

**U.S. COAST GUARD MARINE SAFETY NOTICE**  
**May 26, 2009**

**Fuel Systems and Fuel Switching Between Residual Fuel Oil and Marine Distillates**

The purpose of this Marine Safety Notice is to increase awareness and provide general guidance on fuel systems and fuel switching safety in an effort to prevent propulsion losses. A recent Coast Guard study and review of marine casualties indicate that lack of maintenance and testing of certain systems, including fuel oil systems, is one of the leading causes of propulsion failures. Proper procedures, training, and maintenance are essential for vessels to safely switch between heavy/intermediate fuel oils and marine distillates. Additionally, vessel operators need to have a good understanding of their system requirements and limitations, and determine if any modifications may be necessary to safely switch between intended fuels.

**Managing Risk**

In order to manage risk and improve safety, vessel owners and operators should:

- Consult engine and boiler manufacturers for fuel switching guidance;
- Consult manufacturers to determine if system modifications or additional safeguards are necessary for intended fuels;
- Develop detailed fuel switching procedures;
- Establish a fuel system inspection and maintenance schedule;
- Ensure system pressure and temperature alarms, flow indicators, filter differential pressure transmitters, etc., are all operational;
- Ensure system seals, gaskets, flanges, fittings, brackets and supports are maintained;
- Ensure a detailed system diagram is available;
- Conduct initial and periodic crew training;
- Exercise tight control when possible over the quality of the fuel oils received; and
- Complete fuel switching well offshore prior to entering restricted waters or traffic lanes.

**Vessels operating in California waters**

The state of California Air Resources Board (ARB) has a proposed regulation under review that, if approved as expected, will require ocean going vessels to use low sulfur marine distillates in main engines, auxiliary engines, and auxiliary boilers beginning on July 1, 2009 in regulated California waters. The state defines regulated waters as those out to 24 nautical miles from the baseline. In light of this state of California regulatory initiative, the Coast Guard anticipates an increase in deep draft fuel switching and urges industry to take proactive measures to improve fuel switching safety in an effort to prevent propulsion losses and equipment casualties.

The California ARB *regulatory advisories and contact information for related questions* can be located via the following links:

Marine Notice 2009-1:

[http://www.arb.ca.gov/ports/marinevess/documents/marinenote2009\\_1.pdf](http://www.arb.ca.gov/ports/marinevess/documents/marinenote2009_1.pdf)

Marine Notice 2009-2:

[http://www.arb.ca.gov/ports/marinevess/documents/marinenote2009\\_2.pdf](http://www.arb.ca.gov/ports/marinevess/documents/marinenote2009_2.pdf)