

International Regulation News Update

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Marine Environment Protection Committee's 51st Session (29 March to 2 April 2004)

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MARPOL 13G AND 13H INTERPRETATIONS

Carriage of Heavy Grade Oil

Under resolution MEPC.111(50), MARPOL 13H introduces requirements for the carriage of *heavy grade oil* (HGO) as cargo. HGO, for the purposes of regulation 13H, is defined as meeting any one of the following criteria:

- Crude oil with a density $>900 \text{ kg/m}^3$ @ 15°C ;
- Fuel oils with a density $>900 \text{ kg/m}^3$ @ 15°C or kinematic viscosity $>180 \text{ mm}^2/\text{s}$ @ 50°C ; or
- Bitumen, tar and their emulsions.

Regulation 13H contains specific provisions for oil tankers based on their deadweight and area of operation. Prior to the adoption of regulation 13H in December 2003, the only requirement for carriage of HGO on oil tankers (5000 > dwt \geq 600) delivered on or after 6 July 1996 was that they be arranged with:

- double bottoms having a height of B/15 (m) but not less than 760 mm; and
- wing tanks having a minimum width of $0.4\text{m} + 2.4(\text{dwt}/20000)$ but not less than 760mm, unless the capacity of each cargo oil tank does not exceed 700m^3 in which case wing tanks are not required.

However, new 13H revised the above regulation for the carriage of HGO as cargo by requiring double bottoms and wing tanks on all new construction and for existing oil tankers by their anniversary date of delivery in 2008.

MEPC 51 concluded that the wing and double bottom tanks, that are arranged to protect the center HGO tanks, can be utilized to carry oil, other than HGO, provided that the capacity of each cargo oil tank does not exceed 700m^3 for oil tankers (5000 > dwt \geq 600).

Implementation of CAS for Cat.1 Tankers

Upon entry into force on 5 April 2005, resolution MEPC.111(50) will remove the current 13G requirement for Category 1 oil tankers to complete the Condition Assessment Scheme (CAS) in 2005. This was agreed because MEPC.111(50) also accelerated the phase out date such that all Category 1 oil tankers would be phased out in 2005 (currently, the phase out date extends to 2007 for some of these tankers).

Category 1 oil tankers are tankers $\geq 20\text{k}$ dwt, but without protectively located segregated ballast tanks, carrying crude oil, fuel oil, heavy diesel oil

or lubricating oil as cargo or $\geq 30\text{k}$ dwt carrying other types of oil.

An anomaly does however occur for Category 1 oil tankers delivered prior to 5 April 1982 since, under the current regulation 13G, such tankers delivered in January, February, March and in the first 4 days of April would be required to complete CAS in the first few months of 2005 only to be phased out on 5 April 2005.

MEPC 51 concluded that such Category 1 oil tankers would not be required to complete CAS. A circular is to be issued to this effect.

Implementation of CAS for Cat.2 & 3 Tankers

Completion of CAS is required as a prerequisite for Category 2 and 3 tankers to continue their operation until the designated phase out dates.

Category 2 oil tankers are tankers $\geq 20\text{k}$ dwt carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo or $\geq 30\text{k}$ dwt carrying other types of oil. To qualify, these tankers must be fitted with protectively located segregated ballast tanks.

Category 3 oil tankers are tankers ≥ 5000 dwt and $< 20\text{k}$ dwt carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo or $< 30\text{k}$ dwt carrying other types of oil.

IACS raised a concern at MEPC 51 as to possible misinterpretations that could be provided on the dates when these tankers are required to be certified under the CAS. To clarify the matter, MEPC 51 concluded that a successful completion of the Condition Assessment Scheme (CAS) is required by the first intermediate or renewal survey carried out after:

- 15 years of age; or
- 5 April 2005,

whichever occurs later.

Determination of Oil Tanker Age

The Committee considered a proposal to apply, in lieu of the tanker's original *delivery date*, the *completion date* of a major conversion of an oil tanker as the basis for applying MARPOL 13G and 13H. Such a conversion would be limited to a complete replacement of all tanks (cargo, ballast and void) within the cargo block.

A literal reading of these regulations clearly indicate that the tanker's original delivery date should be used to determine the tanker's phase out date.

However, when considering the intent of the phase out requirements under MARPOL Annex I, which address the cargo carrying capacity of oil tankers, some Delegations saw the merit in considering the actual age of the cargo block in which case a later phase out date could be granted. The matter is scheduled to be progressed during MEPC 52 in October 2004 where it is expected that a conclusion will be reached.

BALLAST WATER CONVENTION

Entry Into Force

A new Ballast Water Convention was adopted on 13 February 2004 and will enter into force when 30 States representing 35% of the world's gross tonnage become signatory. All ships including submersibles, floating craft/platforms, FSUs and FPSOs are to manage their ballast water in accordance with an approved Ballast Water Management Plan and record such management in a Ballast Water Record Book.

Retroactive Implementation Schedule

Table 1 summarizes the implementation schedule of the type of treatment required according to the age of ship and its ballast capacity as per the provisions of the Convention.

Ballast Capacity (m ³)		< 1500		≥ 1500 but ≤ 5000		> 5000	
Construction Date		<2009	≥2009	<2009	≥2009	<2012	≥2012
First IS or RS occurring after delivery date in the year	2009	D1 or D2	D2	D1 or D2	D2	D1 or D2	D2
	2010						
	2011						
	2012						
	2013						
	2014						
	2015						
2016	D2	D2	D2	D2	D2	D2	
2017							
Est. Ship No's (>10k gt)		19000	5500	5500	5500	9000	9000

Standard D1 is the ballast water exchange standard which achieves either 95% volumetric exchange or pumps three times the volume of ballast water carried in each tank.

Standard D2 is the ballast water biological Standard that must use approved treatment systems which provide treated ballast water such that:

- there are less than 10 viable organisms per m³ ≥50 micrometers in minimum dimension, and
- there are less than 10 viable organisms per millilitre < 50 micrometers in minimum dimension and ≥10 micrometers in minimum dimension, and
- Indicator Microbe concentrations: (1) toxicogenic vibrio cholerae: <1 colony forming unit (cfu) per 100 millilitre or <1 cfu per gram of zooplankton samples; (2) Escherichia coli: <250 cfu per 100 millilitre; and (3) Intestinal Enterococci: <100 cfu per 100 millilitre.

Treatment systems are to be approved by the Administration and although a test protocol has not been developed, it is anticipated that such a protocol will require prototype and onboard testing before such an approval is granted. Therefore, ship owners should not fit their ships with a treatment system that does not contain an endorsement by a Government.

Ballast Water Treatment Guidelines

Although the Convention was adopted in December 2003, there are more than ten sets of Guidelines referred to in the Convention that need to be developed in order to implement the provisions of the Convention. Of these 10, MEPC 51 agreed to focus its initial effort on Guidelines that are directly related to the mandatory review process that must take place with respect to regulation D-2 and whether this biological standard should be made more robust or not. The D-2 review needs to be completed in 2006 in accordance with regulation D-5 which requires completion at least three years prior to the earliest date (2009) that the D-2 biological standard could become effective (see Table 1).

MEPC recognized that the following four sets of Guidelines are needed in order to complete the D-2 review process in a sound and accurate manner:

- D-2 Review Process;
- BW Treatment Type Approval;
- Use of Active Substances; and
- BW Sampling and Analysis

D-2 Review Process Guidelines

A preliminary draft of D-2 Review Guidelines was developed and is scheduled to be finalized at MEPC 52 (Oct 04) in order that the actual review process can begin during MEPC 53 (July 05).

These draft Guidelines currently request Member States and industry observers to submit information which evaluates available BW treatment technology against the following criteria:

- extent of testing (prototype and/or production) carried out onshore and onboard ships;
- ballast capacity and flow rate(s) vs biological performance;
- potential safety hazards and any mitigating measures needed with the technology;
- unwanted environmental side-effects
- practicality, durability, cost effectiveness per treated ton of BW, and any operational limitations associated with technology used onboard new and existing ships.

MEPC will also need to consider the above information against projected new construction demand for 2009 and several years beyond in terms of ballast capacity and flow rate(s) associated with the new construction.

Since ballast capacity is not recorded in any of the international data bases, to assist in the above D-2 review ABS conducted a review of its fleet to determine the relationship between ballast capacity and deadweight according to type of ship. The relationships identified are shown in Table 2, below.

Table 2 DWT to Ballast Capacity Relationships		Ballast Capacity (m ³)		
		1.5k	5k	10k
DH Oil Tanker	Corresponding Min DWT	3500	7500	16000
Chemical &/or Oil		4000	12000	25000
Product Tanker		6000	17000	30000
LNG/LPG		3500	17000	20000
Gen Cargo & Refer		8500	20000	47000
RO-RO		3500	10000	33000
Container		4500	14500	21000
Bulk Carrier /OBO		4500	15000	28000

D-2 Associated Guidelines

The last three sets of Guidelines noted on the previous page are interrelated and necessary in order that the technologies to be evaluated are based on tests that have been conducted in a uniform manner and under a robust type approval program and that the performance of such technologies has been sampled and analyzed in a consistent and biologically meaningful manner.

An intersessional working group (Oct 04) and correspondence group will progress the development of these guidelines.

Type Approval Guidelines

A significant amount of the discussion on the draft set of Type Approval Guidelines focused on the extent of testing to be carried out (both biological and functional testing) and whether such testing should be performed in the test facility ashore and/or after installation onboard the ship. Two options were developed:

- Option 1 – biological testing at a test facility ashore followed by only functional testing after installation onboard the ship; and
- Option 2 - biological testing (to the extent to ensure that the installed equipment would be effective in a shipboard environment) followed by functional testing after installation onboard the ship.

Both Options have advantages and disadvantages. Option 1 offers an approach that is consistent with current type approval in that type approved equipment is purchased with a level of confidence of its performance such that only functional tests are carried out after installation on board.

However, due to the unknown reliability and accuracy of BW technology performance, the possible variability in sampling and analysis results and the likelihood that BW treatment will use a combination of treatment technologies to provide BW meeting the D-2 standard, there was general agreement at the BW Working Group that biological checks should be part of the type approval process as per Option 2.

IBC CODE REVISION

General

In preparing for the October 2004 adoption of the previously approved revision of MARPOL Annex II, the Committee also prepared final amendments to the International Bulk Chemical (IBC) Code which is mandatory through MARPOL Annex II and SOLAS. As currently drafted, Annex II and the IBC Code are scheduled to enter into force on 1 January 2007 upon adoption in October 2004.

The principal reason for these revisions is to accommodate the re-evaluation process of noxious liquid substances that has been carried out under the Global Harmonized System (GHS). This process evaluates each substance offered for carriage in bulk according to the GHS system and assigns a hazard profile accordingly. The hazard profiles are then used to assign carriage requirements.

At MEPC 49 in July 2003, the Committee approved a 4-category system of substances, which is comprised of a more environmentally-protective 3-category system and a 4th category for “*other substances*”.

One of the improvements calls for new ships to be capable of emptying their tank contents to less than 75 liters (currently this varies from 100 to 900 liters, depending on the substance and the age of the vessel). This reduced “*stripping limit*” is not retroactive for existing ships. However, all ships will be subject to the revised discharge limitations of not less than 12 nautical miles from the nearest land in a depth of water of not less than 25 meters.

Nominal Tonnage Surplus for Vegetable Oils

A significant portion of the debate focused on whether there was an adequate surplus of tonnage so as to not cause a disruption in the multi-billion dollar-a-year veg-oil trade in 2007, when MARPOL Annex II and the IBC Code revisions are scheduled to become effective for new and existing ships, including those carrying vegetable oils. Based on the GHS re-categorization and the revised ship-typing requirements, a significant amount of veg-oils are to be carried in Type-2 (double hull) chemical tankers (which have more onerous requirements for venting and maximum tank size limits) as opposed to the requirements of the Type-3 single hull chemical carrier.

There were mixed views as to whether or not sufficient tonnage would be available after the scheduled 1 January 2007 entry into force passed. In light of the GHS assessment, it was recognized that certain vegetable oils exhibit the same physical properties as petroleum oils and can therefore be just as devastating to the marine environment. As such, there was unanimous support to provide the necessary protection to the environment by approving the draft amendments to the IBC Code, except for the USA, Philippines and Malaysia who reserved their position pending further review.

Safeguards in the Event of a Tonnage Deficit

To allay concerns of some Delegates that the predicted nominal surplus of tonnage was not sufficient, and to take into account how difficult it is to accurately determine the amount of veg-oil transported according to ship arrangement, Delegates were reminded of the provision under MARPOL Annex II that allows Administrations to modify or delay, for a specific period of time, application of amendments of Annex II or the IBC Code associated with the ship's structure, equipment or fittings, to existing ships. This eased a number of concerned Delegates, but further heightened concerns of others who believed that such a provision could create an unintended and unwanted consequence whereby phased out oil tanker tonnage under MARPOL Annex I could be easily used to haul Annex II products. To ensure that this does not occur, the Committee agreed that the MARPOL Annex II exemption provisions are not to be used by signatory Parties to legitimize the carriage of Annex II noxious liquid substances by Annex I phased out oil tankers.

A further proposal was presented and agreed to in principle. To provide for safeguards in pollution prevention due to operations and due to the occurrence of accidental breach of the side or bottom shell, it was proposed that identified veg-oils should be carried in Type-3 chemical/NLS tankers (without the more onerous Type-2 venting and maximum tank size limits) but arranged with double hulls that comply with the dimensions required for Type-2 chemical tankers.

Transport of Veg-Oils in General Cargo Ships

MEPC 51 approved Guidelines to allow the carriage of vegetable oil in bulk in deep tanks or independent tanks in general dry cargo ships specifically designed for the carriage of such oils.

Such ships need to be NLS certificated before 1 January 2007, to continue to carry these vegetable oils on specific trades.

The Guidelines apply to instances where it has been determined that the transport of certain veg-oils (those listed in the IBC Code with a pollution hazard only; primarily triglycerides) would not be viable using NLS tankers as required by Annex II. Such a relaxation shall apply to independent tanks located at least 760 mm from the shell plating, is to be restricted to specifically identified trades and shall fully comply with all discharge requirements under the revised Annex II. Before granting a relaxation, the flag Administration must first receive written confirmation from both the Government of the country of loading and the Government of the country of unloading that they concur with the proposed relaxation.

REVISED MARPOL ANNEX IV - SEWAGE

Implementation Schedule

To overcome legal issues associated with the manner in which the current Annex IV was amended by MEPC 44 and then entered into force (EIF) on 23 September 2003, MEPC 51 adopted a new version of MARPOL Annex IV which contains the same technical provisions adopted by MEPC 44. The MEPC 51 revision is scheduled to enter into force on 1 August 2005.

New ships (built on or after EIF) and existing ships (built before EIF) are to comply with the provisions to prevent pollution by sewage as summarized in Table 3, below.

Table 3	GT	Certified Persons	Annex IV Compliance Date
New Ships	≥ 400	na	On delivery if built:
	< 400	>15	≥ 23 Sep 2003 ⁺ ≥ 1 Aug 2005 [#]
Existing Ships*	≥ 400	na	23 Sep 2008 ⁺
	< 400	>15	1 Aug 2010 [#]

* Ships built before 2 October 1983 shall comply with Annex IV, as far as is practicable
⁺ for Parties to Annex IV (MEPC 44 version)
[#] for Parties to Annex IV (MEPC 51 version)

Based on the above, compliance is dependent on whether or not the Government of the ship's flag of registry is signatory to the MEPC 44 or 51 version of Annex IV. It is noted that 96 of 160 Member States, representing 54% of the world's

gross tonnage, are signatory to Annex IV – MEPC 44 (see www.imo.org for details).

Equipment and Discharge Provisions

Ships shall be fitted with one of the following systems and shall control the discharge of sewage in accordance with Table 4, below.

Table 4 - Equipment and Discharge Provisions	
Equipment	Discharge Requirement
An approved treatment plant	No visible floating solids nor discoloration of surrounding water
An approved system for Comminuting/Disinfecting	> 3 nautical miles from the nearest land
A holding tank of adequate capacity	> 12 nautical miles from the nearest land and at a ship speed ≥ 4 kts

Annex IV provides standard dimensions for flanges of discharge connections and requires a five year certificate to be issued after completion of an initial survey which remains valid without further survey.

PARTICULARLY SENSITIVE SEA AREAS

MEPC 51 continued to discuss the identification of new Particularly Sensitive Sea Areas (PSSAs). As of 2001, two PSSA's have been designated: the Great Barrier Reef and the Archipelago of Sabana-Camaguey. These areas are afforded special protection through action by IMO because of their significance with respect to recognized ecological, socio-economic, or scientific reasons and because they may be vulnerable to damage by international shipping activities.

The three new areas under consideration which were agreed to in principle are the Canary Islands, the Baltic Sea and Galapagos Archipelago. Member States that sponsored the proposed designation of the above areas indicated that they would submit to the Navigation Sub-Committee for consideration Associated Protective Measures (APMs). Within the scope of IMO these APMs address special discharge restrictions, ship routing and reporting and other measures aimed at protecting specific sea areas against environmental damage from ships, such as compulsory pilotage schemes or vessel traffic management systems.

*Note - For further information concerning the above information, please contact ABS Regulatory Affairs at :
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