Addendum
to the
DNV US Supplement v.10 approved October 10, 2003

for
Offshore Supply Vessels certificated under 46CFR Subchapter L

Addendum to Annex

To the MEMORANDUM OF AGREEMENT

between the

UNITED STATES COAST GUARD

and

DET NORSKE VERITAS

GOVERNING PARTCIPATION IN

THE ALTERNATE COMPLIANCE PROGRAM

AND THE DELEGATION OF CERTAIN SURVEY

AND CERTIFICATION SERVICES

FOR UNITED STATES OF AMERICA FLAGGED VESSELS

SUPPLEMENTAL REQUIREMENTS

USCG approved August 1, 2006

Scope: This addendum includes additional Supplemental Requirements for Offshore Supply Vessels, except liftboats, certificated under 46 CFR Subchapter L.

46 CFR SUBCHAPTER L – OFFSHORE SUPPLY VESSELS

Lifesaving and fire safety equipment type approval requirements are given in the General Part on Type Approval in the approved DNV US Supplement.

Cite: 46 CFR 125.110 Carriage of flammable or combustible liquid cargoes in bulk.

(a) Except as provided by this section, no OSV may carry a noxious liquid substance (NLS) in bulk without the approval of the Commandant (G-PSO).

(b) An OSV may carry the following in integral tanks:

(1) Grade-D combustible liquids listed by Sec. 30.25-1 of this chapter, in quantities not to exceed 20 percent of the vessel's deadweight, except that the vessel may carry drilling fluids and excess fuel oil, Grade-E as well as Grade-D, without limit.

(2) Grade-E combustible liquids listed by Sec. 30.25-1 of this chapter, in quantities not to exceed 20 percent of the vessel's deadweight, except that the vessel may carry drilling fluids and excess fuel oil, Grade-D as well as Grade-E, without limit.

(3) An OSV may carry the following in fixed independent tanks on deck: Grade-B and lower-grade flammable and combustible liquids listed by Sec. 30.25-1 of this chapter, in quantities not to exceed 20 percent of the vessel's deadweight.

(4) An OSV may carry hazardous materials in portable tanks, in compliance with part 64 and subpart 98.30 of this chapter. A portable tank may be filled or discharged aboard the vessel if authorized by an endorsement on the vessel's Certificate of Inspection.

Cite: 46 CFR 125.120 C*arriage of noxious liquid substances in bulk.*

(a) Except as provided by this section, no OSV may carry a noxious liquid substance (NLS) in bulk without the approval of the Commandant (G-PSO).

(b) An OSV may carry NLS in integral and fixed independent tanks, in quantities not to exceed 20 percent of the vessel's deadweight.

(c) Each OSV carrying NLSs in bulk in integral tanks or fixed independent tanks must:

(1) Meet the oceangoing requirements

(2) Have a Certificate of Inspection or NLS Certificate endorsed with the name of the NLS cargo; and

(3) Have the Cargo Record Book.

(d) An OSV that does not meet the equipment requirements in Marpol 73/78 Annex II may not discharge NLS residues to the sea. The vessel's Certificate of Inspection or NLS Certificate will contain this restriction.

(e) Each OSV that discharges NLS residues to the sea must meet--

(1) The equipment requirements in Secs. 153.470 through 153.491 of 46 CFR;

and

(2) The operating requirements in Secs. 153.901, 153.903, 153.909, and 153.1100 of 46 CFR.

Cite: 46 CFR 125.150 Lifesaving Systems

Reference is made to 46 CFR 133 on “Lifesaving Systems”. This subpart is based on Chapter III of SOLAS. Additional items not covered by SOLAS and DNV rules are as follows:

46 CFR 133.07

The OCMI may require an OSV to carry specialized or additional lifesaving equipment other than as required in 46 CFR part 133 if the OCMI determines that the conditions of a voyage present uniquely hazardous circumstances which are not adequately addressed by existing requirements.

46 CFR 133.70 (c)(1)(ii)

The vessel must carry an immersion suit of the appropriate size for each person onboard.

46 CFR 133.70 (c)(2)(ii)

If watch stations, work stations, or work sites are remote from cabins, staterooms, or berthing areas and the immersion suits are stowed in those locations, there must be, in addition to the immersion suits required under paragraph (c)(1)(ii) of this section, enough immersion suits stowed at the watch stations, work stations, or work sites to equal the number of persons normally on watch in, or assigned to, those locations at any time.

46 CFR 133.70 (c)(3) Markings.

Each immersion suit or anti-exposure suit must be marked in such a way as to identify the person or OSV to which it belongs.

46 CFR 133.70 (d) Lifejacket, immersion suit, and anti-exposure suit containers.

Each lifejacket, immersion suit, and anti-exposure suit container must be marked in block capital letters and numbers with the quantity, identity, and size of the equipment stowed inside the container. The equipment may be identified in words, or with the appropriate symbol from IMO Resolution A.760(18).

46 CFR 133.105 (a)(4) Lifefloats

Such alternative devices may be used for some trades, subject to approval by the USGC.

46 CFR 133.130 (a)(8)

Each survival craft must not require lifting from its stowed position in order to launch, except that--

(i) A davit-launched liferaft may be lifted by a manually powered winch from its stowed position to its embarkation position; or
(ii) A survival craft that weights 185 kilograms (407.8 pounds) or less, may require lifting of not more than 300 millimeters (1 foot).

Cite: 46 CFR 126.130
Cranes
Cranes installed on OSVs are to be certified by an organisation approved by USCG as a crane certifying authority.

Cite: 46 CFR 126.170
Carriage of offshore workers.

(a) Offshore workers may be carried aboard an OSV in compliance with this subchapter. The maximum number of offshore workers authorized for carriage will be endorsed on the vessel's Certificate of Inspection; but in no case will the number of offshore workers authorized for carriage exceed 36.
(b) No more than 12 offshore workers may be carried aboard an OSV certificated under this subchapter when on an international voyage, unless the vessel holds a valid passenger-ship-safety certificate (Form CG-968) issued in compliance with the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS 74/83).

Cite: 46 CFR 127.220
Emergency Source of Power
(a) Except as provided in paragraph (b), when a compartment containing the emergency source of electric power, or vital components of that source, adjoins a space containing either the ship’s service generator or machinery necessary for the operation of the ship’s service generator, each common bulkhead and deck must be of “A-60” Class construction.
(b) The “A-60” Class construction required by paragraph (a) is unnecessary if the emergency source of electrical power is in a ventilated battery locker that:
(1) Is located above the main deck;
(2) Is located in the open; and
(3) Has no boundaries contiguous with other decks or bulkheads.

Cite: 46 CFR 127.240
Means of escape

(a) A vertical ladder ending at a deck scuttle may be the second means of escape if the--
(1) Primary means of escape is a stairway or passageway;
(2) Installation of another stairway or passageway is impracticable;
(3) Scuttle is located where stowed deck cargo could not interfere;
(4) Scuttle is fitted with a quick-acting release, and with a hold back device to hold it open; and

(5) Scuttle meets the requirements for location, strength, and height of coaming in subchapter E of this chapter.

(b) Each vertical ladder must--
(1) Have rungs that are--
(i) At least 410 millimeters (16 inches) long;
(ii) At most 300 millimeters (12 inches) apart, uniform for the length of the ladder; and
(iii) At least 180 millimeters (7 inches) from the nearest permanent object in back of the ladder;
(2) Have at least 115 millimeters (4 ½ inches) of clearance above each rung;
(3) Be made of incombustible materials; and
(4) Have an angle of inclination with the horizontal, greater than 70 degrees but not more than 90 degrees.

Cite: 46 CFR 127.260
Ventilation for accommodations

(a) Each accommodation space must be adequately ventilated in a manner suitable to the purpose of the space.
(b) Each vessel of 100 gross tons and over must be provided with a mechanical ventilation system unless the cognizant OCMI is satisfied that a natural system, such as openings windows, portlights, or doors, will accomplish adequate ventilation in ordinary weather.

Cite: 46 CFR 127.280
Construction and arrangement of quarters for crew members and accommodations for offshore workers.

The following requirements apply to accommodations for offshore workers on each vessel:

(1) Each offshore worker aboard must be provided with adequate fixed seating. The width of each seat should be at least 460 millimeters (18 inches). The spacing of fixed seating must be sufficient to allow ready escape in case of fire or other emergency. The following are minimal requirements:
(i) Aisles 4.6 meters (15 feet) in length or less must not be less than 610 millimeters (24 inches) wide.
(ii) Aisles more than 4.6 meters (15 feet) in length must not be less than 760 millimeters (30 inches) wide.
(iii) Where the seating is in rows, the distance from seat front to seat front must not be less than 760 millimeters (30 inches).

(2) If the intended operation of a vessel is to carry offshore workers aboard for more than 24 hours, quarters for them must be provided.
Each stateroom for use by them must--
(i) Berth no more than six workers;

(ii) Have clear headroom of at least 1.9 meters (6 feet, 3 inches); and

(iii) Contain at least 1.9 square meters (20 square feet) of deck and at least 4 cubic meters (140 cubic feet) of space for each worker accommodated. The presence in a stateroom of equipment for use by the occupants does not diminish the area or volume of the room.

(3) There must be at least one toilet, one wash basin, and one shower or bathtub for every eight or fewer offshore workers who do not occupy a stateroom to which a private or semi-private facility is attached.

Cite: 46 CFR 127.320

Storm rails

Suitable storm rails must be installed in each passageway and at the deckhouse sides, including in way of inclined ladders, where persons aboard have normal access. They must be installed on both sides of passageways which are more than 1.8 meters (6 feet) wide.

Cite: 46 CFR 127.430

Visibility from pilothouse.

DNV does not allow polarized and tinted windows to be fitted (given as info).

Cite: 46 CFR 127.440

Operability of window coverings.

Any coverings or protection placed over a window or porthole that could be used as a means of escape must be able to be readily removed or opened. It must be possible to open or remove the covering or protection without anyone's having to go onto a weather deck. It may be necessary to break the glass of a window or porthole before removing or opening the covering or protection.

Cite: 46 CFR 128.420

Keel cooler installations

(a) Approved metallic flexible connections may be located below the deepest-load waterline if the system is a closed loop below the waterline and if its vent is located above the waterline.

(b) Fillet welds may be used in the attachment of channels and half-round pipe sections to the bottom of the vessel.

(c) Short lengths of approved non metallic flexible hose fixed by metallic or non-metallic hose-clamps may be used at machinery connections if—

(1) The clamps are of a corrosion-resistant material;

(2) The clamps do not depend on spring tension for their holding power;

(3) Two of the clamps are used on each end of the hose, except that one clamp may be used on an end expanded or beaded to provide a positive stop against hose slippage; and

(4) The clamps are resistant to vibration, high temperature, and brittleness.

Cite: 46 CFR 128.430

Non-integral keel cooler installations

(a) Each hull penetration for a non-integral keel cooler installation must be made through a cofferdam or at a sea-chest and must be provided with isolation valves fitted as close to the sea inlet as possible.

(b) Each non-integral keel cooler must be protected against damage from debris and grounding by protective guards or by recessing the cooler into the hull.

Cite: 46 CFR 128.440

Bilge systems

If the steering room, engine room, centerline passageway, forward machinery space, and compartment containing the dry-mud tanks are the only below-deck spaces that must be fitted with bilge suctions, the vessel may be equipped with a bilge system applicable to a dry-cargo vessel.

Cite: 46 CFR 128.450

Liquid mud systems

Liquid mud piping systems may use resiliently seated valves of Category A to comply with 46 CFR 56.20-15.

Tanks for oil-based liquid mud must be fitted with tank vents equipped with flame screens. Vents must not discharge to the interior of the vessel.

Cite: 46 CFR 129.326

Dual-voltage generators.

If a dual-voltage generator is installed on an OSV, the neutral of the dual-voltage system must be solidly grounded at the switchboard's neutral bus and be accessible for checking the insulation resistance of the generator.

Cite: 46 CFR 129.375

Grounded distribution system.

If a grounded distribution system is provided, there must be only one connection to ground, regardless of the number of power sources.

Cite: 46 CFR 129.380

(c) Each generator must be protected by an overcurrent device set at a value not exceeding 115 percent of the generator’s full-load rating.

Cite: 46 CFR 129.520

Hazardous areas.

No OSV that carries flammable or combustible liquid with a flashpoint of below 140°F (60°C), or carries hazardous cargoes on deck or in integral tanks, or is involved in servicing wells, may have electrical equipment installed in pump rooms, in hose-

storage spaces, or within 3 meters (10 feet) of a source of vapor on a weather deck unless the equipment is explosion-proof or intrinsically safe.

Cite: 46 CFR 129.550

Power for cooking and heating.

a) The use of gasoline for cooking, heating, or lighting is prohibited.

b) The use of liquefied petroleum gas for cooking, heating, or other purposes must comply with subpart 58.16 of 46 CFR.

Cite: 46 CFR 130.120

Automation of Unattended Machinery Spaces

a) Each vessel must have a propulsion-control system operable from the pilothouse. Each piece of machinery under automatic control must have an alternative manual means of control.

Cite: 46 CFR 130.130

Steering on OSVs of less than 100 gross tons.

(j) DNV does not permit hydraulic systems for steering gear to be used for other systems/ purposes (given as info).

Cite: 46 CFR 130.140

Steering on OSVs of less than 100 gross tons.

The vessel is to be fitted with-

(b)(2) A hydraulic system with a maximum allowable working pressure of not more than 12,411 kPa (1,800 psi), dedicated to steering.

(b)(15) Manual capability to center and steady the rudder if the vessel loses normal steering power.

Cite: 46 CFR 130.310

Radar

Each vessel of 100 or more gross tons must be fitted with a general marine radar in the pilot house.

Cite 46 CFR 130.440

Communications system.

(a) Each OSV must have a communications system to immediately summon a crew member to the machinery space wherever one of the alarms required by Sec. 130.460 of this subpart is activated.

(b) The communications system must be either--

(1) An alarm that--

(i) Is dedicated for this purpose;

(ii) Sounds in the crew accommodations and the normally manned spaces; and

(iii) Is operable from the pilothouse; or

(2) A telephone operated from the pilothouse that reaches the master's stateroom, engineer's stateroom, engine room, and crew accommodations that either--
(i) Is a sound-powered telephone; or
(ii) Gets its power from the emergency switchboard or from an independent battery continuously charged by its own charger.

Cite: 46 CFR 131.880
Fire hoses and axes
Each fire hose and axe must be marked with the vessel’s name.

Cite: 46 CFR 132.120
Fire pumps – (Fire Monitors)
(h) When a fire monitor is connected to the fire main system, it must be lead from a discharge manifold near the fire pump. Each fire monitor must be fitted with a shut-off valve at the monitor and at the connection to the fire pump discharge manifold.

Cite: 46 CFR 132.130
Fire Stations
g) Each fire station must have at least one length of fire hose including nozzle.

Cite: 46 CFR 132.310
Fixed fire-extinguishing systems for paint lockers
(b)(1) A fixed gaseous or other approved fire-extinguishing system meeting all cargo ship requirements is required for paint lockers, except those less than 1.7 cubic meters (60 cubic feet) in volume; accessible only from the weather deck; and not adjacent to a tank for flammable or combustible liquids.

2.3.2 Stability

For 46 CFR 171 Subpart C and 46 CFR 174 Subpart J (Stability of Passenger Ships and Cargo Ships – Reflagging), please see the stability part of the main DNV US Supplement Version 10 (given as info).

Cite: 46 CFR 174 Subpart G – Special Rules pertaining to OSVs
Sec. 174.185 Intact stability.
(a) The area under each righting arm curve must be at least 0.08 meter-radians (15 foot-degrees) up to the smallest of the following angles:
(1) The angle of maximum righting arm;
(2) The downflooding angle; or
(3) 40 degrees.
(b) The righting arm curve must be positive to at least 40 degrees.
(c) The freeboard at the stern must be equal to the freeboard calculated to comply with subchapter E of this chapter or to the value taken from Table 174.185, whichever is less.

Table 174.185. Minimal Freeboard at the Stern

LBP in meters (feet)	**Freeboard at stern in millimeters (inches)**
Less than 20 (65)	300 (12)
20 (65) but less than 30 (100)	380 (15)
30 (100) but less than 40 (130)	400 (18)
40 (130) but less than 50 (155)	500 (20)
50 (155) but less than 60 (190)	560 (22)
60 (190) but less than 70 (230)	610 (24)
70 (230) and greater	660 (26)

Sec. 174.200 Damaged stability in machinery spaces for all OSVs.
Each OSV must be shown by design calculations to comply, under each afloat condition of loading and operation, with Sec. 174.207 of this subpart in case of damage between any two watertight bulkheads in each machinery space.

Sec. 174.207 Damaged stability criteria.
Survival conditions.
An OSV is presumed to survive assumed damage if the angle of heel in the final stage of flooding does not exceed 15 degrees.
Buoyancy of superstructure.
The buoyancy of any superstructure directly above the side damage must be considered in the most unfavourable condition (ref. table 174.207(a)).

Table 174.207(a) Extent of Damage - Collision Penetration

Longitudinal extent (vessels with LBP not greater than 45 meters [143 feet])	0.1L or 1.8 meters (6 feet), whichever is greater in
Longitudinal extent (vessels with LBP greater than 45 meters [143 feet]).	3 meters (10 feet) + .03L.
Transverse extent*	760 millimeters (30 inches).
Vertical extent	From baseline upward without limit.

*The transverse penetration applies inboard from the side of the vessel, at right angles to the centerline, at the level of the deepest load waterline.