

OVERVIEW OF THE

Regulation to Reduce Emissions from In-Use Off-Road Diesel Vehicles

New rules to achieve significant emission reductions and protect public health

On July 26, 2007, the California Air Resources Board (ARB) approved a regulation to reduce emissions from existing off-road diesel vehicles used in California in construction, mining, and other industries.

Why did ARB staff propose this regulation?

Most off-road vehicles today have no emission controls and can last 30 years or longer. As a result, the vehicles covered by the regulation emit large amounts of soot or particulate matter (PM) and oxides of nitrogen (NOx), accounting for nearly a quarter of statewide diesel mobile source PM and NOx. These emissions are toxic, currently causing about 1,100 premature deaths per year. Reducing emissions from in-use off-road diesel vehicles is also necessary to meet federally imposed clean air standards. Failure to meet federal clean air standards could result in the imposition of sanctions that could impact the State's infrastructure improvement efforts.

Who must comply with the regulation?

Any person, business, or government agency that owns or operates diesel-powered off-road vehicles in California (except for agricultural or personal use, or for use at ports or intermodal railyards) with engines with maximum power of 25 horsepower (hp) or greater are subject to the regulation. The regulation applies to vehicles commonly used in construction, mining, rental, airport ground support and other industries. Out-of-state companies doing business in California are also subject to the regulation.

What types of vehicles are subject to the regulation?

The regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, and airport ground support equipment. The regulation does not apply to stationary equipment or portable equipment such as generators.

What does the regulation require?

The regulation requires fleets to apply exhaust retrofits that capture pollutants before they are emitted to the air, and to accelerate turnover of fleets to newer, cleaner engines.

The regulation establishes fleet average emission rates for PM and NOx that decline over time. Each year, the regulation requires each fleet to meet the fleet average emission rate targets for PM or apply the highest level verified diesel emission control system to 20 percent of its horsepower. In addition, large and medium fleets are required each year to meet the fleet average emission rate targets for NOx or to turn over a certain percent of their horsepower (8 percent in early years, and 10 percent in later years). "Turn over" means repowering with a cleaner engine, rebuilding the engine to a more stringent emissions configuration, retiring a vehicle, replacing a vehicle with a new or used piece, or designating a dirty vehicle as a low-use vehicle. If retrofits that reduce NOx emissions become available, they may be used in lieu of turnover as long as they achieve the same emission benefits.

The regulation also includes the Surplus Off-Road Opt-in for NOx (SOON) program. Local air

districts may opt into the SOON program to reduce NOx emissions beyond what is required by the regulation. Larger fleets that operate vehicles in districts participating in the SOON program may be required to apply for incentive money, and – if they receive the money – to take additional actions to reduce NOx emissions.

When does the regulation take effect?

The regulation takes effect earliest for the largest fleets, those with over 5,000 horsepower of affected vehicles. (The fleet size excludes vehicles operated less than 100 hours per year.) For these large fleets, the first fleet average compliance dates are in 2010.

For medium fleets, those with 2,501 to 5,000 hp, the first fleet average compliance dates are in 2013.

The requirements are delayed until 2015 for fleets of 2,500 hp or less. These fleets are subject only to the PM fleet average, and thus would not have to accelerate turnover of their vehicles.

What are the estimated benefits of the regulation?

The regulation is expected to significantly reduce emissions of NOx and PM. In total, the regulation is expected to reduce 187,000 tons of NOx emissions and 33,000 tons of PM emissions between 2009 and 2030.

The regulation is expected to achieve the 2020 goal of reducing PM 85 percent from 2000 baseline levels set forth in ARB's 2000 Diesel Risk Reduction Plan. It is also projected to reduce PM emissions 37 percent from the 2000 baseline by 2010, and 92 percent by 2020. NOx is expected to be about 13 percent lower in 2015 as a result of the regulation, and by 2020, NOx emissions would be 32 percent lower than would occur in the absence of the regulation.

The regulation is also expected to prevent about 4,000 premature deaths over its course, while the associated health benefits would translate to significant health cost savings, an expected \$18 to \$26 billion in total. Finally, the regulation's expected emissions reductions will help us meet federal clean air standards.

What are the estimated costs?

The total cumulative cost of the regulation between 2009 and 2030 is expected to be between \$3.0 and 3.4 billion (2006 dollars), with the majority of these costs occurring between 2010 and 2021. For perspective, the total cost of the regulation will be less than 0.3 percent of the total annual construction revenue generated in California in 2005.

Where can I find more information about the regulation?

The staff report and technical support document for the regulation are posted at <http://www.arb.ca.gov/regact/2007/ordiesel07/ordiesel07.htm>

Further information, including a spreadsheet fleet average calculator for compliance planning, is available on the off-road regulation website at <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

For additional general information

Please contact ARB's diesel hotline at (866) 6DIESEL (634-3735). You may also obtain this document in an alternative format by contacting ARB at: (916) 322-4505 (voice); (916) 324-9531 (TDD, Sacramento area only); or (800) 700-8326 (TDD, outside Sacramento). TTY/TDD/Speech-to-Speech users may dial 711 for the California Relay Service.

FACTS ABOUT

Regulations for Small Fleets of In-Use Off-Road Diesel Vehicles

On July 26, 2007, the California Air Resources Board (ARB) approved regulations to reduce emissions from existing off-road diesel vehicles used in California. As discussed further below, the regulations contain special, less stringent provisions for small fleets. For additional information regarding these regulations please see: *Overview of Regulation to Reduce Emissions from In-Use Off-Road Diesel Vehicles*.

How does the regulation define a small fleet?

The following are defined by the regulations as a small fleet:

- Fleets with total fleet horsepower less than or equal to 2,500 horsepower (hp);
- All municipality fleets in low-population counties (Alpine, Amador, Calaveras, Colusa, Del Norte, Glenn, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada, Plumas, San Benito, Sierra, Siskiyou, Sutter, Tehama, Trinity, Tuolumne, and Yuba); and
- Municipality fleets in other counties that have received ARB Executive Officer approval to be treated like a municipality in a low population county.

The total fleet horsepower used to calculate fleet size excludes low-use vehicles. "Low Use" vehicles are those operated less than 100 hours per year.

What does the regulation require of small fleets and when do the requirements take effect?

Beginning in 2015, each year, the regulation requires each small fleet to meet the fleet average emission rate target for particulate matter (PM) or apply the highest level verified diesel emission control system to 20 percent of its horsepower. Small fleets can reduce their PM emissions either by applying exhaust retrofits that capture pollutants before they are emitted to the air, or by accelerating turnover of fleets to newer, cleaner engines. Small fleets need to report to ARB beginning August 1, 2009. Annually thereafter, they need to report any changes to their fleet.

How do the requirements for small fleets differ from those for larger fleets?

Small fleets are completely exempt from the NO_x fleet average portion of the regulation and thus are never forced to undertake any accelerated turnover. The small fleet PM fleet average targets begin five years after those for large fleets and generally lag five years behind those for medium and large fleets.

Why does the regulation include different, less stringent requirements for small fleets?

More time was given for the smallest fleets because many of them are one- or two-person operations for whom learning about and understanding the regulation may be a challenge. The larger fleets, with their economies of scale, greater resources and revenue streams, and greater access to financing, are also more likely to be able to absorb or pass through the cost of the regulation without major disruption. Finally, enforcing the regulation in early years for just the relatively few largest fleets will present less of a challenge than enforcing the regulation for the very numerous smallest fleets.

What exemptions are there from the mandatory retrofit requirements?

The following engines are exempt from exhaust retrofit requirements:

- Engines in vehicles less than five years old;

- Engines for which there is no retrofit available or for which the retrofit cannot be safely installed;
- New engines that come with a diesel particulate filter (DPF);
- Engines already retrofitted with the best available PM exhaust retrofit that achieves at least 50 percent PM reduction at the time of installation; and
- Engines retrofitted with an experimental diesel emission control strategy approved by ARB's Executive Officer.

Are there special provisions for Low-Use vehicles?

Yes, low-use vehicles (that operate less than 100 hours/year in California) are subject only to the labeling and reporting portions of the regulation. They need not be turned over, retrofitted, or included in the fleet average calculations.

Will incentive funding be available to help small fleets?

Yes. California has the largest clean air incentive program in the nation, the Carl Moyer Program, with more than \$140 million available each year primarily through the local air districts. In addition, ARB is in the process of awarding funds from a one-time \$25 million grant program to public agencies for the purchase of low-polluting construction vehicles.

The Carl Moyer Program will only pay for emission reductions that go beyond the requirements of the regulation and occur at least three years early. Because their initial compliance dates are not until 2015 and because they are exempt from the NOx portion of the regulation, many small fleets would be able to access Carl Moyer Program funds in advance of their first compliance date and will always be eligible for projects that achieve NOx reductions.

Where can I find more information about the regulations?

The staff report and technical support document for the regulation are posted at <http://www.arb.ca.gov/regact/2007/ordiesel07/ordiesel07.htm>

Further information including a spreadsheet fleet average calculator for compliance planning, is available on the off-road regulation website at <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

Before the regulation takes effect, staff plans to hold numerous training and outreach events to help educate small fleets about the regulation.

For additional information

Please contact ARB's diesel hotline at (866) 6DIESEL (634-3735). You may also obtain this document in an alternative format by contacting ARB at: (916) 322-4505 (voice); (916) 324-9531 (TDD, Sacramento area only); or (800) 700-8326 (TDD, outside Sacramento). TTY/TDD/Speech-to-Speech users may dial 711 for the California Relay Service.

FACTS ABOUT

Regulation for Medium and Large Fleets of In-Use Off-Road Diesel Vehicles

On July 26, 2007, the California Air Resources Board (ARB) approved a regulation to reduce emissions from existing off-road diesel vehicles used in California in construction, mining, and other industries. This fact sheet discusses provisions for medium and large fleets, a separate fact sheet is available that discusses special provisions for small fleets. For general information regarding this regulation, please see: *Overview of Regulation to Reduce Emissions from In-Use Off-Road Diesel Vehicles*.

How does the regulation define medium and large fleets?

FLEET OWNERSHIP	TOTAL FLEET HORSEPOWER ¹		
	0-2500 HP	2501-5000 HP	5001 HP +
FLEET	S	M	L
MUNICIPALITY ²	S	M	L
FEDERAL GOVERNMENT		L	
STATE GOVERNMENT		L	

(1) Total fleet horsepower excludes vehicles used less than 100 hours per year

(2) For low population county options please see Small Fleet fact sheet.

What compliance actions does the regulation require of large fleets and when do the requirements take effect?

Beginning in 2010, each year, the regulation requires each large fleet to meet the fleet average emission rate target for PM or apply the highest level verified diesel emission control system to 20 percent of its horsepower. The regulation also requires each large fleet to meet the fleet average emission rate target for NO_x or to turn over a certain percent of its horsepower (8 percent in early years, and 10 percent in later years). The regulation requires annual reporting beginning April 1, 2009.

What compliance actions does the regulation require of medium fleets and when do the requirements take effect?

Medium fleet requirements start three years after those for large fleets but after that are identical. Beginning in 2013, each year, the regulation requires each medium fleet to meet the fleet average emission rate target for PM or apply the highest level verified diesel emission control system to 20 percent of its horsepower. The regulation also requires each medium fleet to meet the fleet average emission rate target for NO_x or to turn over a certain percent of its horsepower (8 percent in early years, and 10 percent in later years). The regulation requires annual reporting beginning June 1, 2009.

What actions can fleets take to reduce their emissions?

Fleets can reduce their emissions by applying exhaust retrofits that capture pollutants before they are emitted to the air; repowering vehicles with newer, cleaner engines; rebuilding engines to a more stringent emissions configuration, retiring the oldest, dirtiest vehicles, and accelerating turnover of fleets to newer, cleaner vehicles.

What is the SOON program?

The regulation also includes the Surplus Off-road Opt-in for NO_x (SOON) program. Local air districts may opt into the SOON program to reduce NO_x emissions beyond what is required by the regulation. Larger fleets that operate vehicles in districts participating in the SOON program may be required to apply for incentive money, and – if they receive the money – to

take additional actions to reduce NOx emissions. A fleet may be required to participate in the SOON program if the following criteria are met:

- Statewide the fleet has greater than 20,000 hp;
- As of January 1, 2008, the fleet consists of more than 40 percent Tier 0 and Tier 1 vehicles; and
- At least one vehicle operates a majority of the time in a participating district.

The governing board of any air quality management district or air pollution control district has the authority to opt into the SOON program.

What exemptions are there from the turnover requirements?

The following vehicles are exempt from turnover requirements:

- Vehicles less than 10 years old;
- Specialty vehicles if certain criteria are met;
- Engines equipped with the best available PM exhaust retrofit, installed within the past six years; and
- Engines meeting the Tier 4 or interim Tier 4 standards.

If NOx retrofits become available and verified, they can be used in lieu of the mandatory turnover so long as they achieve equivalent emission reductions.

What exemptions are there from the mandatory retrofit requirements?

The following engines are exempt from exhaust retrofit requirements:

- Engines in vehicles less than five years old;
- Engines for which there is no retrofit available or for which the retrofit cannot be safely installed;
- New engines that come with a diesel particulate filter (DPF);
- Engines already retrofit with the best available PM exhaust retrofit that achieves at least 50 percent PM reduction at the time of installation; and
- Engines retrofit with an experimental diesel emission control strategy approved by ARB's Executive Officer.

Are there special provisions for low-use vehicles?

Yes, low-use vehicles (that operate less than 100 hours/year in California) are subject only to the labeling and reporting portions of the regulation. They need not be turned over, retrofit, or included in the fleet average calculations.

Will incentive funding be available for medium fleets?

Yes. California has the largest clean air incentive program in the nation, the Carl Moyer Program, with more than \$140 million available each year primarily through the local air districts. In addition, ARB is in the process of awarding a one-time \$25 million grant program to public agencies for the purchase of low-polluting construction vehicles.

The Carl Moyer Program will only pay for emission reductions that go beyond the requirements of the regulation and occur at least three years early. Because their initial compliance dates are not until 2013, many medium fleets would be able to access Carl Moyer Program funds in advance of their first compliance date. Carl Moyer program information is available at: <http://www.arb.ca.gov/msprog/moyer/moyer.htm>

Where can I find more information about the regulation?

The staff report and technical support document for the regulation are posted at <http://www.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm>

Further information, including a spreadsheet fleet average calculator for compliance planning, is available on the off-road regulation website at <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

You may also contact ARB's diesel hotline at (866) 6DIESEL (634-3735).

Regulation to Reduce Emissions from In-Use Off-Road Diesel Vehicles

Actions Taken Early Can Reduce or Spread Out Compliance Costs

On July 26, 2007, the California Air Resources Board (ARB) approved a regulation to reduce emissions from existing off-road diesel vehicles used in California in construction, mining, and other industries. The regulation will require fleets to modernize and add retrofits. Additional fact sheets regarding various aspects of the regulation, including an overview, are available on the website listed at the end of this document.

This regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, and airport ground support equipment. Vehicles with engines less than 25 horsepower are exempt.

FLEETS CAN TAKE ACTIONS PRIOR TO THEIR INITIAL COMPLIANCE DATE TO ACCRUE EARLY CARRYOVER CREDIT

The regulation requires fleets to meet certain emission targets and take specific actions by specific dates. Modeling by ARB staff shows it is likely that fleets will have higher annual costs in the first few years after a fleet's initial compliance date¹, and the costs will decrease in later years. Certain actions taken by fleets prior to their initial compliance date will allow them to accrue (bank) carryover retrofit credit, which they can use later to avoid being required to retrofit. As described in more detail below, taking early actions can help by reducing or spreading out the costs to comply with the regulation in the first few years.

Adequate records must be maintained by fleets in order to verify that these early actions were taken. For details of early credit provisions, including recordkeeping, please refer to the regulation language which is available at the following link: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>.

The early actions that fleets can use to obtain credits are:

1. Retrofitting an engine with ARB-Verified Diesel Emission Control Strategy (VDECS);²
2. Repowering with a cleaner engine; and
3. Retiring a vehicle.

EARLY RETROFITTING

Get Double Credit by Retrofitting With A Diesel Particulate Filter Before March 1, 2009

The regulation requires fleets to meet diesel particulate matter (PM) fleet averages, or apply the highest level VDECS to 20% of their horsepower per year. When a highest level VDECS is installed onto an engine in any fleet size before March 1, 2009, the fleet will get double credit. That is, the fleet will receive carryover retrofit credit equal to double the horsepower of the engine on which the highest level VDECS is installed.³ After March 1, 2009, single credit will be given. That is, the fleet will receive carryover retrofit credit equal to the horsepower of the engine on which the highest level VDECS is installed.

At this time for most engines affected by this regulation, the highest level VDECS are diesel particulate filters (DPFs). DPFs are exhaust aftertreatment devices that reduce diesel PM emissions.⁴

A list of VDECS may be found at: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>. A partial list of diesel-emission retrofit device suppliers and installers is available at: <http://www.arb.ca.gov/msprog/publicfleets/retrofitdistributorslist.pdf>.

EARLY REPOWERING

Get Early Credit by Repowering with a Newer Tier 1, 2, or 3 Engine Before March 1, 2009

Upgrading to a newer engine can significantly reduce emissions. A summary of the various emission standard tiers is available at: http://www.arb.ca.gov/msprog/ordiesel/documents/PM_NOx_Emis_Factors.pdf. Employing a newer engine reduces both PM and NOx, as opposed to retrofitting with a PM-only DPF. Repowering to a Tier 2 or Tier 3 engine and then adding a retrofit further reduces emissions.

Credit for early repowers will be given for repowering to a Tier 1 or higher engine before March 1, 2009.⁵ After March 1, 2009, to count towards compliance with the regulation, a repower must be to a Tier 2 level or higher.

EARLY RETIREMENT

Get Early Credit by Annually Retiring More than 8 Percent of Tier 0 Vehicles Between March 1, 2006, and March 1, 2009

Fleets that retire their Tier 0 vehicles at an average rate greater than 8 percent of horsepower per year between March 1, 2006, and March 1, 2009, accumulate early carryover credit.⁶

Is Funding Available?

There is limited grant funding from a variety of programs through local air districts, ARB, and federal agencies, however most are one-time or limited in scope. The most consistent source of funding is through the Carl Moyer Program.⁷ Generally, emission projects funded through the Carl Moyer program must reduce emissions at least three years earlier than required by regulation. Carl Moyer program funds are more likely to be available to medium and small fleets due to the initial compliance dates for these fleets being later. Medium fleets may be eligible for Carl Moyer funds for repowers and retrofits that are installed by February 28, 2010. Small fleets may be eligible for Carl Moyer funds for retrofits that are installed by February 28, 2012, as well as for repowers installed at any time. Any size fleet may apply if they have met compliance targets more than three years into the future. See other fact sheets on the regulation for fleet compliance dates and compliance target levels of the regulation. Information on the Carl Moyer Program is available at <http://www.arb.ca.gov/msprog/moyer/moyer.htm>. The Carl Moyer Program funds are usually allocated through the local air districts. A listing of contacts is available at <http://www.arb.ca.gov/msprog/moyer/contacts.htm>.

For fleets in air districts that opt into the Surplus Off-road Opt-in for NOx (SOON) program, SOON program funding may be available as well.

For More Information About the Regulation

Further information about the off-road regulation, including the regulation language, additional fact sheets, and a fleet average calculator for compliance planning, is available at <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm> or ARB's diesel hotline at (866) 6DIESEL (634-3735).

- 1 March 1 of 2010 for large fleets, 2013 for medium fleets, and 2015 for small fleets.
- 2 VDECS are systems verified by the ARB to be effective at reducing diesel particulate matter (PM) and durable. Any retrofit device used to comply with this regulation must be a Level 2 or Level 3 PM device (i.e., reduce diesel PM by at least 50%).
- 3 All computations for this regulation utilize horsepower of the engine. In other words, a higher horsepower engine is worth more than a lower horsepower engine when calculating carryover credits.
- 4 The terms VDECS, retrofit device, filter, and DPF are often used interchangeably. Although their use as retrofits in the United States is not as widespread, over 200,000 DPFs have been installed on heavy-duty off-road vehicles worldwide and 35,000 have been installed as retrofits on construction machines in Europe.
- 5 A repowered vehicle must remain in the fleet for credit to be claimed. Repowers receive single, not double credit.
- 6 Early retirement receives only single, not double, credit.
- 7 Retrofits funded with Carl Moyer funding receive only single, not double, credit.



Air Resources Board



Linda S. Adams
Secretary for
Environmental Protection

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Arnold Schwarzenegger
Governor

October 7, 2008

Mail-Out #MSC 08-28

TO: All Interested Parties

SUBJECT: Importance Of Proper Maintenance Of Diesel Engines Equipped With Retrofit Devices

The purpose of this advisory is to provide guidance to owners and operators of diesel vehicles and equipment on the importance of following good engine maintenance practices, in particular with engines that are equipped with retrofit devices. Installation of a retrofit device to control emissions does not in any way mean engine maintenance can be reduced or neglected. Rather, proper engine maintenance is a key part of staying in compliance with the Air Resources Board's (ARB) in-use diesel fleet regulations and is critical to ensuring that a vehicle equipped with a retrofit device continues to operate without problems.

If an end-user uses a retrofit to comply with the requirements of an ARB regulation, that retrofit must be verified by ARB under the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines* (the Procedure). After a retrofit is verified under the Procedure, ARB issues a document called an Executive Order which lists all the terms and conditions that must be met for the verification to be valid (for a listing of currently verified retrofits, please visit the ARB website at <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>). Simply using a verified retrofit, however, is not enough to ensure compliance. The retrofit must also be used in a manner consistent with its Executive Order. Keeping the engine in a proper state of maintenance is one of these conditions. A poorly-maintained engine can cause damage to a retrofit and prevent it from performing at its verified level. As such, proper engine maintenance is necessary for compliance with ARB regulations.

In addition, if a retrofit device still under warranty is damaged while installed on a poorly-maintained engine, the retrofit manufacturer might deny warranty coverage. As a result, the end-user may have to spend thousands of additional dollars to repair or replace the retrofit to continue to comply with ARB regulations. ARB strongly encourages end-users to talk to the device installer about maintenance needs before and after installation of the device. Many devices can mask the usual signs of engine trouble, such as black smoke, which further motivates the need to follow a regular maintenance schedule and not to simply wait for more serious problems to arise.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

All Interested Parties
October 7, 2008
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Another part of complying with ARB regulations is avoiding the use of any alternative diesel fuels or fuel additives that are not specifically listed on a retrofit device's Executive Order. Using unapproved fuels or additives is illegal and strictly prohibited. Doing so may adversely affect the performance and durability of the retrofit, will affect an end-user's warranty rights and protection, and brings a vehicle out of compliance with ARB regulations that require retrofits to be verified. For more information, please see Enforcement Advisory Number 379, which can be found on the ARB website at <http://www.arb.ca.gov/enf/advs/advs379.pdf>.

Should you have any questions regarding this advisory, please contact Ms. Kathleen Mead, Manager, Retrofit Implementation Section, at (916) 324-9550 or by email to kmead@arb.ca.gov.

Sincerely,

/s/

Robert H. Cross, Chief
Mobile Source Control Division

cc: Kathleen Mead, Manager
Retrofit Implementation Section



Enforcement Division

Advisory

To: Owners, Installers, Distributors and
Manufacturers of Verified Diesel
Emission Control Strategy (VDECS)

Number 379

August 2008

USE OF ALTERNATIVE DIESEL FUELS AND FUEL ADDITIVES IN ENGINES EQUIPPED WITH DIESEL EMISSION CONTROL STRATEGIES

Diesel emissions control strategies (DECS) are used to meet the best available control technology (BACT) requirements in regulations adopted to control diesel exhaust from fleets (Fleet Rules). The Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines (California Code of Regulations (CCR), title 13, section 2706 (e)) requires that the applicant for a DECS verification must specify the fuel and lubricating oil requirements necessary for proper functioning of the DECS. Based on the information provided, the Executive Officer approves which alternative diesel fuel and or fuel additives will be allowed for use with a particular DECS. All terms and conditions for DECS verification, including a list of all approved alternative diesel fuels and or fuel additives, are specified in the Executive Order (EO).

Use of any alternative diesel fuels and or fuel additives not specifically listed in the verification EO is illegal and strictly prohibited. Such operation with a verified DECS may adversely affect system performance or durability, and will affect end user warranty rights and protection. Operating with an unapproved alternative diesel fuel or fuel additive violates the EO, negates the DECS verification for that vehicle, and removes BACT compliance status with the Fleet Rules.

The Verification Procedure defines an alternative diesel fuel as:

"Any fuel used in diesel engines that is not commonly or commercially known, sold or represented as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM Standard Specification for Diesel Fuel Oils D975-81, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g. recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel, Fischer Tropsch fuels, and emulsions of water in diesel fuel. Natural gas is not an alternative diesel fuel".

The Verification Procedure defines a fuel additive as:

"Any substance designed to be added to fuel or fuel systems or other engine-related systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the entire vehicle or one of its component parts, or any combination thereof; or assists diesel emission control strategies in decreasing emissions, or improving fuel economy or increasing performance of a vehicle or component part, or any combination thereof".

In addition, under state law, it is illegal for any person to falsely advertise or otherwise claim that a fuel additive purports to achieve reductions in motor vehicle exhaust emissions unless such claims can be demonstrated to the Air Resources Board to be factual.

Non-Compliance:

Health and Safety Code, Section 39674 (a) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

Health and Safety Code, Section 39674 (b) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed ten thousand dollars (\$10,000) for each day in which the violation occurs.

Health and Safety Code, Section 43832. Investigation of advertising claims

The state board may request, from any person who advertises, or causes to be advertised, in any manner or claim that a fuel or fuel additive reduces motor vehicle exhaust emissions, a report detailing the data which supports the advertiser's claims of emission reduction by that fuel or fuel additive.

The state board may conduct, and may request the Department of Consumer Affairs to assist the state board in, such further investigation as may appear warranted under the circumstances.

If the state board, or the state board and Department of Consumer Affairs if the latter has assisted in the investigation, determines that the fuel or fuel additive is not substantially as effective as it is claimed to be in the advertisement for it, state board shall report the findings to Attorney General for what-ever action under the Business and Professions Code or other law the Attorney General finds appropriate.

The Air Resource Board (ARB) enforcement will immediately pursue complaints and cases against violators of the alternative diesel fuels and or fuel additives requirements (CCR, title 13, section 2706 (e)). In case the ARB is not able to reach a mutually agreed upon settlement with the violator, the case will be referred to the Attorney General for prosecution, as authorized by Health and Safety Code, Section 43832.

For further information about the Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines regulation, please visit our website at: <http://www.arb.ca.gov/diesel/verdev/verdev.htm> or contact Ms. Shawn Daley at (626) 575-6972 or sdaley@arb.ca.gov.

For questions regarding enforcement of the Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines regulation, please contact Mr. Tajinder Gill at (626) 459-4304 or tgill@arb.ca.gov.



Air Resources Board



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Governor

September 5, 2008

Mail-Out #MSC 08-24

TO: ALL CALIFORNIA WASTE HAULER FLEETS
OTHER INTERESTED PARTIES

SUBJECT: EXEMPTION OF HAZARDOUS WASTE UNDER THE FLEET RULE FOR
SOLID WASTE COLLECTION VEHICLES

The purpose of this advisory is to clarify the definition of residential and commercial solid waste as it relates to hazardous waste and hazardous waste haulers. The Fleet Rule for Solid Waste Collection Vehicle (SWCV Rule), [Section 2021.2(b)] defines residential and commercial solid waste as:

"All putrescible and nonputrescible solid, and semisolid wastes, including garbage, trash, refuse, rubbish, ashes, yard waste, recyclable materials, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes originating from single-family or multiple family dwellings, stores, offices, and other commercial sources, and construction and demolition projects in residential and commercial zones, not including hazardous, radioactive, or medical waste."

Pursuant to this definition, hazardous waste is excluded from the SWCV rule. However, ARB recognizes that based on the nature of the material being hauled, characterization to determine the appropriate disposition (i.e. Class I, II or III) of the waste is often determined just prior to the material being hauled to a landfill. Based on the sampling results, the waste may be classified and hauled as either hazardous or non-hazardous. Because of the uncertain nature of this determination, a hazardous waste hauler often has no ability to know whether a particular load will be classified as hazardous or non-hazardous, thus complicating their ability to comply with the SWCV rule.

To address this, ARB has determined that waste haulers operating exclusively as a hazardous waste hauler are not subject to the SWCV Rule, but will be subject to the Air Resources Board's (ARB) proposed Statewide Truck and Bus Regulation. This regulation is scheduled to be presented to the Air Resources Board (ARB) in December 2008 for approval. For more information on this proposed regulation, go to <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

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To be excluded from the SWCV Fleet Rule as a hazardous waste hauler, the owner or operator must possess a Hazardous Waste Transporter Registration Certificate (Certificate) and submit a copy to ARB upon request. ARB further recommends the owner/operator maintain a copy of the Certificate in the affected vehicles.

Should you have any questions regarding this advisory, please contact Ms. Kathleen Mead, Manager, Retrofit Implementation Section, at (916) 324-9550 or kmead@arb.ca.gov.

Sincerely

/s/

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