



Overview

North American Emission Control Area

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Focus Areas

- Sulfur Oxide (SO_x)
 - Can be reduced directly by lowering the percent of sulfur in fuel oil.
- Nitrogen Oxide (NO_x) compounds
 - Can be reduced by controlling the combustion process.
- Particulate Matter (PM)
 - Can be achieved by burning cleaner distillate fuels as opposed to residual fuels, such as heavy fuel oils, and by reducing sulfur content since some particulates are sulfur compounds.



Compliance

- MARPOL Annex VI, Regulation 14
- Two methods to comply
 - Use of low sulfur fuel
 - Equivalent Arrangement
- Method utilized listed on IAPP
 - Section 2.3 and 2.6



Chart of North American ECA





USCG/EPA MOU

- Coast Guard entered into a Memorandum of Understanding (MOU) with the EPA to set forth the terms by which the USCG and EPA will mutually cooperate in the implementation and enforcement of Annex VI to MARPOL as implemented by APPS.



Verification of Compliance

- Records to be inspected to determine if the fuel oil used onboard the ship meets the standard.
 - Bunker Delivery Notes
 - Representative Fuel Oil Samples
 - Fuel Oil Changeover Procedures
 - Fuel Oil Changeover Logs



Non-Availability

- Operators may encounter situations where low sulfur fuel oil is not available for purchase.
- MARPOL Annex VI, Reg 18.2.4 requires notification to be made to the flag Administration and to the competent authority of the relevant port of destination.
- EPA is responsible for receiving the US notifications.



Equipment Casualty or Failure

- MARPOL Annex VI, Regulation 3.1.2, allows for non-compliant emissions resulting from damage to a ship or its equipment.
- All reasonable precautions were taken after the occurrence for the purpose of preventing or minimizing the emissions.