



MARPOL Annex VI

Enforcement of MARPOL Annex VI Resources

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MARPOL, the International Convention for the Prevention of Pollution from Ships, is concerned with preventing marine pollution from ships. Specifically, Annex VI of MARPOL addresses air pollution from ocean-going ships. The international air pollution requirements of Annex VI establish limits on nitrogen oxides (NOx) emissions and require the use of fuel with lower sulfur content, protecting people's health and the environment by reducing ozone-producing pollution, which can cause smog and aggravate asthma. The requirements apply to vessels operating in U.S. waters as well as ships operating within 200 nautical miles of the coast of North America, also known as the North American Emission Control Area (ECA).

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MARPOL Annex VI

MARPOL was developed through the International Maritime Organization (IMO), a United Nations agency that deals with maritime safety and security, as well as the prevention of marine pollution from ships. MARPOL is the main international agreement covering all types of pollution from ships.

Air pollution from ships is specifically addressed in Annex VI of the MARPOL treaty. Annex VI includes requirements applicable to the manufacture, certification, and operation of vessels and engines, as well as fuel quality used in vessels in the waters of the United States.

Annex VI Significant Provisions

Annex VI of the MARPOL treaty is the main international treaty addressing air pollution prevention requirements from ships. It was implemented in the United States through the Act to Prevent Pollution from Ships, 33 U.S.C. §§ 1901-1905 (APPS). Annex VI requirements comprise both engine-based and fuel-based standards, and apply to U.S. flagged ships wherever located and to non-U.S. flagged ships operating in U.S. waters.

- Annex VI establishes:
 - Limits on NO_x emissions from marine diesel engines with a power output of more than 130 kW. The standards apply to both main propulsion and auxiliary engines and require the engines to be operated in conformance with the Annex VI NO_x emission limits.
 - Limits on the sulfur content of marine fuels.
- Ships operating up to 200 nautical miles off of U.S. shores must meet the most advanced standards for NO_x emissions and use fuel with lower sulfur content., This geographic area is designated under Annex VI as the ECA.
- Each regulated diesel engine in U.S. flagged vessels must have an Engine International Air Pollution Prevention (EIAPP) certificate, issued by EPA, to document that the engine meets Annex VI NO_x standards. Certain vessels are also required to have an International Air Pollution Prevention Certificate (IAPP), which is issued by the United States Coast Guard (USCG). Ship operators must also maintain records on board regarding their compliance with the emission standards, fuels requirements and other provisions of Annex VI.
- U.S. flagged vessels are subject to inspection for compliance with Annex VI. Non-U.S. flagged ships are subject to examination under Port State Control while operating in U.S. waters. The USCG or EPA may bring an enforcement action for a violation.

Annex VI and APPS contain oversight and enforcement provisions and violations may result in criminal and/or civil liability. [More Information on Annex VI.](#)

Memorandum of Understanding between EPA and Coast Guard

On June 27, 2011 the EPA and USCG entered into a Memorandum of Understanding (MOU) to enforce Annex VI MARPOL. The Annex VI MOU provides that EPA and USCG will jointly and cooperatively enforce the provisions of Annex VI and APPS. Efforts to be conducted by USCG and EPA include inspections, investigations and enforcement actions if a violation is detected. The efforts to ensure compliance with Annex VI and APPS include oversight of marine fueling facilities, on board compliance inspections, and record reviews.

- [Reference News Release](#)
- [Memorandum of Understanding \(MOU\) to enforce Annex VI MARPOL Annex VI](#)
- [EPA and Coast Guard Joint Letter to Industry regarding Annex VI requirements](#)

Health and Environmental Effects

Ocean going vessels emit significant pollution that not only effect populations living near ports and coastlines, but also those living hundreds of miles inland. Marine diesel engines generate significant emissions of NO_x, fine particulate matter (PM_{2.5}), and sulfur oxides (SO_x) that contribute to nonattainment of the National Ambient Air Quality Standards for PM_{2.5} and ozone.

These engines also emit hydrocarbons (HC) , carbon monoxide (CO), and hazardous air pollutants or air toxics that are associated with adverse health effects. Emissions from these engines also cause harm to public welfare, and contribute to visibility impairment and other detrimental environmental impacts across the United States.

Large marine diesel engines are significant contributors to our national mobile source emission inventory and their contribution is expected to grow in the future. At the current rate, NO_x emissions from ships are projected to more than double to 2.1 million tons a year while annual PM_{2.5} emissions are expected to almost triple to 170,000 tons a year by 2030.

Low Sulfur Fuel Oil Non-availability

***Update to Interim Guidance: EPA has launched an electronic portal through which owners and operators of vessels can electronically submit a disclosure of fuel oil non-availability using a Fuel Oil Non-availability Disclosure (FOND) form. The electronic portal for submitting a FOND is managed through EPA's Central Data Exchange (CDX). EPA is no longer accepting Fuel Oil Non-Availability Disclosures through its marine-eca@epa.gov email address.

- NOTE: You will need to log in to CDX, or register if you are a first-time user, to submit a FOND. Instructions for registering on CDX

EPA issued an interim guidance regarding compliance with fuel oil sulfur standards, as set forth in Annex VI and implemented in APPS, that are applicable to ships operating in waters off the coast of North America. The interim guidance explains how owners and operators of vessels can establish compliance with these requirements, and describes how an owner or operator of a vessel who cannot obtain compliant fuel oil can make a fuel oil non-availability claim.

- Interim Guidance on the Non-Availability of Compliant Fuel Oil for the North American Emission Control Area

Penalty Policy

On January 16, 2015, EPA released a penalty policy for violations of the sulfur in fuel standard and related provisions for ships. This action reinforces the agency's commitment to pursue violations of U.S. and international air pollution requirements by ships operating in the North American and U.S. Caribbean Sea Emissions Control Areas. The policy applies to violations of new international standards for sulfur emissions from ships that went into effect on Jan. 1, 2015, and violations under the previous standards. This policy is intended to deter potential violators, ensure that the EPA assesses fair and equitable penalties and allow for the swift resolution of claims arising from noncompliance. The EPA is committed to enforcing marine emission standards to help prevent dangerous air pollution from harming public health in American communities.

- North American and U.S. Caribbean Sea Emissions Control Areas Penalty Policy for Violations by Ships of the Sulfur in Fuel Standard and Related Provisions

Protocols with the U.S. Coast Guard

EPA and the Coast Guard have established the following protocols, pursuant to the MOU, for managing enforcement of Annex VI.

- [Protocols](#) for Referral of Violations

Additional Information

- Information on U.S. Coast Guard's:
 - [Information regarding Annex VI of MARPOL](#)
 - [Frequently Asked Questions about the North American ECA by USCG](#)
 - [Marine-ECA E-mail](#)
 - [EnviroFlash Link - Sign up for all Marine-ECA Alerts](#)

LAST UPDATED ON APRIL 19, 2017