DMV Compliance Verification Begins in 2020

March 2019

A GUIDE TO CALIFORNIA'S CLEAN AIR REGULATIONS FOR HEAVY-DUTY DIESEL VEHICLES

the TRUCK STOP

CALIFORNIA AIR RESOURCES BOARD

GEAR UP, BREATHE EASY

The California Air Resources Board (CARB) is actively enforcing heavy-duty diesel vehicle regulations in support of California's clean air goals. Enforcement of clean diesel vehicle rules also provides a level playing field for those who have already done their part and are in compliance.

This booklet provides basic information and resources to help take the guesswork out of California's clean truck and bus requirements. If your vehicle does not meet state clean air laws, you could be subject to fines or temporarily lose the ability to operate in California.

For more information or assistance with compliance options, visit www.arb.ca.gov/truckstop, call CARB's toll-free hotline at 1-866-6DIESEL, or email us at *8666DIESEL@arb.ca.gov*

DISCLAIMER

While this booklet is intended to assist vehicle owners with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with all applicable regulations.

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Please visit CARB's comprehensive website for more detailed information regarding diesel vehicles at *www.arb.ca.gov/truckstop*

Para obtener más informacíon en español, por favor visite *www.arb.ca.gov/truckstop/espanol*

8666DIESEL@arb.ca.gov 1-866-6DIESEL (1-866-634-3735)

WHAT DIESEL RULES APPLY TO YOU?

Check all diesel rules that apply to you.

☐ Does your vehicle have a **Gross Vehicle Weight Rating (GVWR) of 14,000+ lbs.**?

See Trucks and Buses (private and federal fleets): page 4
Other rules may apply, see below.

☐ Is your fleet **publicly owned**, a **solid waste collection vehicle**, or a **transit agency** or **utility**?

See Public Fleets and Others: page 10

☐ Do you visit **ports or intermodal rail yards**?

See Drayage Trucks: page 7

☐ Do you own or operate a **reefer** (transport refrigeration unit)?

See Transport Refrigeration Units: page 8

☐ Do you own or pull **53-foot or longer box-type trailers**?

See Tractors and Box-Type Trailers: page 9

☐ Do you own a vehicle with a **GVWR of 6,000+ lbs.**?

See Idling Limits: page 10
See Emission Control Labels: page 10
See Heavy-Duty Vehicle Inspection Program: page 10
See Periodic Smoke Inspection Program: page 10

TRUCK & BUS REGULATION

On-road diesel vehicles with a GVWR that is 14,001+ lbs. must reduce exhaust emissions by meeting particulate matter (PM) filter requirements and upgrading to newer engines. Vehicles with 2010 engine model year (EMY) or newer are fully compliant.

Heavier Vehicles with a GVWR greater than 26,000 lbs. must upgrade as shown in the table. Reporting is optional when exclusively using the Engine Model Year schedule for heavier vehicles below.

EMY Schedule for Heavier Vehicles (>26,000 lbs. GVWR)		
EMY	**PM Filter***	**2010 EMY by**
Pre-1994	Not required	January 1, 2015
1994-1995	Not required	January 1, 2016
1996-1999	January 1, 2012	January 1, 2020
2000-2004	January 1, 2013	January 1, 2021
2005 or newer	January 1, 2014	January 1, 2022
2007-2009	If already equipped	January 1, 2023

*Level 3 PM filter

Lighter Vehicles with a GVWR between 14,001 and 26,000 lbs. need to be upgraded with 2010 or newer EMY. Check the table to determine your replacement date. Older vehicles may be upgraded to newer used equipment that is still in compliance with the schedule. No retrofit PM filter or reporting is required for lighter vehicles.

EMY Schedule for Lighter Vehicles (14,001-26,000 lbs. GVWR)	
EMY	**2010 EMY by**
1995 and older	January 1, 2015
1996	January 1, 2016
1997	January 1, 2017
1998	January 1, 2018
1999	January 1, 2019
2003 and older	January 1, 2020
2004-2006	January 1, 2021
2007-2009	January 1, 2023

For more information:
1-866-6DIESEL (866-634-3735)
www.arb.ca.gov/truckstop

Other compliance options may help you comply with the regulation (please see page 5). Reporting is required by January 31 of the compliance year to claim any available options.

COMPLIANCE OPTIONS

Requires reporting in CARB's TRUCRS system

Listed below are the remaining compliance options available for 2019 and future compliance years. If you do not qualify for these options, you must follow the Engine Model Year (EMY) schedule found on page 4.

Low-Use Exemption
The mileage limit is 1,000 miles per year in California. If you have vehicles designed to power other equipment while stationary, the limit is 100 hours per year in California.

Low Mileage Construction Truck Option
Eligible vehicles with a particulate matter filter that don't meet the EMY schedule may operate up to 15,000 miles per year, and up to 20,000 miles for dump trucks. Lighter vehicles can no longer claim this flexibility option. No longer available for opt-in.

Agricultural Vehicle Extension for Replacement Vehicles
Agricultural vehicles that reported for this flexibility option cannot operate more than 10,000 miles per year until January 1, 2023. No longer available for opt-in.

NOx Exempt Area Extension
The counties that were added to the list of NOx Exempt Areas under the 2014 amendments have been removed, and a PM filter must already be installed to claim the NOx Exempt Area Extension.

Retrofit by 2014 and Additional Time for Engine Replacement
Lighter vehicles with pre-2000 model year engines and heavier vehicles with pre-1996 model year engines that were retrofit by January 1, 2014 AND reported to use this compliance option have until January 1, 2020 to delay engine replacement. If ALL the vehicles in your fleet had a diesel particulate filter by January 1, 2014, they may operate until January 1, 2023. No longer available for opt-in.

Options No Longer Available
- Heavy Cranes Phase-In Option.
- The twenty-five percent annual vehicle upgrade limit.
- Cattle livestock trucks are no longer eligible for Specialty Ag Extension.

Note that the 2017 Lawson Lawsuit impacted many of the previously exisiting options and deadlines, and many are no longer available or have expired.

DMV COMPLIANCE VERIFICATION BEGINS IN 2020

Starting in 2020, new enforcement tools ensure that vehicles subject to CARB's Truck and Bus Regulation must meet the health-based requirements of that rule prior to obtaining registration through the California Department of Motor Vehicles (DMV). Beginning January 1, 2020, the DMV cannot register any vehicle that does not meet the requirements of the Truck and Bus Regulation.

2020 DMV Registration Requirements

You must be in compliance with the Truck and Bus Regulation in one of the following ways in order to register your vehicle with the DMV:

- The vehicle is using an allowable compliance option AND is reported into the TRUCRS reporting system
- The vehicle is compliant with the Engine Model Year Schedule (see page 4)
- The vehicle is equipped with a 2010 or newer model year engine (usually a 2011 or newer model year vehicle) OR is repowered with 2010 or newer model year engine

Currently out of compliance? Don't wait until 2020.

CARB can issue DMV registration blocks now if your vehicle does not meet air quality requirements. The State of California is enforcing all diesel regulations in preparation for 2020.

DRAYAGE TRUCKS

Diesel-fueled trucks transporting cargo destined for or coming from California's ports and intermodal rail yards (including bobtails and transporting chassis) must be registered in the statewide Drayage Truck Registry prior to entry. Drayage fleets must comply with requirements by operating only vehicles with 2007 MY engines or newer.

Drayage Compliance Schedule (GVWR 26,001 lbs. or more)	
Truck Engine Model Year	**Emission Requirements**
2006 and older	Not allowed
2007-2009	Compliant through 2022
2010 and newer	Fully compliant

By January 1, 2023, all class 7 and 8 diesel-fueled drayage trucks must have 2010 or newer engines. Trucks with 2010 or newer engines are fully compliant with both the Truck and Bus and Drayage regulations.

The exchange of marine or rail cargo (e.g. containers) between compliant and noncompliant drayage trucks is not allowed anywhere in California.

Note: If you are considered exempt from the Drayage Truck Regulation, you are currently subject to the Truck and Bus Regulation.

Drayage Truck Regulation

1-888-247-4821
www.arb.ca.gov/drayagetruck

TRANSPORT REFRIGERATION UNITS (REEFERS)

All transport refrigeration units (TRU) and TRU generator sets that operate in California must meet the in-use performance standards (see compliance table below).

Every California-based TRU and TRU generator set must be registered in Air Resources Board Equipment Registration (ARBER) and be labeled with a CARB Identification Number. All terminals that are located in California where TRUs are based must submit operator reports to CARB at: *arber.arb.ca.gov*.

TRU and TRU Generator Set Compliance Schedule		
Engine Model Year	**Low-Emission TRU (50% PM Reduction)**	**Ultra-Low-Emission TRU (85% PM Reduction)**
2001 or older	December 31, 2009	December 31, 2015
2002	December 31, 2009	December 31, 2016
2003	December 31, 2010	December 31, 2017
2004 (<25 hp)	December 31, 2011	December 31, 2018
2004 (>25 hp)	Not Applicable	December 31, 2011
2005 and newer	Not Applicable	December 31st of the model year plus 7 years

Fleets may comply by using Alternative Technologies (e.g. hybrid-electric TRUs or TRUs equipped with electric standby) or retrofitting with a verified diesel particulate filter. For guidance on using electric standby and hybrid-electric TRUs as an Alternative Technology compliance option, see: www.arb.ca.gov/diesel/tru/documents/guidance_electricstandy_ets.pdf.

All businesses that hire carriers (e.g. brokers, shippers and receivers) must only use carriers that supply compliant TRUs.

Transport Refrigeration Unit Regulation Helpline

1-888-TRU-ATCM (1-888-878-2826)
www.arb.ca.gov/diesel/tru/tru.htm

TRACTORS & BOX-TYPE TRAILERS

The Tractor-Trailer Greenhouse Gas Regulation applies to 53-foot or longer box-type trailers and 2013 MY or older heavy-duty tractors that pull these trailers.

Low-Rolling Resistance Tire Requirements*

	Tractors	Trailers
2013 and older MY	Required	Required
2014 and newer MY	N/A	Required

Tractor Requirements

All 2011 through 2013 MY sleeper-cab tractors must be SmartWay™ designated models. 2014 MY or newer tractors are covered by a federal regulation and are exempt from this rule.

Trailer Aerodynamic Requirements

All trailers must be either SmartWay™-certified or aerodynamically retrofitted to a minimum standard.

Delays and Exemptions

Certain trucks subject to the Transportation Refrigeration Unit (TRU) rule can phase in tire and aerodynamic requirements from 2018 to 2020. This only applies to TRUs with 2003 to 2009 MY reefer trailers equipped with 2003 or newer TRU engines.

Fleets must register to take advantage of short haul, local haul or storage trailer exemptions, and to apply for temporary use passes.

For full details, see: *www.arb.ca.gov/tractortrailer_ghg*

For a listing of SmartWay™-certified technologies, see: *www.arb.ca.gov/cc/hdghg/technologies.htm*

*Must be SmartWay™-certified.

OTHER DIESEL PROGRAMS

CARB continues to actively enforce long-standing requirements for diesel vehicles including:

Idling Limits

Idling Limits restrict diesel vehicles from idling more than five minutes. Idling in school zones is not allowed, with limited exceptions. See: *www.arb.ca.gov/noidle*

Emission Control Labels

Emission Control Labels must be affixed to engines of all commercial heavy-duty diesel vehicles, and must be legible as proof the engine, at minimum, meets U.S. federal emissions standards for the engine model year.

Periodic Smoke Inspection Program

The Periodic Smoke Inspection Program requires owners of California-based fleets of two or more diesel vehicles to perform annual smoke opacity tests and to keep records for at least two years for each vehicle. The requirement does not apply to cars or trucks that must undergo a Smog Check.

Heavy-Duty Vehicle Inspection Program

The Heavy-Duty Vehicle Inspection Program uses random roadside inspections to verify that diesel engines do not smoke excessively and are tamper-free. See: *www.arb.ca.gov/enf/hdvip/hdvip.htm*

Public Fleets and Others

Vehicles with a GVWR of 14,001+ lbs. that are owned by state and local government fleets, private utilities, and solid waste collection vehicles, must already have particulate matter (PM) filters (retrofit or originally equipped).

SOOT FILTER BUYER BEWARE

Use only CARB-verified soot filters!

Selecting and installing the right CARB-verified diesel particulate filter (DPF), also known as a soot filter, for your truck takes time. If your filter is not installed by January 1st of the applicable compliance year, or ordered four months prior to the deadline, then you may be in violation. Visit *www.arb.ca.gov/truckstop* and click on "Engine Filters" for details.

Be aware, filters must be verified for use on your vehicle. Used filters are not compliant and may damage your engine.

Compliance options that utilize new filter installation are limited. Therefore, installation of a filter without being aware of the available options may not result in a non-compliant vehicle. Make sure you understand your compliance options.

The emissions performance of every DPF technology has been verified by CARB through rigorous testing. Keep in mind that a DPF is not a "fit and forget" device. Protect your DPF and engine by paying attention to a few simple but important maintenance requirements.

DIESEL PARTICULATE FILTER CARE & MAINTENANCE

Vehicle Maintenance is Critical

Top-notch vehicle engine maintenance is required. Remember to check fuel injectors, air filters, turbo chargers, fuel filter, fuel, coolant and lube oil. Failure to maintain the engine can void the DPF warranty!

Don't Ignore the DPF Monitoring System

The cab of the truck features a monitoring system for the DPF that includes several indicator lights that give important feedback on DPF operation. The operator must understand and observe the DPF indicator lights on a regular basis and respond accordingly.

Maintain the Proper Engine Duty Cycle

The duty cycle is the daily pattern of engine use. If the duty cycle of a truck is changed, it may affect how the filter works, and can lead to plugging. Notify your installer if you change the way you use your vehicle and be aware that it may affect the way your filter functions.

Understand Your DPF's Regeneration System

The soot collected by the DPF must eventually be removed to keep the filter from clogging. The process of burning the soot in the filter is called regeneration and is done using high temperatures for a specified amount of time. Your truck is equipped with either a passive system that cleans the DPF automatically or an active system that may work automatically or require driver intervention to start a regeneration cycle.

Handle the Filter with Care

DPFs are commonly made of ceramic, so do not bang or tap on your filter. A cracked or damaged filter may not be compliant with the Truck and Bus Regulation and could be a citable violation.

DPF Cleaning Basics

The DPF is a maintenance item. It must be removed and cleaned periodically to get rid of accumulated noncombustible ash from the filter. Ash removal is separate from regeneration. Only use filter cleaning procedures approved by the DPF manufacturer.

RESOLVING DPF-RELATED PROBLEMS

While a DPF undergoes a rigorous verification process prior to sale, occasional problems may arise. Use the following three-step protocol to resolve DPF-related performance or reliability problems: 1. Contact your installer (most problems are resolved in this manner) 2. Contact the device manufacturer (if the installer cannot resolve your complaint) 3. Contact ARB at 866-6DIESEL or *8666DIESEL@arb.ca.gov* (only if the installer or manufacturer cannot resolve your complaint).

A guide to operating your DPF is available at: *www.arb.ca.gov/truckstop* or by contacting (866) 6DIESEL or via email at *8666diesel@arb.ca.gov.*

FUNDING ASSISTANCE

Grant funding is very limited but may be available to help fleets and individuals comply with California regulations earlier than is required.

Funding is available for vehicle replacements, retrofits, and zero-emission technologies. Please contact the local air district where you are based to determine if you are eligible for funding or if an opportunity may become available in the future. One example is the Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program, which provides funding through local air districts for agricultural harvesting equipment, heavy-duty trucks, agricultural pump engines, tractors, and other equipment used in agricultural operations.

CARB's loan assistance program (PLACE) helps small businesses with vehicles that operate at least 50 percent of the time in California. The program connects truckers to participating lenders to help purchase trucks, PM filters, aerodynamic retrofits or low-rolling resistance tires.

See: *www.arb.ca.gov/ba/loan/on-road/on-road.htm*

Equipment owners are encouraged to apply as early as possible to maximize potential funding options. See the TruckStop website's "Financial Assistance" section for more funding information.

QUICK TIPS

- All fleet owners who use compliance options must report information about all eligible vehicles in the California fleet into the Truck Regulation Up-load, Compliance, and Reporting System (TRUCRS). The reporting period is open from January 1 to January 31 of the compliance year.
- Records must be kept and provided upon request to demonstrate compliance with flexibilty options claimed in the reporting system.
- The Truck and Bus Regulation is based on the **model year of the engine**. Generally, the model year of an engine is one year older than the vehicle model year. For example, a 2007 truck is likely to have a 2006 engine model year.
- Vehicles that operate less than 1,000 annual miles within California can qualify for the low-mileage usage exemption. Odometer readings must be reported annually to CARB.
- Selecting and installing a diesel particulate filter (DPF), also known as a soot filter, for your truck takes time. Make sure to use only **CARB-verified** soot filters.
- The gross vehicle weight rating (GVWR) is assigned by the vehicle manufacturer and represents the maximum weight of the vehicle and what it can carry when fully loaded. Check the driver's door jam for the **GVWR label**. The GVWR is **not** the same as the unladen weight, gross combined weight rating, or registered weight rating.
- The **Engine (Emission) Family Name** (EFN) can be found on the emission control label located on the engine. The EFN is typically 10 to 12 characters, however very old engines may have an EFN only a few characters long.
- Be aware that tampering with your engine odometer can put you out of compliance with engine certification requirements and the Truck and Bus Regulation.

NOT SURE IF YOUR DIESEL TRUCK, BUS OR EQUIPMENT COMPLIES WITH CALIFORNIA AIR QUALITY REGULATIONS?

the TRUCK STOP

Register & Report

Use TruckStop to find out what you need to do to comply and avoid penalties.

Training

Sign up for free live training classes.

FAQs

See questions and answers from our diesel hotline generated by truckers like you.

Videos

View short videos that explain diesel requirements and reporting systems.

DPF

Find out about diesel particulate filters.

Funding

Financial assistance may be available to help clean up your trucks, buses and equipment.

Answers

Visit TruckStop at:
www.arb.ca.gov/truckstop

OVERVIEW OF

The Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards

Rule to achieve significant emission reductions and protect public health

Rubber-Tired Gantry Crane

The California Air Resources Board (ARB) has in place a regulation, which took effect in 2006, to reduce emissions from mobile cargo handling equipment (CHE) operating at California's ports and intermodal rail yards. The regulation requirements, which are in section 2479 of title 13 of the California Code of Regulations, are applicable to all diesel-fueled equipment used at a California port or intermodal rail yard to lift or move containers, bulk or liquid cargo, or to perform routine or predictable maintenance and repair activities. Equipment at low-throughput ports meeting certain criteria are exempted.

What is mobile cargo handling equipment?

Mobile CHE is any motorized vehicle used to handle cargo delivered by ship, train, or truck, or used for scheduled or routine maintenance activities. The type of equipment used depends on the type of cargo handled or the type of activity. Equipment that handles cargo containers includes yard trucks, top handlers, side handlers, reach stackers, forklifts, and rubber-tired gantry (RTG) cranes. Equipment that is used to handle bulk cargo includes dozers, excavators, loaders, and railcar movers. Forklifts, aerial lifts, and other types of equipment used in maintenance operations at ports and intermodal rail yards are also considered CHE for the purposes of this regulation.

What does the Cargo Handling Equipment Regulation require?

The regulation establishes best available control technology (BACT) for new and in-use CHE that operates at California's ports and intermodal rail yards. Below is a list of the general requirements. A more detailed explanation can be found in the staff reports for the original rulemaking and subsequent amendments, available at: *www.arb.ca.gov/regact/cargo2005/isor.pdf* and *www.arb.ca.gov/regact/2011/cargo11/cargoisor.pdf*, respectively.

Yard Truck

New Yard Trucks: New yard trucks must be equipped with either a certified on-road engine meeting the current engine emissions standards or a certified Tier 4 final off-road diesel engine. (See § 2479(e)(1)(A).)

New Non-Yard Truck Equipment: New non-yard truck equipment must be equipped with a certified on-road engine meeting the current emissions standards or a certified Tier 4 final off-road engine. If neither is available, the engine must be certified to the highest level off-road diesel engine standards, and the highest level available verified diesel emission control strategy (VDECS) must be installed within one year, if applicable. Engines certified to Tier 4 Family Emission Limit (FEL) Alternate PM emission standards must be retrofitted with highest level VDECS within one year of acquisition, if available. CHE owners/operators may rent the cleanest available non-yard truck equipment until new equipment is delivered in cases where new compliant equipment is purchased but delivery is delayed. (See § 2479(e)(1)(B).)

In-use Yard Trucks: The regulation requires in-use yard trucks to meet BACT performance standards primarily through accelerated turnover of older yard trucks to those equipped with certified engines meeting current on-road engine emissions standards or Tier 4 final off-road engine emissions standards. Compliance is phased in for owners and operators who have more than three yard trucks in their fleet. (See § 2479(e)(2).)

In-use Non-Yard Truck Equipment: Non-yard truck equipment are also required to meet BACT per a phased compliance schedule. This includes replacement to cleaner on-road or off-road engines and/or the use of retrofits. (See § 2479(e)(3).)

Compliance Schedule: Compliance with the regulation was phased in beginning in 2007 based on the age of the engine, whether or not it was equipped with VDECS, and the size of the fleets. All yard trucks must be compliant with the regulation by December 31, 2017, and all non-yard truck equipment were required to be compliant by December 31, 2013.

The regulation includes provisions that would allow operators to delay compliance with the in-use performance standards if an engine is within one year of retirement, if no VDECS is available for non-yard truck equipment, if an experimental diesel particulate matter emission control strategy is used for non-yard truck equipment, if there are delivery delays, or the equipment operates 200 hours per year or less. (See § 2479(f).)

Opacity Monitoring: All CHE engines must be tested annually for exhaust opacity and equipment with excessive opacity must receive maintenance and repair before being returned to service. New engines are exempt from the opacity monitoring requirements until four years after the model year of the engine (regardless of when they were acquired or placed into service). For example, a 2015 model year engine is exempt until January 1, 2019.

Non-Yard Truck Equipment Transfer: A port terminal or intermodal rail yard owner/operator may request a transfer of their owned or leased non-yard truck CHE if the locations that the equipment is transferred from and to are both under the control of the same owner or operator and the equipment is compliant with the performance requirements of the regulation prior to being used in the new location. ARB approval must be obtained prior to the transfer. (See § 2479(k).)

Recordkeeping and Reporting: Owners and operators are required to maintain records for all mobile CHE, submit a compliance plan, and perform annual reporting by submitting their contact information and location of their equipment, and a demonstration of compliance for vehicles that have complied during the year. Compliance plans and the first annual report were due to the ARB on January 31, 2007. Records of opacity testing results must also be maintained. (See § 2479(i) and (j).)

What are the benefits of the regulation?

ARB staff developed this regulation to reduce emissions of diesel particulate matter (PM) and oxides of nitrogen (NO_x) from new and existing (in-use) mobile CHE at ports and intermodal rail yards. ARB staff estimated mobile CHE at ports and intermodal rail yards emitted approximately 200 tons per year (0.54 tons per day) of diesel PM and 4,890 tons per year (13 tons per day) of NO_x in 2006. Diesel PM emissions are estimated to be reduced by 90 percent (about 0.5 tpd) and NO_x emissions by 73 percent (about 10 tpd) by the end of 2017.

In 1998, ARB identified diesel PM as a toxic air contaminant based on its potential to cause cancer and other non-cancer impacts such as premature deaths, asthma attacks, and lost work days. Implementation of the rule is anticipated to provide significant public health benefits including an 80 percent reduction in cancer risk associated with PM emissions from CHE. Additional benefits include the prevention of 32 cumulative premature deaths and the reduction of many other non-cancer health effects associated with both diesel PM and NO_x emissions.

For more information

Contact Michele Houghton at (916) 327-5638 (e-mail: *michele.houghton@arb.ca.gov*) or visit our web site at *www.arb.ca.gov/cargo*. The full regulatory text is available from: *www.oal.ca.gov/ccr.htm*. Regulatory documents associated with the original rulemaking and subsequent amendments may be viewed and downloaded from: *www.arb.ca.gov/regact/cargo2005/cargo2005.htm* and *www.arb.ca.gov/regact/2011/cargo11/cargo11.htm*, respectively.

To obtain this document in an alternative format or language, please contact the ARB's Helpline at (800) 242-4450 or at *helpline@arb.ca.gov.* TTY/TDD/ Speech to Speech users may dial 711 for the California Relay Service.

OVERVIEW OF

Commercial Harbor Craft Regulation

On November 15, 2007, the California Air Resources Board (ARB) approved a regulation to reduce emissions from diesel engines on commercial harbor craft vessels. Amendments were approved in June 2010. Regulation compliance is significantly reducing diesel particulate matter (PM) and oxides of nitrogen (NOx) emissions from harbor craft engines.

What types of vessels are subject to this regulation?

The regulation applies to all commercial harbor craft vessels including, but not limited to, ferries, excursion vessels, tugboats (including ocean-going tugs), towboats, push boats, crew and supply vessels, barge and dredge vessels, work boats, pilot vessels, and commercial and charter fishing boats. There are about 4,200 harbor craft vessels, and 8,300 diesel engines on these vessels, currently in use in California. Of these, nearly 800 are ferries, excursion vessels, tugboats, towboats, push boats, crew and supply vessels, barge and dredge vessels equipped with about 2,500 propulsion and auxiliary engines that are subject to in-use engine emission limits.

What does the commercial harbor craft regulation require?

Regulated California Waters means:
All internal waters, estuarine waters, ports, and coastal waters within 24 nautical miles of the California coast.

The regulation includes requirements for both new and in-use diesel engines used on commercial harbor craft operating in Regulated California Waters. Below is a brief discussion of these requirements; specific details can be found in the regulation, which is available online: www.arb.ca.gov/ports/marinevess/harborcraft/hcregulatory.htm

Operational Requirements for All Commercial Harbor Craft

Commercial harbor craft owners/operators are required to fuel their diesel engines with California ultra low sulfur diesel and install (if not already installed) a non-resettable hour meter on each engine. All owners/operators are required to submit an initial report to ARB within 30 days of first operating in Regulated California Waters. Vessel owners/operators must keep a copy of their initial report and annually up-dated records on the vessel or in a central dockside location to be made available upon request by ARB staff.

Newly-Acquired Engines for New Harbor Craft

The engines on all new commercial harbor craft vessels are required to meet the United States Environmental Protection Agency (U.S. EPA) marine or off-road engine emission standards in effect at the time the vessel is acquired.

Replacement Engines on In-Use Harbor Craft

Newly-acquired engines for all in-use harbor craft are required to meet the Tier 2 or Tier 3 marine or off-road standards (or Tier 4 in certain cases) in effect at the time the vessel owner/operator acquires the engine. This provision ensures that as older engines on in-use vessels are retired, they will be replaced with the cleanest available engines. Newly-acquired engines are not required to meet the Tier 4 marine or off-road standards unless replacing a Tier 4 engine on the in-use vessel.

Propulsion Engines for New Ferries

Propulsion engines on new ferries acquired after January 1, 2009, with capacity for 75 or more passengers, are required to be even cleaner than the Tier 2 and Tier 3 standards. These new ferries are required to install best available control technology (BACT) on the propulsion engines in addition to having engines that meet the current marine engine emission standards in effect at the time of acquisition. Alternatively, ferry vessels may comply with the regulation by installing propulsion engines that meet the Tier 4 marine engine emission standards.

In-Use Requirements Specific to Ferries, Excursion Vessels, Tugboats, Towboats, Push Boats, Crew and Supply Vessels, Barge and Dredge Vessels

The regulation requires existing Tier 1 and earlier propulsion and auxiliary engines on in-use ferries, excursion vessels, tugboats, towboats, push boats, crew and supply vessels, and barge and dredge vessels, to meet U.S. EPA Tier 2 or Tier 3 standards in effect at the time of regulation compliance.

Low use compliance is available for engines that operate 300 hours annually or less in the regulated categories, or 80 hours if in barge and dredge.

There are four regulation compliance schedules. Two are for the categories of ferry, excursion vessel, tugboat, towboat, and push boat: one for vessels with home ports outside of the South Coast Air Quality Management District (SCAQMD), and an accelerated schedule for vessels with home ports in the SCAQMD. Additionally, there is a statewide regulation compliance schedule for crew and supply vessels and one for barge and dredge vessels. All compliance schedules are based on the engine model year and hours of operation and are designed to replace the oldest, highest use engines first.

Vessel owners/operators are required to submit a report about how they plan to comply with these requirements and then an additional report when they have completed compliance. Once engines are upgraded to Tier 2 or Tier 3 marine or off-road engines, the CHC regulation does not require any further upgrades. However, if the vessel owners/operators choose to replace these compliant engines, the replacement engines are required to meet the current U.S. EPA marine or off-road engine standard. (See "Replacement Engines on In-Use Harbor Craft")

Why did ARB develop a regulation for commercial harbor craft?

Regulations are necessary to reduce emissions of diesel PM and NOx that cause adverse health effects for Californians. Diesel engines on California commercial harbor craft were estimated to emit 3.3 tons per day (tpd) of diesel PM and 73 tpd of NOx in 2004. An ARB exposure study at the ports of Los Angeles and Long Beach found harbor craft to be the third highest source of diesel PM emissions contributing to the cancer risk from port activity.

What are the health impacts associated with commercial harbor craft emissions?

The health impacts associated with commercial harbor craft emissions include both cancer and non-cancer health risks. Non-cancer health impacts are due to both directly emitted PM and secondary diesel PM, to which NOx is a precursor. Non-cancer health effects may include eye and lung irritation, allergic reactions in the lungs, asthma exacerbation, blood toxicity, immune system dysfunction, and developmental disorders. NOx has been shown to have the following adverse health effects in humans: respiratory irritation, immune system suppression, and asthma exacerbation. Staff estimates that the non-cancer health impacts from harbor craft emissions prior the implementation of the CHC regulation included approximately 90 premature deaths and 2,400 asthma-related cases per year, as well as numerous other impacts.

What are the environmental and health impacts of the regulation?

By 2025, commercial harbor craft diesel PM emissions will be reduced about 75 percent and NOx emissions about 60 percent compared to the 2004 baseline. These reductions will result in a decrease of over 60 percent in the population impacted by a cancer risk of 10 in a million and avoid approximately 310 premature non-cancer deaths statewide by 2025, as well as prevent numerous other non-cancer health effects.

How much will the regulation cost?

The total cost of regulatory compliance for affected businesses was estimated to be approximately $140 million over the life of the regulation. The cost-effectiveness was estimated to be about $29 per pound of diesel PM reduced, if all costs are attributed to reducing diesel PM. If the costs are split evenly between reducing PM and NOx, the cost effectiveness is estimated at $14 per pound of PM and $1,800 per ton of NOx. Health cost savings due to reduced mortality and reduced incidences of non-cancer illnesses are estimated at a total valuation of $1.3 billion to $2 billion, calculated using U.S. EPA methodology.

Where can I find more information about the regulation?

If you have specific questions or comments about the regulation or supporting documents, please contact Zhenlei Wang at (916) 322-1049 (e-mail: zhenlei.wang@arb.ca.gov) or Cherie Rainforth at (916) 327-7213 (e-mail: cherie.rainforth@arb.ca.gov).

You may also visit our web site at www.arb.ca.gov/ports/marinevess/harborcraft.htm, or contact ARB's toll-free harbor craft helpline at (888) 44CRAFT (442-7238) or email at harborcraft@arb.ca.gov.

To obtain this document in an alternative format or language, please contact the ARB's Helpline at (800) 242-4450 or at helpline@arb.ca.gov. TTY/TDD/ Speech to Speech users may dial 711 for the California Relay Service.

OVERVIEW OF

The Statewide Drayage Truck Regulation

Rule to achieve significant emission reductions and protect public health.

In December 2007, the California Air Resources Board (ARB) approved a new regulation to reduce emissions from drayage trucks transporting cargo to and from California's ports and intermodal rail yards.

Why is this regulation needed?

Drayage trucks tend to be older vehicles with little or no emission controls. These vehicles tend to congregate near ports and rail yards and emit large amounts of smog forming oxides on nitrogen (NO_x), and toxic soot (Particulate Matter (PM)). Nearby communities are more heavily impacted by these emissions which contribute to many adverse health effects, including asthma, cancer, and premature deaths. Reducing emissions from these trucks is necessary to meet federally imposed clean air standards and to reduce adverse health effects – especially to nearby communities.

What types of vehicles are subject to this regulation?

The regulation applies to all on-road class 7 and class 8 (GVWR > 26,000 lbs) diesel-fueled vehicles that transport cargo to and from California's ports and intermodal rail yards regardless of the state or country of origin or visit frequency. The regulation does not apply to certain types of vehicles including emergency vehicles, military tactical support vehicles and dedicated use vehicles.

Can I re-certify my truck to lower the GVWR (Gross Vehicle Weight Rating)?

No. According to Vehicle Code Section 350:

- "Gross Vehicle Weight Rating" (GVWR) means the weight specified by the manufacturer as a loaded weight of the single vehicle.

The GVWR on the certification label can only be assigned by the manufacturer and it is the only valid GVWR for complying with the Drayage Truck Regulation's requirements.

Who must comply with the regulation?

The regulation establishes requirements for drayage truck drivers, drayage truck owners, motor carriers that dispatch drayage trucks, port and marine terminals, intermodal rail yards, and port and rail authorities.

What does the regulation require?

In general, the regulation requires emission reductions from drayage trucks as well as recordkeeping and reporting to help monitor compliance and enforcement efforts. The basic responsibilities for each stakeholder are as follows: truck drivers must provide motor carrier contact information, load destination, and origin to enforcement officers, if requested; truck owners are required to register their trucks in the State administered Drayage Truck Registry (DTR), ensure their trucks meet emission standards by the appropriate deadline dates (see table below), and ensure that emission control technologies are functioning properly; motor carriers must ensure that dispatched trucks are compliant with the regulation, provide a copy of the regulation to truck owners, and keep dispatch records for five years; and terminals are required to collect information from each noncompliant truck entering their facility and report it to their respective port or rail authority, who then reports this information to the ARB.

When do truck owner requirements take effect?

The regulation requires truck owners to register their trucks in the State run DTR prior to port or railyard entry. Truck owners are also required to meet emission standards shown in the following table.

Class 8 compliance schedule

Truck Engine Model Year	Emission Requirements
1994 thru 2006 (pre-1994 not allowed)	Reduce PM emissions by 85%* now and; After December 31, 2013, meet 2007 engine standard
2007-2009	Compliant through 2022
2010 and Newer	Fully compliant

Class 7 compliance schedule

Truck Engine Model Year	Emission Requirements
2006 and older while operating in the South Coast Air Basin	Reduce PM emissions by 85%* now and; After December 31, 2013, meet 2007 engine emission standard
2006 and older	After December 31, 2013, meet 2007 engine emission standard
2007 thru 2009	Compliant through 2022
2010 and Newer	Fully compliant

Note: All Drayage Trucks must operate with a 2007 or newer model year engines by January 1, 2014.

*ARB verified level 3 diesel particulate filter.

What are the benefits of the regulation?

The regulation is projected to provide significant emission reductions that will have a positive air quality impact in California – especially in and around affected ports and intermodal rail yards. PM emissions are projected to be reduced by about 2.6 tons per day starting in 2010 and NO_x emissions are projected to be reduced by 34 tons per day starting in 2014. Staff estimates that approximately 580 premature deaths would be avoided by 2014 in addition to 17,000 fewer cases of asthma-related symptoms.

Is incentive money available?

Incentive funds may be available in many areas of the state. Please see the following ARB website for additional information: *www.arb.ca.gov/ba/fininfo.htm*.

For more information

Contact the ARB Drayage Truck Hotline at 888-247-4821.
Please visit our website at : *www.arb.ca.gov/drayagetruck*

To obtain this document in an alternative format or language please contact the ARB's Helpline at (800) 242-4450 or at *helpline@arb.ca.gov*. TTY/TDD/ Speech to Speech users may dial 711 for the California Relay Service.

California Environmental Protection Agency
Air Resources Board

2017 Advisory

To: Vessel Fleets and Terminal Operators Subject to ARB's Ships At-Berth Regulation

NOVEMBER 2016

AIRBORNE TOXIC CONTROL MEASURE FOR AUXILIARY DIESEL ENGINES OPERATED ON OCEAN-GOING VESSELS AT-BERTH IN A CALIFORNIA PORT

The purpose of this Advisory is to inform affected vessel fleets and terminal operators as to how Air Resources Board (ARB) staff will proceed with enforcement of the Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port[1] (At-Berth Regulation or Regulation), beginning January 1, 2017.

The provisions in this Advisory will cover actions beginning January 1, 2017, and ending when ARB revokes this Advisory. ARB will evaluate eligibility for the flexibility provided in this Advisory on a case-by-case basis, as set forth below. As of January 1, 2017, this Advisory supersedes previous advisories (dated December 2013 and March 2015) regarding the At-Berth Regulation. Vessel fleet and terminal compliance plans for the 2017 calendar year may follow the guidance in this Advisory.

Regulatory Background

ARB's At-Berth Regulation is intended to reduce emissions of diesel particulate matter (PM) and oxides of nitrogen (NOx) from auxiliary engines on ocean-going vessels while at-berth at California ports. Fleets affected by the Regulation include those composed of container vessels, passenger vessels, or refrigerated cargo vessels. Fleets can comply through one of two paths: the Reduced Onboard Power Generation Option (that relies on use of shore-based electrical power), or the alternative Equivalent Emissions Reduction Option.

The Regulation requires fleets complying under the Reduced Onboard Power Generation Option to satisfy the following two criteria beginning on January 1, 2017:

- Visits: At least 70 percent of a fleet's visits to a port must satisfy the following limit on engine operation: for each visit, the auxiliary engines on the vessel cannot operate for more than three hours during the entire time the vessel is at-berth (e.g., a shore power visit); and

- Power Reductions: The fleet's total onboard auxiliary engine power generation must be reduced by at least 70 percent from the fleet's baseline power generation.

Fleets that comply under the Equivalent Emission Reduction Option pathway must reduce NOx and PM by 70percent or more through use of an ARB-approved technology[2].

On January 1, 2020, the requirements under the existing regulation increase to 80 percent for the visit, power reduction, and equivalent emission reduction requirements.

[1] Section 93118.3, title 17, chapter 1, subchapter 7.5, California Code of Regulations (CCR)
[2] ARB-approved technologies include shore power, or alternatives with an ARB Executive Order which states control efficiencies, as well as monitoring, reporting, recordkeeping requirements, and operating conditions. Executive Orders for alternative technologies can be found on ARB's website at: http://www.arb.ca.gov/ports/shorepower/eo/eo.htm

Fleet Options

ARB understands it may not be possible for regulated entities to satisfy certain provisions in the Regulation under certain circumstances. As a result, ARB will offer six possible scenarios, which may apply on a case-by-case basis, with the objective of providing flexibility to fleets that have equipped their vessels to use shore power or contracted to use an alternative control technology to comply with the At-Berth Regulation. Fleets are expected to make every effort to reduce emissions to meet the requirements of the At-Berth Regulation. ARB staff will review each fleet's efforts to meet the scenario conditions on a case-by-case basis. The burden is on the fleet operator to provide proof and documentation sufficient to qualify for the scenarios in this Advisory. Staff may request additional information to verify a fleet's claims. If staff is unable to verify a fleet's claim, the fleet's request to utilize one or more scenarios in this Advisory will be denied. As noted above, the provisions in this Advisory will cover actions beginning January 1, 2017, and ending when ARB revokes this Advisory.

Scenario 1. The vessel visiting the port is equipped to receive shore power, but the terminal's shore power berth is not able to provide shore power.

Scenario 1 applies to visits by shore power equipped vessels where, for reasons beyond the fleet operator's control, the terminal's shore power berth is not able to provide shore power and the terminal is actively working to restore shore power at the berth. For example, the shore side infrastructure is undergoing construction to upgrade shore power capability or shore side equipment has failed and is being repaired. In these cases, the visit may count toward the visit requirement as a shore power visit, and the hours the auxiliary engines operate during the visit may be excluded from the calculations for the percent power reduction or equivalent emission reduction requirements. Scenario 1 does not apply to visits where the vessel's shore power equipment is unable to reach a vault, a shore power berth is already occupied by another vessel, or there is a lack of availability of labor from the terminal or port. These issues are the responsibility of the vessel fleet, the terminal operator, and the port to resolve together to support full utilization of shore power equipment.

To utilize this scenario, for each visit that falls under this scenario, the fleet operator must provide ARB staff with the next annual report the following information about the visit: vessel name, Lloyds or IMO number, date and time of arrival, terminal, berth, and reason for berth unavailability. In addition, the fleets must provide the following information about the terminal: contact person at the terminal, detailed reason for berth unavailability including documentation provided from the terminal regarding the berth unavailability, and estimated date the shore power berth will return to service.

Terminals and ports that do not make shore power available may be subject to ARB enforcement action, as appropriate under the specific circumstances of each case.

Scenario 2. A vessel makes a commissioning visit to a terminal, and during the visit, the auxiliary engines operate longer than three hours.

Commissioning of the vessel is undertaken to ensure that the vessel is compatible with the shore side power hardware and that there are no safety issues for both the equipment and the personnel handling the connection. Scenario 2 applies to fleets with shore power equipped vessels that have yet to commission the shore power equipment at a terminal. The first commissioning visit made by a vessel to a terminal, regardless of the time necessary to connect or disconnect to shore power, will count towards the visit requirement of the Regulation as long as the vessel was able to successfully connect to shore power during that visit. The time required to commission will also be excluded from the power reduction or emission reduction requirements from the Regulation as long as the vessel was able to successfully connect to shore power during that visit. At the request of the fleet operator, ARB staff may count an additional commissioning visit as compliant, on a case-by-case basis, in circumstances where a fleet demonstrates that the commissioning process could not be accomplished in a single visit or the vessel needed to be recommissioned due to changes in the shore power infrastructure.

To utilize this scenario, a fleet operator must provide documentation to verify that the scheduled commissioning occurred,including vessel name, Lloyd's number, date and time the vessel commissioned, terminal and berth at which the vessel commissioned, and a copy of the commissioning test results.

Scenario 3. A vessel uses shore power, but fails to meet the three/five-hour time limit for connecting or disconnecting shore power.

Scenario 3 applies to fleets that have elected to comply with the Reduced Onboard Power Generation Option. Staff has been informed of many circumstances that could result in the auxiliary engines operating for more than the three/five hour time limits, including delays lowering the gangway, securing the vessel, waiting for clearance, or waiting for labor to connect the vessel. A vessel visit that successfully uses shore power during the visit but was not able to meet the three/five hour time limits may request relief under this scenario to count toward the visit requirement as a compliant visit.

To utilize this scenario, a fleet operator must provide a summary in the next annual report of their visit times including the total number of vessel visits, and shore power visits, and a summary of the auxiliary engine operating time for visits that exceeded the three/five-hour time limits. For each vessel visit where the engines operated for longer than the three/five hour time limits, the fleet must provide the vessel name, the date of the visit, and the reasons for operating engines longer than three hours.

Scenario 4. Vessels are using an approved alternative control technology to comply with the At-Berth Regulation.

Scenario 4 applies to fleets that are complying under the Reduced Onboard Power Generation Option that want to use an approved alternative control technology during a visit to reduce emissions. Use of an alternative control technology, with ARB-approved control efficiencies, during a visit allows the visit to count towards the fleet visit requirement. Furthermore, the approved reductions may count toward an equivalent power reduction requirement based on the ARB-approved control factors. Fleets may reduce the calculation of power provided by the auxiliary engine, as determined under subsection (e)(1)(B) of the Regulation, by determining the equivalent power reduction. To determine the equivalent power reduction, fleets may multiply the auxiliary engine emission rate for NOx and PM by the emission reductions for NOx and PM calculated from the equations in the alternative technology's Executive Order. If the equivalent power reduction for NOx and PM differ, fleets must use the lower equivalent power reduction.

To utilize this scenario, a fleet must provide the name of the approved alternative control technology, the number of vessel visits using the control technology, the total hours of operation by the fleet of the control technology, and any additional information required by the applicable technology's Executive Order.

Scenario 5. Fleet participates in testing an alternative control technology with an ARB-approved test plan.

In order to assist with testing new alternative control technologies, fleets that participate in testing of an alternative technology during a vessel's visit may claim an experimental exemption under the following conditions: (a) The alternative technology must have an ARB-approved test plan; (b) the testing must be specified in the approved test plan; and (c) the testing must be conducted in accordance with the approved test plan. The visit may count as compliant with the fleet's visit requirement, and the fleet may elect to exclude the power or emissions associated with the testing from the compliance calculations of power reduction or emission reduction in the Regulation. If the alternative control technology receives ARB approval, the fleet may elect to include the power or emissions associated with the testing in the compliance calculations of power reduction or emission reduction in the Regulation, based on the effectiveness documented in the ARB Executive Order.

To utilize this scenario, for each visit where experimental testing was conducted, a fleet must provide the name of the alternative control technology, the name of the vessels using the control technology, the type of test specified in the approved test plan, the date and time the testing was conducted, and the total hours of operation by the control technology during the visit. If the alternative control technology receives ARB approval, and the fleet elects to include the emissions associated with the testing in the compliance calculations of power reduction or emission reduction, then the fleet must also provide any additional information required by the technology's ARB Executive Order.

Scenario 6. A fleet meets the percent reduction requirements for visits, power, or emissions, averaged on an annual basis.

Scenario 6 applies to fleets that demonstrate they have met the percent reduction requirements for visits, power, or emissions, averaged on an annual basis, from January 1 to December 31. For each of the visit, power, and equivalent emission reduction requirements, an annual rather than quarterly compliance period provides fleets with flexibility to meet the required reductions over the year. Fleets that are unable to meet a quarterly requirement have the other three quarters of the year to adjust to meet the requirements. This flexibility is intended to provide fleets better ability to make up for any unforeseen issues in the year. Fleets should submit reports of annual compliance starting with the 2017 compliance report due on March 1, 2018.

Reporting Compliance Actions Taken Under this Advisory

To utilize any of the scenarios described in this Advisory, an affected vessel fleet operator must report, under penalty of perjury, specific information to ARB by emailing that information to ShorePower@arb.ca.gov. The attached "Annual Reporting Form" identifies the information that needs to be reported for fleets using any of the six scenarios, or a combination of those scenarios, in 2017 and beyond. The Annual Reporting Form for each scenario utilized must be submitted by March 1st of the following year, at the same time that the fleet submits its annual compliance statement. In addition, fleets must also provide the records required to be kept pursuant to the Regulation (Section 93118.3(g)(1)(B) or (g)(2)(B)). Failure to provide the required documentation for each scenario used will result in denial of the compliance relief. Again, the burden is on the fleet operator to provide proof and documentation in order to use the above listed scenarios, and ARB will review each scenario request on a case-by-case basis to determine whether to grant the requested scenario relief.

Proposition 1B Grants for Shore Side Infrastructure

ARB-approved use of Scenarios 2 and 3 is permitted to count toward the performance requirements and Scenarios 4 and 5 should be excluded from the performance requirements for grid-based shore power infrastructure projects funded by the Proposition 1B: Goods Movement Emission Reduction Program. For additional information, please refer to Supplemental Procedures for Ships at Berth and Cargo Handling Equipment Projects located at: www.arb.ca.gov/gmbond.

For Additional Information

Please visit http://www.arb.ca.gov/ports/shorepower/shorepower.htm, contact ARB staff at ShorePower@arb.ca.gov, or call Ms. Lynsay Carmichael at (916) 327-5784.

California Air Resources Board

Marine Notice 2011-2

November 2011
Advisory to Owners or Operators of Ocean-Going Vessels Visiting California Ports

Changes to the Regulation on Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline

The purpose of this advisory is to notify owners and operators of ocean-going vessels (OGVs) of changes to the OGV Fuel Regulation. **California's ARB will begin enforcement of the changes to the rule on December 1, 2011**. This advisory is only a summary of the requirements and does not contain all the information that may be needed to comply with the regulation. The regulations can be found at the following: http://www.arb.ca.gov/regact/2011/ogv11/ogv11.htm

What are the changes to the fuel requirements?

The revised fuel requirements are summarized in Table 1 below. These fuel requirements apply to ocean-going vessel main (propulsion) diesel engines, auxiliary diesel engines, and auxiliary boilers.

Table 1: New Fuel Requirements for Ocean-Going Vessels

Fuel Requirement	Effective Date	Percent Sulfur Content Limit
Phase I	July 1, 2009[1]	Marine gas oil (DMA) at or below 1.5% sulfur; or Marine diesel oil (DMB) at or below 0.5% sulfur
	August 1, 2012[2]	Marine gas oil (DMA) at or below 1.0% sulfur; or Marine diesel oil (DMB) at or below 0.5% sulfur
Phase II	January 1, 2014[3]	Marine gas oil (DMA) or marine diesel oil (DMB) at or below 0.1% sulfur

1. No change from the existing requirements.
2. Marine gas oil sulfur limit reduced from 1.5% to 1%. No change in marine diesel oil limit.
3. Implementation delayed from 2012 to 2014.

How does the regulatory boundary change?

The regulatory boundary was expanded in Southern California to be consistent with the Contiguous Zone. This new boundary includes the region 24 nautical miles (nm) from the California shoreline, including 24 nm from the shoreline of the Channel Islands. There is also a small region near the north end of the Santa Barbara Channel that was excluded from the regulatory boundary to encourage vessels to use the established shipping lanes in the Channel. The maps on the back of this advisory (Figures 1a – 1c) show the new regulatory boundary, as well as the excluded region.

How can I get more information?*

Name	Title	Phone	Email
Bonnie Soriano	Staff Air Pollution Specialist	(916) 327-6888	bsoriano@arb.ca.gov
Paul Milkey	Staff Air Pollution Specialist	(916) 327-2957	pmilkey@arb.ca.gov
Peggy Taricco	Supervisor, Technical Analysis Section	(916) 323-4882	ptaricco@arb.ca.gov

* Additional information can also be found at http://www.arb.ca.gov/marine

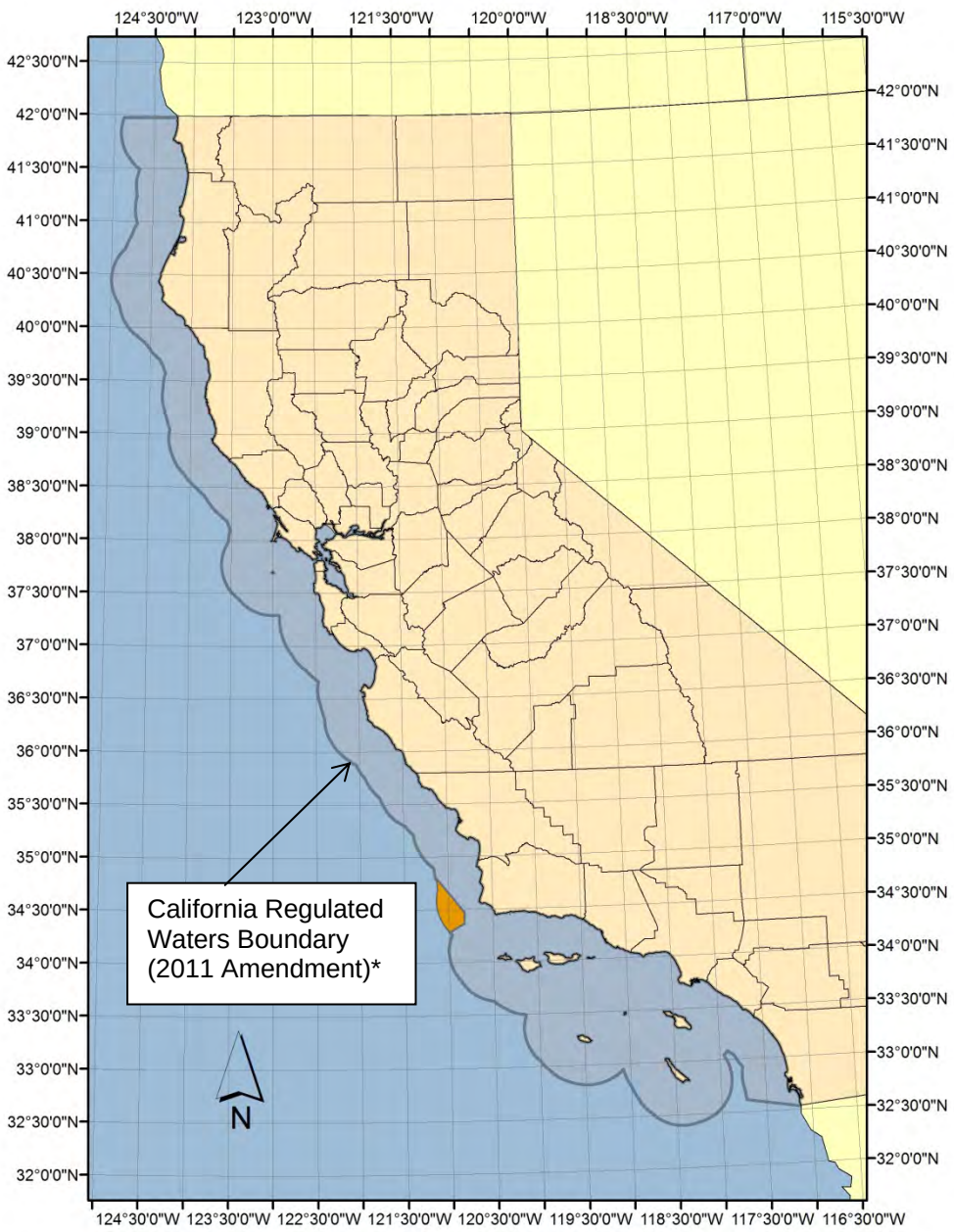


Figure 1a. Regulated California Waters

Figure 1b. Bay Area Detail

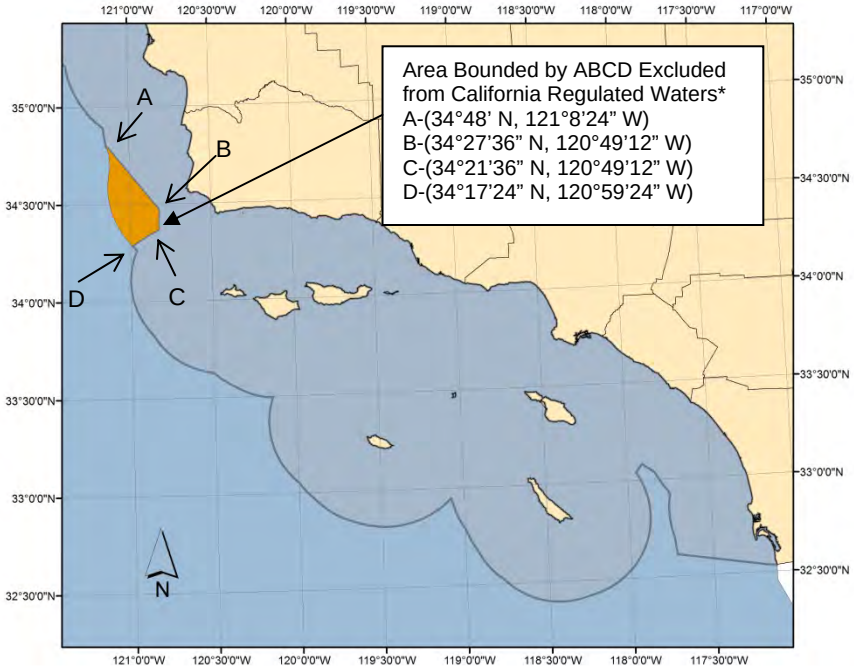


Figure 1c. Southern California Detail

*California Regulated Waters are consistent with the Contiguous Zone except for region bounded by ABCD in Figure 1c.

In-Use Off-Road Diesel-Fueled Fleets Regulation

Overview, Revised October 2016

CALIFORNIA AIR RESOURCES BOARD

The Off-Road Regulation Applies To:

All self-propelled off-road diesel vehicles 25 horsepower (hp) or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the Regulation for In-Use Off-Road Diesel Fueled Fleets (Off-Road regulation). This includes vehicles that are rented or leased (rental or leased fleets).

Personal use vehicles, vehicles used solely for agriculture, vehicles that are awaiting sale, and vehicles already covered by the Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards (Cargo Handling regulation), are exempt from the Off-Road regulation.

Emergency operations vehicles, dedicated snow removal vehicles, low-use vehicles (used under 200 hours per year, as confirmed by a non-resettable hour meter), and vehicles used a majority of the time (but not solely) for agricultural operations, must be reported to ARB and labeled, but are exempt from the performance requirements of the Off-Road regulation.

Summary:

The overall purpose of the Off-Road regulation is to reduce emissions of oxides of nitrogen (NOx) and particulate matter (PM) from off-road diesel vehicles operating within California. The Off-Road regulation:

- Imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles;
- Requires all vehicles to be reported to ARB (using the Diesel Off-Road Online Reporting System, DOORS) and labeled;
- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies, VDECS (i.e., exhaust retrofits).

The requirements and compliance dates of the Off-Road regulation vary by fleet size. For a fleet to determine their size, it must add up all of the off-road horsepower under common ownership or control in the fleet.

Fleet Size Category	Description
Small	Fleet or municipality <= 2,500 hp, or Municipality fleet in low population county, captive attainment area fleet, or non-profit training center, regardless of total hp
Medium	Fleet with 2,501 to 5,000 hp
Large	Fleet with more than 5,000 hp, or All state and federal government fleets, regardless of total hp

Requirements Currently in Effect:

Effective June 2008 for All Fleets: Idling and Disclosure

The following requirements are in effect and being enforced:

Idling Limited to 5 Minutes – Fleets must limit their unnecessary idling to 5 minutes; there are exceptions for vehicles that need to idle to perform work (such as a crane providing hydraulic power to the boom), vehicles being serviced, or in a queue waiting for work.
More information – www.arb.ca.gov/enf/advs/advs377.pdf

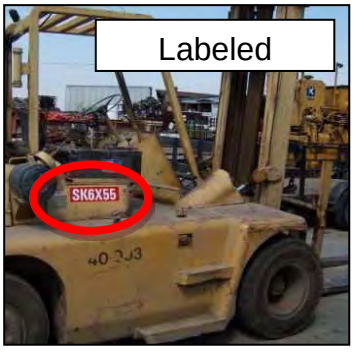
Written Idling Policy – Medium and large fleets must have a written idling policy.
More information – www.arb.ca.gov/enf/advs/advs391.pdf
Suggested language – www.arb.ca.gov/msprog/ordiesel/faq/idlepolicyfaq.pdf

Disclosure for Selling Vehicles – The seller (whether a dealer or a contractor with just one vehicle) must provide disclosure of the Off-Road regulation (exact language provided in the regulation) on the bill of sale or invoice, and must keep records that the disclosure was provided for three years after the sale. The seller must also report the vehicle sale to ARB via DOORS within 30 days of the sale.
More information and necessary language – www.arb.ca.gov/enf/advs/advs378.pdf

Effective 2009 for All Fleets: Reporting and Labeling

The following requirements are in effect and being enforced:

Reporting – Reporting can be completed using DOORS, which is ARB's free online reporting tool for the Off-Road regulation. Additionally, hard copy reporting forms are also available. More information on how to report and what information is required is available on the DOORS website at https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html.



Labeling – After a fleet reports their vehicles to ARB, each vehicle is assigned a unique Equipment Identification Number (EIN). The fleet must label its vehicles within 30 days of receiving EINs. Note that ARB does not issue EIN labels; it is the fleet's responsibility to follow ARB's label specifications and to make or purchase the labels or placards, or paint the EINs on its vehicles. More information on label specifications is available at www.arb.ca.gov/msprog/ordiesel/faq/faq-labeling.pdf.

While this document is intended to assist fleets with their compliance efforts, it does not alter or modify the terms of any ARB regulation, nor does it constitute legal advice. It is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel-Fueled Fleets Regulation.

A list of label vendors is available at www.arb.ca.gov/msprog/ordiesel/labelvendors.htm.

Previously, fleets were only required to label the right (starboard) side of the vehicle. However, the labeling provisions of the Off-Road regulation were amended in December 2010 to require labels on both sides of each vehicle. Additionally, fleets reported as 'captive attainment area fleets' must have labels with a green background instead of red. Fleets had until January 1, 2013, to implement both of these changes.

More information on these labeling amendments is available at http://www.arb.ca.gov/msprog/mailouts/msc1208/msc1208.pdf.

Annual Reporting – All fleet owners must review and update their information by March 1st each year that annual reporting is required. Large fleets must report annually from 2012 to 2023, medium fleets from 2016 to 2023, and small fleets from 2018 to 2028. For each annual reporting date, a fleet must report any changes to the fleet, hour meter readings (for low-use vehicles and vehicles used a majority of the time, but not solely, for agricultural operations), and also must submit the Responsible Official Affirmation of Reporting (ROAR) form. All of these items should be submitted using DOORS.

Effective January 1, 2014 for All Fleets: Restrictions on Adding Vehicles

Effective January 1, 2014, there are restrictions on adding older vehicles to a fleet.

ARB received authorization from the United States Environmental Protection Agency (U.S. EPA) on September 13, 2013, to enforce the Off-Road regulation's restrictions on fleets adding vehicles with older tier engines, and will start enforcing beginning January 1, 2014.

Ban on adding Tier 0s – Effective January 1, 2014, a fleet may not add a vehicle with a Tier 0 engine to its fleet.

Prohibition on adding Tier 1s – Also effective January 1, 2014, for large and medium fleets, and January 1, 2016 for small fleets, a fleet may not add any vehicle with a Tier 1 engine. The engine tier must be Tier 2 or higher.

Prohibition on adding Tier 2s – Beginning January 1, 2018, for large and medium fleets, and January 1, 2023, for small fleets, a fleet may not add a vehicle with a Tier 2 engine to its fleet. The engine tier must be Tier 3 or higher.

More information on the adding vehicles requirements is available at http://www.arb.ca.gov/msprog/ordiesel/faq/addingvehicles.pdf.
While this document is intended to assist fleets with their compliance efforts, it does not alter or modify the terms of any ARB regulation, nor does it constitute legal advice. It is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel-Fueled Fleets Regulation.

Upcoming Requirements:

Upcoming Requirements for all Fleets: Performance Requirements

The performance requirements begin:
July 1, 2014, for large fleets
January 1, 2017, for medium fleets
January 1, 2019, for small fleets

Compliance Options – By each annual compliance deadline, a fleet must demonstrate that it has either met the fleet average target for that year, or has completed the Best Available Control Technology requirements (BACT). Large fleets have compliance deadlines each year from 2014 through 2023, medium fleets each year from 2017 through 2023, and small fleets each year from 2019 through 2028. These requirements are described further below. Note that although the first deadline for large fleets in 2014 is on July 1, the compliance deadline in all future years will be January 1 (for example, the second compliance deadline for large fleets will be on January 1, 2015).

Meeting the fleet average targets – The fleet average index is an indicator of a fleet's overall emissions rate, and is based on the fleet's average NOx emissions which is determined by the horsepower and model year of each engine in the fleet. If the fleet average index is equal to or less than the fleet average target for a given year, the fleet is not required to take further action to reduce emissions from its vehicles.

OR

Complying with BACT requirements – If a fleet cannot, or does not want to meet the fleet average target in a given year, it may instead choose to comply with the BACT requirements. A fleet may meet the BACT requirements each year by turning over or installing VDECS on a certain percentage (referred to as the BACT rate) of its total fleet horsepower. 'Turnover' means retiring a vehicle, designating a vehicle as permanent low-use (a vehicle used less than 200 hours per year), repowering a vehicle with a higher tier engine, or rebuilding the engine to a more stringent emission standard. 'Installing VDECS' means installing the highest level VDECS verified by ARB to reduce PM, or installing a VDECS verified to reduce NOx. In order to fulfill the BACT requirements for large and medium fleets, if a VDECS cannot be installed on a vehicle, then that vehicle must be turned over. However, for small fleets, if a VDECS cannot be installed, that vehicle is exempt from the BACT requirements. The BACT rates for each fleet size are shown below.

While this document is intended to assist fleets with their compliance efforts, it does not alter or modify the terms of any ARB regulation, nor does it constitute legal advice. It is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel-Fueled Fleets Regulation.

Large fleets:
2014: 4.8 percent
2015 to 2017: 8 percent
2018 to 2023: 10 percent
Medium fleets:
2017: 8 percent
2018 to 2023: 10 percent
Small fleets:
2019 to 2028: 10 percent

Optional Compliance Schedule for Fleets with 500 Hp or Less – Small fleets with 500 hp or less may comply with the small fleet requirements listed above, or may comply with an optional compliance path which requires the fleet to phase out Tier 0 and Tier 1 vehicles by 2029. This optional compliance schedule is shown in the table below.

Optional Compliance Schedule for Fleets with 500 HP or Less

Compliance Date: January 1 of Year	Percent of Fleet (by horsepower) Which Must Have a Tier 2 or Higher Engine
2019	25
2022	50
2026	75
2029	100

By 2029, all of the fleet's vehicles must have Tier 2 or higher engines. If small fleets with 500 hp or less choose not to pursue this compliance path, they must meet the small fleet requirements above.

Additional Information:

Off-Road regulation homepage:
www.arb.ca.gov/ordiesel

For more information on the Off-Road regulation, including Fact Sheets, Frequently Asked Questions (FAQs), and DOORS User Guides, please visit the Off-Road Knowledge Center at
www.arb.ca.gov/msprog/ordiesel/knowcenter.htm

For assistance with Off-Road reporting or using ARB's online reporting system DOORS, please contact the DOORS hotline by phone at (877) 59DOORS (877-593-6677), or by email at doors@arb.ca.gov

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TRU TRANSPORT REFRIGERATION UNITS

TRU Brochure #2

What TRU & TRU Generator Set Owners & Operators Need to Know to Comply with the TRU Airborne Toxic Control Measure (ATCM)

Cal/EPA
California Air Resources Board
1001 I Street
Sacramento, CA 95814
1-888-878-2826
1-888-TRU-ATCM
http://www.arb.ca.gov/diesel/tru/tru.htm

Disponible en Español en la página:
http://www.arb.ca.gov/diesel/tru/documents/tru2spanish.pdf

Who is affected?

Owners and operators of in-use diesel-fueled TRUs and TRU generator (gen) sets that operate in California, irrespective of whether they are registered in or outside of the State of California are affected. This includes all carriers that transport perishable goods using diesel-powered refrigeration systems on trucks, trailers, shipping containers, and railcars that operate in California.

Operators of terminals located in California where TRUs or TRU gen sets are regularly garaged, maintained, operated, or dispatched from, including a dispatch office, cross-dock facility, maintenance shop, business or private residence (excluding independent repair shops).

What is the purpose of the regulation?

In February 2004, the California Air Resources Board (ARB) approved the *Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Gen Sets, and Facilities Where TRUs Operate* (TRU ATCM). The TRU ATCM is designed to use a phased approach over about 15 years to reduce the diesel particulate matter (PM) emissions from in-use TRU and TRU gen set engines that operate in California.

What are the basic requirements?

For TRU Owners and Operators…

- Registration: Owners must submit applications for ARB Identification Numbers (IDN) to ARB by July 31, 2009, for all TRUs that are based in California. IDNs are voluntary for TRUs and TRU gen sets that are based outside of California. Inspections for TRUs with IDNs are faster because compliance has been pre-screened. Updates are required within 30 days if registration information changes.

- Operator Reports must be submitted to ARB by all California terminal operators listing all TRU IDNs that are regularly assigned to California terminals. The initial Operator Report was due at ARB by July 31, 2009. Operator Report updates are required within 30 days if the information in the report changes.

- In-Use Standards: TRU and TRU gen set engines that operate in California must meet in-use performance standards that are phased in starting December 31, 2008 (extended to December 31, 2009). See the phased compliance schedule on the next page. This in-use standard requirement applies to owners and operators of TRUs and TRU gen sets that operate in California, regardless of whether they are registered or based inside or outside of the State.

How Do I Comply with the In-Use Performance Standards of the TRU ATCM?

Staff have provided detailed guidelines in the compliance assistance document titled "How Do I Comply with the TRU ATCM?", which can be downloaded from the TRU website at: www.arb.ca.gov/diesel/tru/tru.htm. See the section titled "Ref.3—In-Use performance Standards."

For More Information…

Please see ARB's TRU website at: www.arb.ca.gov/diesel/tru/tru.htm for more information about verified diesel emission control strategies for TRUs and compliance assistance documents such as:

- ***Advisories***
- ***How Do I Comply with the TRU ATCM?***
- ***Frequently Asked Questions and Guidelines for Compliance***
- ***Final Regulation Order***

TRU owners and operators are strongly urged to sign up for ARB's TRU list serve. Please click on the link for 'TRU List Serve' on the TRU website. Email notices will then be automatically sent to you when there is news related to the TRU ATCM.

Call ARB's TRU Helpline at 1-888-878-2826 (1-888-TRU ATCM) if you have questions.

If you need this document in an alternate format or in another language please call 1-888-878-2826 or email tru@arb.ca.gov. TTY/TDD/Speech users may dial 711 for California Relay Service.

CAP-07-041

IN-USE PERFORMANCE STANDARD COMPLIANCE DATES

Model Year of Engine	Compliance Date for Low Emission Standard	Compliance Date for Ultra Low Emission Standard
2001 OR OLDER	December 31 2008 (Extended to 12-31-09)	December 31, 2015
2002	December 31, 2009	December 31, 2016
2003	December 31, 2010	December 31, 2017
2004 (≥25 hp)	Skip to Ultra-Low Standard	December 31, 2011
2004 (<25 hp)	December 31, 2011	December 31, 2018
FUTURE YEARS	Skip to Ultra-Low Standard	December 31 of the model year plus 7 years

How do I register my TRU (apply for an ARB IDN)?

To register your TRU with ARB (apply for an IDN), apply on-line from the ARB Equipment Registration (ARBER) website at: www.arb.ca.gov/arber/arber.htm. Also, see TRU Advisories 08-06 and 08-10-R1 at the TRU website. Call the TRU Help Line if you need assistance at: 1-888-878-2826.

How do I submit an initial Operator Report?

To submit an initial Operator Report, submit the report on-line from the ARBER website at: www.arb.ca.gov/arber/arber.htm. Call the TRU Help Line if you need assistance at: 1-888-878-2826.

Prohibitions you need to know about…

Once a compliance deadline passes for a TRU or TRU gen set model year, it is illegal to sell, offer for sale, lease, offer for lease, rent, or offer to rent a TRU for use in California that does not meet the in-use performance standards in the ATCM. Owners still have options for dealing with noncompliant TRUs or TRU gen sets. See the Prohibitions section of the compliance assistance document titled "How Do I Comply with the TRU ATCM?"