVW + GVW)
*Vehicle is MDV when GVWR > 6000 lb.

(1) Optional, applies to up to 4% of mfr's LDT2 fleet with a maximum base payload > 2500 lb.

(2) Optional, applicable for 150,000 miles only (i.e., no 50,000 or 120,000 mile standard) & is not eligible for supplemental fleet average NMOG credit.