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**Reference to:** Regulations of 30 May 2012 No. 488 concerning environmental safety for ships and mobile offshore units - Environmental Safety Regulations

Regulations of 1 July 2014 No. 944 on dangerous goods on Norwegian ships - Dangerous Goods Regulations

## **Carriage of hazardous and noxious liquid substance in bulk on existing offshore support vessels after 31 December 2020**

### **Application and purpose**

This guidance applies to existing offshore support vessels<sup>1</sup> (OSVs) certified in accordance with IMO<sup>2</sup> Res. A.673(16)<sup>3</sup>, hereinafter referred to as “the Resolution”, to transport and handle limited amounts of hazardous and noxious liquid substance in bulk.

Circular RSV 14-2020 guides and informs the industry with respect to possible consequences for existing OSVs as and when

- new carriage requirements for noxious liquid substances (NLS) enter into force on 1 January 2021, and
- the OSV Chemical Code<sup>4</sup> (the Code) is implemented in the Norwegian legislation.

These introduce the following three main challenges:

1. NLS, which due to safety reasons are assigned new carriage requirements.
2. New requirements for the training of personnel involved in NLS bulk operations.
3. Exemptions for carriage of chemicals in bulk on domestic voyages not covered by the Resolution.

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<sup>1</sup> OSVs of which the keels were laid, or which were at a similar stage of construction on or after 19 April 1990 and before 1 July 2018.

<sup>2</sup> International Maritime Organization

<sup>3</sup> Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels, Resolution A.673(16), as amended

<sup>4</sup> Code for the transport and handling of hazardous and noxious liquid substances in bulk on offshore support vessels, Resolution A.1122(30)

Circular RSV 14-2020 also provides guidance on technical requirements of the Code where, in the Norwegian Maritime Authority's (NMA) opinion, a need exists for accepting alternative solutions relevant for most of the existing OSVs.

This is a general guideline. The scope and effect of the upcoming amendments will vary from ship to ship. Hence, these guidelines should not be understood to describe all or every aspect of the challenges facing the industry.

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## 1 Regulations

The Environmental Safety Regulations<sup>5</sup> and the Dangerous Goods Regulations<sup>6</sup> apply when carrying NLS, including chemicals, in bulk. These regulations require ships to comply with MARPOL<sup>7</sup> Annex II or SOLAS<sup>8</sup> Chapter VII Part B, both of which make the IBC Code<sup>9</sup> mandatory. As an alternative to the IBC Code, an OSV carrying limited amounts of hazardous and noxious liquid substances may comply with the appropriate IMO guideline<sup>10</sup>. At present, the above regulations refer to the Resolution only.

The scope of the Resolution is limited both in relation to the quantity as well as the hazards of the substances carried. The carriage of chemicals with more severe hazards, such as toxicity, is not within the scope of the Resolution. The scope of the Code is broader and has carriage requirements for all NLS, including dangerous chemicals. By implementing the Code in the Norwegian legislation, OSVs which comply with the provisions of the Code may also carry the more hazardous cargoes in bulk.

The industry should note that existing OSVs which comply with the requirements of the Code, except for the stability provisions in chapter 2 of the Code, and subject to the satisfaction of the NMA<sup>11</sup>, may carry more hazardous cargoes than what the Resolution permits.

The carriage requirements for individual NLS are listed in Chapter 17 or 18 of the IBC Code and the latest edition of the MEPC.2/Circular (Provisional categorization of liquid substances in accordance with MARPOL Annex II and the IBC Code). The carriage requirements apply to every ship that carry NLS, irrespective whether a ship shall comply with the IBC Code, the Code or the Resolution<sup>12</sup>.

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<sup>5</sup> Regulations of 30 May 2012 No. 488 on environmental safety for ships and mobile offshore units

<sup>6</sup> Regulations of 1 July 2014 No. 944 on dangerous goods on Norwegian ships

<sup>7</sup> International Convention for the Prevention of Pollution from Ships

<sup>8</sup> International Convention for the Safety of Life at Sea

<sup>9</sup> International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

<sup>10</sup> Cf. Environmental Safety Regulations section 7 and the Dangerous Goods Regulations section 6

<sup>11</sup> Cf. 1.1.4 of the OSV Chemical Code

<sup>12</sup> Cf. Section 3.13 of the Resolution

## 2 Background

### 2.1 New carriage requirements

Comparing with the present situation, amendments to the IBC Code<sup>13</sup> which enter into force on 1 January 2021, generally impose stricter carriage requirements for NLS. The more stringent requirements mean that measures to prevent environmental pollution are augmented with measures aimed at safeguarding life, health and material values. Many of the products that today are assigned with pollution hazard (P) will be assigned with a safety hazard (S). Some of these will also be categorised as toxic products.

Many of the existing OSVs have been constructed in accordance with waivers involving the vessel's arrangements that may be used in accordance with the Resolution.<sup>14</sup> The condition for these waivers was that "pollution hazard only substances with a flash point exceeding 60°C" were permitted for carriage in a specific tank and the associated arrangements. Additionally, the Resolution does not allow for the carriage of toxic products.

The amendments will require that existing OSVs certified in accordance with the Resolution, on or after 1 January 2021, when carrying NLS, comply with the new carriage requirements, as applicable.

Further, the carriage requirements for "offshore contaminated bulk liquid P" and "offshore contaminated bulk liquid S" are included in the Chapter 17 of the IBC Code. All ships that backload bulk liquids offshore shall comply with these requirements in addition to Chapter 16 of the Code. Chapter 16 requires additional gas detection of hydrogen sulphide (H<sub>2</sub>S) and lower explosion limit (LEL) and has several operational requirements that must be incorporated in the vessel's safety management system.

### 2.2 The Code

In 2011, the IMO recognised the need for a revision of the Resolution. The revision resulted in the Code for the transport of chemicals on OSVs. The Code considers the carriage of chemicals with broader and more severe hazards than what is the case today.

### 2.3 Carriage of chemicals not covered by the Resolution in bulk on domestic voyages to offshore installations

During the work with developing the Code in IMO, the NMA recognised an urgent need for exemptions from national regulations for carriage of toxic products and products assigned with ship type 2 in the IBC Code. Therefore, awaiting the new international requirements, exemptions have been granted to OSVs that are designed in accordance with the Resolution on the condition that they comply with some additional safety measures.

## 3 Guidance

### 3.1 New carriage requirements

The consequences due to the revised carriage requirements for existing OSVs will vary. However, ship owners which take no action will most likely face less capacity and flexibility of their ship.

In our opinion, the amendments with the greatest impact on a typical existing OSV ship design are:

- The majority of the most frequently carried NLS cargoes on OSVs will be assigned with a safety hazard (S).

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<sup>13</sup> Cf. Resolution MEPC.318(74) – Amendments to the IBC Code, Resolution MEPC.315(74) – Amendments to MARPOL Annex II and Resolution MSC.460(101) - Amendments to the IBC Code

<sup>14</sup> Cf. Section 3.1.10, 3.2.4, 3.4.6 and 5.1 of the Resolution

- Many of the NLS cargoes will be assigned as toxic products, which implies that section 15.12 or parts of 15.12 of the IBC Code shall be met.
- New carriage requirements for “offshore contaminated bulk liquid P” and “offshore contaminated bulk liquid S”.

### **3.2 New requirements for training personnel**

Irrespective of a ship’s date of construction, the NMA’s approach is that all personnel involved in NLS bulk cargo operations shall have the knowledge necessary to safely perform the required activities. Therefore, it should be expected that personnel on existing OSVs will have equal requirements for training as personnel on board an OSV certified to comply with the Code.

However, presently there are no specific provisions adopted under the auspices of the IMO for such training for the crew on an OSV. The training most relevant is directly referring to the training for the crew on a chemical tanker. Consequently, the NMA is yet to conclude on the level of training required and the application for such training to existing OSVs. However, the NMA is in a dialogue with the industry to establish more detailed guidelines for the prospective training. The results of this work will be presented on a later occasion. It can be expected that transitional provisions will be established for all OSVs. Further, such relevant training requirements will most likely enter into force after the Code is implemented in the Norwegian legislation.

### **3.3 Exemptions for carriage of chemicals not covered by the Resolution in bulk on domestic voyages**

By implementing the Code in the Norwegian legislation, the special reasons on which applicable exemptions were based are no longer present. That means that when our acceptance expires, the existing OSVs engaged in the carriage of toxic products and ship type 2 products may only continue to carry these products if they are certified to comply with the requirements of the Code for such products.

### **3.4 Measures to be considered by the shipowner**

The amendments to the IBC Code will have an impact on all existing vessels.

A ship owner needs to establish the best approach considering the necessary actions for each individual ship that shall continue to carry NLS in bulk after 1 January 2021. A gap analysis between the ship and the requirements in the Code may be beneficial in this process. Also, the following should be considered:

- all carriage requirements assigned to a product shall be complied with when transporting NLS cargo in bulk,
- a few NLS, which have properties that presents a lesser safety hazard, are currently being considered for carriage in tank arrangement that fulfil the requirements for carriage of “pollution hazard only substances with a flash point exceeding 60°C” cf. section 3.6 of this circular.
- waivers beyond those stated in the Environmental Safety Regulations, the Dangerous Goods Regulations, MARPOL Annex II, the OSV Chemical Code, the Resolution or this Circular, may not be considered by the NMA,
- personnel on an existing OSV will have training requirements equal to the training requirements for personnel on OSVs certified in accordance with the Code,
- all ships that backload bulk liquids offshore shall comply with the new carriage requirements for contaminated backloads mentioned above and Chapter 16 of the Code, and
- an existing vessel which continue operating under the regime of the Resolution may carry the products listed in Appendix I of the Resolution even though the new carriage requirements falls outside the scope of the Resolution. However, the new carriage requirements for that product shall still be complied with. This is relevant for example for Methyl alcohol and Formic acid (85% or less acid).

With all aspects considered, the NMA strongly recommends that the existing OSV are considered for compliance with the requirements of the Code and recertified accordingly.

### 3.5 Accepting alternative solutions

The NMA acknowledges the significant impact some of the requirements of the Code will have on the existing OSVs.

Each ship owner will have to identify the extent of the structural changes required in order to comply with the requirements of the Code.

In the view of the NMA, the following technical requirements of the Code affect most of the existing designs significantly and may be a subject to an alternative solution.

- Paragraph 4.3.7 – Set point of the P/V valves
- Paragraph 16.4.4.2.1, MEPC.318(74) and MSC.460(101) – “Offshore contaminated bulk liquid S” treated to remove or prevent breakout of H<sub>2</sub>S.

According to paragraph 16.4.4.2.1, carriage of backloads which have been treated to remove or prevent breakout of H<sub>2</sub>S, shall fulfil the carriage requirements in MEPC.318(74) and MSC.460(101) for “Offshore contaminated bulk liquid S”, including the requirements for toxic products in the Code. The NMA may consider that these requirements are waived provided that:

- a. the conditions for "offshore contaminated bulk liquid P" are expected to be maintained throughout voyage, cf. paragraphs 16.4.4.2.2 of the Code, MEPC.318 (74) and MSC.460(101);
  - b. the cargo is handled as a safety hazardous substance, cf. Chapter 3 of the Code; and
  - c. the cargo tanks are equipped with controlled ventilation, cf. Chapter 7 of the Code.
- 2.6.2 – The extent of damage for vessels carrying not more than 1200m<sup>3</sup>  
The main rule is that the whole of Chapter 2 in the Code shall be complied with. However, in lieu of the extent of damage required by paragraph 2.6.2 of the Code, the extent of the damage requirements applicable on the date of construction of an existing OSV may be used.

### 3.6 Transitional period

The NMA recognises that time is constrained for the work needed to convert an existing OSV to comply with the requirements of the Code. Hence, the NMA will accept a transitional period for OSVs operating in Norwegian waters until the first renewal survey after 31 December 2020. The NMA will also advocate for such transitional period in the IMO. At the time of adopting RSV 14-2020, other coastal or port states', as far as NMA knows, have not yet concluded on the matter. However, the NMA is cooperating with other coastal states around the North Sea with the purpose of finding a common approach. This includes identifying a list of NLS that can be carried safely in tank arrangement fulfilling the requirements for “pollution hazard only substances with a flash point exceeding 60°C”. During the transitional period, existing OSVs will keep the current Certificate of Fitness issued as proof as an OSV complies with the requirements of the Resolution.

The transitional period will only be valid for products which are included in the Appendix I of the Resolution or are listed in the product list enclosed to the vessels Certificate of Fitness. The exemptions for carriage of chemicals not covered by the Resolution in bulk on domestic voyages will not be included in the transitional period.

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