

TERMINAL REGULATIONS AND INFORMATION BOOKLET FOR LNG CARRIERS CALLING AT TERMINAL

OFFSHORE LNG TOSCANA S.p.A.
(OLT)

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1.0 Introduction Definitions

The Terminal Regulations and Information Booklet ("**Terminal Regulations**") supplements the Maritime Safety Regulations Order nr. 6 / 2014 issued by the Livorno Harbour Master on January 29th 2014 ("**Maritime Safety Regulations Order**") and any regulation expressly applicable to it, to ensure safe and efficient operations at the Terminal.

This document does not replace any of the Maritime Safety Regulations and certain information, including information about the Maritime Safety Regulations, is provided solely as a courtesy. The User and/or the LNG Carrier's Master shall independently verify any such information and may not rely on the Terminal Operator to provide such information. The information contained herein may be reviewed periodically by the Terminal Operator as required.

They also:

- provide the User with a source of additional information and procedures pertinent to operations at the Terminal
- define the standards the LNG Carriers must comply with to be subject to the Compatibility Study Process for acceptance by the Terminal
- should be read in conjunction with the Maritime Safety Regulations and other applicable laws to ensure that the Users are compliant with all applicable State/local Legislation and any other Terminal specific requirements
- require OLT to be kept in copy to all written communications between the LNG Carriers and the Terminal Operator
- govern the acceptance, vetting and operations of LNG Carriers calling at the Terminal

Application

The **Terminal Regulations** apply to the Terminal and all LNG Carriers calling at the Terminal.

1.1 DEFINITIONS

- **ALL FAST:** means that the LNG Carrier is securely moored and in position alongside the berth of the Terminal and that the Spool Pieces have been installed on board the LNG Carrier.
- **APPROVAL & VETTING PROCEDURES:** means the "LNG Carrier Approval & Vetting Procedures" for the Terminal accessible on OLT's website (www.oltoffshore.it).
- **CARGO HANDLING MANUAL:** means the "Cargo Handling Manual" for the Terminal accessible on OLT's website (www.oltoffshore.it).
- **COMPETENT AUTHORITIES:** means any Italian or European Union Member State's legislative, judicial, administrative or executive body, including (i) any court of competent jurisdiction; (ii) any local, national or supra national agency, authority, inspectorate, minister, ministry, official or public or statutory person (whether autonomous or not) of, or of the government of, Italy or the European Union; (iii) the European Commission; (iv) the Italian Antitrust Authority (*Autorità garante della concorrenza e del mercato*); (v) the Gas and Electric Power Authority; (vi) the Italian Ministry for Economic Development; (vii) the Italian Ministry of Industry, Trade and Crafts; and (viii) the Maritime Authorities.
- **CONDITIONS OF USE:** means the conditions of use at Article 11.
- **CREW:** means all personnel operating and serving aboard the LNG Carrier, including the Master, officers and ratings.
- **ESD:** means emergency shutdown.
- **ETA:** means the estimated time of arrival of an LNG Carrier at the Pilot Boarding Station.
- **EXCLUSION ZONE:** has the meaning set forth in Article 2.2.

- **FINAL ACCEPTANCE VISIT:** means the visit as described in the Approval & Vetting Procedures 3.3 – Step 3, confirming the acceptance of the LNG Carrier to berth at the Terminal (see also Attachment 11.0).
- **FSRU TOSCANA:** means the LNG floating storage and regasification unit having IMO number 9253284 and registered under the Italian flag number LI10153.
- **GRID:** means the national and regional transport system for Gas as defined in the MICA decree of the 22nd of December 2000, as such decree is published in the Gazzetta Ufficiale, serie generale, 23/11/2001 n. 18, and as amended and updated from time to time.
- **GUARDIAN VESSEL:** means the vessel dedicated to the enforcement of the Exclusion Zone.
- **HARBOUR MASTER:** means the *Capitaneria di Porto di Livorno*.
- **INTERNATIONAL STANDARDS:** means the standards and practices from time to time in force applicable to the ownership, design, equipment, operation or maintenance of LNG Carriers established by the rules of a classification society (within the International Association of Classification Societies (**IACS**) or as may otherwise be acceptable to OLT), the conventions, rules, guidelines and regulations laid down by the International Maritime Organization (**IMO**), the Oil Companies International Marine Forum (**OCIMF**), International Group of Liquefied Natural Gas Importers (**GIIGNL**), Society of International Gas Carriers and Terminal Operators (**SIGTTO**) (or any successor body of the same) and any other internationally recognized agency or organization with whose standards and practices it is customary for international operators of such vessels or terminals to comply, including the holding of a valid operational OCIMF Ship Inspection Reporting system (**SIRE**) certificate.
- **INTRINSICALLY SAFE:** means the condition whereby any spark or thermal effect, generated by the normal operation or accidental failure of the equipment, is incapable, under prescribed test conditions, of igniting a prescribed gas mixture. Any equipment so rated will be certified by an appropriate body as “intrinsically safe.”
- **LINE THROWING APPARATUS:** is defined in the Maritime Safety Regulations.
- **LNG:** means natural gas which has been converted to a liquid state at or below its boiling point and at a pressure of approximately 1 atmosphere.
- **LNG CARRIER:** means a ship, constructed and equipped for the transportation of LNG in bulk.
- **LNG CARRIER CARGO EQUIPMENT:** means the LNG Carrier’s cargo pumps, cargo compressors, cargo vaporizers, inert gas generators, motors, control equipment, and other cargo handling equipment and where appropriate also includes the primary and emergency power supply, circulating pumps and other auxiliary equipment essential for safe and efficient operations.
- **MARITIME AUTHORITIES:** means the Ministry of Infrastructures and Transport (*Ministero delle Infrastrutture e dei Trasporti*), the *Autorità Portuale* (Port Authority) and the Harbour Master.
- **MARITIME SAFETY REGULATIONS:** means the regulations, administrative provisions, acts and/or other provisions, including the Maritime Safety Regulations Order, issued by the Maritime Authorities in so far as they are relevant to the operation of the Terminal and/or LNG Carriers.
- **MASTER:** means any person legally and duly certified and appointed as commanding officer responsible for the navigation and management of an LNG Carrier or in his absence his duly authorized deputy.
- **NAKED LIGHTS:** means open flames, exposed incandescent material or any other unconfined source of ignition.
- **NOTICE OF READINESS:** has the meaning set forth in Article 3.2.1.
- **OCIMF:** means the Oil Companies International Marine Forum.
- **OLT:** means OLT S.p.A., the Terminal’s owners and commercial operating company (or its successor).
- **OLT CRISIS MANAGEMENT PLAN:** means the plan at [Attachment 11.17].

- **PILOT:** is defined in the Maritime Safety Regulations.
- **PILOT BOARDING STATION:** is defined in the Maritime Safety Regulations.
- **SHIP'S AGENT:** means the agent appointed by the LNG Carrier owner or charterers to act on behalf of the LNG Carrier in arranging marine services and authority clearance requirements for the LNG Carrier to unload at the Terminal.
- **SPOOL PIECES:** means the targeting spool assembly for an LNG Carrier's manifold, being the equipment designed and made available by the Terminal that needs to be installed by LNG Carrier's crew on its port side cargo manifold in order to allow the connection and disconnection of the FSRU loading arms in offshore environmental conditions.
- **TERMINAL:** means FSRU Toscana, geographically located at the coordinates provided for in Article 2.1, including berth area and other facilities within the Exclusion Zone and the Terminal's management. Such management includes the person or persons (and his/their deputies and assistants) authorized by OLT to exercise the powers or perform the duties related to making and enforcing regulations, administration and control of the plant and berths.
- **TERMINAL MANAGER:** means such individual with day-to-day primary responsibility for managing the Terminal.
- **TERMINAL OPERATOR:** means the company appointed and authorized by OLT to perform the management and technical operation of the Terminal in accordance with the ISM Code and ISO 9001 ,14001, and OHSAS 18001.
- **TERMINAL PERSONNEL:** means the personnel operating on board the Terminal the number, responsibilities, duties and preparation of which have been stated by the Maritime Authorities.
- **TERMINAL REGULATIONS:** means this Terminal Regulations and Information Booklet as updated from time to time by OLT, which apply to LNG Carriers and Users in connection with the operation of LNG Carriers at the Terminal.
- **TERMINAL REPRESENTATIVE:** means the designated person (s) who will board the LNG Carrier on behalf of the Terminal and will act as coordinator between the Terminal and LNG Carrier. The Terminal Representative or 'Berthing Loading Master' is in direct communication with the Terminal control room.
- **TERMINAL SOPEP PLAN:** means the Terminal's shipboard oil pollution emergency plan produced in accordance with the International Convention for the Prevention of Pollution from Ships (MARPOL) (as amended from time to time) and relevant Italian legislation (as amended from time to time).
- **TUG:** is defined in the Maritime Safety Regulations.
- **USER:** means a person entitled to receive services at the Terminal from time to time.

2.0 General Information

2.1 TERMINAL LOCATION

The Terminal is located approximately 12 nautical miles offshore Livorno in Latitude 43° 38' 40" N, Longitude 009° 59' 20" E in a water depth of about 112 meters.

2.2 RESTRICTED AREAS AND SAFETY ZONES

A two nautical mile radius **"Exclusion Zone"** exists around the Terminal in which fishing and pollution (as ruled by MARPOL convention and/or national and local rules) are prohibited and navigation restricted.

Access to the Exclusion Zone is restricted exclusively to LNG Carriers calling at the Terminal, mooring and service support vessels, either working for or authorized by the Terminal and Marine Authority, as well as those vessels associated with law enforcement agencies. The Exclusion Zone is monitored by a dedicated guard-ship:

"Guardian Vessel"

Registry: Italy
Port of Registry: Genova, Italy
Call Sign: IIZJ2
IMO n.: 9615585
MMSI: 247316200

There is no designated anchorage area around the Terminal. Any LNG Carrier requiring anchoring must first seek authorization from the Maritime Authorities on VHF channel 16: refer to Order n.6 / 2014.

2.3 BERTH APPROVAL PARAMETERS

The Terminal is designed in compliance with the International Standards to provide a berth for any LNG Carrier compliant with the Conditions of Use, having successfully passed a case-by-case **"Compatibility Study Process"** (as described in Approval & Vetting Procedures) and satisfying the following size limitations:

Maximum Arrival Displacement	120,000 metric tonnes
Maximum Overall Length	310 metres
Minimum Overall Length	Limit is determined by reference to safe mooring plan and unloading arms envelope
Maximum Beam	50 metres
Maximum Moulded Depth	Limit is determined by reference to the loading arms envelope
Maximum Loaded/Ballast Draft	Limit is determined by reference to the loading arms envelope
Manifold and Mooring layout	In accordance with OCIMF "Recommendations for manifolds for refrigerated liquefied natural gas carriers (LNG) second edition 1994"

Above parameter are subject to verification during compatibility process especially for mooring lay out. Depending on LNGC mooring fitting position.

All LNG Carriers must be capable of conducting LNG cargo discharge and ballast operations simultaneously so as to minimize the area of the LNG Carrier exposed to wind while moored.

[See: Article 8 State of Readiness](#)

2.4 ENVIRONMENTAL CONDITIONS

2.4.1 – General information

The Terminal is under influence of the northern Tyrrhenian Sea climate.

During winter the prevailing winds are SW'ly and NE'ly while during summer the prevailing winds are NW'ly.

During and after periods of strong SW winds, which usually last approximately two days in winter, a considerable swell is experienced.

The information provided in this article 2.4.1. is indicative and offered as guidance only.

An OLT wave meter buoy is positioned in Lat. 43 37 05 N Long. 009 59 46 E

Yellow color – flash (5- every 2 sec.) period 20 sec.

2.4.2 - Weather Reports

Twice daily weather forecasts are received by and available from the Terminal Operator.

These weather forecasts are by their nature only indicative of conditions that may be experienced. Neither OLT nor the Terminal Operator accepts any liability or responsibility whatsoever for the accuracy or otherwise of any weather forecast made available by the Terminal Operator.

2.5 LNG CARRIER DOMESTIC MATTERS

The domestic needs of the LNG Carrier are to be arranged by the Ship's Agent.

The Terminal Operator or OLT may, if requested and at their sole discretion, assist in these arrangements. Ship's Agent to take into account that only the Terminal's approved support vessels are authorized to enter the Exclusion Zone.

Provisions, stores and crew changes	There are no facilities to accommodate provisions storing or crew changes at the Terminal. The LNG Carrier's Master and Ship's Agents should schedule crew changes or stores deliveries prior to berthing, after un-berthing, or while at anchor. The LNG Carrier may, in exceptional cases, store or effect crew changes from support vessels when alongside only with the prior permission of the Maritime Authorities and Terminal Operator. As a general rule, while the LNG Carrier is alongside the Terminal, support vessels may not approach the LNG Carrier and stores and/or spares may not be loaded or unloaded.
Repairs	While the LNG Carrier is alongside the Terminal, repairs are prohibited, unless otherwise agreed by the Maritime Authorities and the Terminal Operator to facilitate safe or continued operations.
Medical care	While there are no medical facilities available on the Terminal, emergency medical evacuation to shore may be organized by the Ship's Agent at the expense of the LNG Carrier. The Ship's Agent makes requests to the Terminal Operator for medical evacuation. The Ship's Agent is responsible for logistical arrangements for the evacuees upon arrival on shore.
Bunkers and potable water	There are no bunkering or potable water facilities at the Terminal. Bunkering activities are not permitted at the Terminal or within the Exclusion Zone.
Garbage Facilities	There are no garbage reception facilities at the Terminal.

2.6 TERMINAL REPRESENTATIVE

The Terminal Representative will usually board the LNG Carrier before the Pilot boards, outside the Exclusion Zone. He will perform the 'Final Acceptance Visit' of the LNG Carrier for berthing at the Terminal.

The Terminal Representative acts as coordinator for all LNG Carrier/Terminal operations and will usually remain onboard during the LNG Carrier's call at the Terminal.

Should an emergency arise, The Terminal Representative may also be available to offer local information to the LNG Carrier Master. However, if so, such information is provided as a courtesy only and no warranties are made as to the accuracy or otherwise of the advice.

2.7 LNG CARRIER DOCUMENTATION

It is the LNG Carrier Master's responsibility to ensure that prior to arriving off the Terminal the LNG Carrier has current versions of the following documents:

- *Maritime Safety Regulations*
- *Terminal Regulations*
- *Cargo Handling Manual*
- *Approval & Vetting Procedures*
- *Environmental, Safety and Quality Minimum Criteria*
- *Gas and LNG Measurement Manual*

These documents can be accessed at OLT's website: www.oltoffshore.it

The LNG Carrier's Ship's Agent will also forward copies of the Terminal Regulations and Maritime Safety Regulations to the LNG Carrier's Master prior to the LNG Carrier's arrival.

Prior to arrival at the Terminal, the Master is to confirm (to the Terminal, the Maritime Authorities and to the Agent) safe receipt of and compliance with the Terminal Regulations and Maritime Safety Regulations.

The LNG Carrier's Master shall provide the following of the LNG Carrier's documents upon request of the Terminal Representative:

- *cargo handling manual*
- *emergency procedures*
- *statutory certificates*

3.0 Arrivals

3.1 COMMUNICATION INFORMATION

All communications between the Terminal and LNG Carrier and Ship's Agents shall be conducted in the English language.

Item	Description
VHF "Operating Channels"	Channel 15 or 18 during maneuvering and alongside and [16], 24 hours per day.
Terminal details	Call Sign: IBAH IMO number 9253284
Terminal email	operations@ECOS-LNG.COM
Terminal Telephone	CCR +39 05686201250(VOIP) +870 765109759 (SAT) Terminal Manger +39 05686201251
OLT email	lngc@oltoffshore.it Giovanni.giorgi@oltoffshore.it
OLT Fax	+39 0245430590
OLT Telephone	+39 023667351

3.2 PRE- ARRIVAL COMMUNICATIONS

Upon departure from the loading port, the LNG Carrier's Master must send via fax or email a series of communications and estimated times of arrival (ETAs) as listed below:

- *Loading port of the LNG Carrier*
- *Name of the LNG Carrier*
- *Time and date when LNG loading was completed*
- *The quantity and quality of LNG loaded and the portion of such quantity to be unloaded at the terminal if less than the full quantity*
- *Foreseen Arrival load draft and departure ballast draft at FSRU Toscana*
- *ETA Notice of the LNG Carrier shall be submitted, updated or confirmed (as the case may be) at the following intervals, subject to the Maritime Safety Regulations:*
 - (i) Upon departure from the load port ;
 - (ii) seventy-two (72) hours before the then current ETA;
 - (iii) forty-eight (48) hours before the then current ETA;
 - (iv) twenty-four (24) hours before the then current ETA;
 - (v) twelve (12) hours before the then current ETA; and
 - (vi) thereafter for any ETA change of more than two (2) hours.
 - (vii) If the cargo to be unloaded has been acquired or diverted to the Terminal, after the departure of the LNG Carrier from the load port or after the relevant time specified above, then the ETA Notice shall be submitted as soon as possible after such acquisition or diversion, but in any event taking into account any applicable requirement for the final time by which the arrival of LNG Carrier shall be notified to the Maritime Authorities.

When in VHF range of the Terminal the LNG Carrier shall contact and maintain a listening watch on the Terminal's VHF Operating Channels.

Pre arrival information is to be, in any case, transmitted to the Terminal no less than 72 hours prior to arrival at the Terminal.

[See: Attachment 11.2 Pre Arrival Information.](#)

Masters are obliged to immediately report to the Terminal any defects or deficiencies that may affect the safety or the performance of operations to be conducted while the LNG Carrier is within the confines of the Exclusion Zone and/or when the LNG Carrier is at the Terminal.

The following checks and tests must be carried out successfully on board the LNG Carrier and duly recorded within three days prior to the estimated time of berthing:

- *Water Spray systems*
- *Fire pumps*
- *Inert condition of annular space, primary and secondary space if applicable*
- *Operation of cargo system remote control valves and their position indicators*
- *Alarm function of fixed gas detection equipment*
- *Primary custody transfer and alarm set points*
- *Operation of the ESD system*

The LNG Carrier's Master shall immediately report any defects or deficiencies concerning these checks and tests to the Terminal Operator.

The LNG Carrier's Master shall present evidence of the successful completion of the above checks to the Terminal Representative at the pre-transfer meeting.

3.2.1 Notice of Readiness

The LNG Carrier's Master or the Ship's Agent shall give a notice of readiness to moor and unload ("NOR") to the Terminal Operator and the Terminal Operator as soon as the LNG Carrier:

- has arrived at the Pilot Boarding Station or such other location as the Terminal Operator has notified the LNG Carrier;
- has cleared the necessary formalities with the Maritime Authorities and all other relevant Competent Authorities, has complied with all necessary customs notification requirements and all other necessary authorizations have been obtained; and
- is ready in all respects, including having received the Spool Pieces to proceed to moor at the Terminal and commence unloading.

The NOR is tendered by the LNG Carrier's Master and shall:

- *Be Signed by the Master of the LNG Carrier ; and*
- *State the time and date when it was tendered ; and*
- *Be Addressed to the Terminal Manager, in copy to the Terminal Operator*

Upon receipt of a valid NOR, the Terminal Manager shall provide the LNG Carrier with instructions for berthing at the Terminal.

The Terminal Operator may reject the NOR at any time before the LNG Carrier is All Fast, but only where:

1. such NOR:
 - i. does not contains the information specified above; or

- ii. contains or confirms material information that the Terminal Operator has reasonable evidence is incorrect;
- 2. any of the requirements set forth above have not been satisfied;
- 3. the Terminal Operator raises safety concerns;
- 4. the User no longer complies with the conditions to receive services at the Terminal; or
- 5. the Terminal Operator, reasonably foresees that the LNG Carrier will not be All Fast within forty-eight (48) hours after the end of the 'scheduled arrival window' for the LNG Carrier.

3.3 NAVIGATION, PILOTAGE AND BERTHING

3.3.1 Pilotage

Pilotage is compulsory using the Maritime Authorities' approved Pilotage service. VHF contact should be established with the "Livorno Pilot Station" on Channel 12 when within range. The boarding position for the Pilot and Terminal Representative is approximately 2.5 nautical miles off of the Terminal and will be communicated once the LNG Carrier is in VHF range.

Avvisatore Marittimo Livorno (a ship information service) may be used by the LNG Carrier (available at www.shipinfo.it).

Refer to Maritime Authority Order nr. 6/2014.

3.3.2 Pilot Ladder

Pilot ladders for embarkation **must** be in accordance with SOLAS Chapter V Reg. 17 and the IMO "Recommendation on Arrangements for Embarking and Disembarking Pilots in Very Large Ships," adopted by Resolution A.426 (XI) 1979, "Required Boarding Arrangements for Pilots."

3.3.3 Tug Assistance Vessels

LNG Carriers are required to berth and un-berth with the Maritime Authorities' approved Tugs.

These Tugs are also required to remain in close proximity to the LNG Carrier throughout its stay at the Terminal so as to:

- maintain a security watch
- be available to render prompt assistance in case of:
 - early departure requirements
 - emergency situations (including providing fire fighting support)

The minimum number and power of Tugs required by the Maritime Authorities are indicated in the following table:

LNG Carrier DWT	Number of Tugs – berthing	Number of Tugs – unberthing
All LNG Carriers	2 x > 100t bollard pull 1 x > 70t bollard pull	2 x > 100t bollard pull

The Maritime Authorities require that 2 x > 100t bollard pull Tugs be on standby whilst the LNG Carrier is alongside.

The Maritime Authorities at all times retain control over the requirements as to number and bollard pull of Tugs.

Tug should be fasted ones aft one fwd as much as possible on LNGC Center lines
Refer to Maritime Authority Order nr. 6 / 2014

3.3.4 Pneumatic line throwing apparatus

The Terminal is equipped with Line Throwing Apparatus that can be used for the connection of the transfer of mooring lines between the LNG Carrier and the Terminal.

LNG Carrier Master and crew must be aware of the possible dangers connected with such apparatus.

[See: 4.0 Mooring and Unmooring](#)

3.3.5 Ship Agency

The Ship's Agent is responsible for booking and coordination of the Pilots, Tugs and any other services to the LNG Carrier.

LNG Carriers' owners, charterer and Ships Agents are directed to OLT's website (www.oltoffshore.it) for further details.

The Ship's Agents should liaise and communicate with the Terminal Operator and the Terminal concerning the LNG Carrier's ETA and the schedule requirements of the Pilot, Tugs and any other service.

The Ship's Agent should advise the Terminal Operator and the Terminal of any other activities that the LNG Carrier may request to be permitted while at the Terminal, including:

- planned storing activities
- crew changes
- visiting personnel to the LNG Carrier
- cargo surveyor arrangements
- other planned activities

If such activities are permitted by the Terminal, the Ship's Agent will be responsible for organizing transportation to and from the LNG Carrier.

3.4 STATUS OF LNG CARRIER EQUIPMENT

The Master of the LNG Carrier **MUST** notify the Pilots and the Terminal Representative of any limitations or deficiencies that might impose special hazards in connection with handling, mooring or unloading the LNG Carrier, such as defective (for example only, but not limited to):

- *propulsion;*
- *steering equipment;*
- *lines or gear;*
- *cranes/booms; or*
- *LNG Carrier Cargo Equipment.*

Each LNG Carrier that the User intends to moor alongside and Unload at the Terminal shall be in compliance with International Standards, be approved by the Terminal Operator having successfully passed a Compatibility Study Process as detailed hereinafter and have passed all inspections including the "Final Acceptance Visit and the Unloading Test Safety Inspection".

Reference: see the Approval & Vetting Procedures

The Terminal Representative will conduct a Final Acceptance Visit, prior to allowing berthing of the LNG Carrier at the Terminal. As set out in the Approval & Vetting Procedures, this visit will include, but will not be limited to, the following checklist items:

- mooring arrangements and equipment visual inspection and compliance with Terminal requirements, evidence of valid test certificates
- visual inspection of lifting equipment for receiving/returning the Spool Pieces
- visual inspection of cargo manifolds and service platform
- ESD link compliance with the Terminal's requirements
- external communication compliance with the Terminal's requirements
- availability of required/requested documentation

[See attachment 11.0 "Final Acceptance Visit Checklist"](#)

If the LNG Carrier is found **unacceptable** for Terminal berthing or unloading, the Terminal Representative will as soon as practical notify the LNG Carrier's Master, the Maritime Authorities, the Pilot, the Terminal Operator, the Terminal Manager and the Ship's Agent of such unacceptability.

A "**Rejected Report**" will be submitted to all parties.

[See: Attachment 11.1 "Rejected Report"](#)

If the LNG Carrier is found **acceptable** for Terminal berthing or unloading, the Terminal Representative will as soon as practical notify the LNG Carrier's Master, the Maritime Authorities, the Pilot, the Terminal Operator, the Terminal Manager and the Ship's Agent of such acceptability.

The Terminal Representative will also conduct the 'Unloading Test Safety Inspection' based on OCIMF (ISGOTT), SIGTTO and other industry accepted standards.

3.5 BERTHING SCHEDULE

The berthing schedule shall be determined by the Terminal in accordance with its procedures and obligations to its Users, subject to the Terminal's available storage capacity and any contrary requirements of the Maritime Authorities.

3.6 BERTHING/UN-BERTHING CRITERIA

The following tables show the prescribed environmental limits for certain operations:

- side-by-side mooring and unloading arm connection is subject to the following environmental limits:

Average wind speed limit	Average Sea state Limit		Average surface current Limit
m/s	Hs (m)	TP(s)	m/s
7.50	1.50	7.5	0.50

- the environmental limits that force the cessation of cargo transfer and the disconnection of the unloading arms are:

Average wind speed Limit	Average Sea state Limit		Average surface current Limit
m/s	Hs (m)	TP(s)	m/s
15.00	2.50	8.5	0.50
15.00	2.00	8.0	0.50

**For certain vessel depending of height of manifolds in departure (ballast) meteocean condition reduced at 2.0m hs waves . Ref to Loading Arms envelope and compatibility study.*

This information is provided for guidance only. Within the prescribed environmental limits, these operations are always subject to the judgment of the LNG Carrier's Master, the Terminal Manager, the Pilots, the Terminal Representative and the decision of the Maritime Authorities.

When assessing the limiting conditions, the combined effect of all parameters (wind speed, wave height, surface current) shall be considered.

Any deviation from the above environmental limits for such operations shall be agreed and defined between parties during the Compatibility Study Process.

The required range of visibility for berthing operations is more than 500m.

NOTE: the Terminal is fitted with an anemometer and current / wave measurement equipment that will be used to determine the prevailing wind, sea-state and surface current conditions.

[See: Attachment 11.7 Adverse Weather – Terminal Operating Policy](#)

3.7 UNLOADING ARM TARGETING SPOOL PIECES

Before entering in the Exclusion Zone, the LNG Carrier shall arrange for receipt of the four (4) targeting Spool Pieces by way of an approved Terminal support vessel. The connection of these targeting Spool Pieces to the LNG Carrier manifold shall be performed by the LNG Carrier's crew under the supervision of the Terminal Representative.

[See: 'Cargo Handling Manual' sec. 2.2 and Appendix C](#)

3.8 BERTHING APPROACH

All maneuvering of LNG Carriers proceeding to and within the Exclusion Zone shall be conducted with appropriate care and caution at a speed and in a manner that shall not endanger the safety of other vessels or the Terminal.

When the LNG Carrier enters the Exclusion Zone, the Tugs must be connected to the forward and aft ends of the LNG Carriers much as possible on LNGC center line

The berthing principle is to maneuver the LNG Carrier into a position parallel to the Terminal's berth at about 50 meters off. With the LNG Carrier stopped in this position, and by the use of the Line Throwing Apparatus, a connection will be established between the Terminal and the LNG Carrier in order that the first two mooring lines forward and aft (one breast and one spring respectively) can be passed from the LNG Carrier and connected to the Terminal's mooring hooks; then heaving on these mooring lines and with the support of the Tugs the LNG Carrier will maneuver alongside the Terminal's berth.

LNG Carriers will berth with their port side alongside to the Terminal's berth.

The Terminal is provided with a berthing aid and mooring line tension monitoring systems.

A portable PC unit will be also available, from the Terminal Representative to the LNG Carrier, that

is linked to the Terminal by wireless telemetry during the berthing maneuver. This unit will, in LNG Carrier approach mode, display dynamic graphical data presentation of the LNG Carrier's speed, distance and longitudinal angle versus the Terminal.

To avoid damage to the Terminal's fendering system, the LNG Carrier should normally be landed squarely (in parallel) onto the Terminal's fenders with a contact speed **not exceeding 10 cm/second**.

The LNG Carrier's Master and the Terminal Manager will agree on the final position in accordance with the LNG Carrier's and Terminal's cargo handling arrangements (unloading arms spotting line). It is expected that the LNG Carrier shall be ready to commence unloading as soon as practicable after the completion of mooring, and it shall complete unloading, safely, effectively and expeditiously taking into account the prevailing and expected weather conditions and relevant operating conditions.

Note: Mooring Liners

Maritime Authority has imposed, for safety reasons, the presence on board the Terminal and or the LNG Carrier the presence of two Livorno Harbour mooring liners during the mooring/unmooring and for the whole duration of LNG Carrier stay alongside, as supervisor.

Refer to Maritime Authority Order nr. 6/2014

3.7.1 Status of Anchors

During pilotage operations, when entering the Exclusion Zone and while alongside the Terminal, the LNG Carrier must have the chain stoppers, locking pins and other securing devices in place on all of her anchors to prevent accidental release.

4.0 Mooring and Unmooring

4.1 MOORING ARRANGEMENTS

The proposed mooring plan (as established during the Compatibility Study Process) will include details of the number and position of mooring lines to be used consistent with OCIMF "Mooring Equipment Guidelines 3rd Edition MEG3".

During the Compatibility Study Process, the proposed mooring plan for the LNG Carrier needs to consider the requirement to protect the mooring lines from abrasion with the LNG Carrier's hull, fairleads and chocks.

The minimum mooring line requirements for LNG Carriers are indicated in the following table:

Lines	Forward	Aft
Head / Stern / Breast	6	4
Springs	2	4
Emergency Fire Lines	1	1

N°16 is the Minimum number of mooring lines required as for side by side study

For vessel size abt 65/75 k N°14 or n°15 is the minimum number of mooring lines required as for side by side study

.

All mooring lines must be deployed on mooring winch drums and be capable of effectively mooring the LNG Carrier.

[See: Attachment 11.9 Example Mooring Layouts](#)

The arrangement of mooring lines and the sequence of the mooring operations shall be agreed upon in advance between the LNG Carrier's Master, the Pilots and the Terminal Manager.

The LNG Carrier must be moored to the complete satisfaction of the LNG Carrier's Master, the Pilots and the Terminal Manager.

The layout of the Terminal's mooring arrangements is designed according to OCIMF "Mooring Equipment Guidelines MEG 2 in order to suit a range of LNG Carrier designs. All mooring hooks are equipped with load sensors and are monitored with a tension monitoring system.

All head, stern, spring and breast mooring lines deployed by the LNG Carrier must be fitted with twenty-two (22) meters, eight (8) strand type synthetic mooring tails or any other suitable length as decided during the Compatibility Study Process. In particular in some position in order to avoid contact between mandrel or cow hitch and LNGC fairlead shorter length than 22m should be used. 11m tails and Grommet are not acceptable by Terminal.

The certificates for all mooring lines (and components thereof) deployed by the LNG Carrier and their inspection data shall be made available to the Terminal Representative on request.

All LNGC mooring lines used for mooring shall be fitted with similar breaking strength and manufactured with same material.

Synthetic mooring lines shall meet the requirements of OCIMF's publication "Guidelines on the Use of Synthetic Fiber Ropes as Mooring Lines on Large Carriers."

Mooring lines and Tails Maintenance inspection and retirement shall be in compliance with OCIMF MEG 4 section 5.4

4.1.1 Mooring Winches

If the LNG Carrier is fitted with self tensioning winches, those winches **MUST be** placed on the manual brake.

Where spilt drums are fitted, mooring lines must be properly reeled in accordance with OCIMF "Mooring Equipment Guidelines."

The LNG Carrier's mooring equipment shall be maintained in good condition so as to meet the requirement of keeping the LNG Carrier in a proper and safe position alongside the berth at all times. Certificates and inspection data of LNG Carrier's mooring equipment shall be made available by the Master to the Terminal Representative on request.

4.2 STATUS OF MOORING

The safety of the moored LNG Carrier is the Master's responsibility under all circumstances. However, to ensure safe cargo handling and to avoid damage to the Terminal, the Terminal Representative and Terminal's deck watch personnel will periodically check the LNG Carrier's moorings, to ensure that they are satisfactory. If they are not, the Terminal Representative will request the LNG Carrier's Master to adjust the moorings or take such other steps as are considered necessary. If the Master does not fulfill the Terminal Representative's request in reasonable time or in extreme cases (i.e. safe operation or the Terminal's integrity is jeopardized) the Terminal Representative may suspend the cargo discharge or take such other steps as are considered necessary.

It is the LNG Carrier Master's responsibility to ensure that the LNG Carrier is securely moored having due regard to the prevailing and forecasted sea and weather conditions.

The prevailing and forecasted sea and weather conditions must be monitored during the LNG Carrier's stay alongside. Appropriate action shall be taken in advance of deteriorating weather. Sufficient and competent personnel shall maintain a strict mooring watch to ensure that necessary and proper adjustments are made as required to prevent slack or over taut lines and control movement of the LNG Carrier. The mooring lines' tensions shall be carefully monitored especially when conditions approach the environmental limits for the operations.

Note: the Terminal is equipped with a mooring tension monitoring and recording system that receives load data from each mooring hook. The set points for the tension alarms are:

- **Low : 5 tonnes**
- **High: 40 tonnes**

However, if appropriate, the alarm set points can be adjusted as per the mooring plans.

On activation of a high or low mooring tension alarm immediate action will be required to rectify the tension of the alarmed mooring line(s).

The Terminal Representative and Terminal Manager will make decisions regarding the commencement, continuation, or cessation of cargo operations in accordance with their assessment of the prevailing and forecasted sea and weather conditions. Any such decisions shall be made in full consultation with the LNG Carrier's Master who retains an independent right to order a cessation of any cargo operation.

[See: Attachment 11.7 Adverse Weather – Terminal operating Policy.](#)

4.3 PARTIAL FILL OPERATIONS FOR MEMBRANE LNG CARRIERS

The LNG Carrier's Master and owners are recommended to conduct a due diligence review and risk assessment prior to the LNG Carrier's first arrival at the Terminal to confirm its capability to discharge at the Terminal within the set operating parameters and hind-cast data.

The LNG Carrier's owners should be guided by the LNG Carrier's classification society and the tank system designer, with regards to limitations, operations and mitigation measures for operating at the Terminal or if the LNG Carrier has to depart from the Terminal in a partial fill condition.

As guidance only, LNG Carrier's Master and owners are directed to the "January 2012 Lloyd's Register Guidance on the Operation of Membrane LNG Ship to Reduce the Risk of Damage due to Sloshing or Equivalent"

The LNG Carrier's owners should, as a minimum, have developed a safe condition departure plan in the event the LNG Carrier is required to depart the Terminal prior to cargo completion. Such a departure plan shall be required as part of the LNG Carrier pre-approval process at the Terminal.

Possible mitigation measures and considerations for inclusion in the plan include:

- *Development of passage plans that consider wave directions, wave periods and fill levels of cargo tanks,*
- *Constraints imposed by sea room to reduce exposure to beam sea conditions,*
- *Anchoring plans, and*
- *Internal transfer of cargo between tanks.*

The LNG Carrier's Master, the Terminal Manager and the Terminal Representative should review the most recently received weather forecasts prior to:

- *Berthing and commencement of discharge*
- *entering a partial fill condition*

In this instance, a twenty-four (24) hours look-ahead period should be considered, in order to satisfy themselves that conditions will remain favorable for safe cargo operations without the need for interruption or un-berthing of the LNG Carrier.

5.0 Communication

5.1 VERBAL COMMUNICATION

All communication between the LNG Carrier and Terminal shall be in English. The Master shall advise the Terminal prior to arrival if unable to comply, and a solution is to be agreed. Terminal will also ensure that the LNG Carrier is provided with a HOT LINE for communication to the Terminal. The Terminal shall normally provide a PaBx Telephone Line that will enable communication via the Ship/Terminal communication link during routine unloading operations. However, communications between LNG Carrier and the Terminal are primarily carried out using a Terminal provided VHF radio.

Alternative communication will be via VHF radio on a pre-agreed Channel.

With references to SIGTTO Ship to Ship transfer guide ed. 2013 LNG Carrier and Terminal may evaluate if useful to fill up the following check list, unless the required information have been already covered :

- Checklist 1 -Pre-fixture information.
- Checklist 2 –Before operations commence.
- Checklist 3 –Before run-in and mooring.
- Checklist 4 –Before cargo transfer.
- Checklist 5 –Before unmooring.

Communication shall be confirmed on a frequent basis to verify the operation of the systems.

[See: Attachment 11.3 Ship/Terminal Safety Checklist](#)

All portable communications systems in use must be certified Intrinsically Safe and must comply fully with applicable safety requirements.

5.2 COMMUNICATIONS LINK

The primary system utilized to establish a means of communication between the LNG Carrier and the Terminal will be via either:

- *Fiber optic link or*
- *Copper cable (electrical) link.*

A backup pneumatic ESD link will also be available.

Depending on the LNG Carrier's systems, one primary and the Pneumatic ESD link will be fitted and tested in due time prior commencement of operations.

The fiber optic is utilized to transmit 4 channels of multiplexed communications between the Terminal and the LNG Carrier, together with Terminal/LNG Carrier and LNG Carrier/Terminal ESD signaling. The copper cable link shall also transmit all of the above, but on a dedicated pair of wires per signal.

The LNG Carrier's personnel will connect the fiber optic or electrical link and pneumatic link before unloading arms connection starts.

The fiber optic or electrical and pneumatic link will remain connected until the unloading arms are disconnected.

Following the disconnection of the fiber optic or electrical link, the LNG Carrier should continue to monitor VHF Ch. 15 /18.

In the event of a failure of a communications system providing the ESD / data link, all discharge operations shall be suspended until the fiber optic or electrical link is reestablished, or until such time that an alternative Communication/ESD system is established and agreed upon between the LNG Carrier and the Terminal Manager and approved by the Maritime Authorities.

Prior to any LNG Carrier calling for the first time (and as part of the Compatibility Study Process), the Terminal Operator and User will conduct a 'LNG Carrier/Terminal Compatibility Study'. During that survey any problems associated with communications will be identified and steps will be taken with the LNG Carrier and its owner to ensure that an adequate and compatible communication link

exists between LNG Carrier and Terminal

See the Cargo Handling Manual for details of the communication systems and pin configurations.

5.2.1 Communication Agreement

The Communication Agreement shall be completed and signed by the LNG Carrier Master during the pre-transfer meeting. This agreement defines the communications systems and procedures to be implemented between the LNG Carrier and the Terminal.

[See: Attachment 11.5 Communication Agreement](#)

6.0 Access & Security

6.1 LNG CARRIER ACCESS

The LNG Carrier's Master has the sole jurisdiction over controlling access to his LNG Carrier.

If required, the Terminal will operate its crane, properly certified for personnel transfer, as located beside the unloading arms.

It remains the responsibility of the LNG Carrier's Master to provide assistance on the LNG Carrier's main deck to enable the proper and safe access of transferred personnel.

6.2 SECURITY BERTH/LNG CARRIER ACCESS CONTROL

No person other than the pilots, customs officials, immigration officer, Ship's Agent, Maritime Authorities or Terminal Representative is allowed to board or disembark from an LNG Carrier until clearance has been obtained from the Maritime Authorities having jurisdiction over the Terminal and the LNG Carrier.

The Terminal Operator, among other things:

- ✓ *reserves the right to request that personnel produce personal identification,*
- ✓ *reserves the right to escort to or from the LNG Carrier any visitors or persons whose conduct may present a hazard to personnel or Terminal property,*
- ✓ *reserves the right in order to ensure that the Terminal Regulations are being observed to board the LNG Carrier at any time with a nominated person.*
- ✓ *has the sole responsibility of controlling access to the Terminal area and the Exclusion Zone. LNG Carrier crew personnel access to the Terminal **is not permitted** without prior approval from the Terminal Manager. If it is permitted, it will be **exclusively with** a Terminal personnel escort.*

6.3 LNG CARRIER EMERGENCY ESCAPE

The following pertains to emergency escapes:

A pilot ladder or accommodation ladder shall be rigged or positioned on the outboard side of the LNG Carrier. The accommodation ladder shall be swung outboard ready for immediate lowering in case an emergency escape is required.

The starboard side lifeboat, if fitted and unless it can depart from a stowed position with all personnel inside, shall be lowered to the embarkation level or be ready for immediate use in case of emergency.

The Terminal Representative will review with the LNG Carrier Master during the pre-transfer meeting emergency evacuation arrangements, including reciprocal arrangements in case of the need to evacuate the Terminal and remove the LNG Carrier from the berth.

6.4 SECURITY ISPS

All security related questions should be addressed to the Terminal Representative.

The Terminal Representative will act as "**deputy port facility security officer**" (DPFSO) and is authorized to sign the "Declaration of Security" which shall be signed also by the LNG Carrier security officer or the Master and will concur with the LNG Carrier security officer on any additional security measures in case the LNG Carrier or Terminal is at a security level other than 1.

The LNG Carrier could be at a higher security level than the Terminal, but never at a lower level.

[See: Attachment 11.10 pre-arrival ISPS Declaration of Security](#)

7.0 Safety

7.1 INTRODUCTION

The safety requirements have been developed based on OCIMF (ISGOTT), SIGTTO and other industry accepted standards. The LNG Carrier's personnel are responsible for the safety of the LNG Carrier. The LNG Carrier's Master and crew **MUST** take all necessary safety precautions (whether or not so advised by the Terminal Representative), keeping in mind the hazards of LNG discharge operations, weather conditions and any other circumstances requiring special care or caution.

7.2 REDUCED VISIBILITY

When visibility at the Terminal during offloading operations falls below 100 meters as determined by observation of a known fixed distance, the Terminal Manager and the LNG Carrier Master will jointly review the situation to ensure that the safety and integrity of the offloading operations are not being compromised and that appropriate safety measures are in place.

The safety measures may include but are not limited to:

- *Placing tugs at closer standby and*
- *Additional deck and berth personnel for monitoring purposes.*

The LNG Carrier's Crew and Terminal staff must not hesitate to:

- *Notify immediately the Terminal Operator LNG Carrier control room of any situation that may jeopardize the safety or integrity of the operation, and*
- *If required activate the ESD system,*
- *Report any situation that compromises the safety of the operation to the LNG Carrier's Master and to the Terminal Manager.*

7.3 EMERGENCY PROCEDURES AND RESPONSE

In addition to LNG Carrier specific emergency procedures, the Master shall take the following actions (from the first listed action to the last action) in the event of an emergency situation arising on the LNG Carrier or the Terminal:

- *Sound a continuous blast on the whistle*
- *Sound the general alarm*
- *Stop all cargo transfer and prepare to disconnect unloading arms*
- *Inform the Terminal Representative*
- *Initiate the LNG Carrier's emergency response procedure*
- *Inform the Maritime Authorities on [VHF channel []]*
- *If necessary, request mobilization of the tugs' firefighting capability (the Terminal will be responsible for informing all relevant functions within OLT and will arrange Guardian Vessel mobilization and for the Terminal's firefighting capability to be mobilized as required)*
- *Coordinate the fire fighting operations onboard and direct the use of official emergency teams*

If the fire cannot be controlled or contained or if the Terminal installation is seriously endangered, the Master and the Terminal Manager shall confer and determine the necessity of removing the LNG Carrier from the berth. Upon notification of any incident associated with the LNG Carrier, communications will be established between the Terminal Manager, the LNG CARRIER Master and Maritime Authorities to determine the appropriate response.

The following incidents may potentially occur while the LNG Carrier is alongside the facility (Non exhaustive list):

- *Fire/explosion*
- *Pollution*
- *Uncontrolled release of LNG or LNG vapour*
- *Man Overboard*

- *LNG Carrier out of position*
- *LNG Carrier related incidents, including, mechanical failure affecting cargo operations, accident/medical emergency, power failure and failure of ship's moorings*

The primary considerations are the safety of personnel and the protection of the integrity of the Terminal and the LNG Carrier. Quick response is essential in these situations and could require towing the LNG Carrier away from the Terminal.

For details on immediate specific actions to be taken:

[See: Attachment 11.11 Emergency Response Actions](#)

Subsequent actions to be taken will depend on how the particular incident develops. It may become necessary for the LNG Carrier to implement the OLT Crisis Management Plan if a 'crisis' (as defined therein) develops.

[See: Attachment 11.17 OLT Crisis Management Plan](#)

7.4 EMERGENCY MOORING RELEASE

The Terminal is fitted with a central emergency remote mooring hook release system.

The emergency remote mooring hook release system will be activated only in the case of an extreme emergency which places either the LNG Carrier or the Terminal at extreme risk. The emergency remote mooring hook release system may be activated from either the Terminal's control room or unloading arms cabin.

The LNG Carrier will only be released from the Terminal after consultation (if possible in the circumstances) with the LNG Carrier's Master, and upon agreement that the LNG Carrier shall maneuver away from the Terminal. In the event of an extreme emergency, the Terminal may activate the emergency mooring hook release system without consultation with the LNG Carrier's Master.

7.5 FIRE PREVENTION

Industry Standard practices and fire prevention measures shall be adhered to consistent with the Ship/Terminal Safety Checklist, including the following:

- *the LNG Carrier's fire control, safety plan and crew list must be posted adjacent to the starboard side pilot ladder/accommodation ladder and the accommodation entrance*
- *the LNG Carrier's water spray system must be available for use at all times*
- *the LNG Carrier's fire main system must be pressurized at all times*
- *all of the LNG Carrier's fire hoses shall be fitted with jet/spray branches to be available at each cargo tank dome area and at the cargo manifold area and shall be connected to the LNG Carrier's fire main system, of sufficient length, and ready for immediate use*
- *the LNG Carrier's portable dry powder fire extinguishers must be placed in an accessible place near the manifold area in operation*
- *the LNG Carrier's fixed dry powder system must be ready for immediate use, with control boxes opened for access*
- *all of the LNG Carrier's external doors, windows and portholes must remain closed*
- *the LNG Carrier's air conditioning and ventilator intakes likely to draw in air from the cargo area must be closed (however, air conditioning must be maintained on partial recirculation in order to maintain a positive pressure in the accommodation)*
- *the LNG Carrier's window type air conditioners must be disconnected from their power supply*
- *the use of LNG Carrier's radio installation is only authorized for receiving purposes*
- *the LNG Carrier's main transmitting aerials must be disconnected and earthed while unloading arms are connected to the LNG Carrier*
- *the use of the LNG Carrier's RADAR during cargo handling operations is prohibited*
- *portable and fixed electric and electronic devices and equipment used in the LNG Carrier's hazardous areas must be of approved type for such areas (for example EX) and satisfactorily*

maintained so as to ensure that their original certificates are not jeopardized

- *the use of Naked Lights is strictly prohibited*
- *smoking in the berth area is strictly prohibited and smoking on board the LNG Carrier is only authorized in the designated smoking areas, unless previously agreed upon during the pre-transfer meeting*
- *smoking and nonsmoking signs shall be displayed on board the LNG Carrier on arrival under the Master's authority*
- *hot work including hammering, chipping, and operations involving the use of any power tools are prohibited on board the LNG Carrier*
- *the use of mobile telephones and pagers is prohibited either within the Terminal or the LNG Carrier's hazardous areas, unless of an approved type (non approved types must be switched off throughout)*
- *mobile telephones and pagers may be used on board the LNG Carrier inside the accommodation area and with the Master's permission*

In addition, the LNG Carrier shall maintain a fire watch system, which includes routine monitoring of spaces and areas not continuously manned.

7.6 EMERGENCY TOWING LINES

The LNG Carrier is to deploy 'fire wires' on its offshore (starboard) bow and quarter, which shall be maintained at a height of approximately 3 meters above sea level at all times, and shall be rigged consistent with the recommendations found in OCIMF's "Mooring Equipment Guidelines".

7.7 PERSONAL PROTECTIVE EQUIPMENT

It remains the LNG Carrier's Master's responsibility to ensure that his crew wear appropriate personal protective equipment at all times on the LNG Carrier while it is located in the Exclusion Zone.

8.0 State of Readiness

8.1 STABILITY/DRAFT/TRIM

To enable safe cargo handling operations and emergency un-berthing, the Master is required to maintain appropriate draft, trim and list, and to retain sufficient positive stability, propeller and rudder immersion.

The maximum trim permitted is 1.0 meters by the stern, but always compatible with the unloading arms working envelope. Deviation from max allowed trim shall be discussed and agreed during compatibility process.

All LNG Carriers must conduct LNG cargo discharge and ballast operations simultaneously to minimize the exposed wind area of the LNG Carrier while moored.

NOTE: for custody transfer measurement the LNG Carrier is requested to arrive at the Terminal on even keel and upright. Such condition, if feasible, to be maintained also for cargo operation completion.

In case LNG carrier intends to perform Heel Out, the following points shall be strictly followed and accepted by LNGC:

Max acceptable trim astern 1m.

Max extra time acceptable for terminal 3 hours (extra time is to be intended as the time exceeding the normal discharge of the cargo of the relevant vessel, even if still within the discharge lay time).

Terminal shall be informed in advance regarding the expected draft necessary for heel out.

Mid ship draft and manifold elevation at ballast departure shall be in compliance with the ones declared in the compatibility process.

Terminal representative on board shall be informed during pre-discharge meeting about the procedure, draft and manifold elevation.

Terminal representative on board LNGC reserves the right to prevent or interrupt heel out operation at any time at his sole discretion for safety and /or technical/operational reason.

The acceptance can be given only when Terminal has a clear vision of met ocean forecast and considering the extension of time for discharging operation due to heel out (i.e. not sufficient time to unberth the LNGC , disconnect targeting spool pieces, redeliver the same to escort tug and remove fenders from terminal everything in safe condition).

8.2 DEFECTS AND DEFICIENCIES

Any defect or deficiency occurring in the LNG Carrier's manning, propulsion, LNG Carrier Cargo Equipment or other control systems or equipment during the LNG Carrier's stay at the Terminal must be immediately reported to the Terminal Representative.

8.3 REPAIRS AND MAINTENANCE

ANY REPAIR OR MAINTENANCE WORK (EITHER COLD OR HOT) THAT COULD IMPAIR THE SAFETY OF THE CARGO HANDLING OPERATIONS OR THE MANEUVERABILITY OF THE LNG CARRIER ARE STRICTLY PROHIBITED UNLESS THE MASTER HAS OBTAINED PRIOR WRITTEN PERMISSION AND A PERMIT TO WORK FROM THE MARITIME AUTHORITIES AND THE TERMINAL MANAGER.

Prior authorization from the Maritime Authorities and the Terminal Manager (72 hours before arriving at the Terminal) is required for:

- *Any hot work*
- *Enclosed space entry*
- *Repairs and maintenance that may temporarily reduce the LNG Carrier's fire fighting capability, readiness to maneuver or safety systems.*

Such exceptional authorization will not be granted during cargo handling operations. It will only be considered where unavoidable repair / breakdown occurs and may be conditional on the Master

ensuring that sufficient Tugs to move the LNG Carrier are in place, as a contingency measure if so required.

The Master shall advise the Terminal Operator of any intended maintenance planned during the LNG Carrier's stay at the Terminal.

8.4 CREW PREPAREDNESS READINESS

At all times sufficient Crew must be ready on board the LNG Carrier to ensure that the correct level of personnel is available to respond to any emergency situation that may occur, including emergency un-berthing.

8.5 ENGINE READINESS

Boilers, main engines, steering machinery and other equipment essential for maneuvering must be maintained ready for operations so as to enable the LNG Carrier to be un-berthed under her own engine power on short notice in case of emergency.

The LNG Carrier shall not be operated in unmanned machinery space mode at any time while alongside the Terminal or when navigating in the Exclusion Zone.

8.6 ENGINE SAFETY

TO PREVENT INADVERTENT OPERATION OF THE LNG CARRIER'S MAIN ENGINE WHILE THE UNLOADING ARMS ARE CONNECTED, THE TERMINAL WILL REQUEST THAT MAIN TURBINE STEAM INLET V/V SHALL BE CLOSED AND SECURED BY MEANS OF TURNING GEAR ENGAGED, AFTER THE ALL FAST DECLARATION BY THE LNG CARRIER MASTER AND PRIOR TO STARTING TO CONNECT THE UNLOADING ARMS.

The Terminal will give formal permission to the LNG Carrier to remove the seal as soon as the unloading arms are disconnected and clear of the LNG Carrier.

**THE LNG CARRIER MASTER SHALL ENSURE THAT THE ENGINE IS SUFFICIENTLY WARMED UP AND READY FOR A FULL RANGE OF OPERATIONS BEFORE UNMOORING OPERATIONS ARE COMMENCED.
AUTO SPIN IS TO BE OFF AND THE TURNING GEAR ENGAGED UNTIL UNLOADING ARMS ARE DISCONNECTED.
IT IS THE LNG CARRIER MASTER'S RESPONSIBILITY TO ADVISE THE PILOT IF THERE ARE ANY LIMITATIONS ON THE RANGE OF USE OF THE LNG CARRIER'S MAIN PROPULSION.**

9.0 Pollution Avoidance

9.1 INTRODUCTION

The LNG Carrier's Master is responsible for preventing any kind of pollution from LNG Carrier. This includes bunkers, LNG, bilge water, sewage, dirty ballast, plastics, garbage, or any other matter that results in the pollution of the sea or atmosphere. The Master must ensure that all applicable International Convention for the Prevention of Pollution from Ships (MARPOL) and Italian laws and regulations are observed.

The LNG Carrier must have in place a Shipboard Oil Pollution Emergency Plan (SOPEP) approved by the flag state and have records to substantiate that the Crew has received training in responding to emergency situations.

Any fines imposed for such pollution are for the LNG Carrier's account.

9.2 LEAKS AND POLLUTION PREVENTION

The LNG Carrier's Crew shall maintain a vigilant lookout to prevent and/or detect leaks or spillage during cargo handling operations.

Unloading arm connections to the LNG Carrier will be leak tested with the Terminal nitrogen supply prior to the commencement of cargo off-loading operations. The pressure used for this leak test will be agreed upon between the LNG Carrier's Master and the Terminal Representative and will be dependent upon the maximum expected operating pressure for the planned operation. The maximum/minimum allowed pressure in the unloading arm will be detailed in the Cargo Handling Agreement, in the form attached and duly signed by the authorized representative of the Master and the Terminal Representative.

[See: Attachment 11.4 Cargo Handling Agreement](#)

Any unused LNG Carrier cargo and bunker connections must remain tightly closed and blanked.

While alongside the Terminal, the internal transfer of bunkers is not permitted.

Deck scuppers, drain holes, and drip trays on the LNG Carrier within the vicinity of any potential pollution area must be suitably plugged and any accumulated water or effluent drained off as required.

9.2.1 Discharging Material Overboard

It is strictly prohibited to throw any material, papers, waste or goods either solid or fluid overboard.

9.2.2 Gas Freeing

Gas freeing of any of the LNG Carrier's tanks to the atmosphere is strictly prohibited in the Exclusion Zone.

9.2.3 Venting

Venting cargo vapor to the atmosphere is not permitted. The Master shall report all incidents of cargo vapor venting to the Terminal and take all necessary action to prevent accidental venting.

In the event of an emergency situation during which venting occurs, cargo handling operations will be immediately stopped.

9.2.4 Bilge and Sewage Discharge

The discharge of bilge and sewage effluents, oil, or any mixture containing oil to the sea is strictly prohibited. Bilge overboard valves shall be visibly locked and sealed shut.

The list of locked sealed valves is to be forwarded to the Terminal Representative.

9.2.5 Ballast Discharge

In accordance with the Maritime Safety Regulations and Italian laws and regulations, only clean segregated ballast may be discharged from the LNG Carrier when at the Terminal. A copy of the IMO ballast report shall be forwarded to the Terminal Representative.

9.2.6 Air Emission

An LNG Carrier while inside the Exclusion Zone or moored at the Terminal must ensure air emissions are in compliance with European Union Directive 2005/33/EC.

SPECIAL PROVISION: WHEN ENTERING WITHIN EIGHT MILES DISTANT FROM THE TERMINAL, PROPULSION AND ENERGY GENERATION SYSTEMS ON BOARD THE LNG CARRIER MUST USE ONLY BOIL OFF GAS AS FUEL; THIS IS APPLICABLE BOTH WHEN NAVIGATING AND WHEN ALONGSIDE THE TERMINAL. EXCEPTIONS ARE POSSIBLE ONLY FOR SAFETY, EMERGENCY, TECHNICAL FUNCTIONALITY OF LNG CARRIER EQUIPMENT AND / OR WITH SPECIFIC AUTHORIZATION FROM THE MARITIME AUTHORITIES.

9.2.7 Excessive Smoke

Excessive smoke emissions from the LNG Carrier's funnel and soot blowing are strictly prohibited.

The Terminal Operator shall immediately report to Maritime Authorities any infringement.

9.3 ACTION IN EVENT OF POLLUTION

In the event of pollution from the LNG Carrier, immediate notification **MUST** be given by the LNG Carrier Master to the Terminal Representative, the Maritime Authorities, OLT and to the Terminal Manager who will initiate the Terminal SOPEP Plan.

This does not relieve the LNG Carrier Master of his or her responsibility to activate the LNG Carrier emergency response plans and procedures.

In the event of infringements to pollution prevention rules, at the Terminal Operator's option, the LNG Carrier may be rejected until appropriate actions are taken by the LNG Carrier in order to avoid any further risk of pollution.

9.3.1 LNG Leakage

In the event of LNG leakage (including vapor release), the LNG Carrier's Crew shall immediately stop cargo transfer or activate the ESD system, as appropriate.

If a gas cloud forms and threatens the Terminal, the remote controlled water monitors and other water spray systems shall be used by the Terminal to control the gas cloud. If necessary, the Terminal personnel will be evacuated.

Operations may resume only when the cause of the leakage is definitely established and is completely secured so that it cannot recur.

In the event that LNG leakage occurs on the Terminal and/or unloading arms, the Terminal shall immediately request the LNG Carrier to stop cargo transfer or will activate the ESD system, as appropriate.

If the LNG leak endangers the LNG Carrier's structure, the water monitors on the standby Tugs and the Terminal shall assist in preventing sub cooling of the non-cryogenic structures of the LNG Carrier.

The LNG Carrier is required to maintain a water curtain at shipside in the unloading arms' area throughout the periods when the unloading arms are connected.

10.0 Cargo Operations

10.1 CARGO HANDLING AGREEMENT

The procedures for the intended cargo handling must be preplanned, discussed and agreed upon in writing using the attached form by the Terminal Representative and the LNG Carrier's Master prior to the commencement of operations.

[See: Attachment 11.4 Cargo Handling Agreement](#)

10.2 CONTROL AND SUPERVISION OF OPERATIONS

The LNG Carrier cargo control room shall be manned at all times and under the control of a competent officer.

The person(s) so appointed shall maintain communications with the Terminal Operator.

An efficient deck watch shall be maintained so that the mooring lines, tank deck and manifold are under constant observation.

10.3 LNG CARRIER / TERMINAL PRE-TRANSFER MEETING

Before the start of transfer operations, a "**pre-transfer meeting**" will be held onboard the LNG Carrier, in compliance with the Maritime Safety Regulations and the Cargo Handling Manual.

The Terminal Representative will coordinate this meeting.

ATTACHMENTS	IN AGREEMENT WITH
ATTACHMENT 11.3 SHIP/TERMINAL SAFETY CHECKLIST	LNG Carrier/Terminal
ATTACHMENT 11.4 CARGO HANDLING AGREEMENT	LNG Carrier/Terminal
ATTACHMENT 11.12 MASTER'S LETTER OF ACKNOWLEDGEMENT	LNG Carrier/Terminal
ATTACHMENT 11.5 COMMUNICATION AGREEMENT	LNG Carrier/Terminal
ATTACHMENT 11.6 EMERGENCY CONTACTS AND SIGNALS	LNG Carrier/Terminal
ATTACHMENT 11.10 ISPS DECLARATION OF SECURITY	LNG Carrier/Terminal

NOTE: a fully completed and signed copy of the 'Ship/Terminal Safety Checklist' shall be forwarded to the Maritime Authorities before cargo operations commence.

The designated responsible person(s) appointed by the LNG CARRIER Master to supervise the cargo handling operations on board the LNG Carrier shall attend this meeting representing the LNG Carrier.

The foregoing forms (provided as attachments to this document) will be given by the Terminal Operator to the LNG Carrier. These forms will be discussed, completed and agreed upon by LNG Carrier Master and the Terminal Representative during this meeting.

The purpose of this meeting is to ensure that all aspects of unloading and associated activities are clearly understood and documented using the Terminal pre-transfer meeting agenda.

The agenda for this meeting shall include the following:

- *confirmation of pre-arrival safety checks*
- *mooring requirements and checks*
- *status of cargo tanks on arrival (temperature and pressure)*
- *custody transfer and CTMS status*
- *connection and disconnection of unloading arms*
- *testing of ESD system*
- *unloading arms cool-down procedures*
- *unloading arms working envelope requirements and limitation*
- *unloading procedures and schedule*
- *LNG Carrier cargo heel requirements and stripping requirements*
- *partial fill requirements and duration cargo tanks will be in this condition*
- *ballasting and draft requirements*
- *weather forecast update*
- *communications with Terminal Operator*
- *work permit requirements*
- *Tugs*
- *Guardian Vessel duties*
- *emergency procedures, including unmooring operations and evacuation plans*
- *ESD*
- *security arrangements*
- *no smoking areas*

10.4 EMERGENCY SHUTDOWN

Justifications for activating an ESD include any emergency situations such as:

- *fire*
- *explosion*
- *LNG leakage or spillage*
- *mooring failure*
- *failure of strategic equipment*
- *any other event likely to endanger the Terminal, LNG Carrier, or their equipment or personnel or the environment*

The Terminal Representative may direct the LNG Carrier to stop cargo operations and to prepare for emergency unloading arm and LNG Carrier release.

The goal of the ESD system is to prevent or minimize damage to personnel, property, and the environment.

10.5 ESD

To minimize the potential hazard of an LNG release, the LNG transfer system is protected by three emergency shutdown steps: ESD0, ESD1 and ESD2.

ESD 0

ESD 0 allows the rapid shutdown of the Terminal's compressors and master gas valves, and initiates the ESD1 procedure.

ESD 1

ESD 1 allows in a controlled way shutdown of the LNG Carrier's transfer pumps operation during an emergency and closure of the Terminal and LNG Carrier's isolation shutdown valves.

ESD 2

ESD 2 automatically uncouples the unloading arms when the arms are overextended. This emergency situation (e.g. potential loading arm failure) generally occurs due to the LNG Carrier moving outside the design envelope of the unloading arms.

After an incident, a joint investigation of the incident and a survey of the LNG Carrier may be carried out by the LNG Carrier's Master, the Terminal Representative, the Terminal Manager, Maritime Authorities and Terminal Operator's designated personnel.

Reference: [See Cargo Handling Manual](#)

10.6 RESUMPTION OF OPERATIONS

When an emergency is over and the situation is secure, the initiator of the ESD should notify all stations accordingly and operations shall be resumed only when safe to do so and authorized by Maritime Authorities. Details of the occurrence shall be entered on the 'Emergency Shutdown Report' form, and the cause is to be investigated.

In some cases the LNG Carrier may be required to leave the Terminal.

[See: Attachment 11.8 Emergency Shutdown Report form](#)

OPERATIONS MAY NOT RESUME UNTIL IT IS DETERMINED THAT IS SAFE TO DO SO. OPERATIONS MAY RESUME ONLY WITH THE MARITIME AUTHORITIES' PERMISSION AND WITH THE TERMINAL MANAGER'S AND LNG CARRIER'S MASTER'S AGREEMENT AS DOCUMENTED ON THE EMERGENCY SHUTDOWN REPORT.

10.7 LIQUID AND VAPOR ARMS CONNECTION ⁽¹⁾

LNG unloading will normally be carried out through three liquid unloading arms and one vapor return arm on the berth, unless previously agreed upon between the LNG Carrier Master and the Terminal Representative during the pre-transfer meeting.

The connection assistance system (Spool Pieces with guiding cones) should be embarked onboard the LNG Carrier when the Terminal Representative joins the LNG Carrier.

Reference: [see Cargo Handling Manual](#)

The LNG Carrier shall provide personnel for the preparation of the unloading arm connection assistance system under the coordination of the Terminal Representative, including their connection of Spool Pieces to the LNG Carrier's manifolds.

The Master shall ensure that the LNG Carrier's manifolds are ready for connection immediately after completion of berthing and that the LNG Carrier's manifold water curtain is ready to be started immediately after the completion of unloading arms connection.

To allow use of the cable guided connection system and avoid interference with the unloading arm, the LNG Carrier's manifold handrail should be lowered or removed prior to unloading arm connection and shall be reinstalled after disconnection.

The liquid unloading arms and the vapor return arm will be connected by the Terminal Operator upon the LNG Carrier's confirmation of readiness and after the Terminal Operator is satisfied that the LNG Carrier is in compliance with the requirements of the 'LNG Carrier/Terminal Safety Checklist'.

After connection, the Terminal will purge the liquid and vapor arms with nitrogen (O₂ Content < 2% By Volume).

Reference: see the Cargo Handling Manual, and pub. SIGTTO 'LNG transfer Arms and manifold draining, Purging and Disconnection Procedure.

⁽¹⁾ LNG Carrier's manifold must be in compliance with OCIMF 'Manifold Recommendation for Liquefied Gas Carriers'.

10.8 CARGO MEASUREMENTS

The LNG Carrier's Master shall ensure that the cargo measurements are conducted in compliance with the "**Terminal LNG Measurement Manual**" provided by the Terminal Operator.

The LNG Carrier's custody transfer measurement system shall be in compliance with the requirements of the Terminal LNG Measurement Manual, including:

- *calibration of LNG tanks*
- *tank gauge approval and accuracy*
- *liquid level gauging device accuracy, both primary and auxiliary systems for offshore use*
- *temperature gauging devices*
- *pressure gauging devices*

The Terminal Representative will be present and witness LNG measurement at the start and end of transfer operations.

The Terminal Operator reserves the right to place a certified cargo surveyor on board the LNG Carrier.

Cargo surveyor shall be informed by LNGC (paper can be sent through LNGC agent to cargo surveyor before joining on board) about the procedure and risk evaluation during transfer by mean of pilot ladder/ combination ladder.

10.9 UNLOADING RATES

The Master and the Terminal Representative shall agree on the maximum transfer rate at the pre-transfer meeting. The agreed transfer rate shall be noted in the cargo handling agreement. The LNG Carrier Master and Terminal Operator will monitor the transfer rates and the discharge pressure at Terminal's loading headers throughout all stages of cargo operations.

The Terminal Operator may request a reduction in transfer rates before changing tanks or at any time during the off-loading operations. The agreed upon normal standby notice period will be observed for normal rate reduction requests.

10.10 MAXIMUM LNG CARGO TANK VAPOR PRESSURE

The LNG Carrier's Master shall make all reasonable efforts to limit the vapor pressure in the cargo tanks to 140 mbar(g).

The LNG cargo will not be considered to be off-specification LNG due solely to the cargo tank vapor pressure being above 140 mbar(g); however, the Terminal Operator may, in its sole discretion:

- (i) declare the LNG Carrier to be not ready for unloading
- (ii) stop or delay the commencement of discharge of LNG until the vapor pressure is reduced below this limit
- (iii) stop the LNG vapor transfer
- (iv) increase the discharge rate if feasible and safe for the Terminal and LNG Carrier

10.11 LIQUID AND VAPOR ARMS DISCONNECTION

The liquid unloading and vapor return arms will be drained to be free of LNG and purged with nitrogen (hydrocarbon content < 2% by volume) by the Terminal Operator prior to disconnection.

The LNG Carrier's Master shall ensure that the LNG Carrier's manifolds and cargo lines are ready for draining, purging, and disconnecting operations.

The liquid unloading and vapor return arms will be disconnected and stowed one by one by the Terminal Operator. The LNG Carrier's crew shall provide assistance during arm draining/purging and disconnection. The LNG Carrier Master shall ensure that steps are taken to prevent inadvertent operation of the LNG Carrier's ESD/ manifold valves that may result in a release of LNG or vapor through the manifold at the time of disconnection. The LNG Carrier's crew should remain at a safe distance from the unloading arms while they are being maneuvered by the Terminal Operator. To allow use of the cable guided connection system and avoid interference with the unloading arm, the LNG Carrier manifold handrail shall be lowered or removed prior to disconnection of the unloading arms.

After unmooring the Spool Pieces shall be disconnected by the LNG Carrier's crew from the LNG Carrier manifold and lowered to an approved Terminal support vessel or onboard the Terminal as instructed by the Terminal Representative.

Reference: see the Cargo Handling Manual, and pub. SIGTTO ' LNG transfer Arms and manifold draining, Purging and Disconnection Procedure.

10.12 SHIP / SHORE POST-TRANSFER MEETING

A post transfer meeting will be held on the LNG Carrier, in compliance with the Maritime Safety Regulations and the Cargo Handling Manual.

The Terminal Representative will coordinate this meeting.

The designated responsible person(s) appointed by the LNG Carrier's Master to supervise the cargo handling operations on board the LNG Carrier shall attend this meeting.

During this meeting the Terminal Representative will discuss with the LNG Carrier Master any observations, concerns or issues that should be addressed by the LNG Carrier prior to its return to the Terminal.

11. Conditions of Use and Appendices

CONDITIONS OF USE

1 Acceptance of LNG Carrier

All LNG Carriers calling at the Terminal are first subject to acceptance by OLT and must be in compliance with **International Standards** (which means the standards and practices from time to time in force applicable to the ownership, design, equipment, operation or maintenance of LNG Carriers established by the rules of a classification society (within the International Association of Classification Societies (**IACS**) or as may otherwise be acceptable to OLT), the conventions, rules, guidelines and regulations laid down by the International Maritime Organization (**IMO**), the Oil Companies International Marine Forum (**OCIMF**), International Group of Liquefied Natural Gas Importers (**GIIGNL**), Society of International Gas Carriers and Terminal Operators (**SIGTTO**) (or any successor body of the same) and any other internationally recognized agency or organization with whose standards and practices it is customary for international operators of such vessels or terminals to comply, including holding a valid operational OCIMF Ship Inspection Reporting system (**SIRE**) certificate) and must satisfy the Terminal's

- *vetting requirements (**Reference:** see the Approval & Vetting Procedures)*
- *berth compatibility requirements*
- *insurance liability requirements*

OLT's decision whether to allow an LNG Carrier to berth at the Terminal may also depend upon any of the prevailing or forecasted sea and weather conditions, as well as the size, trim, and handling qualities of the LNG Carrier.

Should an LNG Carrier be rejected or delayed by OLT for any reason, OLT will supply the LNG Carrier's Master or the Ship's Agent with written reasons for the rejection or delay.

The Terminal Manager is authorized by OLT to determine the continued eligibility of an LNG Carrier to remain at the Terminal.

OLT reserves the right at all times to direct an LNG Carrier to leave the Terminal if the Terminal Representative or Terminal Manager determines that the continued presence of the LNG Carrier poses a threat to the Terminal, safety or the environment. In such circumstances, where possible the LNG Carrier's Master will first be consulted.

In case any LNG Carrier calling at the Terminal does not comply with the International Standards, as above stated and any Terminal-specific criteria, that LNG Carrier will, prior to its approval, be subject by OLT to a "**Non-Standard Compatibility Process**". This Non-Standard Compatibility Process will be specifically tailored for the individual LNG Carrier and may include, for guidance only, a dedicated study of the unloading arms connection, mooring analysis, hydrodynamics etc. Time to perform such Non-Standard Compatibility Process may vary on a case-by-case basis. All costs in performing said Non-Standard Compatibility Process to be for User's account.

Reference: see the Approval & Vetting Procedures sec. 6.1

2. Master's Responsibility

The Master of an LNG Carrier calling at the Terminal is solely responsible on behalf of its owners, operators or charterers for the safe navigation and operation of their LNG Carrier.

Nothing contained in the Terminal Regulations relieves a Master of his responsibilities including taking precautions to prevent:

- *fire / LNG release*
- *tank over pressurization or vacuum*
- *environmental pollution*
- *damage to the Terminal, including*

- *damage to the mooring and fendering system*
- *damage to the unloading arms system*

The Master remains at all times fully responsible for the LNG Carrier and for its complement, including crew and any supernumeraries.

Neither the Terminal nor OLT (including its servants, agents and contractors) shall in any way be responsible for the availability, provision, performance or operation of Tugs or other support vessels contracted by or on behalf of the LNG Carrier.

3. Agency

OLT, the Terminal and its personnel do not perform any LNG Carrier agency functions.

The LNG Carrier's owner or the LNG Carrier Operator must arrange for a Ship's Agent or any other local agency services. It is recognized that a representative of the agency may need to board or be onboard the LNG Carrier.

4. Government Officials

It is recognized that Italian government officials may need to attend onboard the LNG Carrier within the Exclusion Zone and that these may include:

- *Customs Officer Immigration Officer*
- *Maritime Authorities' representative / Coast Guard*

The LNG Carrier or the Ship's Agent should advise the Terminal when such need arises.

5. Anti Pollution

It is the responsibility of the LNG Carrier's Master to prevent pollution and to ensure that the LNG Carrier complies with all applicable laws and regulations in relation to cargo, bunkers, bilge water, sewage, dirty ballast, plastics, garbage, or any other materials that may cause pollution of the sea or atmosphere.

The LNG Carrier must have in place a Shipboard Oil Pollution Emergency Plan (SOPEP) approved by its flag state and have records to substantiate that the personnel onboard have received training and are proficient in responding to emergency situations.

Any fines imposed by any administration or government for pollution arising from or caused by the LNG Carrier or for which the LNG Carrier is liable for under any applicable law, shall be for the account of and remain with the LNG Carrier (including its owner, operator, manager or Master).

6. Terminal hours of operation

Subject to the prevailing and expected sea and weather conditions, and at the full discretion of the Terminal Manager, OLT and the Harbor Master:

- berthing of LNG Carriers at the Terminal is restricted to daylight hours only, save if permitted otherwise by the Maritime Authorities
- off-loading operations at the Terminal from LNG Carriers may be conducted at any hour of the day or night
- un-berthing of LNG Carriers from the Terminal may be conducted at any hour of the day or night

Note: the above may also be subject to the availability of Pilot(s) and support vessels to assist the LNG Carrier, save where permitted otherwise by the Maritime Authorities.

7. Marine Terminal Closure

Any decision regarding the opening and closing of the Terminal, due to adverse prevailing or expected sea or weather conditions or for any other operational reason, is made solely at the discretion of the Terminal Manager. If the Terminal is closed, OLT that will subsequently provide a waiting LNG Carrier with a written notice of the times during which the Terminal was closed.

LNG Carriers required to leave the Terminal or the Exclusion Zone during periods of closure must maintain contact with the Terminal via VHF so as to be ready and available when the Terminal reopens.

Neither the Terminal nor OLT (including its servants, agents and contractors) shall in any way be liable for any costs incurred as a result of delay, suspension or refusal to permit cargo operations in relation to this article 7.

8. Pilotage

All berthing, mooring, and unmooring operations within the Exclusion Zone are to be conducted with the Maritime Authorities' approved Pilot(s) onboard, except in emergency situations or when the absence of a Pilot is permitted by the Maritime Authorities.

Notwithstanding the presence of a Pilot, the Master always remains in command of the LNG Carrier and responsible for its safe navigation and operation.

Neither the Terminal nor OLT (including its servants, agents and contractors) shall in any way be responsible for the availability, provision or performance of Pilots.

9. Drugs and Alcohol

As part of the prequalification requirements before the LNG Carrier is permitted to call at the Terminal, the owners or operators of the LNG Carrier must have in place an effective drug and alcohol abuse policy, a copy of which must be posted onboard.

This drug and alcohol abuse policy must meet or exceed the standards specified in the OCIMF 'Guidelines for the Control of Drugs and Alcohol Onboard LNG Carrier'.

Whilst the LNG Carrier is within the Exclusion Zone, this drug and alcohol abuse policy must be strictly observed and the LNG Carrier's Master must ensure that no restricted drugs (other than those in the medical locker) are onboard and that no alcohol is used or is available for use.

Note: the LNG Carrier's crew is reminded that they must have a zero blood alcohol level

10. Visitors attending the LNG Carrier

The LNG Carrier (including its owners, operator or Master) shall be responsible for ensuring that all visitors attending within the Exclusion Zone, including representatives of Users, Maritime Authorities, independent surveyors and Ship's Agents, fully comply with the Terminal Regulations and other procedures.

It is not possible to use Terminal dedicated tugs and crew boat in case the LNG Carrier needs to perform crew changes, boarding supplies/spare parts, boarding company superintendent or vetting inspectors, and any other services. In case the LNG Carrier needs the above-mentioned services, the LNG Carrier shall inform the LNGC agency that will contact the dedicated services of the port of Livorno.

The Terminal Representative and any Terminal or OLT personnel that need to attend or remain onboard the LNG Carrier during off-loading operations must to the extent possible be provided with food and accommodation of the standard usually provided for the LNG Carrier's senior officers.

11. Removal of Wrecks

If the LNG Carrier, or any part thereof sinks within the Exclusion Zone or otherwise becomes, in OLT's opinion, an obstruction or danger to the Terminal or any part of its associated subsea

infrastructure, including off-take pipeline, then OLT in its sole discretion:

- may require the LNG Carrier's owners to proceed forthwith to remove the obstruction or danger
- is fully empowered to take such steps as OLT deems appropriate to remove the obstruction or danger, including acting in the capacity as agent for the LNG Carrier (including its owners, operator or Master)

Any expenses incurred as a result of such removal shall be recoverable from the LNG Carrier (including its owners, operator or Master), except to those expenses which have been caused solely and directly by the negligence of OLT (including its servants, agents and contractors).

12. Provision of services

12.1 Compliance with laws: all services, facilities and assistance provided by or on behalf of OLT its parent companies, subsidiaries, or affiliates, or its or their servants, agents, or contractors, their parent companies, subsidiaries, or affiliates, or its or their servants, agents, or contractors whether or not any charge is made by OLT therefore, are provided subject to the Terminal Regulations and all applicable laws and regulations for the time being in force.

12.2 Terminal Representative on LNG Carrier: the services of the Terminal Representative are provided to the LNG Carrier with the express understanding and condition that the Terminal Representative becomes for such purposes the servant of the LNG Carrier (including its owners, operator and charterers) and neither the Terminal or OLT (including its servants, agents and contractors) shall in any way be liable for any loss, damage or personal injury (of any nature whatsoever including death) incurred by any person whomsoever, resulting from or in any way contributory to or connected with, the advice or assistance given or for any action taken by the Terminal Representative, whether negligent or otherwise.

12.3 LNG Carrier navigation: in all circumstances the Master of any LNG Carrier shall remain solely responsible on behalf of its owners for the navigation and operation of the LNG Carrier. Except in relation to gross negligence or willful misconduct, neither the Terminal or OLT (including its servants, agents and contractors) shall in any way whatsoever be responsible or liable for any contribution with respect to any loss, damage, or delay from whatsoever cause arising whether directly or indirectly in consequence of any assistance, advice, or instructions whatsoever given or tendered in respect of any vessel, whether by way of the provision of navigation facilities (including berthing aids) or otherwise howsoever.

13. Liabilities and indemnities

13.1 Whilst reasonable care is taken to ensure that the Terminal is safe, devoid of defect, fit for service and suitable for receiving LNG Carriers or other permitted vessels, no guarantee, express or implied, of such safety and suitability is given and every LNG Carrier shall be and remain fully at the risk of its owners, operator, charterers and Master thereof.

13.2 Neither the Terminal nor OLT (including its servants, agents and contractors) shall be held responsible or liable for any contribution with respect to any loss, damage, personal injury (of any nature whatsoever including death) or delays whatsoever that may be sustained by or occur to the LNG Carrier (its owners, operators, charterers, Master, crew or cargo) or to any third party by whomsoever and by whatsoever cause, unless it is caused solely and directly by their own negligence.

13.3 If in connection with or by reason of the use of the Terminal by the LNG Carrier any loss or damage (including any loss of profit consequent upon such damage) is caused to the Terminal, or personal injury (of any nature whatsoever including death) caused upon any person aboard the Terminal, or delay of whatsoever nature is caused to the operation of the Terminal, due to whatever reason and irrespective of whether there has been any negligence or default on the part of the LNG Carrier (including its owners, operators and Master), in any such event the LNG Carrier shall hold the Terminal and OLT harmless from and indemnified against all such loss (including any loss of profit consequent upon such damage), damage, personal injury and delay sustained as consequence thereof, unless the same has been caused solely and directly by the negligence of the Terminal or OLT.

13.4 The LNG Carrier (including its owners, operators and Master) shall hold the Terminal and OLT (including its servants, agents and contractors) harmless from and indemnified against all and any

claim, damages, costs and expenses arising whether directly or indirectly out of any loss, damage, personal injury (of any nature whatsoever including death) or delay of whatsoever nature caused to any third party by the LNG Carrier or by her owners, her Master or crew or by any other servant or agent of her owners unless the same arose from the sole and direct negligence of the Terminal or OLT.

13.5 Excluding those losses under clause 13.3 which are a direct result of damage caused to the Terminal neither the LNG Carrier (including its owners, operators and Master), the Terminal or OLT (including its servants, agents and contractors) shall be responsible for indirect or consequential damages.

14 Limitation of Liability

14.1 The LNG Carrier (including its owners, operators and Master), shall not be liable with respect to any claim under article 13, for a sum exceeding the amount of one hundred and fifty million (150,000,000) United States Dollars per event. It is expressly agreed that this is the maximum liability of either party to the other party under article 14.

14.2 For any claim other than those specified in paragraph 14.1, including but not limited to those under articles 11 and 16, neither the LNG Carrier (including its owners, operators and Master) nor the Terminal and OLT (including its servants, agents and contractors), as the case may be, shall be deprived of any right they may have to limit their liability in accordance with any applicable law for the time being in force. In particular, both:

(i) the LNG Carrier (including its owners, operators and Master); and

(ii) the Terminal and OLT (including its servants, agents and contractors),

shall be entitled to limit their liability in accordance with the "1996 London Protocol to amend the Convention on Limitation of Liability for Maritime Claims of 19 November 1976" whether or not the same is applicable under the provisions of the Italian Maritime Code.

15. Changes to the Conditions of Use

By signing these Conditions of Use, the LNG Carrier (including its owners, operator and Master) consents to the Conditions of Use then in force and any change that:

- has been already scheduled to come into force and for which advance notice has been given before or at the signing of the Master's Letter of Acknowledgment (attachment no. 11.12 to the Terminal Regulation and Information Booklet).
- arise from the coming into force of new legal or statutory provisions or regulations issued by the Maritime Authorities or other competent bodies that have, or may have, a direct or indirect influence on the Terminal or its operation; such new provisions or regulations shall be applied fully from the date of their entry into force

Where changes to any part of the Conditions of Use are made, no compensation of any sort shall be due.

16. Pollution

The LNG Carrier shall be entered with the International Tanker Owners Pollution Federation Limited (**ITOPF**). For any oil pollution caused by the LNG Carrier, its Master, or crew, the LNG Carrier and its owners shall protect, defend, indemnify, and hold harmless OLT from and against any loss, damage, liability, suit, claim, or expense arising there from.

17. Parties and related parties.

It is hereby expressly agreed that no servant or agent of OLT shall be under any liability whatsoever for any loss, damage, or delay of whatsoever kind arising or resulting directly or indirectly from any act of neglect or default on its part while acting in the course of or in connection with its employment, and without prejudice to the generality of the foregoing provisions in this clause, every exemption, limitation, condition, and liberty herein contained and every right, exemption from liability, defense, and immunity of whatsoever nature applicable to OLT or to which OLT is entitled hereunder shall also be available and shall extend to protect every such servant or agent of OLT acting as aforesaid, and for the purpose of all the foregoing provisions of this clause OLT is or shall be deemed to be acting as agent or trustee on behalf of and for the benefit of all persons who are or might be its servants or agents from time to time, and all such persons shall to this extent be or be deemed to be parties to this agreement.

18. Governing Law and Jurisdiction

The Terminal Regulations, including these Conditions of Use, are governed by Italian law and any dispute arising out or in connection with the Terminal Regulations will be exclusively referred to the court of Milan.

Attachment 11.0 LNG CARRIER FINAL ACCEPTANCE VISIT

INSTRUCTIONS FOR COMPLETION:

The 'Final Acceptance Visit' checklist is to be completed by the Terminal Representative after boarding the LNG Carrier and prior to entering the Exclusion Zone and acknowledged by the LNG Carrier's Master.

The 'Final Acceptance Visit' is performed to confirm the acceptance of the LNG Carrier to call for Pilots / Tugs, in order to proceed alongside the Terminal.

- All the items should be '**CHECKED**' and entries made.
- Each item shall be initialed by the responsible person in the appropriate column.
- In the event of a negative answer that could adversely affect the mooring/unloading operations and after consultation with the Terminal Manager, OLT and Maritime Authorities, the LNG Carrier could be denied permission to moor or mooring will only be permitted to occur after taking the necessary countermeasures/precautions.
- The checklist shall be signed by the Terminal Representative and by the LNG Carrier Master or his/her representative.
- Once the 'Final Acceptance Visit' checklist is completed satisfactorily, the Terminal Representative will inform the Terminal Manager, the Maritime Authorities and OLT.
- If the LNG Carrier is not accepted the '**Rejected Report**' shall be completed.

DATE:			
LNG Carrier name:		Date:	
Date of Arrival: (NOR):		Cargo Nr.	
Master:		Terminal Representative:	
ITEMS / DESCRIPTION	IN COMPLIANCE (initials)	NOT IN COMPLIANCE (initials)	REMARKS
1. Verification that the requested LNG Carrier Master declaration on the use of boil off Gas has been transmitted to Harbor Master in compliance with Ordinance n.6/2014 requirements			
2. Examination of mooring plan agreed during the LNG Carrier / Terminal Compatibility Process versus the on board mooring arrangement and equipment.	<input type="checkbox"/>	<input type="checkbox"/>	Incl. verification of readiness
3. Visual inspection of mooring equipment.	<input type="checkbox"/>	<input type="checkbox"/>	
4. Visual inspection of mooring wires or synthetic tails and connections and related accessories (messengers, heaving lines etc.), verification of compliance with Terminal requirements for mooring, evidence of existing and valid test certificates.	<input type="checkbox"/>	<input type="checkbox"/>	If the test certificates are not physically verified the LNG Carrier Master shall confirm the completeness and correctness of the certificates
5. Visual Inspection of lifting equipment for status and readiness to load and install on board the targeting Spool Pieces at LNG Carrier manifolds.	<input type="checkbox"/>	<input type="checkbox"/>	
6. Cargo manifolds and vapour connection readiness and in compliance with the Terminal requirements. Identification of spotting line.	<input type="checkbox"/>	<input type="checkbox"/>	

7. Manifold service platform readiness for loading arms connection. Confirmation of collapsible or removable handrails at manifolds to allow guide wires connection for MLA.	<input type="checkbox"/>	<input type="checkbox"/>	
8. ESD link compliance with Compatibility Study Process exchange data.	<input type="checkbox"/>	<input type="checkbox"/>	
9. External communication compliance with Terminal requirements.	<input type="checkbox"/>	<input type="checkbox"/>	
10. LNG Carrier's correct understanding of Terminal environmental operational parameters and limits.	<input type="checkbox"/>	<input type="checkbox"/>	
11. Availability of the Terminal Regulations on board the LNG Carrier.	<input type="checkbox"/>	<input type="checkbox"/>	
12. LNG Carrier's understanding of unloading arms operational envelope and alarms.	<input type="checkbox"/>	<input type="checkbox"/>	
13. Confirm with Master "No material deficiencies with any LNG Carrier Cargo Equipment" and related CTM, valves control, loading calculator etc...	<input type="checkbox"/>	<input type="checkbox"/>	
14. Confirm the cathodic protection system switched off (fwd + aft) during approach and stay alongside the Terminal	<input type="checkbox"/>	<input type="checkbox"/>	
15. Confirm with the Master "No material deficiencies with engines and navigational equipment".	<input type="checkbox"/>	<input type="checkbox"/>	

☐ LNG CARRIER ACCEPTANCE CONFIRMED

☐ LNG CARRIER REJECTED (SEE "REJECTED REPORT" ATTACHED)

DECLARATION

We have checked, where appropriate jointly, the items of the checklist and have satisfied ourselves that the entries we have made are correct to the best of our knowledge.

If, to our knowledge, the status of any item changes, we will immediately inform the other party.

FOR TERMINAL:	FOR LNG CARRIER:
Name: _____	Name: _____
Position: Terminal Representative _____	Rank: _____
Signature: _____	Signature: _____
Date: _____	Date: _____
Time: _____	Time: _____

Attachment 11.1**"REJECTED REPORT"**

DATA:			
LNG Carrier name:		Port of Registry:	
IMO Number:		Owner:	
Date:		Time:	
Master:		Terminal Representative:	

DESCRIPTION OF NON COMPLIANCES FOUND DURING "FINAL ACCEPTANCE VISIT"	
1.	
2.	
3.	
4.	
5.	

DECLARATION

The undersigned Terminal Representative declares the LNG Carrier.....
to be **not** acceptable for berthing and unloading at the Terminal.

FOR THE TERMINAL

Stamp:

.....
Terminal Repr. (Signature)

.....
Terminal Repr. (Name + Function)

FOR LNG Carrier:

Stamp:

.....
SS / MV: (Name LNG Carrier)

.....
Master (Signature)

.....
Date + Time Master (Name)

Attachment 11.2 PRE ARRIVAL INFORMATION

Items to be reported		
1.	LNG Carrier Name + Call Sign:	
2.	Port of Registry:	
3.	Name of Master:	
4.	GRT/NRT:	
5.	Arrival Displacement:	
6.	Summer Deadweight (MT):	
7.	Length Overall (m):	
8.	Draft Fore and Aft on Arrival (m):	
9.	Draft Fore and Aft on Departure (m):	
10.	Any LNG Carrier defects affecting cargo operations or maneuvering / mooring ability:	
11.	P&I Club name and validity of cover:	
12.	Details of pollution cover:	
13.	Last 3 Ports of Call (incl. security level)	
14.	Is the gas detection system fully operational?	Yes / No
15.	Is the IG-system fully operational?	Yes / No
16.	Are void spaces gas free (incl. barriers)?	Yes / No

17.	Are smoke/fire detection and fixed fire extinguishing systems fully operational?	Yes / No	
18.	Quantity of cargo nominated for discharge (m³):		
19.	Size, rating and standards of cargo manifold connection (m):		
20.	Distance of centre manifold from the bow and distance of spring line fairleads from the centre of the manifolds (m):		
21.	Height of centre line of manifold above the keel (m):		
22.	Distance between manifold flanges centres (m):		
23.	Distance of manifold from ship's side (m):		
24.	Distance from manifold face to first full restraining bracket (m):		
25.	Maximum unloading rate (m³/h):		
26.	Anticipated unloading time (h):		
27.	Is ESD system fully operational? Note date of last test:	Yes / No	Date:
28.	Is overfill protection system operational? Note date of last test:	Yes / No	Date:
29.	Are remotely operated manifold valves operated through a complete open/close cycle?	Yes / No	
		Yes / No	
	Are manifold valves fully operational (hydraulic + manually)?		
	Advise valve type: Advise actual closing time (sec):	Vapour:	Liquid:

30.	Has main engine been tested astern?	Yes / No
31.	Bow-thruster tested and stand by prior pilot boarding station (if applicable):	Yes / No
32.	Does LNG Carrier comply with ISM Code?	Yes / No
33.	Validity of ISM DOC/SMC and issuing authority	
34.	Copy of up-to-date "SIRE" officer matrix attached? (Attach to this form)	Yes / No
35.	Confirm receipt of OLT's 'Terminal Regulations and Information Booklet', 'Port Regulations' and other Terminal Manuals:	Received / Not Received
36.	LNG Carrier Inmarsat contact details:	Tel. No.:
		Fax No.:
		email:
37.	LNG Carrier agent and contact details:	
38.	LNG Carrier Operator and emergency contact details:	
39.	SSO contact information:	

40.	CSO contact information:	
41.	Date ISSC issued and issuing authority:	

ALLEGATO 11.3 CHECKLIST di SICUREZZA della NAVE/del TERMINAL
ATTACHMENT 11.3 SHIP/TERMINAL SAFETY CHECK LIST

(Capitolo 26.3 ISGOTT- Guida internazionale per la sicurezza delle navi petroliere e dei terminal-, quinta edizione)

(Chapter 26.3 ISGOTT, 5th Edition)

ISTRUZIONI PER LA COMPILAZIONE:

INSTRUCTIONS FOR COMPLETION:

Per la sicurezza delle operazioni, occorre che a tutte le domande sia data risposta affermativa

The safety of operations requires that all questions should be answered affirmatively

- Nel caso in cui non sia possibile rispondere affermativamente, occorre fornire una motivazione e
If an affirmative answer is not possible, the reason should be given and
 raggiungere un accordo tra la Nave GNL e il Terminale con riferimento alle precauzioni che dovranno
agreement reached upon appropriate precautions to be
 essere necessariamente adottate. Nel caso in cui una qualsiasi domanda sia ritenuta non applicabile,
taken between the LNG Carrier and the Terminal. Where any question is not considered to be applicable,
 dovrà essere inserita una nota giustificativa nella colonna delle note. Linee guida dettagliate per la
a note to that effect should be inserted in the remarks column. Detailed guidelines for
 compilazione della checklist possono essere reperite nell'Appendice 3 dei "Principi di trattamento del
completing this checklist are contained in Appendix 3 of SIGTTO's "Liquefied Gas Handling Principals
 gas liquefatto sulle navi e nei terminal" (Liquefied Gas Handling Principals on Ships and in
 Terminals", SIGTTO).
on Ships and in Terminals".
 La presente checklist dovrà essere compilata durante la riunione che precederà le operazioni di scarico,
This check-list is to be completed during the pre-discharging meeting,
 eccezion fatta per la Parte D, voce 11, che dovrà essere confermata in seguito al test ESD 1 (a freddo).
except Part 'D', Item 11, which will be confirmed after the ESD 1 test under cold condition.
 Le operazioni di movimentazione del carico non saranno avviate fino a quando la presente checklist
Cargo handling operations will not be started until this check-list
 non sarà stata compilata in tutte le sue voci.
has been fully completed.
- Le caselle della colonna Nave GNL e Terminal dovranno essere siglate in seguito all'effettuazione dei

The cells in the column LNG Carrier and Terminal have to be initialed after controlli ad opera della parte interessata. checks have been carried out by the party concerned.

- Nel caso in cui una voce particolare non sia da considerarsi applicabile alla Nave GNL, al Terminal o
Where a particular item is considered not to be applicable to the LNG Carrier, the terminal or all'operazione programmata, una nota giustificativa dovrà essere inserita nella colonna "annotazioni".
to the planned operation, a note to this effect should be entered in the 'Remarks' column.
- Ai fini della sicurezza delle operazioni, occorre che siano considerate tutte le dichiarazioni pertinenti e
The safety of operations requires that all relevant statements are considered and che vengano accettate le responsabilità e le assunzioni di responsabilità, sia congiuntamente sia the associated responsibility and accountability for compliance are accepted, either jointly or individualmente. Nell'eventualità in cui una parte non sia pronta ad accettare un'assunzione di singly. Where either party is not prepared to accept an assigned responsabilità ad essa assegnata, dovrà essere inserito un commento specifico nella colonna "annotazioni".
accountability, a comment must be made in the 'Remarks' column.
 In questo caso, prima di procedere con le operazioni occorrerà effettuare le necessarie considerazioni.
and due consideration should be given to assessing whether operations may proceed.
- La presenza delle lettere A, P o R nella colonna "CODICE" si riferisce a quanto segue:
- *The presence of the letter A and P or R in the column "CODE" indicates the following:*

A - ('Accordo') - Indica un accordo o una procedura che dovrebbero essere indicati nella colonna "annotazioni" della checklist o comunicati secondo un'altra modalità accettata dalle parti.

A - ('Agreement') - *This indicates an agreement or procedure that should be identified in the 'Remarks' column of the checklist or communicated in some other mutually acceptable form.*

P - ('Permesso') - In caso di risposta negativa alle dichiarazioni codificate con la lettera "P", le operazioni non potranno essere eseguite senza il previo consenso scritto dell'Autorità Marittima.

P - ('Permission') - *In the case of a negative answer to the statements coded 'P', operations should not be conducted without the written permission from the Maritime Authorities.*

R - ('Ripetizione controllo') - Indica le voci che dovranno essere nuovamente verificate ad appropriati intervalli di tempo, come concordato tra entrambe le parti, nei periodi stabiliti nella dichiarazione

R - ('Re-check') - *This indicates items to be re-checked at appropriate intervals, as agreed between both parties, at periods stated in the declaration.*

La dichiarazione congiunta non dovrebbe essere firmata fino a che entrambe le parti non avranno verificato ed accettato le responsabilità e le assunzioni di responsabilità loro assegnate.

The joint declaration should not be signed until both parties have checked and accepted their assigned responsibilities and accountabilities.

La risposta alle suddette domande dovrebbe essere fornita congiuntamente alle istruzioni contenute nella quinta edizione dell' ISGOTT, Capitolo 26.4.

These questions should be answered in conjunction with the guidance notes set out in ISGOTT 5th Edition Chapter 26.4.

DATI: DATA:			
Denominazione della Nave GNL: <i>LNG Carrier name:</i>		Data: <i>Date:</i>	
Data di arrivo (Avviso di prontezza): <i>Date of Arrival (NOR):</i>			
Comandante: <i>Master:</i>		Rappresentante del Terminal: <i>Terminal Representative:</i>	

Parte 'A' Liquidi alla rinfusa: Controlli Part 'A' Bulk Liquid General – Physical Checks				
Liquidi alla rinfusa–Controlli <i>Bulk Liquid General - Physical</i>	Nave GNL <i>LNG Carrier</i>	Terminale <i>Terminal</i>	Codice <i>Code</i>	Annotazioni <i>Remarks</i>
1. E' presente un accesso sicuro che collega la Nave GNL al Terminal. 1. <i>There is safe access between the LNG Carrier and the Terminal.</i>			R	
2. La Nave GNL è ormeggiata in modo sicuro. 2. <i>The LNG Carrier is securely moored.</i>			R	
3. Il sistema di comunicazione concordato tra la Nave GNL e il Terminal è operativo. 3. <i>The agreed LNG Carrier/Terminal communication system is operative.</i>			A R	Sistema: <i>System:</i> Sistema di Backup: <i>Backup System:</i>
4. I cavi di rimorchio d'emergenza sono correttamente montati e posizionati 4. <i>Emergency towing-off pennants are correctly rigged and positioned</i>			R	

<p>5. Le manichette e l'attrezzatura antincendio della Nave GNL sono posizionate correttamente e pronte per l'uso immediato.</p> <p>5. <i>The LNG Carrier's fire hoses and fire-fighting equipment are positioned and ready for immediate use.</i></p>			R	
<p>6. L'attrezzatura antincendio del Terminale è posizionata correttamente e pronta per un uso immediato.</p> <p>6. <i>The Terminal's fire-fighting equipment is positioned and ready for immediate use.</i></p>			R	
<p>7. I collettori della Nave GNL per il carico sono in buone condizioni e adeguati per l'uso previsto.</p> <p>7. <i>The LNG Carrier's cargo manifolds are in good condition and appropriate for the service intended.</i></p>				
<p>8. I bracci di caricamento del Terminale sono in buone condizioni, correttamente montati ed adeguati per l'uso previsto.</p> <p>8. <i>The Terminal's cargo arms are in good condition, properly rigged and appropriate for the service intended.</i></p>				
<p>9. Il sistema di trasferimento del carico è sufficientemente isolato e svuotato per consentire la rimozione sicura delle flange cieche prima del collegamento.</p> <p>9. <i>The cargo transfer system is sufficiently isolated and drained to allow safe removal of blank flanges prior to connection.</i></p>				

<p>10. Gli ombrinali e i pozzetti di raccolta di bordo sono efficacemente chiusi e le ghiotte sono posizionate e vuote.</p> <p>10. <i>Scuppers and save-alls on board are effectively plugged and drip trays are in position and empty.</i></p>			R	
<p>11. I tappi degli ombrinali temporaneamente rimossi saranno costantemente monitorati.</p> <p>11. <i>Temporarily removed scupper plugs will be constantly monitored.</i></p>			R	
<p>12. I dispositivi di contenimento degli spandimenti e i pozzetti a del Terminale sono gestiti correttamente.</p> <p>12. <i>Terminal spill containment and sumps are correctly managed.</i></p>			R	
<p>13. I collegamenti inutilizzati per il carico e il bunker della Nave GNL sono stati adeguatamente messi in sicurezza con flange cieche totalmente imbullonate.</p> <p>13. <i>The LNG Carrier's unused cargo and bunker connections are properly secured with blank flanges fully bolted.</i></p>				
<p>14. I collegamenti inutilizzati per il carico e il bunker del Terminale sono stati adeguatamente messi in sicurezza con flange cieche totalmente imbullonate.</p> <p>14. <i>The Terminal's unused cargo and bunker connections are properly secured with blank flanges fully bolted.</i></p>				
Liquidi alla rinfusa – Controlli <i>Bulk Liquid General - Physical</i>	Nave GNL <i>LNG Carrier</i>	Terminale <i>Terminal</i>	Codice <i>Code</i>	Annotazioni <i>Remarks</i>
<p>15. Tutti i portellini delle cisterne del carico, della zavorra e del bunker risultano chiusi.</p> <p>15. <i>All cargo, ballast and bunker tank lids are closed.</i></p>				

<p>16. Se non utilizzate, le valvole di presa e scarico a mare, vengono chiuse e messe visibilmente in sicurezza.</p> <p>16. <i>Sea and overboard discharge valves, when not in use, are closed and visibly secured.</i></p>				<p>Lo scarico a mare di liquami, acque grigie, nere o oleose non è consentito all'interno della Zona di Esclusione.</p> <p><i>Sewage, grey, black and oily water discharge overboard is not allowed when inside the Exclusion Zone.</i></p>
<p>17. Tutte le porte, i portelloni e le finestre esterni situati negli spazi destinati agli alloggi, ai depositi e all'area dei macchinari sono chiusi. E' consentita l'apertura delle prese d'aria della sala macchine.</p> <p>17. <i>All external doors, ports and windows in the accommodation, stores and machinery spaces are closed (engine room vents may be open).</i></p>			R	
<p>18. I piani di emergenza antincendio della Nave GNL e del Terminal sono localizzati esternamente.</p> <p>18. <i>The LNG Carrier's/Terminal's emergency fire control plans are located externally.</i></p>				<p>Ubicazione Nave GNL:</p> <p><i>Location on LNG Carrier:</i></p> <p>Ubicazione sul Terminale:</p> <p><i>Location on Terminal:</i></p>

Parte 'B' Liquidi alla rinfusa – Verifica verbale**Part 'B' Bulk Liquid General – Verbal Checks**

Liquidi alla rinfusa – Verifica Verbale <i>Bulk Liquid General - Verbal</i>	Nave GNL <i>LNG Carrier</i>	Terminale <i>Terminal</i>	Codice <i>Code</i>	Note <i>Remarks</i>
<p>19. La Nave GNL è pronta a muoversi con il proprio motore.</p> <p>19. <i>The LNG Carrier is ready to move under its own power.</i></p>			P R	

<p>20. E' presente un efficace servizio di guardia a bordo, oltre a un'adeguata supervisione delle operazioni sulla Nave GNL e nel Terminale.</p> <p>20. <i>There is an effective deck watch maintained on board and adequate supervision of operations on the LNG Carrier and on the Terminal.</i></p>			R	
<p>21. A bordo della Nave GNL e presso il Terminale è presente personale sufficiente ad affrontare un'emergenza.</p> <p>21. <i>There are sufficient personnel on board the LNG Carrier and the Terminal to deal with an emergency.</i></p>			R	
<p>22. Le procedure per la gestione del carico e della zavorra sono state concordate.</p> <p>22. <i>The procedures for cargo and ballast handling have been agreed.</i></p>			A R	
<p>23. I segnali di emergenza e la procedura di arresto di emergenza in uso presso la Nave GNL e il Terminale sono stati spiegati e compresi.</p> <p>23. <i>The emergency signal and shutdown procedure to be used by the LNG Carrier and Terminal have been explained and understood.</i></p>			A	
<p>24. E' avvenuto lo scambio (quando richiesto) delle schede tecniche di sicurezza dei materiali (Material Safety Data Sheets- MSDS) per il trasferimento del carico.</p> <p>24. <i>Material Safety Data Sheets (MSDS) for the cargo transfer have been exchanged where requested.</i></p>			P R	

<p>25. I rischi associati alle sostanze tossiche presenti nel carico sono stati identificati e compresi.</p> <p>25. <i>The hazards associated with toxic substances in the cargo handled have been identified and understood.</i></p>				
<p>26. E' stato predisposto un collegamento internazionale antincendio</p> <p>26. <i>An International Shore Fire Connection has been provided.</i></p>				
<p>27. I requisiti per le operazioni da effettuarsi a ciclo chiuso sono stati concordati</p> <p>27. <i>The requirements for closed operations have been agreed.</i></p>			R	
<p>28. Se installati, gli allarmi indipendenti di alto livello risultano funzionanti e collaudati</p> <p>28. <i>Independent high level alarms, if fitted, are operational and have been tested.</i></p>			A R	
<p>29. Adeguati dispositivi di isolamento elettrico sono installati nell'ambito del collegamento tra la Nave GNL e il Terminale</p> <p>29. <i>Adequate electrical insulating means are in place in the LNG Carrier/Terminal connection.</i></p>			A R	<p>Flange isolanti installate sui bracci di scarica.</p> <p><i>Insulation flanges fitted on unloading arms.</i></p>
<p>30. Le linee del Terminale sono dotate di una valvola di non ritorno. In alternativa, sono state discusse le procedure volte ad evitare il riflusso.</p> <p>30. <i>Terminal lines are fitted with a non-return valve, or procedures to avoid back filling have been discussed.</i></p>			P R	

<p>31. Le aree per fumatori sono state individuate. Le limitazioni vengono rispettate.</p> <p>31. <i>Smoking rooms have been identified and smoking requirements are being observed.</i></p>			A R	<p>Aree fumatori designate: <i>Nominated smoking rooms:</i></p> <p>FSRU: sala mensa del personale in servizio sul ponte A (tribordo) <i>FSRU: Duty mess room on A-deck (stbd)</i></p> <p>Nave GNL: <i>LNG Carrier:</i></p>
<p>32. Le norme sulle fiamme libere vengono rispettate.</p> <p>32. <i>Naked Lights regulations are being observed.</i></p>			A R	
<p>33. I requisiti richiesti per l'uso dei telefoni, telefoni cellulari e cercapersone della Nave GNL/del Terminal vengono rispettati.</p> <p>33. <i>LNG Carrier/Terminal telephones, mobile phones and pager requirements are being observed.</i></p>			A R	
<p>34. Le torce elettriche portatili sono di una tipologia approvata.</p> <p>34. <i>Hand torches (flashlights) are of an approved type.</i></p>				
Liquidi alla rinfusa – Verifica verbale <i>Bulk Liquid General - Verbal</i>	Nave GNL <i>LNG Carrier</i>	Terminale <i>Terminal</i>	Codice <i>Code</i>	Annotazioni <i>Remarks</i>
<p>35. I ricetrasmittitori fissi VHF/UHF e i dispositivi AIS si trovano nella corretta modalità di alimentazione o risultano spenti.</p> <p>35. <i>Fixed VHF/UHF transceivers and AIS equipment are on the correct power mode or switched off.</i></p>				
<p>36. I ricetrasmittitori portatili VHF/UHF sono di una tipologia approvata.</p> <p>36. <i>Portable VHF/UHF transceivers are of an approved type.</i></p>				

<p>37. Le antenne radio sono state messe a terra e i radar risultano spenti.</p> <p>37. <i>The main radio transmitter aerials are earthed and radars are switched off.</i></p>				<p>I radar del Terminale dovranno essere utilizzati per il monitoraggio della Zona di Esclusione, in osservanza all'Ordinanza dell'Autorità Marittima.</p> <p><i>Terminal's radars to be used for Exclusion Zone monitoring in compliance with Maritime Authority Ordinance.</i></p>
<p>38. I cavi elettrici collegati a dispositivi elettrici portatili all'interno dell'area a rischio sono scollegati.</p> <p>38. <i>Electric cables to portable electrical equipment within the hazardous area are disconnected from power.</i></p>				
<p>39. Le unità di condizionamento dell'aria di tipo a finestra sono scollegate.</p> <p>39. <i>Window type air conditioning units are disconnected.</i></p>				
<p>40. All'interno della zona alloggi viene mantenuta una pressione positiva, e le prese di condizionamento dell'aria, che possono permettere l'ingresso dei vapori del carico, sono chiuse.</p> <p>40. <i>Positive pressure is being maintained inside the accommodation, and air conditioning intakes, which may permit the entry of cargo vapours, are closed.</i></p>				
<p>41. Sono state intraprese misure adeguate a garantire una sufficiente ventilazione meccanica nella sala macchine del carico.</p> <p>41. <i>Measures have been taken to ensure sufficient mechanical ventilation in the cargo machinery room.</i></p>			R	

<p>42. E' stata predisposta una via di fuga per i casi di emergenza.</p> <p>42. <i>There is provision for an emergency escape.</i></p>				
<p>43. Sono stati concordati i criteri massimi di vento e onda durante le operazioni.</p> <p>43. <i>The maximum wind and swell criteria for operations have been agreed</i></p>			A	<p>Arresto del carico a: <i>Stop cargo at:</i></p> <p>Scollegamento a: <i>Disconnect at:</i></p> <p>Disormeggio a: <i>Unberth at:</i></p>
<p>44. I protocolli di security sono stati concordati tra l'Ufficiale per la Security della Nave e l'Ufficiale per la Security del Terminale, se appropriato.</p> <p>44. <i>Security protocols have been agreed between the Ship Security Officer and the Port Facility Security Officer, if appropriate.</i></p>			A	
<p>45. Nei casi in cui ciò sia appropriato, sono state concordate procedure adeguate per il ricevimento dell'azoto fornito dal Terminale, per inertizzare o drenare le cisterne della Nave GNL, o, ancora, per pulire le linee che portano alla Nave GNL stessa.</p> <p>45. <i>Where appropriate, procedures have been agreed for receiving nitrogen supplied from the Terminal, either for inerting or purging LNG Carrier's tanks, or for line cleaning into the LNG Carrier</i></p>	N/A	N/A	A P	

Parte 'D' Gas liquefatti alla rinfusa – Verifica verbale Part 'D' Bulk Liquefied Gases – Verbal Verification				
Gas liquefatti alla rinfusa Verifica Verbale <i>Bulk Liquid Gases - Verbal</i>	Nave GNL LNG Carrier	Terminal Terminal	Codice Code	Annotazioni Remarks
1. Sono disponibili le schede tecniche dei materiali di sicurezza, che forniscono le informazioni necessarie per la gestione del carico in condizioni di sicurezza. 1. <i>Material Safety Data Sheets are available giving the necessary data for the safe handling of the cargo.</i>				
2. Dove applicabile, viene fornito un certificato di inibizione del produttore. 2. <i>A manufacturer's inhibition certificate, where applicable, has been provided.</i>	N/A	N/A	P	
3. Il sistema spruzzata dell'acqua è pronto per essere immediatamente utilizzato. 3. <i>The water spray system is ready for immediate use.</i>				
4. E' disponibile un numero sufficiente di dispositivi protettivi adeguati (incluso gli autorespiratori) e di indumenti protettivi, pronti per l'uso. 4. <i>There is sufficient suitable protective equipment (including self-contained breathing apparatus) and protective clothing ready for immediate use.</i>				
5. Gli spazi della stiva e gli spazi tra la cisterna del carico e la barriera secondaria sono stati adeguatamente inertizzati o riempiti di aria secca, come richiesto. 5. <i>Hold and inter-barrier spaces are properly inerted or filled with dry air, as required.</i>				

<p>6. Tutte le valvole a controllo remoto sono funzionanti.</p> <p>6. <i>All remote control valves are in working order.</i></p>				
<p>7. Le pompe e i compressori del carico richiesti sono in buone condizioni, e il livello massimo di pressione di esercizio è stato concordato tra la Nave GNL e il Terminal.</p> <p>7. <i>The required cargo pumps and compressors are in good order, and the maximum working pressures have been agreed between LNG Carrier and Terminal.</i></p>			A	
<p>8. L'impianto per il controllo della ri-liquefazione o dell'evaporazione è in buone condizioni.</p> <p>8. <i>Re-liquefaction or boil-off control equipment is in good order.</i></p>				
<p>9. Il dispositivo di rilevamento del gas è stato adeguatamente tarato per il carico, calibrato, collaudato, sottoposto ad ispezione ed è in buone condizioni.</p> <p>9. <i>The gas detection equipment has been properly set for the cargo, is calibrated, has been tested and inspected and is in good order.</i></p>				
<p>10. I dispositivi di allarme e di misurazione del livello del carico sono stati correttamente tarati e sono in buone condizioni.</p> <p>10. <i>Cargo system gauges and alarms are correctly set and in good order.</i></p>				

<p>11. I sistemi di blocco di emergenza sono stati collaudati e funzionano correttamente.</p> <p>11. <i>Temporarily removed scupper plugs will be constantly monitored.</i></p>				
<p>12. La Nave GNL e il Terminal hanno provveduto scambiarsi informazioni sulla velocità di chiusura delle valvole ESD, valvole automatiche o dispositivi simili.</p> <p>12. <i>Emergency shutdown systems have been tested and are working properly.</i></p>			A	
<p>13. La Nave GNL e il Terminal hanno provveduto a scambiarsi informazioni sulle massime/minime temperature/pressioni del carico da movimentare.</p> <p>13. <i>LNG Carrier and the Terminal have informed each other of the closing rate of ESD valves, automatic valves or similar devices.</i></p>			A	<p>Nave GNL: LNG Carrier:</p> <p>Terminal: Terminal:</p>
<p>14. Le cisterne del carico sono protette, in ogni momento, da un riempimento eccessivo involontario durante lo svolgimento di qualsiasi operazione inerente al carico stesso.</p> <p>14. <i>Cargo tanks are protected against inadvertent overfilling at all times while any cargo operations are in progress.</i></p>				

Liquidi alla rinfusa –Verifica Verbale <i>Bulk Liquid - Verbal</i>	Nave GNL <i>LNG Carrier</i>	Terminale <i>Terminal</i>	Codice <i>Code</i>	Annotazioni <i>Remarks</i>
<p>15. Il locale dei compressori è adeguatamente ventilato, e il locale del motore elettrico è adeguatamente pressurizzato. Il dispositivo di allarme funziona correttamente.</p> <p>15. <i>The compressor room is properly ventilated, the electrical motor room is properly pressurized and the alarm system is working.</i></p>				
<p>16. Le valvole di sicurezza delle cisterne del carico sono regolate correttamente e le attuali impostazioni delle suddette valvole risultano chiaramente e visibilmente esposte (Impostazioni di regolazione indicate seguito.)</p> <p>16. <i>Cargo tank relief valves are set correctly and actual relief valve settings are clearly and visibly displayed (Record settings below.)</i></p>				<p>Prima dell'avvio delle operazioni di movimentazione del carico.</p> <p><i>Before cargo operations are started.</i></p>

Per il Terminale:

For Terminal:
Cisterna 1 mbar (g) Cisterna 2 mbar (g) Cisterna 3 mbar (g) Cisterna 4 mbar (g)

Per la Nave GNL

For LNG Carrier
Cisterna 1 mbar (g) Cisterna 2 mbar (g) Cisterna 3 mbar (g) Cisterna 4 mbar (g)

Cisterna 5 mbar (g) Cisterna 6 mbar (g) Cisterna 7 mbar (g) Cisterna 8 mbar (g)

DICHIARAZIONE DECLARATION

I sottoscritti hanno verificato, ove appropriato in modo congiunto, le voci della checklist in osservanza alle istruzioni e hanno provveduto a verificare la correttezza degli inserimenti, in base alle conoscenze in possesso dei sottoscritti stessi.

We, the undersigned, have checked, where appropriate jointly, the items of the checklist in accordance with the instructions and have satisfied ourselves that the entries we have made are correct to the best of our knowledge.

Abbiamo inoltre programmato l'effettuazione di controlli ripetitivi, come necessario, e concordato che le voci indicate con la lettera 'R' nella check-list dovranno essere nuovamente verificate ad intervalli di tempo non superiori a ore (non oltre le 6 ore).

We have also made arrangements to carry out repeat checks as necessary and agreed that those items coded 'R' in the check-list should be re-checked at intervals not exceeding hours (not to exceed 6 hours).

Nell'eventualità in cui dovessimo venire a conoscenza di modifiche intervenute nella condizione di una qualsiasi voce, provvederemo ad informarne tempestivamente la controparte.

If, to our knowledge, the status of any item changes, we will immediately inform the other party.

Per il Terminale: FOR Terminal:	Per la Nave GNL FOR LNG Carrier
Nome: Name: _____	Nome: Name: _____
Posizione: Position: _____	Grado: Rank: _____
Firma: Signature: _____	Firma: Signature: _____
Data: Date: _____	Data: Date: _____
Ora: Time: _____	Ora: Time: _____

REGISTRAZIONE DI CONTROLLI RIPETUTI: RECORD OF REPETITIVE CHECKS:					
Data: Date:					
Ora: Time:					
Iniziali del terminale: Initials for Terminal:					
Iniziali della Nave GNL: Initials for LNG Carrier:					

Attachment 11.4 CARGO HANDLING AGREEMENT

DATA:			
LNG Carrier name:		Date:	
Date of Arrival(NOR):		Cargo Nr.	
Master:		Terminal Representative:	
Cargo quantity on board:	m ³		
Cargo quantity to be discharged	m ³		

CARGO OPERATIONS:									
Confirm vapour will be sent back to LNG Carrier				YES / NO					
Maximum flow vapour return				17.500 m ³ /h					
Number(s) of unloading arms used for liquid transfer				Total 3 arms: Nr. 1, 2, 4					
Number of unloading arms used for vapour transfer				Total 1 arm: Nr. 3					
LNG Carrier liquid lines condition (state temperature):				WARM / COLD		°C			
Tanks condition				TK 1	TK 2	TK 3	TK 4	TK 5	TK 6
Pressure		bar(g) / kPa(g)							
Cargo tank temperature °C Average		°C							
Level		mm							
Volume		m ³							
Confirm unloading arms purged (vol% O2 < 2%)				YES / NO					
Confirmed unloading arms pressure tested				YES / NO					

Closing time of ESD isolation valves	Terminal		LNG Carrier	
	LIQ 1	sec		sec
	VAP	sec		sec
	LIQ 2	sec		sec
	LIQ 3	sec		sec
COOLDOWN: Estimated time of cool-down unloading arms	hrs			
COOLDOWN: LNG cooldown rate required by Terminal	m ³ /h			
COOLDOWN: Max back pressure at manifold during cooldown	bar(g)			
UNLOADING: Estimated time of unloading	hrs			
UNLOADING: Maximum transfer rate for Terminal	m ³ /h			
UNLOADING: Maximum discharge rate for LNG Carrier	m ³ /h			
UNLOADING: Minimum discharge rate	m ³ /h			
UNLOADING: Stripping rate	m ³ /h			
UNLOADING: Maximum/Minimum manifold/Terminal loading headers pressure	bar(g) / kPa(g)			
Confirm stop discharging on request of	FSRU / LNG Carrier			
CTMS <i>CTMS can only be carried out with vapour and liquid manifold valves closed and cargo/stripping pumps stopped.</i>				
State if gas burning will be ceased between opening CTMS and closed CTMS unless specific instruction to do so have been received – state details	YES / NO			
ESD <i>ESD test will be carried out in warm and cold condition</i> <i>ESD signal will be tested from Terminal and LNG Carrier (one from Terminal and one from LNG Carrier - alternating)</i>				
Confirm optical / electrical ESD is operative (including communication)	YES / NO			
Confirm pneumatic ESD operative	YES / NO			

Confirm optical / electrical ESD will be used as primary means in case of emergency	YES / NO	
Confirm pneumatic ESD will be used in case of optical / electrical ESD failure	YES / NO	
RAMP UP	Pump	Interval
Ramp up plan		
Rate per pump	m ³ /h	
Total numbers of pumps		
Nominal unloading rate	m ³ /h	
RAMP DOWN	Pump	Interval
Ramp down plan		
Notice for Terminal Representative prior ramp down	Hrs	
Notice for Terminal prior ramp down	Hrs	
Notice for Terminal prior completion	Hrs	

<p>UNLOADING ARMS DRAINING / PURGING (ref: SIGTTO LNG Transfer Arms and manifold Draining, Purging and Disconnection Procedure)</p> <p><i>Draining of unloading arms to the Terminal and LNG Carrier to be carried out prior beginning tank gauging</i></p> <p><i>Purging of liquid unloading arms by using Nitrogen: LEL% CH4 - 50</i></p> <p><i>Purging of vapour arms by using N2: LEL % CH4- 50</i></p>	
Confirm that steam to turbine will be kept closed while unloading arms are connected and turning gear engaged	YES / NO
Confirm receipt of manual 'CARGO HANDLING MANUAL'	YES / NO
Confirm receipt of manual 'Terminal Regulations and Information Booklet'	YES / NO
Confirm that weather conditions forecast during transfer operations have been discussed	YES / NO
Confirm all necessary cargo handling procedures have been understood	YES / NO

COMMENTS:

FOR THE TERMINAL

Stamp:

Terminal Repr.	(Signature)
----------------	-------------

Terminal Repr.	(Name + Function)
----------------	-------------------

FOR LNG Carrier:

Stamp:

SS / MV: (Name LNG Carrier)

Ch. Officer	(Signature)
-------------	-------------

Date + Time	Ch. Officer	(Name)
-------------	-------------	--------

Attachment 11.5 COMMUNICATION AGREEMENT

DATA:			
LNG Carrier name:		Date:	
Date of Arrival (NOR):			
Master:		Terminal Representative	

A fiber optic / electrical link has been connected between the Terminal and the LNG Carrier. It will enable the following action and means of communications:	
ESD FROM LNG Carrier	Uni-directional. Can be activated at any time from the LNG Carrier in case of Emergency. Inform Terminal as far as practicable before use.
ESD FROM Terminal	Uni-directional. Can be activated at any time from the Terminal in case of emergency. Inform LNG Carrier as far as practicable before use.
TELEPHONE HOT LINE	Bi-directional. To contact directly the Terminal CCR. Also to be used in case of emergency.
Tel number Terminal	
Tel number LNG Carrier	
A pneumatic link has been connected to the LNG Carrier. It will enable the following action:	
ESD FROM LNG Carrier	Uni-directional. Can be activated at any time from the LNG Carrier in case of emergency. Inform Terminal as far as possible before use.
ESD FROM Terminal	Uni-directional. Can be activated at any time from the Terminal in case of emergency. Inform LNG Carrier as far as possible before use.
A portable V.H.F. radio (with private Marine frequency) has been provided to the LNG Carrier. It will enable the following means of communications:	
Terminal CCR.	VHF Ch.

Terminal Representative	VHF Ch.
Terminal CCR.	VHF Ch.
Terminal Representative	VHF Ch.

COMMENTS:

FOR Terminal

Stamp:

Terminal Representative (Signature)

Terminal Representative (Name + Function)

FOR LNG Carrier

Stamp:

SS / MV: (Name LNG Carrier)

Master (Signature) or Chief Officer (Signature)

Master (Name) or Chief Officer (Name)

Time and date:

Attachment 11.6 EMERGENCY CONTACTS AND SIGNALS

DATA:			
LNG Carrier name:		Date:	
Date of Arrival (NOR):			
Master:		Terminal Representative:	

In event of an EMERGENCY the following communication channels are available:

Terminal Central Control Room:	
HOTLINE	
PABX	
VHF	
UHF	

If no immediate contact can be made with the Terminal, contact the on-board Terminal representative ASAP.

IN THE EVENT OF AN EMERGENCY O/B THE TERMINAL THE FOLLOWING SIGNALS WILL BE OBSERVED:		
ALARM TYPE	AUDIBLE	VISUAL
Terminal general alarm:	At least 7 short blasts followed by one long blast + PA	-
Terminal fire alarm:	One continuous blast followed by PA	-

IN THE EVENT OF AN EMERGENCY O/B THE LNG CARRIER THE FOLLOWING SIGNALS WILL BE OBSERVED:		
ALARM TYPE	AUDIBLE	VISUAL
LNG Carrier general alarm:		
LNG Carrier fire alarm:		

Attachment 11.7 Adverse weather – Terminal Operating Policy															
Maximum Conditions: Limit conditions shall be considered as the simultaneous effect of all parameters (wind speed, wave height, surface current).			Operation	Action	Comment										
<table><tr><td>Max wind speed</td><td>Max Seastate</td><td>Max surface current</td></tr><tr><td>m/s</td><td>Hs (m)</td><td>m/s</td></tr><tr><td>7.50</td><td>1.50</td><td>0.50</td></tr></table>			Max wind speed	Max Seastate	Max surface current	m/s	Hs (m)	m/s	7.50	1.50	0.50	Berthing	Berthing operations suspended if above maximum limits	If already berthed, perform extra vigilance	
Max wind speed	Max Seastate	Max surface current													
m/s	Hs (m)	m/s													
7.50	1.50	0.50													
Extra vigilance : <ul style="list-style-type: none">➤ Monitor weather forecast;➤ Monitor wind, waves and current;➤ Close visual observation of mooring lines tension data;➤ Close visual observation of unloading arms working envelope;															
<table><tr><td>Max wind speed</td><td>Max Seastate</td><td>Max surface current</td></tr><tr><td>m/s</td><td>Hs (m)</td><td>m/s</td></tr><tr><td>15.00</td><td>2.50</td><td>0.50</td></tr></table>			Max wind speed	Max Seastate	Max surface current	m/s	Hs (m)	m/s	15.00	2.50	0.50	Discharging	Discharging operations suspended if above maximum limits	As soon as discharge is stopped, Perform prepare for unberthing	
Max wind speed	Max Seastate	Max surface current													
m/s	Hs (m)	m/s													
15.00	2.50	0.50													
Prepare for unberthing : <ul style="list-style-type: none">➤ Call for pilot;➤ Drain unloading arms;➤ Purge unloading arms;➤ Disconnect unloading arms															
NOTE: Decision to unberth can be made at any time by the LNG Carrier Master in consultation with the Terminal Manager															
Unberthing: <ul style="list-style-type: none">➤ LNG Carrier made ready to maneuver;➤ Tugs made fast;➤ Unmooring crews ready (LNG Carrier and Terminal)															

Attachment 11.8 Emergency Stop Report

The Cargo Emergency Stop Report form must be completed when a cargo emergency stop is initiated during the LNG unloading operation. The form must in all cases be completed by the Terminal Representative and the LNG Carrier Master and as appropriate by the Terminal's personnel or the Maritime Authorities' personnel.

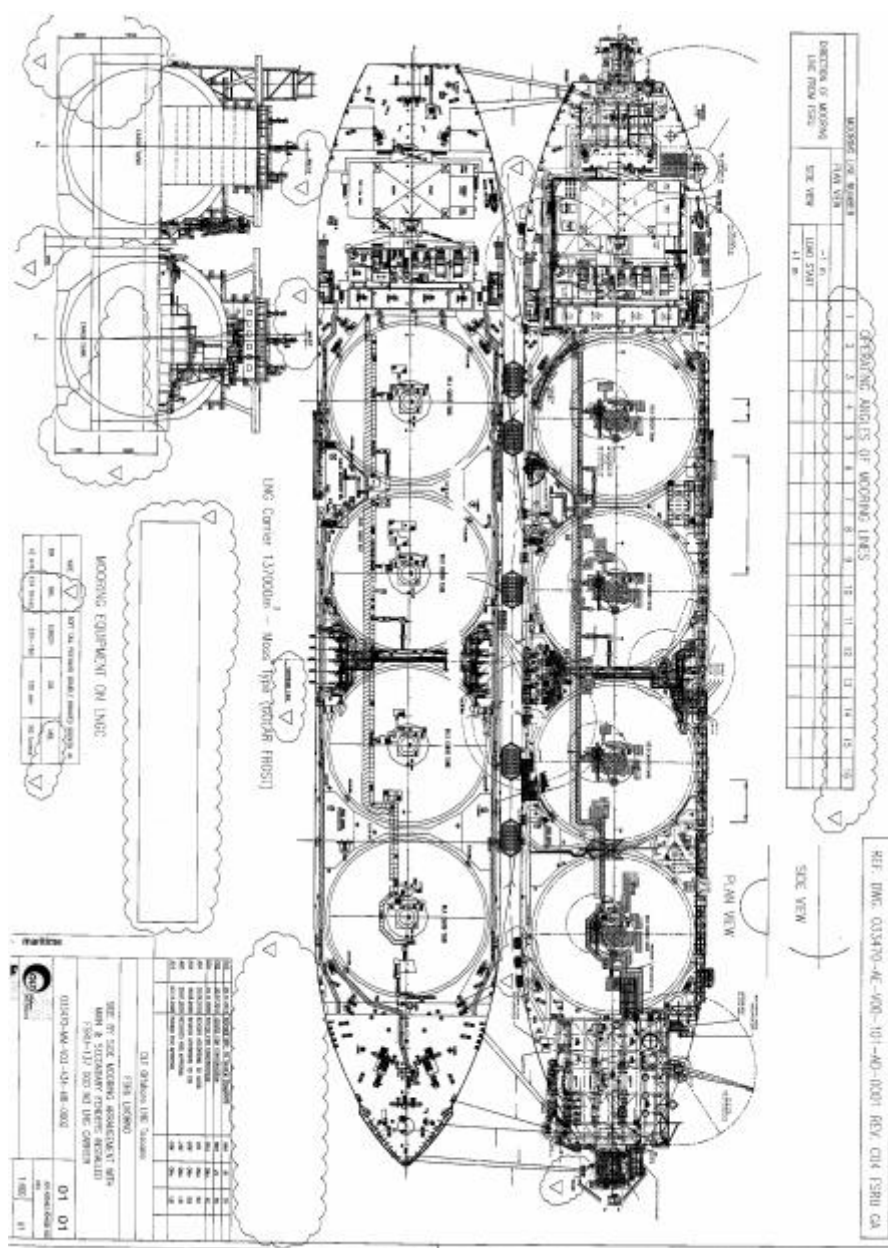
DATA:			
LNG Carrier name:		Date:	
Date of Arrival (NOR):			
Master:		Terminal Representative	

REPORT:			
Cargo Emergency stop initiated:	Date:	Time:	
Cargo Emergency stop initiated by:	LNG Carrier <input type="checkbox"/>	Terminal <input type="checkbox"/>	
Person initiating Cargo Emergency stop:	Name:	Position / Rank:	
Cause:	Fire <input type="checkbox"/>	LNG release <input type="checkbox"/>	
	Weather <input type="checkbox"/>	Injury <input type="checkbox"/>	
	Equipment failure <input type="checkbox"/>	Other (specify) :	
Details:			
Unmooring required?	YES / NO		
	Date:	Time:	
Operations resumed?	YES / NO		
	Date:	Time:	
Are appropriate reports completed and processed?	YES / NO		
	If yes, state details:		
Have recommendations been made to prevent recurrence before operations resume?	YES / NO		
	If yes, state details:		

Have Maritime Authorities been informed?	YES / NO	Date:	Time:
Have Maritime Authorities approved resumption of operations?	YES / NO	Date:	Time:
Recommendations approved (signature + name):	LNG Carrier Master:	Terminal Representative:	Terminal Manger:
Report acknowledgment (signature + name):	Emergency Stop Initiator (LNG Carrier):	Emergency Stop Initiator (Terminal):	
Date and Time of report:			

Attachment 11.9 Example Mooring Layouts

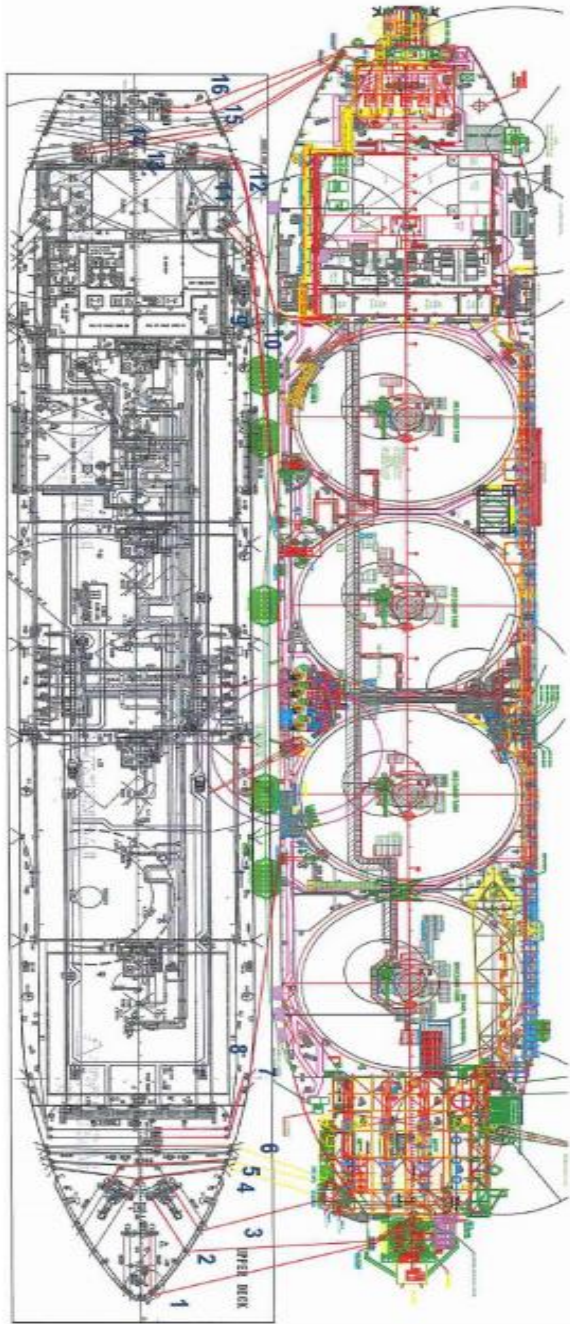
NOTE: the following drawings are FOR REFERENCE ONLY and do not represent a specific LNG Carrier.
Typical mooring for LNG CARRIER 13800 cm :



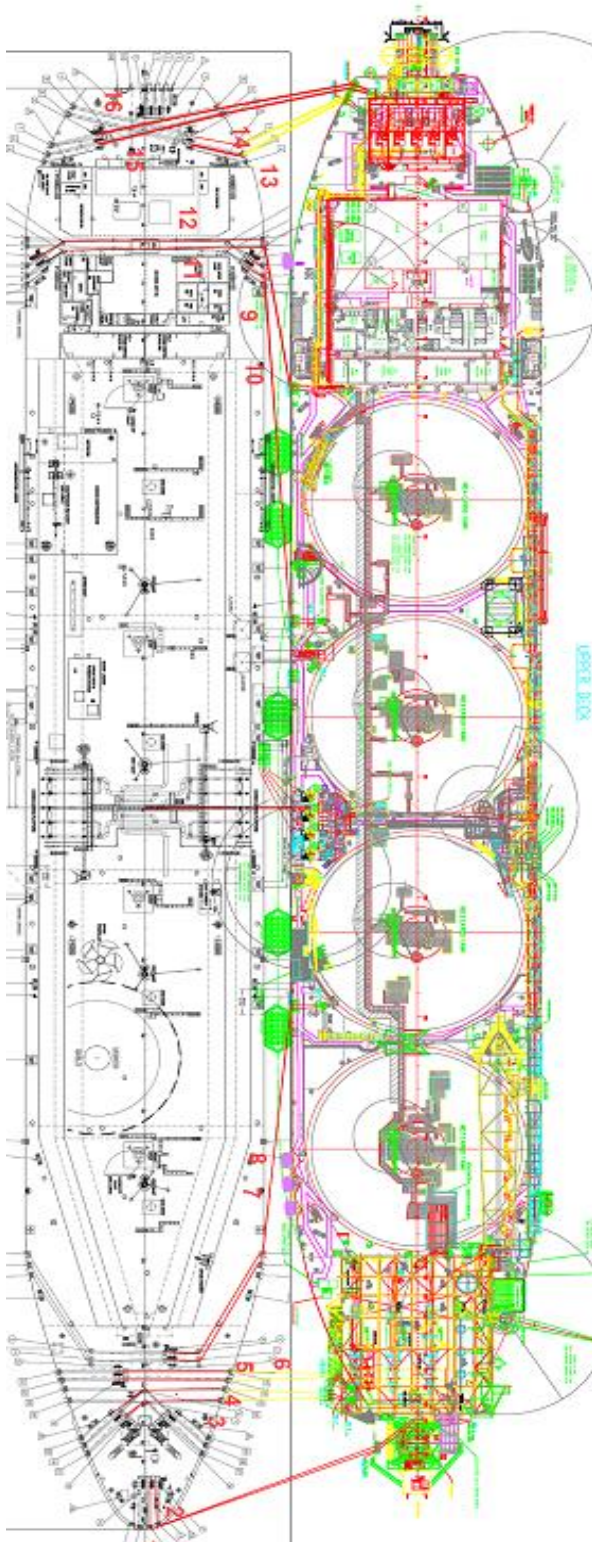
Typical mooring for LNG Carrier 65000 cm



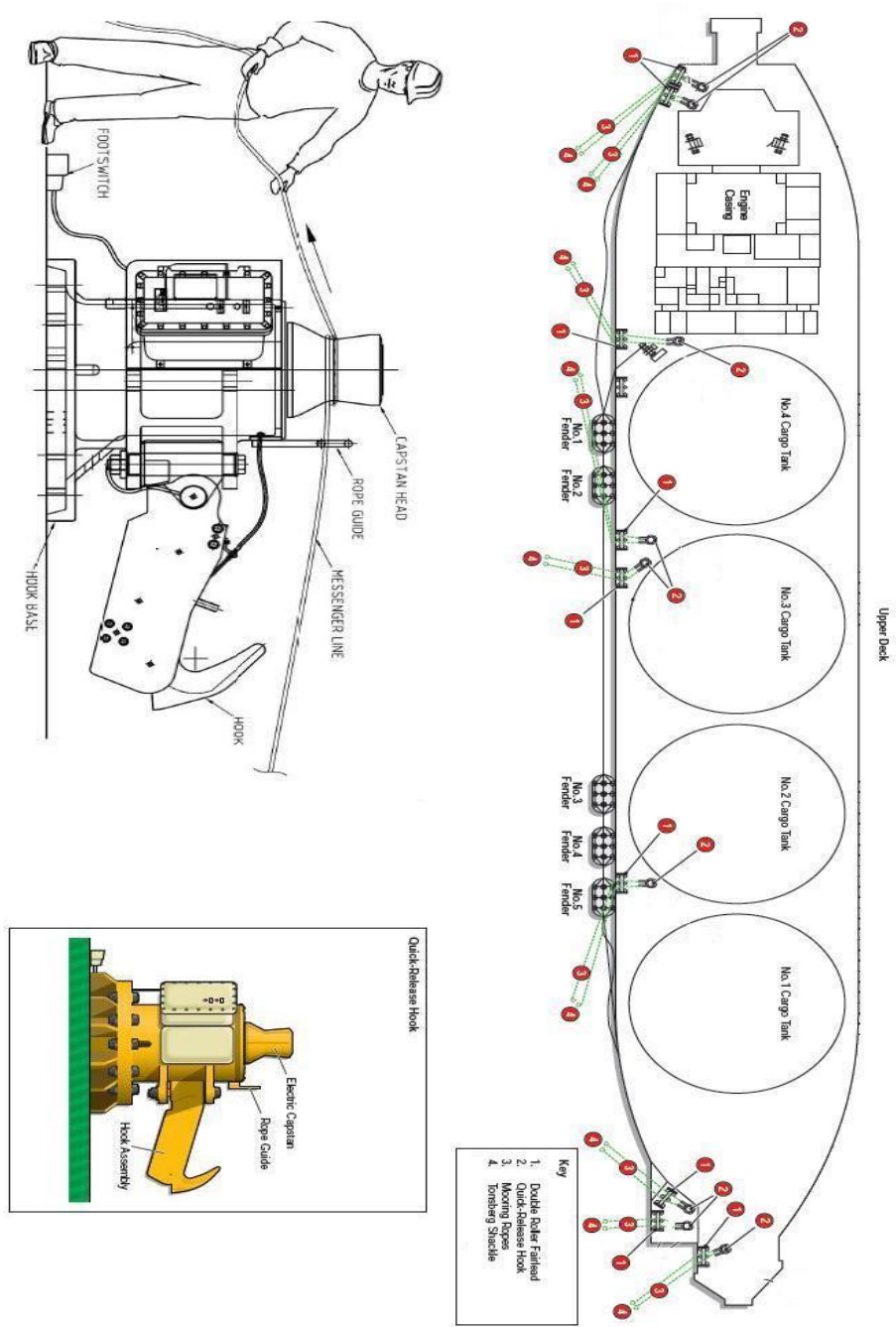
Typical mooring for LNG Carrier 155000 cm



Typical mooring for LNG Carrier 180000 cm



Terminal Mooring Layout



Attachment 11.10 ISPS Declaration of Security

(NOTE: this form is for reference only awaiting the official form after the approval of the Terminal Security Plan)

Name of LNG Carrier:

Port of Registry:

IMO Number:

Name of Terminal Facility:

This Declaration of Security is valid from until, for the purpose of unloading LNG to the FSRU Toscana Terminal from the above named LNG Carrier, and is issued under the following security levels:

Security level for LNG Carrier:

Security level for the Terminal

The Terminal and the LNG Carrier agree to the following security measures and responsibilities and any other measures to ensure compliance with the requirements of the Part A of the International Code for the security of ships and of port facilities.

The affixing of the initials of the LNG Carrier's security officer and the Terminal facility security officer under these columns indicates that the activity will be done, in accordance with relevant approved plan, by

Activity	Terminal	LNG carrier
Handling of unaccompanied baggage		
Controlling the embarkation of persons and their effects		
Ensuring that security communication is readily available between the LNG Carrier and the Terminal		
Ensuring the performance of all security duties		
Monitoring restricted areas to ensure that only authorized personnel have access		
Controlling access to the Terminal		
Controlling access to LNG Carrier		
Monitoring of the Terminal, including berthing areas and areas surrounding the LNG Carrier		
Monitoring of the LNG Carrier, including berthing areas and areas surrounding the LNG Carrier		
Handling of cargo		

The signatories to this agreement certify that security measures and arrangements for both the Terminal and the LNG Carrier during the specified activities meet the provisions of chapter XI-2 and part A of ISPS code that will be implemented in accordance with the provisions already stipulated in their approved plans or the specific agreed upon to and set out in the attached annex.

Dated at on the

Signed for and on behalf of	
The Terminal:	The LNG Carrier:
(Signature of Terminal facility security officer)	(Signature of Master or LNG Carrier security officer)
Name and title of person who signed	
Name:	Name:
Title:	Title:
Contact Details (to be completed as appropriate) (indicate the telephone numbers or the radio channels or frequencies to be used)	
For the Terminal:	For the LNG Carrier:
Port facility security officer	Master
Deputy port facility security officer	Ship security officer
	Company security officer

Attachment 11.11 Emergency Response Actions

The response to any incident will depend on the nature, location and severity of the event. The Terminal and the LNG Carrier must be directed by their respective Emergency Response Plans. *The following contains bulleted immediate actions which are to be taken by the principal parties.*

If marine craft are required to approach or go to alongside the LNG Carrier concerned, they may only do so after the Terminal Manager has confirmed that unloading operations have been stopped.

All Incidents**LNG Carrier Related Incidents****ACTION BY LNG Carrier**

- 1) Initiate emergency cargo transfer shutdown and closure of ESD valves
- 2) Raise general alarm and initiate Emergency Response Plan as required
- 3) Inform and keep informed the Terminal, of the nature and location of incident (e.g. mooring failure / LNG Carrier out of position/fire) and action being taken by the LNG Carrier and assistance required from the Terminal Operator and/or the Maritime Authorities
- 4) Inform the onboard Terminal Representative
- 5) Request Tugs to be on standby and ready to provide assistance as required
- 6) Prepare for unloading arm disconnection and unmooring, including emergency un-mooring

ACTION BY THE TERMINAL

- 1) Initiate emergency shutdown of cargo transfer
- 2) Initiate Terminal's Emergency Response Plan
- 3) Establish communications with standby Tugs
- 4) Establish communications with onboard Terminal Representative
- 7) Advise Maritime Authorities of the nature of incident and stand by in case assistance is required

ACTION BY TUGS & Guardian Vessel

- 1) Go to immediate standby
- 2) Tugs initiate water spray or deluge systems as required
- 3) Await instructions from the Terminal Manager or the LNG Carrier's Master

Terminal Related Incidents

ACTION BY THE TERMINAL

- 1) Raise general alarm and initiate Terminal's Emergency Response Plan
- 2) Initiate emergency LNG transfer shutdown and closure of ESD valves
- 3) Inform the LNG Carrier of the nature of the incident and keep it informed of status
- 4) Advise Maritime Authorities of the nature of the incident and request standby in case assistance is required
- 5) Request all Tugs and the Guardian Vessel to be on standby
- 6) Establish communications with Terminal Representative and request standby

ACTION BY LNG Carrier

Action required by an LNG Carrier berthed alongside the Terminal will depend on the nature, location and proximity of the incident to the berthing area:

- 1) Initiate cargo shutdown
- 2) Initiate onboard emergency response plan
- 3) Standby for unloading arm disconnection and unmooring, including emergency unmooring
- 4) Maintain radio contact with Terminal
- 5) Notify the onboard Terminal Representative

ACTION BY Tugs and Guardian Vessel

- 1) Go to immediate standby
- 2) Tugs initiate water spray or deluge systems as required
- 3) Await instructions from the Terminal Manager or LNG Carrier's Master.

Specific Incidents

The following contains specific additional bulleted immediate actions to be taken by the principal parties.

Oil Spill from LNG Carrier

ACTIONS BY LNG Carrier

- 1) Isolate source of pollution and take whatever steps are necessary to prevent or minimize
- 2) Mobilize onboard pollution response plan
- 3) Initiate clean up onboard
- 4) Stop discharge operations
- 5) Prepare for unloading arms disconnection

ACTION BY FSRU Toscana Terminal

- 1) Verify source and type of pollutant
- 2) Secure all sources of ignition
- 3) Inform Maritime Authorities
- 4) Stop cargo operations
- 5) Prepare for unloading arms disconnection
- 6) Mobilise Terminal pollution response plan

ACTION BY Tugs and Guardian Vessel

- 1) Standby Tugs prepare to assist
- 2) Stand by upwind until nature and type of spill has been established
- 3) Guardian Vessel to start anti-pollution activities as directed by the Terminal Manager

Uncontrolled release of LNG Vapor or Liquid from LNG Carrier / Terminal

ACTION BY LNG Carrier

- 1) Stop discharging operations
- 2) Prepare for unloading arms disconnection
- 3) Secure all sources of ignition and impose a total smoking ban
- 4) Initiate water spray systems or deluge as required.

ACTIONS BY Terminal

- 1) Stop cargo operations
- 2) Prepare for unloading arms disconnection
- 3) Secure all sources of ignition and impose a total smoking ban
- 4) Allow automatic Fire and Gas, fire extinguishing, emergency shutdown and depressurization systems to work
- 5) Operate Terminal's fire monitors, if applicable
- 6) Inform the Maritime Authorities

ACTION BY Tugs and Guardian Vessel

- 1) Standby Tugs and the Guardian Vessel to activate fire fighting and deluge systems
- 2) Stand well clear upwind
- 3) Await instructions from Terminal
- 4) Secure all ignition sources
- 5) Impose total smoking ban

LNG Carrier Collision within Exclusion and Monitoring Zones

ACTION BY LNG CARRIER(S)

- 1) Identify other vessel and call or render assistance as required

ACTION BY Terminal

- 1) Initiate call out of Terminal's man overboard response team
- 2) Place first aid services on standby
- 3) Inform Maritime Authorities

ACTION BY Tugs and Guardian Vessel

- 1) Standby Tugs to respond as directed by the Terminal Manager or LNG Carrier Master
- 2) Guardian Vessel to act as directed by Terminal Manager

Man overboard incident within the Exclusion Zone

In the event of a man overboard incident within the Exclusion Zone, all LNG Carrier movements shall be suspended while search and rescue activities take place.

Extreme caution is required by the search vessels, particularly during hours of darkness, when approaching or entering the search area.

ACTION BY LNG Carrier

- 1) Throw a life buoy or floating aid to the person in the water
- 2) Raise the alarm by sounding (in accordance with LNG Carrier 'Emergency Contingency Manual') the LNG Carrier's whistle
- 3) Stop the cargo operations if the person in the water is within 100m of the Terminal, inform the Terminal's Central Control Room and advice circumstances
- 4) Place lookout and constantly monitor position of person in the water
- 5) Request the Terminal's Central Control Room to mobilize rescue from the Maritime Authorities
- 6) Direct responding vessels to the person in water

ACTION BY Terminal

- 1) Stop cargo operations (subject to Terminal Manager's decision)
- 2) Inform Maritime Authorities
- 3) Initiate call out of Terminal man overboard response team
- 4) Place first aid services on standby
- 5) Direct Guardian Vessel to rescue man overboard.

ACTION BY Tugs and Guardian Vessel

- 1) Standby Tugs and the Guardian Vessel to respond as directed by Terminal Manager or LNG Carrier's Master.

LNG Carrier Out of Position

ACTION BY LNG Carrier

- 1) Initiate ESD procedures
- 2) Clear manifold area in case of ESD2 activation
- 3) Prepare for Tug connection and unmooring of the LNG Carrier, including emergency unmooring.

ACTION BY Terminal

- 1) Confirm/initiate ESD (emergency shutdown)
- 2) Prepare for unloading arm disconnection
- 3) Consider initiating Terminal area fire and deluge systems
- 4) Prepare for release of LNG Carrier, including emergency release

ACTION BY Tugs and Guardian Vessel

- 1) Tugs proceed to LNG Carrier and prepare for connecting towlines
- 2) Await instructions from LNG Carrier's Master for un-berthing operations
- 3) Guardian Vessel to respond as directed by the Terminal Manager

Attachment 11.12 Master's Letter of Acknowledgement

To the Master of the LNG Carrier

Date:

Dear Sir,

It is a requirement hereof that the LNG Carrier's Master shall sign a copy of this Letter on behalf of the LNG Carrier's owners and operators. In the event this Letter is not signed (or otherwise accepted), the Terminal shall be under no obligation to perform or provide any services referred to in this Letter or elsewhere in the Terminal Regulations and Information Booklet.

In addition, responsibility for the safe conduct of operations on board your LNG Carrier while at our Terminal rests with you as Master. Nevertheless since our personnel, property, and other shipping may also suffer serious damage in the event of an accident involving your LNG Carrier, before operations start, we wish to seek your full cooperation and understanding on the safety requirements set out in the Safety Checklist contained in the Terminal Regulations.

These safety requirements are based on safe practices widely accepted within the LNG industry. We, therefore, expect you and all under your command to adhere strictly to them throughout your stay at the Terminal. For our part, we will ensure that our personnel do likewise and cooperate fully with you in the mutual interest of a safe and efficient operation.

To assure ourselves of your compliance with the Terminal Regulations including the Conditions of Use, the Terminal Representative together with a responsible LNG Carrier officer will, before the start of operations and thereafter from time to time during operations, carry out a routine inspection of the LNG Carrier's decks, cargo operations areas and accommodation spaces.

If we observe any infringement on board your LNG Carrier of any of the safety requirements within the Terminal Regulations or as otherwise required, we shall immediately bring this to the attention of you or your deputy for corrective action. If such action is not taken within a reasonable time, we shall adopt measures that we consider to be the most appropriate for dealing with the situation, and we shall notify you accordingly.

Should you feel that any immediate threat to the safety of your LNG Carrier arises from any action on our part, or from equipment under our control, you are fully entitled to demand an immediate cessation of operations.

In the event of any failure to comply fully with any of these safety requirements or Terminal regulations by any LNG Carrier, we reserve the right to stop all operations and to order that LNG Carrier off the mooring for appropriate action to be taken by the owners or charterers.

Please sign to indicate receipt of this letter and confirm that:

You have received a copy of the Terminal Regulations, associated appendices and Manuals, and Terms and Conditions of Use, and that

"I HAVE READ AND UNDERSTOOD THE REQUIREMENTS AND ACCEPT THE CONDITIONS OF USE AS SET OUT IN THE TERMINAL REGULATIONS, AND ON BEHALF OF THE LNG CARRIER OWNER or CHARTERER AGREE TO BE BOUND BY THEM."

Signed by the Master of the LNG Carrier for and on behalf of the LNG Carrier owner and operator:

Signed as received for and on behalf of Terminal Operator and OLT:

I, hereby, unconditionally approve, pursuant to and for the purposes of, articles 1341 and 1342 of the Italian Civil Code, the following clauses of the Terminal Regulations: Article 2.2 Restricted areas and Exclusion Zones ; Article 2.4 Environmental Conditions ; Article 2.5 LNG Carrier Domestic Matters ; Article 2.6 Terminal Representative ; Article 3.3. Navigation, Pilotage and Berthing ; Article 3.4 Status of LNG Carrier Equipment ; Article 4 Mooring and Unmooring ; Article 6 Access & Security ; Article 7 Safety ; Article 8 State of readiness ; Article 9 Pollution avoidance ; Article 10.0 Cargo Operations ; Appendix 11.1 Conditions of Use (acceptance of LNG carrier ; Master's responsibility ; Agency ; Marine Terminal Closure ; Removal of Wrecks ; provision of services ;Liabilities and indemnities ; Limitation of liability ; Pollution ; Governing Law and Jurisdiction ; Changes to terminal regulation) ; Attachment 11.11 Emergency Response Actions.

Signed by the Master of the LNG Carrier for and on behalf of the LNG Carrier owner and operator:

Attachment 11.13 Terminal Feedback Report

DATA:			
LNG Carrier name:		Port of Registry:	
IMO Number:		Owner:	
Date:		Time:	
Master:		Terminal Representative:	

DESCRIPTION OF ISSUES ARISED / DISCUSSED DURING LNG Carrier OPERATIONS	
1. Bridge performance	
2. Mooring operations	
3. Cargo operations	
4. Safety awareness	
5. Communication	
6. Others	

FOR Terminal

Stamp:

Terminal Representative (Signature)

Terminal Representative (Name + Function)

FOR LNG Carrier (for receipt only)

Stamp:

SS / MV:

(Name LNG Carrier)

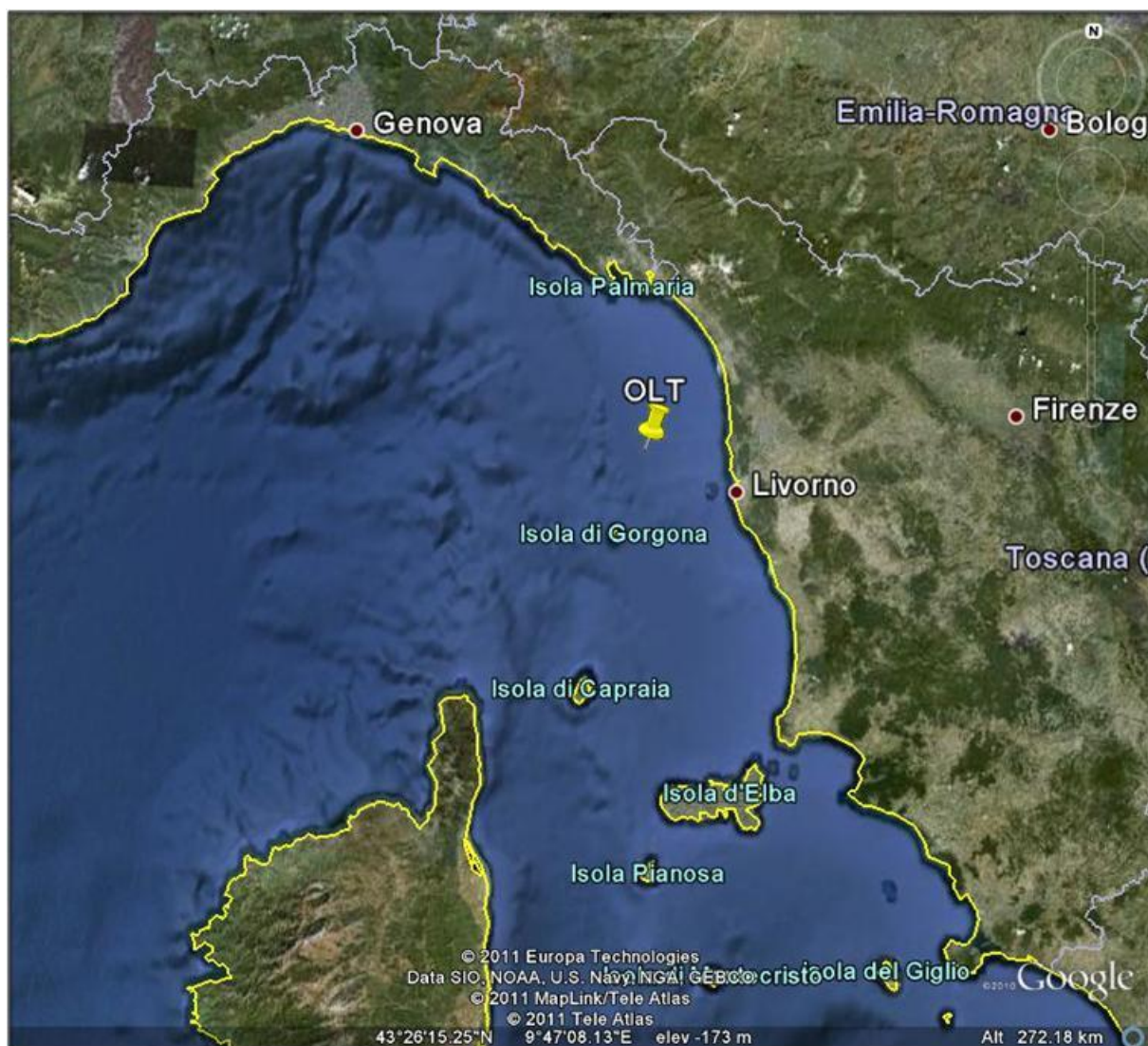
Master (Signature)

Date + Time

Master (Name)

Attachment 11.14 Terminal location

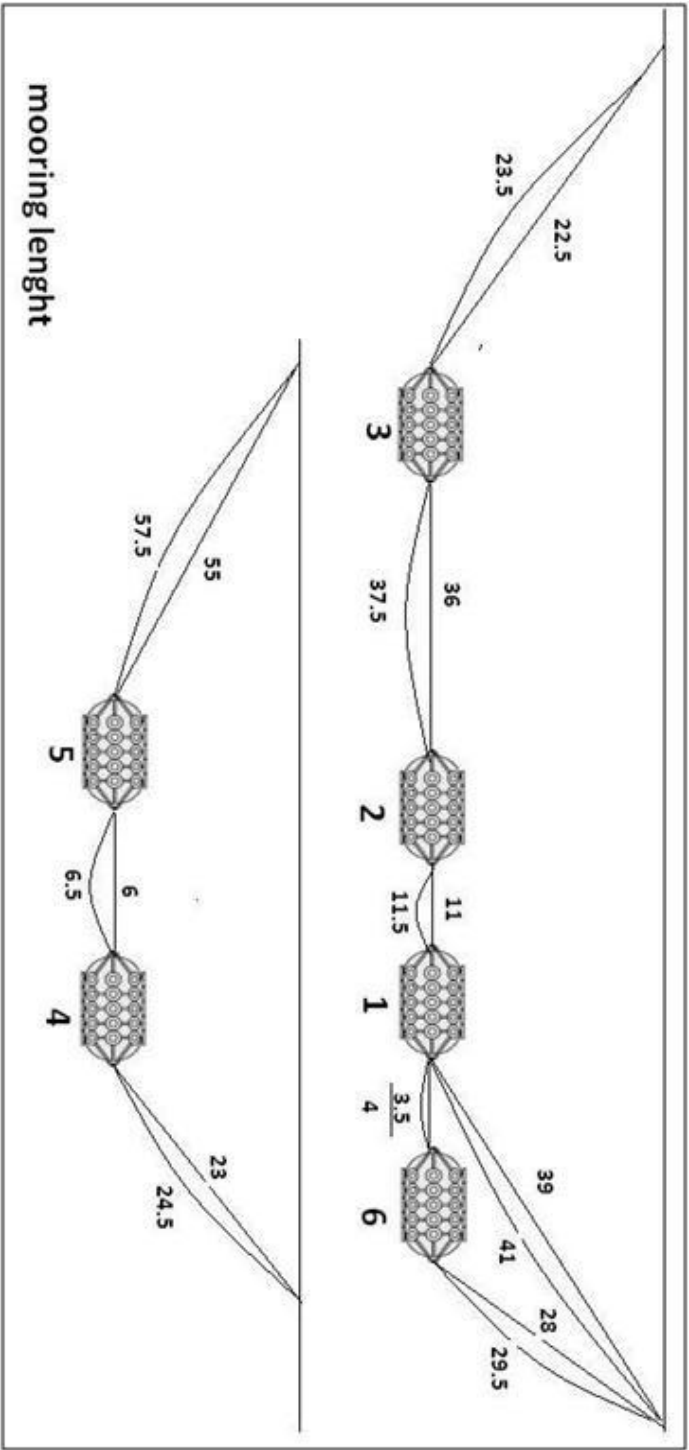




Attachment 11.15 Plan of Terminal and Berth



Attachment 11.16 Fendering arrangements



Attachment 11.17 OLT Crisis Management Plan

Crisis Management Procedure for third parties

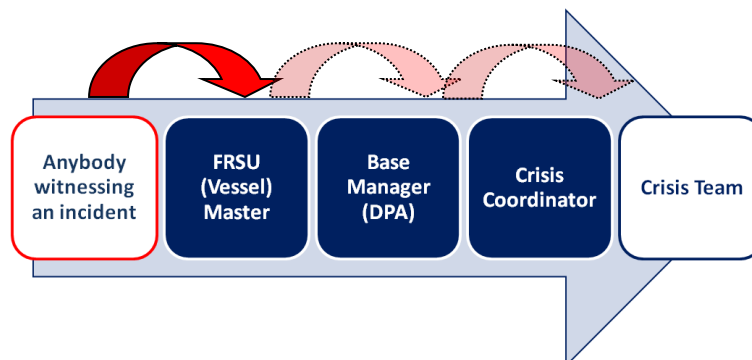
Party expressly agrees that OLT is entitled to implement the Crisis Management Plan (internal procedure) in the event of either a crisis or a potential crisis, and undertakes to notify the Company in writing and without delay whenever it becomes aware of any event or occurrence that could qualify as a crisis or potential crisis according to the following meaning: extraordinary situations that could cause, or already caused, damage to people, that attract the mass media attention or the intervention of the Government, that cause damages to the environment/properties, that cause significant reductions in the supplying or a partial compromise of the activities and permits.

The implementation of the Crisis Management Plan by OLT shall not release either Party from the performance of its obligations.

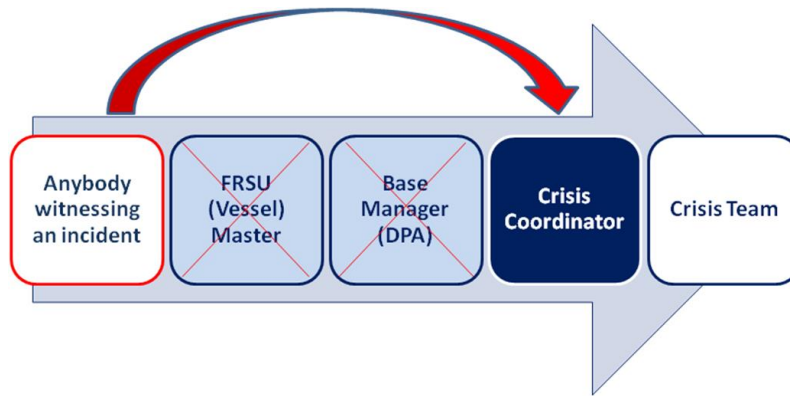
A crisis can be triggered by various events or incidents which might affect the normal course of business. Given the peculiarities of each case, it is necessary to determine which events may provoke an interruption and/or endanger the health and the safety of those who are within the organization or the community.

A crisis occurs when an incident represents a threat for the life of the personnel, when the operation capacity of OLT is compromised, when the incident consequences are difficult to be kept under control, when the incident has long term consequences on the operating results or when it threatens the OLT existence.

Given the definitions of what crisis means to this activity (i.e. an incident with a political impact, attracting unwanted media attention, or affecting the environment), if there is a serious emergency, it is strongly suggested that the following process for invocation is followed:



Only in case the above mentioned process is not possible (e.g. due to FSRU Master temporary unavailability) the witness of the incident can call directly the Crisis Coordinator and/or his deputy according to following chart:



Crisis Coordinator and/or his deputy are available(24/7) at following contact details:

1. Crisis Coordinator

- mobile +39 348 938 2203
- Email: monica.giannetti@oltoffshore.it

1.First Deputy

- mobile +39 348 988 4079
- Email: giovanni.giorgi@oltoffshore.it

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