

# IMO Resolution A.673 (16) – U.S. Standards and Interpretation

## Chapter 1 - General

### 1.1 Application

1.1.1. The Guidelines apply to offshore support vessels, regardless of size or voyage, that, while not constructed or adapted primarily to carry in bulk cargoes subject to these Guidelines, carry, in limited quantities, the substances identified in 1.2.2. The Guidelines apply when these cargoes are carried.

#### U.S. Interpretation:

1.1.1 These Standards apply to all U.S. flagged offshore support vessels (OSV's), that operate seaward of the U.S. boundary line, and are certificated to carry cargoes identified in 1.2.2 below.

These Standards do not apply to fuel carried in the fuel supply tanks of a U.S. flagged OSV, for transfer to offshore drilling or production facilities in the oil industry. Excess fuel oil maybe carried as permitted by 46 CFR Subchapter L.

US flagged OSVs that wish to carry Noxious Liquid Substance (NLS) cargoes must meet one of the following requirements:

1. OSVs that wish to operate exclusively in waters subject to the jurisdiction of the U.S. to include all waters described in section 2.36 (a) of this chapter; the Exclusive Economic Zone in respect to the living and non-living resources therein; and, in respect to facilities located on the Outer Continental Shelf of the U.S., the waters superjacent thereto will need to have a Certificate of Inspection endorsed with the name of the NLS cargo, but will not be required to have a International Pollution Prevention Certificate for the carriage of Noxious Liquid Substances in Bulk (NLS Certificate).

2. In accordance with MARPOL Annex II, Reg. 9.1 and paragraph 1.5 below, OSVs that operate outside waters subject to the jurisdiction of the U.S., will be required to have a Certificate of Fitness (COF), or a valid International Pollution Prevention Certificate for the carriage of Noxious Liquid Substances in Bulk (NLS Certificate). These documents will be issued in accordance with 1.5 below.

1.1.2. For an offshore support vessel the keel of which is laid or which is at a similar stage of construction on or after 19 April 1990, the requirements in chapters 1 to 6 apply in full. For an offshore support vessel the keel of which is laid or which is at a similar stage of construction prior to 19 April 1990, the Guidelines apply as indicated in chapter 7.

#### U.S. Interpretation:

1.1.2 These Standards will apply to all "new" U.S. flagged OSVs carrying those products identified in 1.2.2 below, and certificated to operate seaward of the U.S. boundary line. For the purposes of these Standards, "new" vessels are defined as those vessels whose keels were laid (or similar stage of construction), more than six months following the release of these Guidelines.

All other vessels with keels laid prior to this date will be considered “existing” vessels. “Existing” OSVs will be the subject of future Standards.

1.1.3. A vessel irrespective of the date of construction, which is converted for the carriage of bulk liquids subject to these Guidelines on or after the date specified in 1.1.2 should be treated as a vessel constructed on the date on which such conversion commences. An existing offshore support vessel which transports a cargo subject to these Guidelines and undergoes modification for the transport of additional cargoes falling under these Guidelines should not be considered as a vessel which has undergone a conversion.

U.S. Interpretation:

1.1.3 Working with the cognizant OCMI, vessel operators intending to “modify” their OSV must submit plans to the Coast Guard Marine Safety Center (MSC). The MSC will then evaluate the plans to make a “major conversion” determination. OSVs that undergo a major conversion on a date more than six months following the date of this letter may be required to comply with these Standards.

Conversions to/from a Well Stimulation service may not always be considered a major conversion impacting the vessel’s status as an existing OSV. As mentioned above, each will be a case-by-case decision by the MSC.

1.1.4. For the purpose of these Guidelines, “limited quantities” means that the aggregate quantity of bulk liquids identified in 1.2.2 that is carried is any amount not exceeding a maximum which is the lesser of 800 m<sup>3</sup> or a volume in cubic meters equal to 40% of the vessel’s deadweight calculated at a cargo density of 1.0. For ships referred to in 1.3.4.2, such as well-stimulation vessels, the Administration may permit carriage of more than the maximum amount specified above.

U.S. Interpretation:

1.1.4 For the purpose of these Standards,

1. Any OSV that meets the damage stability requirements contained in 2.1.2 may carry unlimited amounts of drilling fluids as defined in 1.3.12. However, the carriage of all other cargoes identified in 1.2.2 must not exceed a total aggregate volume in cubic meters equal to 20% of the vessel’s deadweight, calculated at a cargo density of 1.0.

2. If the damage stability requirements of 2.1.2 are not met, an OSV may not carry more than the limited quantities specified in 1.1.4 above (i.e. the lesser of 800 m<sup>3</sup> or a volume in cubic meters equal to 40% of the vessel’s deadweight).

1.1.5. For other ships, the Administration may permit carriage of more than the relevant maximum amount specified above, provided that the survival capability requirements of chapter 2 of the International Bulk Chemical Code or the International Gas Carrier Code are complied with.

1.1.6. The Guidelines apply only in the case of bulk carriage involving transfer of the cargo to or from its containment which forms part of the vessel or remains on board.

[U.S. Interpretation:](#)

[1.1.6 Consistent with MSM Volume II, Section F, Ch 2.C.1 the filling and discharge of a portable tank while the tank is still aboard the vessel is considered a “bulk” transfer.](#)

1.1.7. For provisions regulating the transport of dangerous goods and marine pollutants in packaged form, including transport of dangerous goods in portable tanks, refer to the International Maritime Dangerous Goods (IMDG) Code.

[U.S. Interpretation:](#)

[1.1.7 For U.S. ships, the transport of dangerous goods and marine pollutants in packaged form, including transport of dangerous goods in portable tanks, is regulated under the carriage requirements of 46 CFR 125.130, which refers to 49 CFR 171-174, and 176, as applicable.](#)

1.1.8. These Guidelines apply in addition to the Guidelines for the Design and Construction of Offshore Supply Vessels. Where the present Guidelines set forth alternative safety standards, the standards in the present Guidelines should be followed.

[U.S. Interpretation:](#)

[1.1.8 These Standards apply in addition to the requirements for OSVs contained within 46 CFR Subchapter L.](#)

[Vessels enrolled in the Coast Guard’s Alternate Compliance Program \(ACP\) shall meet these Standards.](#)

## **1.2 Scope**

1.2.1. The provisions of the Guidelines have been developed so that limited quantities of cargoes regulated under these Guidelines may be carried in bulk with minimum risk to the offshore support vessel, its crew, and to the environment.

1.2.2. Products which may be carried subject to the Guidelines are:

.1. those hazardous and noxious liquids listed in appendix 1 and those other products which may be assigned to appendix 1 based on the following criteria:

.1.1. products which for safety reasons may be assigned for carriage on a type 3 ship as defined by the International Bulk Chemical Code and which are not required to meet the requirements for toxic products in section 15.12 of that Code,

.1.2. noxious liquid substances which would be permitted for carriage on a type 3 ship;

.2. flammable liquids.

[U.S. Interpretation:](#)

[1.2.2.2 Note that the definition of a “flammable liquid,” as contained within this policy, is different than the definition used in the CFR. See 1.3.8 below.](#)

1.2.3. Additives which are considered to fall outside the scope of products in 1.2.2 may be carried in limited amounts in accordance with requirements acceptable to the Administration. The aggregate amount of such additives which may be transported should not exceed 10% of the vessel's maximum authorized quantity of products subject to these Guidelines. An individual tank should contain not more than 10 m<sup>3</sup> of these additives. The discharge of these additives into the sea from offshore support vessels is prohibited.

[U.S. Interpretation:](#)

[1.2.3 Requests to carry additives which are considered to fall outside the scope of products in 1.2.2 must be made to Commandant \(CG-5223\).](#)

1.2.4. Carriage of products not listed in appendix 1 should be undertaken only in accordance with suitable preliminary carriage conditions prescribed by the Administration, having regard to the criteria for hazard evaluation of bulk chemicals as approved by the Organization and the limitation referred to in 1.2.2. the Organization should be notified of the preliminary evaluation and conditions so that the hazardous material may be considered for inclusion in appendix 1.

[U.S. Interpretation:](#)

[1.2.4 Requests to carry products not listed in Appendix 1 must be made to Commandant \(CG-5223\) following the procedures found in Enclosure \(4\) to NVIC 03-06.](#)

### **1.3 Definitions.**

Unless expressly provided otherwise, the definitions contained in chapters 1 and of the International Bulk Chemical Code apply.

1.3.1. Cargo area is that part of the offshore support vessel where cargo and cargo vapours are likely to be present and includes cargo tanks, cargo pump-rooms, hold spaces in which independent tanks are located, cofferdams surrounding integral tanks and the following deck areas:

- .1. within 3 m of a cargo tank installed on deck;
- .2. within 3 m of a cargo tank outlet in case of independent tanks installed below deck;
- .3. within 3 m of a cargo tank outlet in case of integral tanks installed below deck and separated from the weather deck by a cofferdam;
- .4. the deck area above an integral tank without an overlaying cofferdam plus the deck area extending transversely and longitudinally for a distance of 3 m beyond each side of the tank;
- .5. within 3 m of any cargo liquid or vapour pipe, flange, cargo valve, gas or vapour outlet, or entrance or ventilation opening to a cargo pump-room.

[U.S. Interpretation:](#)

[1.3.1 The above definition of the cargo area is applicable. Any exceptions to the definition of the "cargo area" will be addressed specifically in the applicable section of these Standards.](#)

1.3.2. Deadweight means the difference in metric tons between the displacement of an offshore support vessel in water of a density of 1.025 at the load waterline corresponding to the assigned summer freeboard and the lightweight of the ship.

1.3.3. Lightweight means the displacement of an offshore support vessel in metric tons without cargo, fuel, lubricating oil, ballast water, fresh water and feed water in tanks, consumable stores, and passengers and crew and their effects.

1.3.4. Offshore support vessels are:

.1. vessels which are primarily engaged in the transport of stores, materials and equipment to and from mobile offshore drilling units, fixed and floating platforms and other similar offshore installations; or

.2. vessels, including well-stimulation vessels, but excluding mobile offshore drilling units, derrick barges, pipelaying barges and floating accommodation units, which are otherwise primarily engaged in supporting the work of offshore installations.

[U.S. Interpretation:](#)

[1.3.4. Offshore Support Vessels has the same meaning as “Offshore Supply Vessels \(OSVs\),” as defined in 46 USC Chapter 21.](#)

1.3.5. Hazardous substance is any substance either listed in chapter 17 of the International Bulk Chemical Code or having a hazard more severe than one of the minimum hazard criteria given in criteria for hazard evaluation of bulk chemicals as approved by the Organization.

1.3.6. Pollution hazard only substance means a substance having an entry only of “P” in column d in chapter 17 of the International Bulk Chemical Code.

1.3.7. Safety hazard substance means a substance having an entry of “S” or “S/P” in column d in chapter 17 of the International Bulk Chemical Code.

1.3.8. Flammable liquid is any liquid having a flashpoint not exceeding 60°C (closed cup test).

1.3.9. International Bulk Chemical Code means the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (resolutions MSC.4(48) and MEPC.19(22), as amended).

1.3.10. International Gas Carrier Code means the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (resolution MSC.5(48), as amended).

[Additional U.S. Definitions:](#)

[1.3.11 Non-Flammable means any cargo identified in paragraph 1.2.2 above that does not have a measurable flashpoint.](#)

[1.3.12 Drilling Fluids are those Grades D and E \(as defined in 46 CFR 30.10-15\) Liquid Muds, Drilling Brines and salt solutions identified in Appendix 1. For the purposes of these Standards, Olefin based muds are considered a subset of oil based mud.](#)

## 1.4 Equivalents

1.4.1. When these Guidelines require that a particular fitting material, appliance, apparatus, item of equipment or type thereof should be fitted or carried in an offshore support vessel, or that any particular provision should be made, or any procedure or arrangement should be complied with, the Administration may allow any other fitting, material, appliance, apparatus, item of equipment or type thereof to be fitted or carried, or any other provision, procedure or arrangement to be made in that ship, if it is satisfied by trial thereof or otherwise that such fitting, material, appliance, apparatus, item of equipment or type thereof or that any particular provision, procedure or arrangement is at least as effective as that required by the Guidelines. However, the Administration may not allow operational methods or procedures to be made an alternative to a particular fitting, material, appliance, apparatus, item of equipment, or type thereof, which are prescribed by these Guidelines, unless such substitution is specifically allowed by these Guidelines.

### U.S. Interpretation:

1.4.1 In accordance with 46 CFR 125.170, owners and/or operators may request the U.S. Coast Guard to review and accept a substitution for fittings, materials, equipment, arrangements, calculation, information, or tests required by these Standards.

1.4.2. When the Administration so allows any fitting, material, appliance, apparatus, item of equipment, or type thereof, or provision, procedure, or arrangement, or novel design or application to be substituted thereafter, it should communicate to the Organization the particulars thereof together with a report on the evidence submitted so that the Organization may circulate the same to other Contracting Governments to the 1974 SOLAS Convention, as amended, and Parties to MARPOL 73/78, for the information of their officers.

## 1.5 Survey and certification

1.5.1. Following a satisfactory initial survey of an offshore support vessel, the Administration or its duly authorized organization should issue a certificate, the model form of which is set out in appendix 2, suitably endorsed to certify compliance with the provisions of the Guidelines. If the language used is not English, French, or Spanish, the text should include the translation into one of these languages. The certificate should indicate the cargoes regulated by these Guidelines that the vessel is permitted to carry with any relevant carriage conditions and should have a period of validity not to exceed five years.

### U.S. Interpretation:

1.5.1. US Flagged OSVs that wish to carry Noxious Liquid Substance (NLS) cargoes must meet one of the following requirements:

1) OSVs that wish to operate exclusively in waters subject to the jurisdiction of the U.S., will need to have a Certificate of Inspection endorsed with the name of the NLS cargo, but will not be required to have a International Pollution Prevention Certificate for the carriage of Noxious Liquid Substances in Bulk (NLS Certificate).

2) In accordance with MARPOL Annex II, Reg. 9.1, OSVs that operate outside waters subject to the jurisdiction of the U.S., will be required to have a Certificate of Fitness (COF), or a valid International Pollution Prevention Certificate for the carriage of Noxious Liquid Substances in Bulk (NLS Certificate).

Following a satisfactory initial inspection or survey of an OSV, the cognizant OCMI or an Authorized Class Society (ACS) must either endorse the COI, or issue the relevant international certificate (COF or NLS Certificate) to certify compliance with the provisions of the Guidelines, in accordance with 1.1.1 above. When issued by the cognizant OCMI, the COF is provided in Coast Guard Form CG-5148C, Rev. 02-09, and the NLS Certificate is provided in Coast Guard Form CG-5461, Rev.08-06.

The certificate should indicate the cargoes regulated by these Standards that the vessel is permitted to carry, along with any relevant carriage conditions.

1.5.2. The certificate issued under these Guidelines should have the same force and receive the same recognition as the certificate issued under regulations 7 and 9 of Annex II of MARPOL 73/78 and Regulations VII/10 and VII/13 of the 1974 SOLAS Convention, as amended.

1.5.3. When the vessel is constructed to carry substances having only a marine pollution hazard, then the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk required under MARPOL 73/78, Annex II may be suitably endorsed and serve the purpose of 1.5.1.

1.5.4. The validities of the certificates referred to in 1.5.1 and 1.5.3 should be subject to the periodical, intermediate, annual, and additional surveys required by the International Bulk Chemical Code, the International Gas Carrier Code and MARPOL 73/78, Annex II.

## **Chapter 2 - Stability and Cargo Tank Location**

### **2.1 Stability**

2.1.1. Offshore support vessels built in accordance with these Guidelines should be designed to meet the requirements for intact stability and for subdivision and damage stability contained in the Guidelines for the Design and Construction of Offshore Supply Vessels 2006(resolution MSC.235 (82)).

2.1.2. Well-stimulation vessels which are permitted to carry more than the maximum amounts specified in 1.1.4 should be designed to meet the requirements for intact stability and for subdivision and damage stability contained in the Guidelines for the Design and Construction of Offshore Supply Vessels, but with the damage given in 3.2.1 of those Guidelines occurring anywhere in the ship's length at any transverse watertight bulkhead.

U.S. Interpretation:

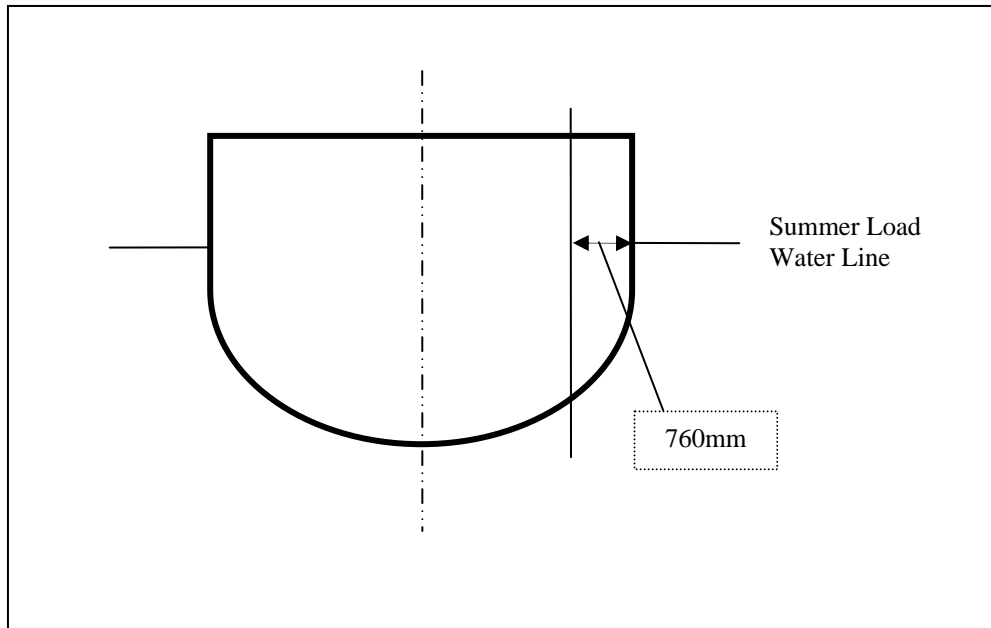
2.1.2: This paragraph applies to all U.S. flagged OSVs that carry more than the limited quantities of cargo specified in 1.1.4.

### **2.2 Cargo tank location.**

Cargo tanks containing products subject to the provisions of the Guidelines should be located at least 760 mm measured inboard from the side of the vessel perpendicular to the centerline at the level of the summer load waterline.

[U.S. Interpretation:](#)

[2.2 Cargo tank location must comply with 2.2 above, as shown in Figure 1 below.](#)



**[Figure 1. Diagram Illustrating Cargo Tank Location \(not to scale\)](#)**

## Chapter 3 - Ship Design

### 3.1 Cargo segregation

3.1.1. Tanks containing cargo or residues of cargo subject to the provisions of the Guidelines should be segregated from machinery spaces, propeller shaft tunnels, if fitted, dry cargo spaces, accommodation and service spaces and from drinking water and stores for human consumption, by means of a cofferdam, void space, cargo pump-room, empty tank, oil fuel tank, or other similar space. On-deck stowage of independent tanks or installing independent tanks in otherwise empty hold spaces should be considered as satisfying this requirement.

#### [U.S. Interpretation:](#)

[3.1.1 As allowed by section 3.1.10, 3.1.1 will not apply to pollution only substances having a flash point exceeding 60°C \(closed cup test\) provided that the segregation requirements for accommodation spaces, drinking water, and stores for human consumption are observed.](#)

3.1.2. Cargoes which react in a hazardous manner with other cargoes or oil fuels should:

- .1. be segregated from such other cargoes or oil fuels by means of a cofferdam, void space, cargo pump-room, empty tank, or tank containing a mutually compatible cargo;
- .2. have separate pumping and piping systems which should not pass through other cargo tanks containing such cargoes, unless encased in a tunnel; and
- .3. have separate tank venting systems.

3.1.3. Cargo piping should not pass through any accommodation, service or machinery space other than cargo pump-rooms or pump-rooms.



U.S. Interpretation:

3.1.3 As allowed by section 3.1.10, 3.1.3 will not apply to pollution only substances having a flash point exceeding 60°C (closed cup test) provided that the segregation requirements for accommodation spaces, drinking water, and stores for human consumption are observed.

3.1.4. Pumps, ballast lines, vent lines and other similar equipment serving permanent ballast tanks should be independent of similar equipment serving cargo tanks.

3.1.5. Bilge pumping arrangements for cargo pump-rooms or for hold spaces in which independent cargo tanks are installed should be situated entirely within the cargo area.

U.S. Interpretation:

3.1.5 The independent dewatering system provided for the cargo area must conform with the requirements of 46 CFR 56.50-50 and 56.50-55. Alternative arrangements will be considered on a case-by-case basis by the Marine Safety Center.

**Segregation requirements for integral tanks**

3.1.6. Where not bounded by bottom shell plating, fuel oil tanks, a cargo pump-room or a pump-room, the cargo tanks should be surrounded by cofferdams. Tanks for other purposes (except fresh water and lubricating oils) may be accepted as cofferdams for these tanks.

U.S. Interpretation:

3.1.6 As allowed by section 3.1.10, 3.1.6 will not apply to pollution only substances having a flash point exceeding 60°C (closed cup test) provided that the segregation requirements for accommodation spaces, drinking water, and stores for human consumption are observed. If applicable, 33 CFR regulations apply.

3.1.7. For access to all spaces, the minimum spacing between cargo tank boundaries and adjacent ship's structures should be 600 mm. (see 3.1.10)

U.S. Interpretation:

3.1.7 A minimum of 460 mm (approximately 18") between internal free surfaces must be maintained for inspection and access purposes. This requirement applies to all cargo tanks, including tanks carrying pollution only substances having a flash point exceeding 60°C (closed cup test).

3.1.8. Cargo tanks may extend to the deck plating, provided dry cargo is not handled in that area. Where dry cargo is handled on the deck area above a cargo tank, the cargo tank may not extend to the deck plating unless a continuous, permanent deck sheathing of wood or other suitable material of appropriate thickness and construction is fitted to the satisfaction of the Administration.

U.S. Interpretation:

3.1.8 Knot-free wood deck sheathing with a minimum thickness of 2 inches will be considered acceptable. Other sheathing materials will be considered on a case-by-case basis by the Marine Safety Center. "Permanent" requires the sheathing to be

mechanically fixed to the deck (temporary sheathing is not acceptable). Sheathing must be installed over manhole covers and should be flush with or recessed below the deck sheathing. Sheathing is not required for pollution hazard only substances.

3.1.9. Cargoes subject to the Guidelines should not be carried in either the fore or aft peak tanks.

3.1.10. For pollution hazard only substances having a flashpoint exceeding 60°C (closed cup test) the Administration may waive the arrangements referred to in 3.1.1 and 3.1.3 provided that the segregation requirements for accommodation spaces, drinking water and stores for human consumption are observed. Additionally, 3.1.6 and 3.1.7 need not be applied.

### **3.2 Accommodation, service and machinery spaces and control stations**

3.2.1. Accommodation or service spaces, or control stations should not be located within the cargo area.

U.S. Interpretation:

3.2.1 For pollution hazard only substances having a flash point exceeding 60°C (closed cup test), the requirements of this paragraph do not apply.

3.2.2. Unless they are spaced at least 7 m away from the cargo area containing flammable products, entrances, air inlets and openings to accommodation, service and machinery spaces and control stations should not face the cargo area. Doors to spaces not having access to accommodation, service and machinery spaces and control stations, such as cargo control stations and store-rooms, may be permitted by the Administration within the 7 m zone specified above, provided the boundaries of the spaces are insulated to A-60 standard. When arranged within the 7 m zone specified above, windows and sidescuttles facing the cargo area should be of a fixed type. Such sidescuttles in the first tier on the maindeck should be fitted with inside covers of steel or equivalent material.

U.S. Interpretation:

3.2.2 Applies to cargo areas containing flammable and safety hazard products. For pollution hazard only substances having a flash point exceeding 60°C (closed cup test), a separation of less than 7 m is permitted for doors to spaces described in paragraph 3.2.2. Additionally, doors, windows, and any other openings in a rated bulkhead must meet the rating of that bulkhead.

3.2.3. In order to guard against the danger of hazardous vapours, due consideration should be given to the location of air intakes and openings into accommodation, service and machinery spaces and control stations in relation to cargo piping and cargo vent systems.

U.S. Interpretation:

3.2.3 Air intakes and other openings to accommodation, service spaces, machinery spaces, and control stations, must be spaced not less than 7m from any part of the cargo area containing cargoes that either present a safety hazard or have a flash point not exceeding 60°C (closed cup test).

3.2.4. For pollution hazard only substances having a flashpoint exceeding 60°C, the arrangements referred to in 3.2.1 and 3.2.3 may be waived.

U.S. Interpretation:

3.2.4 For pollution hazard only substances having a flash point exceeding 60°C (closed cup test), the requirements of paragraphs 3.2.1 are waived.

In accordance with 3.11 below, the vent outlets of tanks containing pollution hazard only substances with a flashpoint exceeding 60°C may terminate not less than 1 m (3 ft) from any opening into living quarters [refer to 46 CFR 56.50-85(a)(5)].

### **3.3 Access to spaces in the cargo areas.**

Access to spaces within the cargo area should meet the requirements of 3.4 of the International Bulk Chemical Code.

U.S. Interpretation:

3.3 For the carriage of non-flammable cargoes and non-safety hazard cargoes (i.e. pollution hazard only cargoes) the dimensions of horizontal and vertical openings within the cargo area may be less than the minimum dimensions stipulated by 3.4 of the IBC Code, as specified below.

- For vertical and horizontal openings, such as those accessing a cargo tank, the minimum size for vertical openings for the manholes shall be 560 mm x 600 mm (22 in x 24 in).

The original intent for the size of the access openings within the IBC Code was to ensure rescue operations of a downed person in the space by a person wearing an SCBA.

With openings reduced to 560 mm x 600 mm (22 in x 24 in) entry into all confined spaces within the cargo area must only take place when the vessel is in the shipyard or at a shoreside facility and only after all applicable confined space entry procedures have been performed.

The shipyard or shoreside facility will be required to have surface air supply readily available during tank entry. The purpose for surface air supply lines are to allow rescue operators a secondary air supply option for tank entry if SCBA's are not practical.

No person may enter a cargo tank, or confined space in the cargo area without the permission of the master. Before permitting anyone to enter a cargo tank, confined space in the cargo area, the master must make sure that:

The space is:

- .1 free of toxic vapors and has sufficient oxygen to support life; or
- .2 Is certified by a Marine Chemist as safe for entry;

**COI Endorsement: For those ships that have access into spaces with openings reduced to 560mm x 600 mm (22in x 24 in) the COI must hold the following statement:**

**“Entry into all confined spaces onboard (provide a list of tanks) with openings reduced to 560mm x 600 mm (22in x 24 in) must only take place when the vessel is at a shipyard or shoreside facility and only when that facility is equipped with surface air supply equipment readily available.”**

### **3.4 Cargo tank construction**

3.4.1. Cargo tanks should be at least of the type required for the cargo by the International Bulk Chemical Code or the International Gas Carrier Code, as applicable.

3.4.2. Instead of the use of permanently attached deck-tanks, portable tanks meeting the requirements of the International Maritime Dangerous Goods (IMDG) Code or other portable tanks specifically approved by the Administration may be used for cargoes indicated in paragraph 1.2.2, provided that the tanks are properly located and secured to the vessel.

U.S Interpretation:

3.4.2. The IMDG Code authorizes the use of portable tanks for certain cargoes. The U.S. Hazardous Materials Regulations (HMR; 49 CFR 171-180) authorize the use of additional types of portable tanks.

Portable tanks not specifically authorized by the IMDG Code or by the HMR may be authorized by the Associate Administrator of Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, under the terms of a special permit issued in accordance with Subpart B of 49 CFR 107.

3.4.3. Except for the tank connections to cargo pump-rooms, all tank openings and connections to the tank should terminate above the weather deck and should be located in the tops of the tanks. Where cofferdams are provided over integral tanks, small trunks may be used to penetrate the cofferdam.

U.S Interpretation:

3.4.3 Tank openings may terminate below the weather deck provided the cargoes for said tank present only a pollution hazard and are non-flammable.

3.4.4. The greater of the following design pressures (gauge) should be used for determining scantlings of independent pressure tanks:

- .1.0.07 MPa;
- .2. the vapour pressure of the cargo at 45°C;
- .3. the vapour pressure of the cargo at 15°C above the temperature at which it is normally carried; or

.4. the pressure which occurs in the tank during the loading or unloading.

The design of the tanks should comply with standards acceptable to the Administration taking into account the carriage temperature and relative density of cargo. Due consideration should also be given to dynamic forces and any vacuum pressure to which the tanks may be subjected.

3.4.5. Integral and independent gravity tanks should be constructed and tested according to standards of the Administration taking into account the carriage temperature and relative density of cargo.

3.4.6. For pollution hazard only substances having a flashpoint exceeding 60°C, the requirements of 3.4.3 need not be applied.

### **3.5 Materials of construction.**

Materials of construction for tanks, piping, fittings and pumps should be in accordance with chapter 6 of the International Bulk Chemical Code, or chapter 6 of the International Gas Carrier Code, as applicable.

#### [U.S. Interpretation:](#)

[3.5 Applies to cargo systems conveying cargoes or cargo vapours listed in 1.2.2 of these Standards.](#)

### **3.6 Cargo tank vent systems**

3.6.1. Independent pressure tanks should be fitted with pressure relief devices that are so designed as to direct the discharge away from personnel and that have a set pressure and capacity which is in accordance with standards acceptable to the Administration taking into account the design pressure referred to in 3.4.4.

#### [U.S. Interpretation:](#)

[3.6.1 In addition to 46 CFR 54.15, the relief valves of independent pressure tanks must meet the requirements applicable to each specific cargo, as listed in 46 CFR Subchapter D and/or 46 CFR Part 153.](#)

3.6.2. Cargo tank vent systems of integral or independent gravity tanks should meet the requirements of the International Bulk Chemical Code, except that the height specified in 8.3.4 of the Code may be reduced to 2 m.

#### [U.S. Interpretation:](#)

[3.6.2 The vent height specified in 8.3.4 and 8.3.5 of the IBC Code may be reduced to 2 m, regardless of whether a high-velocity \(unimpeded exit velocity of 30 m/s\) pressure-vacuum valve is installed.](#)

[All tank venting systems fitted to tanks containing cargoes that have a measurable flashpoint must be fitted with a flame screen meeting the definition in 46 CFR 30.10.-25.](#)

[Any installed pressure-vacuum valve must be approved in accordance with 46 CFR 162.017.](#)

3.6.3. The location of cargo tank vent outlets for independent pressure tanks and for cargo tanks used to carry pollution hazard only substances with a flashpoint exceeding 60°C (closed cup test) should be to the satisfaction of the Administration.

U.S. Interpretation:

3.6.3 In addition to 46 CFR 54.15, the relief valves of independent pressure tanks must meet the requirements for each specific cargo, as listed in 46 CFR Subchapter D and/or 46 CFR Subchapter O.

The position of vent outlets for independent pressure tanks carrying flammable cargoes must be arranged as specified below.

.1 a height of not less than 2 m above the weather deck or above a raised walkway if fitted within 4 m of the raised walkway [This applies regardless of whether a high-velocity (unimpeded exit velocity of 30 m/s) pressure-vacuum valve is installed]; and

.2 a distance of at least 10 m measured horizontally from the nearest air intake or opening to accommodation, service and machinery spaces, and ignition sources.

The vent outlets of cargo tanks containing pollution hazard only substances with a flashpoint exceeding 60°C (closed cup test) must extend to a height above the deck complying with 46 CFR 56.50-85.

In no case may any cargo tank vent outlet terminate less than 1 m (3 ft) from any opening into living quarters. [46 CFR 56.50-85 (a)(5)]"

3.6.4. Cargo tank vent systems of portable tanks allowed under 3.4.2 should be to the satisfaction of the Administration, taking into account the requirements of 3.6.

U.S. Interpretation:

3.6.4 Cargo tank vent systems:

.1 For IM 101 and IM 102 portable tanks, the vents must comply with the applicable requirements of 49 CFR.

.2 For existing Marine Portable Tanks (MPTs), the vents must comply with 46 CFR Part 64.

### **3.7 Cargo transfer**

3.7.1. The cargo transfer system should comply with the requirements of chapter 5 of the International Bulk Chemical Code or chapter 5 of the International Gas Carrier Code when considered applicable and practical by the Administration, taking into account existing industry standards and practices.

U.S. Interpretation:

3.7.1 With the exception of 5.6 for cargo-transfer control systems, the cargo piping requirements of 46 CFR Subchapter F, D, L and/or O, as applicable to the cargo(s) being carried, are considered to satisfy the requirements of chapter 5 of the IBC Code.

3.7.2. The remote shutdown devices for all cargo pumps and similar equipment, required by 5.6.1.3 of the International Bulk Chemical Code, should be capable of being activated from a dedicated cargo control location which is manned at the time of cargo transfer and from at least one other location outside the cargo area and at a safe distance from it.

U.S. Interpretation:

3.7.2 The cargo controls located in the wheelhouse will be considered acceptable as one of the two cargo control locations, provided that remote control operation and a visual means to indicate the status of the cargo transfer equipment is provided within the wheelhouse.

A remote emergency shutdown device in the cargo area that can be activated from the cargo deck is required. As stated the second location outside the cargo area can be the wheelhouse.

The emergency shutdown station located on the cargo deck must contain a single remote actuator for all quick closing shutoff valves or cargo pumps. The Emergency Shutdown station must be marked with the legend "EMERGENCY SHUTDOWN STATION" so that the legend is visible from the work areas of the cargo deck.

### **3.8 Electrical installations.**

Electrical installations should meet the requirements of chapter 10 of the International Bulk Chemical Code.

U.S. Interpretation:

3.8 Electrical installation: IEC 60092-502 (1999) has not been accepted by the Coast Guard and will be amended to address U.S. Coast Guard concerns. Once published, IEC 60092-502 (1999), as amended, will be applicable for hazardous locations.

OSVs complying with A.673 (16) will be required to meet SOLAS II-1, Part D Electrical Installations, Chapter 10 of the IBC Code, and IEC 60092-502 (1999), as amended by the U.S. Coast Guard.

In the interim, OSVs that carry liquids with a flashpoint not exceeding 60°C (closed cup test) on deck or in integral tanks, or are involved in servicing wells, may not have electrical equipment installed in pump rooms, in hose-storage spaces, or within 3 meters of a source of vapour on a weather deck unless the equipment is explosion-proof or intrinsically safe. Explosion-proof equipment must meet UL1203. Intrinsically safe equipment must meet UL 913 or IEC 79-11(Ia). All explosion proof and intrinsically safe electrical equipment must be certified by a nationally recognized testing laboratory or a CG recognized laboratory.

### 3.9 Fire-fighting requirements

3.9.1. For the carriage of flammable liquids identified in paragraph 1.2.2 above, the requirements for tankers in chapter II-2 of the 1974 SOLAS Convention, as amended, should apply to vessels covered by the Guidelines, irrespective of tonnage, including vessels of less than 500 tons gross tonnage, except that:

.1. Regulations 4.5.5, 10.8, and 10.9 should not be applied;

[U.S. Interpretation:](#)

[3.9.1.1 Regulations 4.5.5, 10.8, and 10.9 will not be applied.](#)

.2. Regulation 4.5.1.1 (i.e., positioning of machinery spaces aft of cargo tanks, slop tanks, cargo pump-rooms and cofferdams), Regulation 4.5.1.2 (i.e., the requirements for location of the main cargo control station), Regulations 4.5.1.4 and 4.5.2.3 need not be applied. Additionally, Regulation 9.2.4.2.5 need not be applied provided that the exterior boundaries of superstructures and deckhouses enclosing accommodation and including any overhanging decks which support such accommodation are spaced at least 7 m away from the cargo area. The insulation of such boundaries should however be to the satisfaction of the Administration;

[U.S. Interpretation:](#)

[3.9.1.2 Regulations 4.5.1.1, 4.5.1.2, 4.5.1.4 and 4.5.2.3 will not be applied. In regard to regulation 9.2.4.2.5, exterior boundaries facing the cargo area must be constructed of steel. Any penetrations in these divisions shall be sealed to prevent the passage of flame and smoke. Aluminum doors and window frames must not be used. Consideration should be given to locating access doors, air inlets and openings to accommodations areas and machinery spaces on the transverse sides of the deck house, not facing the cargo area.](#)

.3. with regard to Regulation 9.2.4.1, the Administration may permit use of a method other than IC as defined in Regulation 9.2.3.1.1.1 where considered appropriate;

[U.S. Interpretation:](#)

[3.9.1.3 Only method 1C will be accepted.](#)

.4. the requirements of Regulation 9.2.3 may be applied in lieu of those in Regulation 9.2.4.2, where considered appropriate by the Administration;

[U.S. Interpretation:](#)

[3.9.1.4 The requirements of regulation 9.2.3 will be accepted except for cargo pump rooms. Regulation 9.2.4.2 must be used for cargo pump rooms.](#)

.5. the provisions of Regulations 4.5.3, 4.5.4, and 4.5.6 to 4.5.8 need be applied only where considered appropriate by the Administration, taking into account the requirement in 3.6.2 of the Guidelines that cargo tank vent systems should meet the relevant requirements of the International Bulk Chemical Code;



U.S. Interpretation:

3.9.1.5 Vessels that carry flammable liquids identified in paragraph 1.2.2 above must comply with 4.5.4 and 4.5.7.

.6. Regulations 10.2, 10.4 and 10.5, except regulation 10.5.6, should apply as they would apply to tankers of 2,000 tons gross tonnage and over;

U.S. Interpretation:

3.9.1.6 46 CFR 132.100 through 132.130 will be accepted in lieu of regulation 10.2, provided the fire pump capacity is adequate to supply the two most remote hydrants fitted with 1-1/2 inch hoses and approved nozzles at a minimum pitot pressure of 50 psi. (160 gpm at 50 psi).

.7. the provisions of 3.9.2.3 should be applied in lieu of Regulation 10.8; and

.8. the provisions of 3.9.2.5 should be applied in lieu of Regulation 10.9.

3.9.2. The following provisions also apply for the carriage of flammable liquids identified in appendix 1:

U.S. Interpretation:

3.9.2 This provision applies to the carriage of flammable liquids identified in paragraph 1.2.2 above.

.1. During cargo transfer, water pressure should be maintained on the fire main system.

.2. Fire hoses, fitted with approved dual-purpose nozzles (i.e. spray/jet type with a shutoff), should be attached to each fire hydrant in the vicinity of the flammable liquid to be carried.

.3. Either a fixed deck foam system or a fixed fire-extinguishing system of the dry chemical type complying with the following:

.3.1. the system should be located to protect the deck within the cargo area;

.3.2. the system should be capable of covering the deck within the cargo area without being moved;

.3.3. when a fixed deck foam system is provided, it should comply with the requirements of 11.3.3 to 11.3.12 of the International Bulk Chemical Code. Only foam suitable for the products carried should be used.

U.S. Interpretation:

3.9.2.3.3 IBC Code 11.3.3 to 11.3.12 will not be applied. A U.S. Coast Guard approved fixed foam system must be installed for vessels carrying flammable liquids identified in paragraph 1.2.2 above.

At a minimum, the system must provide foam coverage of all areas where flammable liquids are carried or handled. For vessels with integral tanks, this includes manifolds, tanktops, vents and deck areas within 10 feet of vents.

The system must consist of fixed foam monitors or foam applicators and at least one hoseline, capable of effectively discharging foam to the above listed areas. For vessels with integral tanks, foam water sprinklers or a fixed gas extinguishing system must be provided in the cargo tank room.

Foam hose reels must be part of the approved engineered foam system. Self-contained AFFF hose reel stations that are approved as excess equipment are not acceptable for this purpose.

.3.4. Administrations may approve a fixed fire-extinguishing system provided that:

.3.4.1. on a deck area of 45 m<sup>2</sup> or less, there are two or more dry chemical extinguishers whose total capacity is not less than 135 kg;

.3.4.2. on a deck areas of more than 45 m<sup>2</sup>, there are three or more dry chemical extinguishers whose total capacity of extinguishing agent is not less than:

$$C = 3A \text{ kg}$$

where A is the deck area (in square meters);

.3.4.3. the minimum rate of supply of the extinguishing agent is not less than 3 kg/min.

U.S. Interpretation:

3.9.2.3.4 Approved semi-portable dry chemical fire extinguishers may be used in lieu of a fixed foam system for the on-deck protection of integral tanks, if they satisfy 3.9.2.3.4.1 through 3.9.2.3.4.3, their frame or support is welded or otherwise permanently attached to the vessels' structure, and sufficient discharge hose(s) are provided to protect the areas listed in interpretation 3.9.2.3.3.

.4. An alternative to the systems required in 3.9.2.3 above may be approved in accordance with the procedures contained in SOLAS regulation II-2/17.

.5. The cargo pump-room where flammable liquids are handled should be provided with a fixed fire-extinguishing system in accordance with 11.2 of the International Bulk Chemical Code.

U.S. Interpretation:

3.9.2.5 A U.S. Coast Guard approved fixed fire suppression system must be provided for the cargo pump room, except in cases where the pump room is located in a normally inaccessible space, such as a submersible pump, or a pump room requiring the removal of a bolted manhole or cover plate.

3.9.3. For vessels which carry only liquids identified as non-flammable in appendix 1, the fire-fighting requirements should be to the satisfaction of the Administration.

[U.S. Interpretation:](#)

[3.9.3 The firefighting requirements of 46 CFR Subchapter L are considered acceptable for vessels carrying only non-flammable cargoes identified in paragraph 1.2.2 above.](#)

### **3.10 Acid spill protection**

3.10.1. Floors or decks under acid storage tanks and pumps and piping for acid should have a lining or coating of corrosion-resistant material extending up to a minimum height of 500 mm on the bounding bulkheads or coamings. Hatches or other openings in such floors or decks should be raised to a minimum height of 500 mm; however, where the Administration determines that this height is not practicable a lesser height may be required.

[U.S Interpretation:](#)

[3.10.1 Requests for coaming heights of less than 500 mm \(20 in\) may be considered in accordance with 46 CFR 125.170.](#)

3.10.2. Flanges or other detachable pipe connections should be covered by spray shields.

3.10.3. Portable shield covers for connecting the flanges of the loading manifold should be provided. Drip trays of corrosion-resistant material should be provided under loading manifolds for acids.

3.10.4. Spaces for acid storage tanks and acid pumping and piping should be provided with drainage arrangements of corrosion-resistant materials.

3.10.5. Deck spills should be kept away from accommodation and service areas by means of a permanent coaming of suitable height and extension.

### **3.11 Ventilation of spaces in the cargo area.**

The requirements of chapter 12 of the International Bulk Chemical Code apply. The Administration may, however, grant relaxations concerning the distances required in 12.1.5 of the Code.

[U.S. Interpretation:](#)

[3.11 IBC Code Chapter 12 will apply to the mechanical ventilation requirements in the cargo area, except where modified below:](#)

[For vessels certified to carry only those products which are non- flammable, except acids or other products for which paragraph 15.17 of the IBC Code applies, the requirements of SOLAS II-2/4.5.2.6 for venting arrangement, and SOLAS II-2/4.5.4 for mechanical ventilation must apply in lieu of the requirements of Chapter 12 of the IBC Code.](#)

[IBC Code 12.1.5:](#)

For cargoes with a flashpoint not exceeding 60°C (closed cup test), or those cargoes which present a safety hazard, ventilation exhaust ducts from spaces within the cargo area must discharge upwards, and in locations at least 10 m in the in the horizontal direction from ventilation intakes and openings to accommodation, service and machinery spaces, and control stations and other spaces outside the cargo area.

The vent outlets of tanks containing pollution hazard only substances with a flashpoint exceeding 60°C may terminate not less than 1 m (3 ft) from any opening into living quarters [refer to 46 CFR 56.50-85(a)(5)].

### **3.12 Vapour detection**

3.12.1. Vapour detection for the cargoes carried should be provided in accordance with the requirements contained in the International Bulk Chemical Code.

U.S. Interpretation:

3.12.1 Vessels carrying toxic cargoes, as either denoted by a “T” in column “k” of Chapter 17 of the IBC Code, or when 46 CFR Part 153, Table 1 refers to 46 CFR 153.236, must comply with 46 CFR 153.526.

Vessels carrying cargo with a flash point not exceeding 60°C (closed cup test) must comply with 46 CFR 35.30-15 (b).

3.12.2. Enclosed and semi-enclosed spaces containing installations for acid should be fitted with fixed vapour detection and alarm systems which provide visual and audible indication. The vapour detection systems should be capable of detecting hydrogen except that, in the case where only hydrochloric acid is carried, a hydrogen chloride vapour detection system should be provided.

3.12.3. At least two portable instruments for detecting flammable vapour concentrations should be provided when cargoes subject to these Guidelines with a flashpoint not exceeding 60°C (closed cup test) are carried.

U.S. Interpretation:

3.12.3 Vessels carrying cargo with a flash point not exceeding 60°C (closed cup test) must comply with 46 CFR 153.465.

3.12.4. At least two portable instruments suitable for measuring the concentration of oxygen in atmospheric air should be provided.

U.S. Interpretation:

3.12.4 The carriage of at least two portable instruments suitable for measuring the concentration of oxygen in atmospheric air is required.

### **3.13 Special requirements –**

## **General.**

The special requirements for the cargo as referred to in chapter 17 of the International Bulk Chemical Code or chapter 19 of the International Gas Carrier Code are applicable; however, the requirement in 15.19.6 of the International Bulk Chemical Code for a visual and audible high-level alarm may be waived by the Administration taking into account the cargo carriage arrangements and cargo loading procedures.

### [U.S. Interpretation:](#)

[3.13 In addition to meeting the special requirements referred to in Chapter 17 of the IBC Code, an OSV carrying cargo referred to in 1.2.2 above must also meet the carriage requirements referred to in 46 CFR Part 153, Table 1. Whenever a conflict arises, the more stringent requirement must apply, unless otherwise approved by COMDT \(CG-5223\).](#)

[The high level alarm required by 15.19.6 of the IBC Code is waived for drilling fluids. A visual means of indicating the cargo tank level must be provided for cargo loading operations.](#)

## **3.14 Special requirements for the carriage of liquefied gases**

3.14.1. Each enclosed space used for handling or storage of a liquefied gas should be fitted with a sensor continuously monitoring the oxygen content of the space and an alarm indicating low oxygen concentration. For semi-enclosed spaces portable equipment may also be acceptable.

3.14.2. Drip trays resistant to cryogenic temperatures should be provided at manifolds transferring liquefied gases or at other flanged connections in the liquefied gas system.

3.14.3. For the carriage of liquid nitrogen the requirements of 17.19 of the International Gas Carrier Code should apply.

3.14.4. The construction of cargo tanks and cargo piping systems for liquefied nitrogen and liquid carbon dioxide should be to the satisfaction of the Administration.

3.14.5. Emergency shutoff valves should be provided in liquid outlet lines from each liquefied gas tank. The controls for the emergency shutoff valves should meet the requirements given in 3.7.2 for remote shutdown devices.

### [U.S. Interpretation:](#)

[3.14 OSVs may not carry any liquefied gas in integral or fixed independent tanks without prior approval from COMDT \(CG-5223\).](#)

## **3.15 Gauging and level detection.**

Each cargo tank should have a level gauging system acceptable to the Administration. As a minimum the system should meet relevant requirements of the International Bulk Chemical Code and the International Gas Carrier Code. The systems for process tanks on board well-stimulation vessels should be to the satisfaction of the Administration.

### [U.S. Interpretation:](#)

3.15 Cargo tank level gauging systems must meet the requirements of 13.1 of the IBC Code. In lieu of 13.1, a visual means of indicating the cargo tank level must be provided for cargo loading operations of drilling fluid.

### **3.16 Emergency remote shutdown.**

In the case of transfer operations involving pressures in excess of 5 MPa, arrangements for emergency depressurizing and disconnection of the transfer hose should be provided. The controls for activating emergency depressurization and disconnection of the transfer hose should meet the requirements given in 3.7.2 for remote shutdown devices.

#### U.S. Interpretation:

3.16 A remote emergency shutdown device in the cargo area that can be activated from the cargo deck is required. As stated in 3.7.2 above, the second location outside the cargo area can be the wheelhouse.

The emergency shutdown station located on the cargo deck must contain a single remote actuator for all quick closing shutoff valves or cargo pumps. The Emergency Shutdown station must be marked with the legend "EMERGENCY SHUTDOWN STATION" so that the legend is visible from the work areas of the cargo deck.

## **Chapter 4 - Pollution Requirements**

4.1. Each ship certified to carry noxious liquid substances should be provided with a Cargo Record Book, a Procedures and Arrangements Manual and a Shipboard Marine Emergency Plan developed for the ship in accordance with Annex II to MARPOL 73/78 and approved by the Administration.

#### U.S. Interpretation:

4.1. Each ship certified to NLS cargo must have a:

.1 Cargo Record Book published by the U.S. Coast Guard (OMB App. No. 1625-0094) required by 46 CFR 153.490;

.2 U.S. Coast Guard approved Shipboard Marine Emergency Plan in accordance with NVIC 03-04; and

.3 Procedures and Arrangements (P&A) Manual approved by the Coast Guard (MSC) as required by 46 CFR 153.490

### **Guidance for the Format and Content of P&A Manuals for Offshore Support Vessels (OSV's)**

MARPOL Annex II Appendix 4 provides the standard format for the P&A Manual, which is required for OSV's by the implementation of A.673 (16). While Appendix 4 in MARPOL Annex II should be followed to the greatest possible extent, the following sections may be modified as follows to reflect the requirement of A.673 (16) that OSV's shall not discharge NLS to the sea:

Section 2.6: Should read “This vessel is prohibited from discharging Noxious Liquid Substance (NLS) residues to the sea, and is not equipped with an underwater discharge outlet.”

Section 2.8: Unless vessel is designed to clean cargo tanks by ventilation, this section may be marked “N/A”.

Section 2.9: Unless vessel is equipped with a tank washing system, this section may read, “This vessel is not equipped with a tank washing system.”

Section 3.3: Unless vessel is equipped with a tank stripping system, this section may read, “This vessel is prohibited from discharging Noxious Liquid Substance (NLS) residues to the sea and is not equipped with a tank stripping system.”

Section 4.4.2: Unless vessel is equipped with a tank stripping system, this section may read, “This vessel is prohibited from discharging Noxious Liquid Substance (NLS) residues to the sea and is not equipped with a tank stripping system.”

Section 4.4.3: This section may read, “This vessel is prohibited from discharging Noxious Liquid Substance (NLS) residues to the sea. No discharges into the sea of residues of noxious liquid substances, or mixtures containing such substances, are allowed within the Antarctic area (the sea area south of latitude 60 S).

Section 4.4.6: This section should refer the reader to the USCG Chemical Compatibility Guide.

Section 4.4.7: This section should read, “This vessel is prohibited from discharging Noxious Liquid Substance (NLS) residues to the sea. All NLS residues shall be discharged to an appropriate reception facility.”

Section 4.4.8: This section should read, “This vessel is prohibited from discharging Noxious Liquid Substance (NLS) residues to the sea.”

Section 4.4.9: This section may read, “All cleaning agents and additives shall be treated as substances of their assigned NLS category. This vessel is prohibited from discharging Noxious Liquid Substance (NLS) residues to the sea. All NLS residues shall be discharged to an appropriate reception facility.”

Section 4.4.10: Unless vessel is designed to clean cargo tanks by ventilation this section may be marked “N/A”.

4.2. Discharge into the sea of residues of noxious liquid substances permitted for carriage in Ship Type 3, or products listed in appendix 1 or ballast water, tank washings, or other residues or mixtures containing such substances, is prohibited. Any discharges of residues and mixtures containing noxious liquid substances should be to reception facilities in port. As a consequence of this prohibition, the Administration may waive the requirements for efficient stripping and underwater discharge arrangements in MARPOL 73/78, Annex II.

U.S. Interpretation:

4.2 OSVs are prohibited from discharging any NLS cargo into the sea. All discharges of residues and mixtures containing NLS must be discharged to a licensed reception facility that holds a valid Certificate of Adequacy. As per Regulation 4.4. of Annex II to MARPOL 73/78, such ships are not required to meet efficient stripping and underwater discharge arrangements in MARPOL 73/78, Annex II as implemented in 46 CFR Subchapter O.

The COI will contain the following statement:

“This vessel is prohibited from discharging any NLS cargo or residue into the sea. In accordance with Regulation 4.4 of Annex II to MARPOL 73/78, no cargo tank containing an NLS cargo or its residue may be washed or ballasted unless the wash or ballast water is discharged to a licensed facility with a valid Certificate of Adequacy.”

4.3 In the case of cargoes regulated by MARPOL 73/78, Annex I, the requirements of that Annex should apply as appropriate.

U.S. Interpretation:

4.3 As per 46 CFR 131.935; each vessel must be operated in compliance with:

- (a) Section 311 of the Federal Water Pollution Control Act, as amended (33 USC 1321); and
- (b) 33 CFR parts 151, 155, and 156. and;

MARPOL Annex I, Regulation 12A – “Oil fuel tank protection”:

As per 72 Federal Register 49013, August 27, 2007; required for:

- (a) All ships with an aggregate oil fuel capacity of 600 cubic meters and above delivered on or after August 1, 2010 (as defined in regulation 1.28.9 of MARPOL Annex I), and
- (b) Required to hold an International Oil Pollution Prevention (IOPP) Certificate in accordance with 33 CFR 151.19.

## **Chapter 5 - Personal Protection**

5.1 Decontamination showers and eyewashes. Except in the case of pollution hazard only substances, a suitably marked decontamination shower and eyewash should be available on deck in a convenient location. The shower and eyewash should be operable in all ambient conditions.

5.2 Protective and safety equipment. Protective and safety equipment should be kept on board in suitable locations as required by chapter 14 of the International Bulk Chemical Code or the International Gas Carrier Code for products to be carried.

## **Chapter 6 - Operational Requirements**

6.1. Deck cargo and products covered by these Guidelines should not be loaded or unloaded simultaneously.



6.2. Only personnel engaged in the transfer of cargo covered by these Guidelines should be permitted to be in the cargo area and the adjacent open main deck during loading or unloading operations.

### **Chapter 7 - Applicability of the Guidelines to Existing Offshore Support Vessels.**

The provisions of the Guidelines should apply to offshore support vessels the keels of which are laid or which are at a similar stage of construction before the date specified in 1.1.2 as follows.

7.1. The provisions of chapter 1 of these Guidelines should apply except that, with reference to 1.1.4:

.1. larger quantities of bulk liquids may be permitted by the Administration on an individual vessel basis;

.2. the survival capability requirements of chapter 2 of the International Bulk Chemical Code and the International Gas Carrier Code need not be applied to vessels referred to in 1.3.4.2.

7.2. The provisions of chapters 2 and 3 of the Guidelines should be applied where deemed reasonable and practicable by the Administration taking full account of the present arrangements and equipment of the vessel. Recognizing that existing vessels may not meet many of the requirements of these chapters, relaxations may be granted.

7.3. The provisions of chapters 4 to 6 of the Guidelines should be applied.

## Revised Appendix 1 –

**Table of Permitted Cargoes of the Guidelines for the Transport and Handling of Limited Amounts of Hazardous and Noxious Liquid Substances in Bulk in Offshore Support Vessels**

Substance	Flammability
Oil-based mud containing mixtures of products listed in chapter 17 and 18 of the IBC Code and the MEPC.2/Circular and permitted to be carried under paragraph 1.2 of these Guidelines	No
Water-based mud containing mixtures of products listed in chapter 17 and 18 of the IBC Code and the MEPC.2/Circular and permitted to be carried under paragraph 1.2 of these Guidelines	No
Drilling brines, including:	No
- Sodium chloride solution	No
- Calcium bromide solution	No
- Calcium chloride solution	No
Calcium nitrate/Magnesium nitrite/Potassium chloride	No
Calcium nitrate solution (50% or less)	No
Drilling brines (containing zinc salt)	No
Potassium formate solution	No
Potassium chloride solution	No
Ethyl alcohol	Yes
Ethylene glycol	No
Ethylene glycol monoalkyl ether	Yes
Methyl alcohol	Yes
Acetic acid	Yes
Formic acid (aqueous solution)	Yes
Hydrochloric acid	No
Hydrochloric-hydrofluoric mixtures containing 3% or less hydrofluoric acid	No
Sodium silicate solution	No
Sulphuric acid	No
Triethylene glycol	Yes
Toluene	Yes
Xylene	Yes

Zinc bromide brine	No
Liquid carbon dioxide	No
Liquid nitrogen	No
Noxious liquid, NF, (7) n.o.s. (trade name..., contains...) ST3, Cat Y	No
Noxious liquid, F, (8) n.o.s. (trade name..., contains...) ST3, Cat Y	Yes
Noxious liquid, NF, (9) n.o.s. (trade name..., contains...) ST3, Cat Z	No
Noxious liquid, F, (10) n.o.s. (trade name..., contains...) ST3, Cat Z	Yes
Noxious liquid, (11) n.o.s. (trade name..., contains...) Cat Z	No
Non-noxious liquid, (12) n.o.s. (trade name..., contains...) Cat OS	No