



California Air Resources Board
Marine Notice 2015-1



October 2015

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

**Guidance for Vessel Operators Utilizing the Research Exemption to Use
Fuel at or Below 0.1% Sulfur That Does Not Meet Specifications for
Distillate Fuel Grades in the California OGV Fuel Rule**

Several vessel operators are now complying with the California Ocean-Going Vessel Fuel Regulation (OGV Fuel Rule)¹ using fuel at or below 0.1% sulfur that does not meet the OGV Fuel Rule specifications for distillate fuel grades under a process detailed in Marine Notice 2014-1². While these low sulfur non-distillate fuels, primarily described as ultra-low sulfur fuel oil ("ULSFO"), can be used to comply with the regulation under the Research Exemption, ARB staff has found that without taking precautions, there is a high likelihood of a violation of the sulfur limit. Based on reviews of bunker delivery notes from the vessel operators, these fuels, as purchased, are generally reported to be below, but close to, the 0.1% sulfur regulatory limit. However, shipboard in-use samples collected and tested by ARB staff have sometimes been found to exceed the regulatory limit. The discrepancy could be due to shipboard contamination with high sulfur fuels in tanks or pipes, or other factors. This notice is to alert vessel operators that there is a risk of exceeding the sulfur limit when using these fuels, and to suggest some possible steps that operators can take to reduce the likelihood of noncompliance.

Steps Vessel Operators Can Take to Reduce the Risk of Noncompliance

Listed below are a number of steps that vessel operators can consider, in consultation with vessel manufacturers, fuel suppliers and others, to reduce the risk of exceeding the fuel sulfur limit in the OGV Fuel Rule. However, all ocean-going vessel storage, transfer, piping and purification systems can be considerably different, so there is no guarantee that vessels will be compliant if they follow this guidance.

¹ Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline, title 13, California Code of Regulations (CCR) §2299.2 and title 17, CCR §93118.2.

² Marine Notice 2014-1 provides a process that allows vessels complying with the fuel sulfur limits in the federal North American Emission Control Area using non-distillate fuels such as ULSFO to also comply with the California OGV Fuel Regulation by using the Temporary Experimental or Research Exemption, "Research Exemption," (subsection (c) (6) in both title 13, CCR, §2299.2 and title 17, CCR, §93118.2).

- ULSFO on the market today is typically very close to the 0.1% sulfur limit, and any contamination with even small amounts of higher sulfur fuel oil (HFO) could potentially push these fuels over the regulated limit. Fuel should be tested by a reputable lab to verify product quality.
- Vessel operators may want to consider sourcing ULSFO which is well below the 0.1% sulfur limit to the extent they are available.
- Before bunkering any ULSFO, vessel operators may want to thoroughly clean storage, settling and service tanks of any higher sulfur residual fuels or sludge. There is very little margin for contamination.
- When bunkering ULSFO, vessel and barge operators may want to flush any HFO from the lines before beginning bunkering operations.
- When transferring fuels from ULSFO storage tanks to ULSFO settling tanks, a typical vessel configuration may have a single residual fuel system, where the ULSFO will be transferred through the same lines as the HFO. Vessel engineering staff may want to flush lines into a HFO settling tank for a prescribed amount of time to be sure any ULSFO contaminated with HFO is flushed before beginning transfer into any ULSFO settling tanks.
- Once uncontaminated transfer to the ULSFO settling tanks is complete, the vessel engineering staff must transfer these residual fuels through centrifuges/purifiers to the ULSFO service tanks. Any residual HFO in the system must be flushed completely into the HFO service tanks before switching over to the ULSFO service tanks.
- Once transfer to the service tanks is complete, the vessel will still have some residual HFO in the system. Operating the engine on ULSFO prior to entering the California Regulatory Waters will reduce the chance of a violation. Operational staff should be able to recommend an appropriate amount of operating time on ULSFO for any given vessel, taking into account contamination from any mixing tanks, pumps, filters, or heaters where applicable, and the actual percentages of sulfur in both fuels.
- If a vessel has only one HFO settling tank and/or one HFO service tank, the vessel operator may not want to use non-distillate fuel that is close to the 0.1% sulfur limit.

Even with all the above mentioned steps taken, any contamination that brings the sulfur content of the fuels >0.1% could result in a violation of the OGV Fuels Regulation.

How can I get more information?

Information on California's OGV Fuel Regulation can be found at:
<http://www.arb.ca.gov/ports/marinevess/ogv.htm>

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