



UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Inspections and Compliance Directorate

November 19, 2015
Washington, DC

Safety Alert 13-15
(Update 1 to 02-15)

Ultra Low Sulfur Fuel Oil & Compliance with MARPOL Requirements Before entering and while operating within Emission Control Areas

This safety alert updates Safety Alert 2-15, dated March 3, 2015, by adding two additional recommendations highlighted in red.

The Coast Guard has confirmed several reports it has received stating that main engines may not attain the expected speed when using ultra low sulfur fuel oil. As such, the Coast Guard has revised its list of recommendations to vessel owners and operators about the importance of establishing effective fuel oil changeover procedures to comply with MARPOL Annex VI emission regulations.

The Coast Guard **strongly recommends** that vessel owners and operators ensure the following measures are completed as part of their fuel oil switching procedures:

- Ensure fuel oil switching is accomplished outside of busy traffic lanes and the ECA. Generally the ECA is 200 nm from the North American Coast and 50 miles from the U.S. Caribbean coast (e.g., the Commonwealth of Puerto Rico and the U.S. Virgin Islands);
- Utilize their technical resources to develop safe operations and maintain full compliance with emission requirements;
- Consult with engine and boiler manufacturers for fuel oil changeover guidance and to determine if system modifications or additional safeguards are necessary;
- Consult fuel suppliers for proper fuel selection;
- Ensure all sensors, controls and alarms (e.g., pressure, temperature, viscosity, differential pressure, and flow indicators) are operational and function as designed;
- Ensure system piping, seals, gaskets, flanges, fittings, brackets, etc., are maintained;
- Ensure detailed system schematics are available;
- Review and update fuel oil changeover procedures as needed;
- Establish a fuel oil system inspection and maintenance schedule;
- Remember that the energy content of a given volume of ULS fuel oil may differ from residual fuel, such that existing throttle settings may not give the desired propeller shaft RPM or generator loads; performance and speed trials on ULS fuel oil may need to be conducted;
- **(New) As part of the master-pilot information exchange (as required by 33 CFR 164.11(k)), discuss the vessel's maneuvering characteristics, including any change in RPMs associated with ULS fuel oil;**
- **(New) Determine if using ULS fuel necessitates amendments to the pilot card (see IMO RES A.601(15) and NVIC 7-89);**

- Review and update fuel changeover procedures based on lessons learned;
- Provide initial and periodic crew training for accomplishing safe, effective and leak-free fuel switching; and
- Anticipate that there may be many technical challenges for operators when beginning to use ULS fuel oil as a matter of routine and compliance. These range from excessive leakages of fuel system components, increased wear and tear on these components, lack of lubricity of the fuels, and the need for possible changes in maintenance schedules, operational methods, etc.

This Safety Alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Questions should be forwarded to the Coast Guard Office of Commercial Vessel Compliance, Foreign and Offshore Vessel Division (CG-CVC-2) at **202-372-1218** or by email at CGCVC@uscg.mil.

Link to original safety alert: <http://www.uscg.mil/hq/cg5/cg545/alerts/0215.pdf>
