



California Air Resources Board Marine Notice 2009-2



May 7, 2009

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

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 of a new regulation recently adopted by the **State of California Air Resources Board (ARB)**. Currently the regulation is undergoing final administrative review at the Office of Administrative Law and is expected to be approved to become legally effective late in June, with vessel compliance with the new requirements beginning on July 1, 2009.

The regulation will require ship operators visiting any port located in the State of California to reduce their air pollution through the use of cleaner marine distillate fuels. ***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. If you might be affected by the regulation, it is essential you carefully review the regulation before taking steps to comply with it.*** To receive a copy of the regulation, please contact the ARB staff listed at the end of this advisory, or visit the ARB's website at the following location: <http://www.arb.ca.gov/regact/2008/fuelogv08/fuelogv08.htm>

Who is covered by the regulation?

The regulation applies to any person who owns, operates, charters, rents, or leases ocean-going vessels (both U.S. and foreign-flagged) in any of the "Regulated California Waters," which generally includes all areas within 24 nautical miles of the California coastline, as shown in Figure 1. (All persons subject to this regulation are subsequently referred to in this advisory as "operators.") The ocean-going vessels covered under the regulation include most cargo vessels, such as container ships, tankers, bulk carriers, and car carriers, as well as passenger cruise ships. Military vessels and government vessels used for noncommercial purposes are exempt.

Does this regulation provide a safety exemption?

Yes, the requirements of this regulation do not apply if the master determines that compliance would endanger the safety of the vessel, its crew, its cargo or its passengers because of severe weather conditions, equipment failure, fuel contamination, or other extraordinary reasons beyond the master's reasonable control. This exemption applies only as long as and to the extent necessary to secure the safety of the vessel, its crew, its cargo, or its passengers and provided that;

- (1) the master takes all reasonable precautions after the incident to avoid or minimize repeated claims of exemption;
- (2) the master notifies the Executive Officer of a safety exemption claim within 24 hours after the end of each episode; and

(3) the master submits to the Executive Officer, within 4 working days after the notification, all documentation necessary to establish the conditions.

What are the requirements?

The fuel requirements in the proposed regulation are summarized in Table 1 below.

Table 1: Fuel Requirements for Ocean-Going Vessel Main (Propulsion) Diesel Engines, Auxiliary Diesel Engines (Including Diesel-Electric), and Auxiliary Boilers

Fuel Requirement	Effective Date	Fuel
Phase I	July 1, 2009*	Marine gas oil (DMA) at or below 1.5% sulfur; or Marine diesel oil (DMB) at or below 0.5% sulfur
Phase II	January 1, 2012	Marine gas oil (DMA) or marine diesel oil (DMB) at or below 0.1% sulfur

* See discussion below regarding the effective date of the fuel requirements for auxiliary engines.

These fuel requirements would apply to ocean-going vessel main (propulsion) diesel engines, auxiliary diesel engines (including diesel-electric), and auxiliary boilers when operating within the 24 nautical mile regulatory zone off the California Coastline (see Figure 1). Note that diesel-electric engines are included as auxiliary engines under this regulation. The “Phase I” fuel requirement specifies the use of marine gas oil up to 1.5 percent sulfur, or marine diesel oil up to 0.5 percent sulfur. The Phase I fuel requirement will become effective on July 1, 2009 for main engines and auxiliary boilers under the proposed compliance schedule. For auxiliary engines (including diesel-electric), this fuel requirement will become effective when the regulation becomes legally effective. However, because the regulation is expected to become legally effective in late June, very close to July 1, 2009, the State of California Air Resources Board will provide a grace period for the auxiliary engine (including diesel-electric engines) fuel use requirement until July 1, 2009 to align the implementation date for all engines and auxiliary boilers. This grace period means that even though the regulations, once approved by the Office of Administrative Law, could require use of cleaner fuels in vessel auxiliary engines beginning in late June, ARB will not enforce that requirement until July 1, 2009. As such, the date on which a vessel operator must begin to use the specified marine distillate fuels in any main engine, auxiliary engine (including diesel-electric engines), and auxiliary boiler while operating within Regulated California Waters is July 1, 2009. The “Phase II” fuel requirement specifies the use of marine gas oil or marine diesel oil up to 0.1 percent sulfur fuel. The Phase II requirement would become effective on January 1, 2012, for all sources covered by this regulation.

Are there recordkeeping requirements?

Yes, vessel operators must keep the following records (in English) for at least three years:

- 1) the date, local time, and location (longitude and latitude) when they enter and leave Regulated California Waters (RCW);

- 2) the date, local time, and location at the initiation and completion of any fuel switching used to comply with the regulation (e.g. upon entering/leaving RCW;
- 3) the date, local time, and location of any fuel switching conducted within RCW;
- 4) the type of fuels used (e.g. heavy fuel oil, marine gas oil, etc.) in each auxiliary engine, main engine, and auxiliary boiler within RCW; and
- 5) purchase records of the types of fuel lifted, amounts, and actual percent sulfur by weight, as reported by the fuel supplier or a fuel testing firm.

In addition, ship operators shall maintain onboard the vessel:

- 1) a fuel system diagram that shows all storage, service, and mixing tanks, fuel handling, pumping, and processing equipment, valves, and associated piping. The diagram or other documentation shall list the fuel tank capacities and locations, and the nominal fuel consumption of the machinery at rated power;
- 2) a description of the fuel switch over procedure with detailed instructions and clear identification of responsibilities; and
- 3) the make, model, rated power or output, and serial number of all main engines, auxiliary engines, and auxiliary boilers.

In many cases, the above records are already collected or maintained for other regulatory requirements or standard practices, and they may be submitted (if requested) in a format consistent with these other requirements.

When do these records need to be provided to the State of California?

These records do NOT need to be periodically reported to the ARB. These records, along with any other information necessary to determine compliance, only need to be provided upon request, typically when ARB inspectors board vessels for the purpose of determining compliance with the regulation.

How can I comply under the “Essential Modifications” exemption?

Vessel operators can only utilize this exemption if they can demonstrate that they cannot meet the fuel-use requirements in the regulation without “essential modifications,” as defined in the rule. Vessel operators must apply for this exemption at least 45 days prior to their first California visit (or at the earliest practicable date prior to their port visit if the ship operator will be visiting California less than 45 days after the effective date of the regulation). In their applications, ship operators will need to supply an “Essential Modifications Report” signed by the Chief Engineer of the vessel that identifies the specific modifications needed to comply with the fuel-use requirements, and identifying the maximum extent to which the cleaner fuels specified in the regulation can be used (e.g., some engines or boilers may still be able to operate on the cleaner fuel without modifications, or engines and boilers may be able to operate on the cleaner fuel for a portion of the voyage in RCW without modifications). The application must be approved before the vessel operator can rely on the Essential Modifications exemption. After approval of the application, the vessel operator must inform the ARB prior to each

entry into RCW that the operator will be complying under this provision. Vessel operators are strongly advised to refer to the regulation and contact ARB staff prior to applying for the Essential Modifications exemption. This will ensure that they understand the requirements of this provision before preparing an application.

The State of California Air Resources Board will provide a temporary grace period for vessel operators seeking to comply with the regulation under the Essential Modifications exemption from July 1, 2009 to August 15, 2009. During this time, a vessel operator will be exempted from the requirements of subsection (e)(1) between July 1, 2009 and August 15, 2009, whether their application for an exemption is ultimately approved or denied, if they do the following:

- 1) notify the ARB in writing (email is acceptable) prior to entering RCW that the operator intends to apply for an Essential Modifications exemption, and
- 2) actually submit an application with an Essential Modifications Report at the earliest practicable date, but no later than August 1, 2009.

The operator of a vessel that is in RCW when the regulation takes effect on July 1, 2009 will be granted the same grace period if the operator provides ARB written notice no later than July 6, 2009 of the operator's intent to rely on the Essential Modification exemption, and then submits an application with an Essential Modifications Report at the earliest practicable date, but no later than August 1, 2009.

When can I pay a noncompliance fee in lieu of direct compliance?

Vessel operators can comply with the regulation by paying a noncompliance fee under the following circumstances:

- 1) unplanned redirection to a California port;
- 2) inability to purchase complying fuel;
- 3) inadvertent purchase of defective fuel; or
- 4) inability to schedule vessel modifications in time for compliance.

The Noncompliance Fee Schedule is shown in Table 2 below.

Table 2: Noncompliance Fee Schedule, Per Vessel

California Port Visits	Per-Port Visit Fee
1 st Port Visited	\$45,500
2 nd Port Visited	\$91,000
3 rd Port Visited	\$136,500
4 th Port Visited	\$182,000
5 th or more Port Visited	\$227,500

In addition to the cases above, the noncompliance fee provision may be utilized by infrequent visitors that would be required to make vessel modifications to comply with the regulation, but do not wish to utilize the "Essential Modifications" exemption discussed above. Under this scenario, "infrequent" means a vessel operator that makes no more than two port visits per vessel in any calendar year and no more than four visits

total during the life of the vessel after the effective date of the regulation. In this special case, the fee schedule shown in Table 2 would not apply after four port visits. Vessel operators are strongly advised to refer to the regulation prior to relying on the noncompliance fee option. This will ensure that they meet the specific requirements for each case mentioned above. For example, there are notification requirements, and in some cases, records that need to be provided to demonstrate the need to utilize the provision.

How would the regulation be affected if an Emission Control Area (ECA) is established under the International Maritime Organization (IMO) that includes California?

The United States and Canada recently submitted a joint application to the IMO for an ECA that covers much of North America (including the California coastline). However, even if the application is approved and an ECA is ultimately established covering California, the California regulation would still remain in effect, at least initially. This is because the initial fuel standards under an ECA would achieve far less emission reductions than the California regulation. Nevertheless, the California regulation contains a provision that would sunset the requirements of the rule if the U.S. Environmental Protection Agency achieves equivalent emission reductions. If an ECA is established that includes California’s coastline, by 2015 the ECA would require the use of 0.1 percent sulfur fuel. This fuel would likely achieve equivalent emission reductions to the California regulation, allowing ARB to discontinue the requirements of the regulation at that time.

What should I do now?

We expect to begin enforcing the regulation on July 1, 2009. To prepare for compliance with the regulation, we recommend that affected parties ensure that:

- 1) Vessel crews are thoroughly familiar with the operational procedures used to switch fuels in main engines, auxiliary engines, and auxiliary boilers;
- 2) Sufficient quantities of the specified “Phase I” cleaner fuels are onboard the vessel prior to making a California port visit; and
- 3) Vessel crews understand the relevant record-keeping requirements discussed above.

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
Vessel Hotline	All ARB staff	(877) 808-7447	

**Additional information can be found at <http://www.arb.ca.gov/marine>
A copy of the regulation is available at:
<http://www.arb.ca.gov/regact/2008/fuelogv08/fuelogv08.htm>**

Figure 1: Regulated California Waters (24 nm Zone)

