

# EVOLVING POLLUTION-RELATED REQUIREMENTS INTERNATIONALLY AND IN THE UNITED STATES

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## ABSTRACT

*This paper will analyze the domestic and international pollution-related requirements for vessels that have recently come into force, or will likely soon affect, vessel owners and operators. In particular, the international requirements reviewed include: MARPOL Annex I, Annex IV, Annex VI, the International Convention for the Control and Management of Ship's Ballast Water, the International Convention on the Control of Harmful Anti-Fouling Systems, and the London Convention and its 1996 Protocol. The analysis of changing domestic law reviews the pollution related amendments to the Coast Guard and Maritime Transportation Act of 2004 (CGMTA), Pub. L. No. 108-293, which was signed into law on August 9, 2004, which made numerous amendments relating to the Oil Pollution Act of 1990 (OPA 90), Pub. L. No. 101-380. Vessel owners and operators should continue to monitor evolving pollution related regulations in order to comply with new requirements.*

## DISCUSSION

The international community, through the International Maritime Organization (IMO) has implemented numerous pollution related requirements primarily over the last thirty years. It is fair to say that the initial mechanisms for implementing pollution related requirements related to vessels stemmed primarily from the International Convention for the Prevention of Pollution from Ships, 1973. This Convention, substantially modified in 1998 (MARPOL73/78), covers various sources of ship-generated pollution contained in five annexes (a sixth will come into force in the near future). New international initiatives range from additional requirements related to oil discharges, vessel-related air emissions, and types of paint used to preserve hulls that leach into the environment, to stringent controls placed on the ballast water that they hold.

In addition, there have been significant amendments to U.S. law enacted as part of the CGMTA. This legislation represents the most significant maritime-related legislative package enacted by Congress since the Maritime Transportation Security Act of 2002, Pub. L. No. 107-295 was enacted on November 25, 2002. Title VIII of the CGMTA makes numerous amendments relating to OPA 90. The following is a summary of these significant changes to the international pollution regime and OPA 90 in the United States.

## International Regime Update

*MARPOL Annex I:* Annex I to MARPOL was recently amended partly in response to the environmental catastrophe caused by the single hulled *Prestige* which broke apart and was sunk off the coast of Spain in 2002. Consequently, the amendments to Annex I accelerated the phase-out dates for single hull tankers, added a new regulation, 13H, which bans the transportation of all heavy grades of oil in single hull tankers, and added enhancements to the Condition Assessment Scheme.

Under the amendments to Regulation 13G, most single hull tankers will be eliminated by 2015 or earlier. The amendment identifies three separate categories of vessels: (1) pre-MARPOL<sup>1</sup> tankers greater than 20,000 tons deadweight, (2) MARPOL tankers greater than 20,000 tons deadweight, and (3) tankers greater than 5,000 but less than 20,000 tons deadweight. The phase out dates for these vessels have been moved forward from 2007 to 2005 for all pre-MARPOL tankers and from 2015 to 2010 for all MARPOL and smaller tankers. Under this new timetable, new single hull tankers are still permitted to operate until their twenty-fifth anniversary if they meet certain technical requirements, but their entry can be prohibited by port states upon notification to the IMO.

The 2003 amendments also added regulation 13H which pertains specifically to the transportation of heavy grade oil (HGO) in single hull vessels. The regulation prohibits the transportation of HGO in single hull tankers of 5,000 tons deadweight and above after April 2005 and a deadline of 2008 for single hull tankers between 600 and 5,000 deadweight tons. Under this regulation, certain vessels that are only fitted with double bottoms or double sides may be allowed to continue to operate until their twenty-fifth anniversary. As with the amended regulation 13G, regulation 13H provides parties an opportunity to deny entry to certain single hull tankers carrying HGO unless doing so would jeopardize the safety of the ship or life at sea. Certain European countries have already announced that they intend to deny access to such vessels and it is predicted that other countries will follow suit.

The United States deposited a declaration with IMO on July 2, 2004, announcing that it will not approve of these amendments and reaffirmed that OPA 90 continues to be the national standard for tank vessels operating in U.S. waters. 69 Fed. Reg. 46172 (August 2, 2004).

*MARPOL Annex IV:* Annex IV to MARPOL addresses the discharge of sewage from ships, as well as the equipment and systems that control these discharges. In addition, Annex IV regulates re-

ception facilities that receive waste and also regulates the requirements for the certification of such facilities. Annex IV entered into force thirty years after it was first adopted due to the relaxation of certain provisions to increase the chance of its ratification prior to the adoption of the revised Annex IV. Due to problems with Annex IV, a "revised" Annex IV was developed. As revised, Annex IV applies to all new vessels engaged in international voyages built on or after September 27, 2003, that are 400 Gross Tons (GT), International Tonnage Convention (ITC) or more and new vessels less than 400 GT ITC that are certified to carry more than fifteen passengers. The revised Annex IV relaxes the implementation deadline for existing vessels within these limits to September 27, 2008. The new requirements stipulate that affected vessels must have either a sewage treatment plant, a sewage holding tank, or a sewage comminuting and disinfecting system. If ships are not outfitted with one of these systems then the discharge of sewage into the sea will be prohibited within certain geographical boundaries. It is generally accepted that the high seas are capable of dealing with raw sewage, therefore, no sewage may be discharged within three nautical miles from land and sewage that is not comminuted or disinfected cannot be discharged within twelve nautical miles of land.

The IMO has agreed and is encouraging parties to implement the revised Annex IV upon entry into force of the existing Annex IV with a view to avoid creating a dual treaty regime. In the event parties to the original Annex IV are not able to implement the revised provisions before the 2005 deadline, the IMO has requested that such countries not apply the requirements of the existing Annex IV to ships of foreign flags that will be exempted under the revised Annex and also not to apply any punitive measures for such ships during the transitional period between the original Annex and the revised provisions. The revised Annex IV will enter into force in August 2005. The U.S. likely will not become party to Annex IV as it has continually taken the position that Annex IV is not consistent with the U.S. standard contained in the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1387 (2004). Because the United States is not a party to MARPOL 73/78, Annex IV, it cannot issue official international convention certificates as a Flag State. To facilitate commerce and reduce confusion, however, the Coast Guard is issuing a Flag State document to demonstrate equivalent compliance with MARPOL 73/78, (revised) Annex IV for eligible vessels.

*MARPOL Annex VI:* The Regulations for the Prevention of Air Pollution from Ships, known as Annex VI was adopted in 1997 and will enter into force May 19, 2005. In May 2004, the fifteenth and final country became a party to the Annex representing fifty percent of the world's shipping tonnage. As of October 2004 an additional country became a party which brings the tonnage total to nearly fifty-five percent. Annex VI sets NO<sub>x</sub> emission limits for marine diesel engines rated above 130 kilowatts beginning with engines purchased after January 1, 2000, or engines undergoing a major conversion on or after that date. Special SO<sub>x</sub> emissions control areas are established under the Annex in which more stringent controls will be implemented placing restriction on fuel content. The Protocol designates the Baltic Sea Area a SO<sub>x</sub> Emissions Control Area and an amendment is already waiting in the wings to declare the North Sea a SO<sub>x</sub> Emission Control Area following the official Annex VI implementation date in 2005. In addition, Annex VI regulates volatile organic compound emissions from tankers and incinerators, and prohibits the emissions of other ozone depleting substances such as halon and chlorofluorocarbons and prohibits new installations of onboard systems containing these substances.

*Ballast Water:* Ships carrying water for ballasting purposes will soon be regulated by the International Convention for the Control and Management of Ship's Ballast Water and Sediments (BWM). The BWM was adopted on February 13, 2004, and will enter into force twelve months after thirty member states ratify its content. This amount of ratification will represent thirty-five percent of the world's merchant shipping tonnage and as of October 2004 there were no parties to this convention. There are, however, several countries throughout the world that have already implemented some sort of ballast water control regulations. Considering that billions of gallons of water are transferred daily for ballasting purposes, every day that passes without stringent controls could amount to millions of non-indigenous species being relocated throughout the world. The problems resulting from ballast water have been known for over a century but it was not until the late 1970s that the international scientific community started to realize that the non-indigenous species were causing a plethora of problems.

The goal of the BWM is to prevent, minimize, and ultimately eliminate the transfer of harmful aquatic organisms and pathogens through the control and management of ship's ballast water and sediments. Additionally, parties to the BWM are given the right to take more stringent measures as long as they do not cause greater harm than they prevent to the environment, human health, property or resources. Under the convention, ships are required to have on board and implement a Ballast Water Management Plan that is specific to the particular ship and includes a detailed description of the actions to be taken to implement the Ballast Water Management practices. In addition, ships must have a Ballast Water Record Book, which is strikingly similar to the Oil Record Book required under the MARPOL Annex I, to record when ballast water is taken onboard, circulated or treated, and discharged into the sea.

Under the BWM, ships are required to be surveyed and certified and may be inspected by port state control officers. Inspections can include verifying that the vessel has a valid certificate, inspection of the Ballast Water Record Book and taking samples of the ballast water all the while assuring that ships are not unduly detained or delayed. The Convention also implements geographical limits within which ballast water exchanges must occur. For vessels fitted with ballast water exchange capabilities, the exchange must occur at least 200 nautical miles from the nearest land in water that is at least 200 meters deep and a fifty nautical mile limit is established for vessels not equipped with ballast water exchange capabilities. In addition, the exchange standards require an efficiency of at least 95 percent volumetric exchange.

It is unclear what action the United States will take with regard to ratification of the convention. Concerns have been expressed that the standard is not stringent enough to be protective and that there are currently no technologies in existence that can meet the standards established by the convention.

*Anti-Fouling:* The International Convention on the Control of Harmful Anti-Fouling Systems on Ships (AFS) was adopted on October 5, 2001. AFS will enter into force twelve months after twenty five States representing twenty five percent of the world's shipping tonnage have ratified it. As of October 2004, nine States representing approximately nine percent of merchant shipping have become a party to the convention. Vessel owners have used anti-fouling products on their hulls for numerous years. These products have traditionally impeded either the growth or attachment of marine life to the bottom of vessels. The consequence of this attachment increases drag and therefore decreases fuel efficiency and speed. Within the last two decades, the international community has become conscious of the harmful environmental

consequences resulting from their use. The most effective and harmful components of these products is organotin tributyltin (TBT). The tin component in the TBT slowly leaches and impedes barnacles and other marine life from attaching themselves to the bottom of ship hulls. Unfortunately, the leaching tin slowly enters the overall marine environment and impedes the normal life cycle of other marine life.

The AFS calls for the cessation of either the application or the re-application of these metallic compounds to ship's hulls by January 1, 2003, and this provision will likely have retroactive effect when the convention enters into force. By January 1, 2008, the AFS requires that ships will either not apply these metallic compounds to their hulls or external surfaces or if they use them, they must have a protective barrier between these compounds and the surrounding water. To ensure that this occurs, the AFS calls for an inspection process that will monitor compliance. As a result of technologies and the realization of the harmful environmental effects, industry has stopped producing these harmful compounds and continues to research a safe and effective alternative.

The U.S. will likely sign the convention in the near future and the Environmental Protection Agency (EPA) will then lead the effort to prepare the package of documents to transmit to the U.S. Senate for ratification.

*The International Dumping Convention:* The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, known as the London Convention (LC) was adopted by the international community in 1972 and entered into force in 1975. The LC calls on contracting parties to control the dumping of wastes into the ocean which could not only harm marine life but also interfere with the legitimate uses of the sea. Prior to the adoption of this convention, the dumping of wastes into the sea by industrialized nations occurred at an alarming rate. To limit this pollution, the LC established three separate categories of waste: (1) waste that is prohibited from dumping, (2) waste requiring a special permit, or (3) waste requiring a general permit. During the years since its adoption, the LC has seen numerous amendments, but the 1996 Protocol has effected the most significant revision to the original language and it is intended that this Protocol will entirely replace the 1972 Convention.

The Protocol will enter into force thirty days after the ratification by twenty-six countries, fifteen of which must be contracting parties to the original 1972 convention. As of October 2004, twenty countries representing approximately twelve percent of the world's shipping tonnage have become parties to the Protocol. The most important changes contained in the Protocol are the "precautionary approach" and the "polluter pays" principal. Instead of providing a comprehensive list of wastes that may not be dumped due to their harmful qualities, the Protocol provides a list of wastes that may be dumped under the authority of a permit. These wastes include dredged material, sewage sludge, industrial fish processing waste, vessels and offshore platforms or other man-made structures at sea, inert, inorganic geological material, organic material of natural origin, and bulky items such as iron, steel, and concrete. In addition, incineration at sea which was permitted under the 1972 convention and partially restricted following amendment in 1993, is completely prohibited under the Protocol except in emergency situations. Contracting parties are also prohibited from exporting waste to non-parties for the purpose of dumping at sea or incineration. In order to allow for easier implementation for new contracting parties, the Protocol allows for a transitional period in which a party would be permitted to phase in the regulations over a five year period. In the United States, the EPA has drafted a request for ratification of the Protocol and the necessary legislative changes and expects to submit them to Congress early next year.

## U.S. Regime Update

*Vessel Response Plans for Nontank Vessels Over 400 Gross Tons:* Sec. 701 of the CGMTA amends 33 U.S.C. § 1321 to require the owner or operator of any "nontank vessel" of 400 gross tons or more that carries oil of any kind as a fuel for main propulsion, including bunkers, to prepare and submit a response plan for each vessel. Under the law, response plans have to be submitted to the Coast Guard by August 9, 2005. Previous law was limited to vessels that carry oil in bulk as cargo. In addition, this amendment provides the Coast Guard with authority to issue regulations which require the owner or operator of a tank vessel, a non-tank vessel, or a facility that transfers noxious liquid substances (NLS) in bulk to or from a vessel, to prepare a response plan for a worst case discharge, or a substantial threat of such a discharge, of an NLS that is not designated as a hazardous substance or regulated under other law or regulations.

Under previous law, the list of hazardous substances maintained by the federal government did not include over 70% of current maritime chemical cargoes that the Coast Guard considers to present the most imminent and substantial threat to the marine environment. This amendment harmonizes the domestic list of regulated bulk cargoes with the internationally maintained list.

*Requirements for Tank Level and Pressure Monitoring Devices:* Sec. 702 of the CGMTA amends OPA 90 to make issuance of regulations concerning tank level and pressure monitoring (TLPM) devices discretionary. The previous law had been upheld by the courts as requiring the Coast Guard to issue TLPM regulations. This provision also requires the Coast Guard to study the cost and benefits of alternative methods other than the use of TLPM devices for effectively detecting the loss of oil from oil cargo tanks. The report is due to Congress within 180 days of enactment.

*Liability and Cost Recovery:* Sec. 703 of the CGMTA provides to innocent purchasers, municipalities, and lenders the same protection against liability from oil discharges under OPA 90 as are provided for such entities under the Comprehensive Environmental Response, Compensation, and Liability Act. This includes ownership of a vessel or facility that was acquired under seizure, bankruptcy, tax delinquency abandonment, or other circumstances in which the government or innocent purchasers involuntarily acquires the title, or did not know or have reason to know about the oil after having conducted all of the appropriate inquiries. The amendment requires the Coast Guard, in coordination with EPA, to issue regulations within two years to establish standards and practices for the purpose of satisfying the requirement to carry out appropriate inquiries.

*Oil Spill Recovery Institute:* Sec. 704 of the CGMTA extends the authorization for funding of the Oil Spill Recovery Institute under 33 U.S.C. § 2736 until 2012.

*Double Hull Alternatives:* Sec. 705 of the CGMTA requires the Coast Guard to establish and publish an environmental equivalency evaluation index, taking into account recommendations from the Marine Board of the National Research Council's report on "Environmental Performance of Tanker Design in Collision and Grounding" to assess the overall outflow performance due to collisions and groundings for double hull tank vessels and alternative hull designs.

*Authority to Settle Pollution Claims:* Sec. 706 of the CGMTA provides authority to the head of any department or agency responsible for recovering amounts for which a person is liable under OPA 90 to consider, compromise, and settle claims where the settlement is \$500,000 or less. If the amount is over \$500,000, the Attorney General must approve the settlement in writing.

*Report on Implementation of OPA 90: Sec. 707* of the CGMTA requires the Coast Guard to report to Congress within 180 days of enactment on the status of the levels of funds currently in the Oil Spill Liability Trust Fund and projections for funding over the next five years; implications for changing the phase-out date for single hull tankers; the cost and benefits of requiring vessel monitoring systems on certain tank vessels; a summary of the extent to which spill response costs and damages have exceeded liability limits; and a summary of tank barge and towing vessel safety issues.

*Loans for Fishermen and Aquaculture Producers Impacted by Oil Spills: Sec. 708* of the CGMTA directs the President to establish a loan program for interim assistance to fishermen and aquaculture producers who submit claims for oil spill damages until such time as interim payments are made under 33 U.S.C. § 2705, or in the event that no such interim payments are made. In addition, not later than 270 days after enactment, the Secretary of Commerce, in consultation with the Administrator of the EPA, must submit to Congress a report that addresses the effectiveness of the claims procedures and emergency response programs under OPA 90 related to protecting fishermen and aquaculture producers and that contains other legislative recommendations to improve the procedures and programs.

## CONCLUSION

This paper highlights the new international, as well as domestic conventions and laws concerning pollution-related requirements pertaining to vessels. The quantity of requirements and the dynamic nature of this area of the law requires constant vigilance and monitoring on behalf of vessel owners and operators to ensure proper planning and compliance with evolving pollution-related conventions and law. In particular, vessel owners and operators will have to comply with new requirements related to accelerated phase-out dates for single hull tank vessels, sewage discharge, ship air pollution, ballast water, anti-fouling paint, dumping, vessel response plans for nontank vessels, tank level and pressure monitoring devices, and various amendments to OPA 90.

## BIOGRAPHY

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- International Convention for the Control and Management of Ship's Ballast Water
- International Convention for the Prevention of Pollution from Ships, 1973
- International Convention on the Control of Harmful Anti-Fouling Systems on Ships
- Maritime Transportation Security Act of 2002, Pub. L. No. 107-295
- Oil Pollution Act of 1990, Pub. L. No. 101-380

## ENDNOTES

- <sup>1</sup> Pre-MARPOL tankers do not comply with the requirement for protectively located segregated ballast tanks.