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Air emissions update

Dennis L. Bryant

Recently, the Marine Environmental Protection Committee (MEPC) of the International Maritime Organization (IMO) took a major step toward bringing order out of the current chaos surrounding the regulation of air emissions from ships by provisionally adopting amendments to MARPOL Annex VI.

In 1997, the IMO adopted the initial version of Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL). This Annex is entitled "Regulations for the Prevention of Air Pollution from Ships". It addresses ozone-depleting substances, nitrogen oxides, sulphur oxides, volatile organic compounds, and shipboard incineration, among other things. While acknowledged as comprehensive, this first step by the IMO in the area of control of harmful air emissions was perceived by many as weak.

Various states of the United States staked out independent paths regarding control of air emissions from ships. Alaska was one of the first to act, adopting standards for stack emissions based on opacity. In other words, if the smoke from the ship's stack blocked the view for more than a limited period, the ship was subject to a fine. The methodology was crude, but did encourage several cruise lines to adopt procedures for utilizing shore-side power ("cold ironing"), particularly in Juneau.

Not surprisingly, California has been the most active state with regard to air emissions from ships. Regulations have been adopted prohibiting on-board incineration when the ship is within three nautical miles of the California coast. Regulations have been drafted that would, if adopted, phase in a requirement for large commercial ships calling in the major ports of California to utilize shore power. Most controversially, the State adopted regulations requiring most large commercial ships operating within 24 nautical miles of the California coast to utilize ultra-low sulphur fuel. After this regulation was struck down (first by the federal district court and then by the US Court of Appeals for the Ninth Circuit), California announced that it would continue enforcing the regulation while the matter is on appeal.

The US Environmental Protection Agency (EPA) has adopted regulations regarding air emissions from marine engines for use on ships and boats. These regulations address both spark-ignition (gasoline powered) engines and compression-ignition (diesel powered) engines. For

E-mail

dennis.l.bryant@gmail.com

Internet

<http://brymar-consulting.com/>

Maritime Reporter & Engineering News

<http://marinelink.com/en-US/magazines/Archive.aspx?MID=3>

marine diesel engines with 30 liters or more displacement per cylinder, the EPA basically adopted the MARPOL Annex VI standards. This was done in recognition that no marine engines of this size are manufactured in the United States. At the same time, though, the EPA brought pressure to bear on the IMO to raise the standards. Those efforts (as well as similar efforts by others) bore fruit with the recent development of more stringent air emission requirements by the MEPC.

MARPOL Annex VI was adopted in September 1997 and came into effect in May 2005. It has been ratified by 49 countries, representing over 74% of the gross tonnage of the world's commercial shipping fleet. In the United States, the Senate gave its advice and consent to Annex VI, but the provisions cannot come into effect (and the government cannot formally accede to the Annex) until the implementing legislation is enacted into law. Implementing legislation has been passed by the House of Representatives, but is stalled in the Senate. Meanwhile, a bill has been introduced in the Senate that would, if adopted, establish unilateral air emission standards for ships operating in US waters, thus barring the United States from implementing Annex VI.

The amendments to Annex VI, provisionally approved by the MEPC session ending on April 4, 2008, will when formally adopted at the upcoming MEPC session in October, largely adopt the position espoused by the United States and other stakeholders, such as the International Association of Independent Tanker Owners (INTERTANKO).

The main changes to the international regulation of air emissions from ships would see a progressive reduction in sulphur oxide (SO_x) emissions, with the 4.5% global sulphur cap reduced initially to 3.5% effective from 1 January 2012; then progressively to 0.5%, effective from 1 January 2020, subject to a feasibility review to be completed no later than 2018.

The limits applicable in Sulphur Emission Control Areas (SECAs) would be reduced from the current 1.5% to 1.0%, beginning on 1 March 2010; and would be further reduced to 0.1%, with effect from 1 January 2015.

Progressive reductions in nitrogen oxide (NO_x) emissions from marine engines were also agreed, with the most stringent controls on so-called "Tier III" engines (those installed on ships constructed on or after 1 January 2016) operating in Emission Control Areas.

The revised Annex VI will allow for an Emission Control Area to be designated for SO_x and particulate matter, or NO_x, or all three types of emissions from ships, subject to a proposal from a Party or Parties to the Annex that would be considered for adoption by the IMO, if supported by a demonstrated need to prevent, reduce, and control one or all three of those emissions from ships.

Currently there are two designated SECAs: the Baltic Sea and the North Sea area, which also includes the English Channel. It is expected that, once the United States accedes to Annex VI, it will rapidly move for designation of one or more SECAs in US waters.

Nations that are party to MARPOL Annex VI would be obligated to take reasonable steps to ensure a proper supply of compliant fuel is available. This may prove interesting in a country, such as the United States, with many international ports. If a ship is able to demonstrate that, despite reasonable efforts on its part, it has been unable to purchase compliant fuel, the ship would not be subject to penalty measures, but must notify both its flag administration and the relevant port. As a result of reports of inconsistencies between data contained in Bunker Delivery Notes and commercial test results, revisions to Annex VI also tighten the verification procedures for fuel samples.

With its recent action to strengthen the international regulation of air emissions from ships, the IMO has taken steps to meet the stated objectives of the United States. It is now time for the US Congress to reciprocate by enacting legislation to implement MARPOL Annex VI. This will allow the United States to be an effective part of the solution to this world-wide issue, rather than just wringing its hands and allowing individual states to adopt unilateral, and counter-productive, regimes.