

Terminal Regulations



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1.0 Introduction – Definitions

The Terminal Regulations are an agreement between Terminale GNL Adriatico S.r.L and the Master of the LNG Carrier which supplement the Maritime Safety Regulations Order n.63/2008 issued by the Chioggia Harbor Master on September 2nd 2008 (“Maritime Safety Regulation”) and any Laws, regulation expressly applicable to it, to ensure safe and efficient operations at the Terminal.

They also:

- Provide the Master of LNG Carrier with a source of additional information and procedures pertinent to operations at the Terminal.
- Should be read in conjunction with the Maritime Safety Regulations and other applicable Laws to ensure that the Master of the LNG Carrier is compliant with all applicable Laws and any other Terminal-specific requirements.

Application

The **Terminal Regulations** apply to all LNG Carriers including Persons operating on their behalf at the Terminal berth.

1. - DEFINITIONS

- **ALNG**: means Terminale GNL Adriatico SRL, the Terminal operating company.
- **CARGO EQUIPMENT**: means cargo pumps, cargo compressors, cargo vaporizers, inert gas generators, motors, control equipment, and other cargo-handling equipment. It also includes, where appropriate, primary and emergency power supply, circulating pumps and other auxiliary equipment essential for safe and efficient operations.
- **CREW**: means collectively the personnel involved with cargo-handling operations, and all other persons related to these operations on behalf of the LNG Carriers.
- **GOVERNMENT ENTITY**: means any legislative, judicial, regulatory or executive body (including any agency, bureau, department, commission or office) of the government of any sovereign state or any political subdivision thereof – including the Maritime Authority – or the institutions of the European Union including the European Commission.
- **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 but, for the purposes of this Terminal Regulation, excludes the pipeline which runs from the offshore plant of the Terminal to and including the Cavarzere Entry Point.
- **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.”
- **LAWS** : means all applicable laws, treaties, conventions, statutes, rules, regulations, decrees, ordinances, licenses, permit compliance requirements, decisions, orders, directives and policies that are enforceable through regulatory and/or judicial process of any Government Entity.
- **LINE HANDLERS**: has the meaning specified in the Maritime Safety Regulation.
- **LNG**: means liquefied natural gas.
- **LNG Carrier**: means liquefied natural gas carrier, sometimes referred to as LNG Carrier or LNG ship, constructed and equipped for the transportation of liquefied natural gas in bulk at specified temperatures and pressures corresponding to the atmospheric boiling points of the liquefied gases.
- **LNG Carrier Owner** : is the Person with name given to in Attachment 11.2 who owns under any title the LNG Carrier.

- **MARITIME SAFETY REGULATIONS:** has the meaning specified in the Introduction.
- **MASTER:** means, when used in relation to an LNG Carrier, any person having the command of the LNG Carrier, or a responsible person delegated by the Master to undertake general or specific duties in liaison with the Terminal, provided that the Master shall at all times have sole responsibility for the compliance with the Terminal Regulation.
- **NAKED LIGHTS:** means open flames, exposed incandescent material or any other unconfined source of ignition.
- **MARITIME AUTHORITY:** means Chioggia Harbor Master, in his capacity as the party entrusted with the administration and enforcement of the applicable Maritime Safety Regulations.
- **NOTICE OF READINESS:** has the meaning specified in article 3.2.1.
- **OFFSHORE INSTALLATION MANAGER:** means the person in charge of the safe operation of the Terminal.
- **PERSON:** means any natural person, corporation, company, partnership (general or limited), limited liability company, business trust, Government Entity or other entity or association.
- **PILOT and PILOTAGE:** has the meaning specified in the Maritime Safety Regulation.
- **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 Government Entity clearance requirements for the LNG Carrier to offload at the Terminal and other obligations to be carried out by such agent on behalf of the LNG Carrier pursuant to these Terminal Regulations.
- **TERMINAL:** means the LNG receiving facility, geographically located at the coordinates provided for in article 2.1, including berth area and other facilities within the 2000m exclusion zone.
- **TERMINAL REGULATIONS:** means this agreement which applies to all LNG Carriers including Persons operating at the Terminal berth.
- **TERMINAL REPRESENTATIVE:** means the designated person who will board the LNG Carrier on behalf of ALNG and will act as co-coordinator between ALNG and LNG Carrier. The Terminal Representative or 'Loading Master' is in direct communication with the Terminal Control room.
- **THIRD PARTY:** means any Person not a party to this agreement.
- **TUG:** has the meaning specified in the Maritime Safety Regulation.
- **UNLOADING:** means the technical operations (following the mooring of an LNG Carrier at the Terminal and the safe setting of the receiving equipment) used to transfer an LNG Carrier's cargo to the Terminal's storage tanks, in accordance with the procedures provided in the Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual), and "Unload" and "Unloaded" and similar expressions shall be construed accordingly.

2.0 General Information

2.1 Terminal Location

The Terminal is located approximately 10 nautical miles ENE of Porto Levante. The co-ordinates of the Terminal and Anchorage area are:

Terminal	45 05.3N; 012 35.1 E
Anchorage Area (CST)	45 09.5N 012 25.5 E Chioggia Tanker Anchorage

LNG Carriers requiring anchoring must first seek Maritime Authority authorization on VHF channel 14

2.2 Restricted areas and Safety Zones

A 2000-mtrs or 1,1 nml radius Safety zone exists around the Terminal in which navigation and fishing activities are prohibited.

Access to the exclusion zones is restricted exclusively to LNG Carriers calling at the Terminal, mooring support vessels and support service vessels, either working for or authorized by ALNG and Marine Authority, as well as those vessels associated with law enforcement agencies.

There is also a 1.5-nautical-mile radius Area to be Avoided (ATBA) / No anchoring area around the Terminal.

2.3 Berth Approval Parameters

The Terminal is designed to provide a safe mooring for LNG Carriers satisfying the following size limitations:

Maximum Arrival DWt	148,000 metric tonnes
Maximum Overall Length	320 meters
Maximum Beam	50 meters
Maximum Moulded Depth	27 meters
Maximum Loaded Draft	13/15 meters

All LNG Carriers must conduct LNG cargo discharge and ballast operations simultaneously to minimize the exposed wind area of the LNG Carrier while moored. (See section 8 - State of Readiness)

2.4 Environmental Conditions

2.4.1 General information.

The Terminal is under the influence of the Northern Adriatic Sea climate. Migrating extra tropical cyclones cause weather variations, which enter Europe from the North Atlantic Ocean either in the vicinity of Normandy, France, or across the coast of Portugal. Most of these systems follow a common trajectory to northern Italy and then exit the northern Adriatic to the Northeast, East, or Southeast. Another

phenomenon causing significant variations in the weather is origination of a low-pressure storm system in the region itself. This latter event is common in the months of January, February, and July.

The main winds in the area are the "Bora" and the "Scirocco".

Bora is a wind originating from the Northeast, but its direction shifts with topographic and migratory influences. Offshore Venice, it tends to arrive as an inflow of continental Polar or Arctic air through Trieste (I). Sometimes it funnels through the East Coast of the Adriatic, arriving from the ENE sector.

Wind from this special direction in the Adriatic is referred to as a "*levantera*". The most noteworthy aspect of *Bora* winds is that they sometimes "spill" out of the mountains with an abrupt rise in velocity, spawning squalls and yielding wind speeds of 55 to 70 knots within a few hours. *Bora* winds are most intense from October through May and typically last ½ to 2 days.

The *Scirocco* emerges from the south as tropical continental air that has lifted up moisture from the Mediterranean Sea. As the air moves up the Adriatic, its wind rotates such that it arrives near to the Terminal site from an easterly direction, typically with very cloudy conditions. *Scirocco* winds are most intense from January to May in this region and tend to last from 1 to 3 days.

The information provided in this article 2.4.1. are indicative only (i.e. non-binding).

2.4.2 Weather Reports

Twice daily weather forecasts are available around-the-clock from, among others sources, ALNG.

These weather forecasts are indicative only. ALNG shall not be liable in any manner and under no circumstances towards the LNG Carrier and/or Third Parties for their use.

2.5 LNG Carrier Domestic Matters

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 Terminal Safety Zone.
Garbage Facilities	There are no garbage reception facilities at the Terminal.
Provisions, stores and crew changes	There are no facilities to accommodate provisions storing or crew changes at the Terminal. Master and Ship's Agents should schedule crew changes or stores deliveries: <ul style="list-style-type: none"> ➤ Prior to berthing, ➤ After unberthing, or ➤ While at anchor. The LNG Carrier may store or effect crew changes from supply boats when alongside only with the prior written permission of ALNG Supply boats shall not come alongside the LNG Carrier and stores and/or spares shall not be loaded or unloaded during cargo-handling operations.
Repairs	Repairs, except those as agreed upon with ALNG to facilitate safe or continued operations while at the Terminal, are prohibited.
Medical care	While there are limited medical facilities available on the Terminal, emergency medical evacuation to shore may be organized by ALNG upon request and at the expense of the LNG Carrier. The transportation mode depends on logistic planning and availability and is decided by ALNG. The Ship's Agent makes written requests to ALNG for medical evacuation. The Ship's Agent is responsible for logistic arrangements for the evacuees upon arrival on shore.

2.6 **ALNG - Terminal Representative**

The Terminal Representative (Load Master) may board the LNG Carrier with the Pilot before the beginning of mooring operations.

The Terminal Representative (Load Master) acts as coordinator for all LNG Carrier/shore operations and may remain onboard during the LNG Carrier call at ALNG's office at the Terminal

He/she also provides local advice to the Master should any emergency arise.

2.7 **LNG Carrier Documentation**

It is the Master's responsibility to ensure that the LNG Carrier has updated ~~current~~ versions of the following documents:

- *Chioggia Harbor Master Ordinance 63/2008*
- *Terminal Regulations*
- *Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual)*

The above documents are available at the ALNG website: www.adriaticlng.it

The Ship's Agent will also forward copies of these Terminal Regulations and CHM Ordinance 63/08 to the LNG Carrier's Master prior to the LNG Carrier's arrival.

Prior to arrival at the Terminal, the Master is to confirm receipt and execution of the Terminal Regulations and CHM Ordinance 63/08 to the Terminal, Maritime Authority and the Agent

It is the Master's responsibility to produce the following documents if requested by the Terminal Representative:

- *LNG Carrier Marine Operations Manual Chapter 8, "LNGC Operations"; and*
- *LNG Carrier Emergency procedures.*

3.0 Arrivals

3.1 Communication Information

Except as otherwise provided herein or agreed, all notices or declarations sent by one Party to the other shall be in writing and shall be delivered by letter (overnight mail or courier, postage pre-paid), email or facsimile to the following addresses:

Item	Description
VHF operating channels	[08] and [16] , 24 hours per day
Terminal Postal Address	Senior Marine Advisor c/o Terminale GNL Adriatico S.r.l. Via C. Colombo n° 3 45014 Porto Viro (RO) Italy
Terminal e-mail	alng_oim@adriaticlng.it carmelo.panebianco@adriaticlng.it
Terminal Fax	+39 0426 361250/352
Terminal Telephone	+39 0426 361201/316
ALNG e-mail	alng_marine@adriaticlng.it carmelo.panebianco@adriaticlng.it
ALNG Fax	+39 0426 361600
ALNG Telephone	+39 0426 361593/606

In case of emergency communication can be made verbally but shall be confirmed in written in due time.

Above point of contacts may be time-to-time amendment through a written communication (fax or courier) from ALNG's Operations Manager to the Master.

All communications between ALNG and LNG Carrier and/or Ships Agent shall be in English

3.2 Pre-Arrival Communications

Master must send via fax or e-mail the information and estimated times of arrival (ETAs) as listed below:

- *Departure notice at loading port, including:*
 - *Loading port of the LNG Carrier; and*
 - *Name of the LNG Carrier; and*
 - *Time and date when LNG loading was completed; and*
 - *The quantity of LNG loaded and the portion of such quantity to be unloaded at the terminal if less than the full quantity; and*
 - *LNG's arrival condition for offloading manifolds (cold condition); and*
 - *ETA of the LNG Carrier.*
- *Updated notification of change of ETA if 12 hours or greater*
- *48 hours before arrival, with updated notification of change if 6 hours or greater*
- *24 hours before arrival, with updated notification of change if 3 hours or greater*
- *5 hours before arrival*

- *Updates when in VHF range with the LNG Carrier maintaining a listening watch on Terminal VHF Operating Channels*

Pre-arrival information shall be transmitted to ALNG no less than 48 (forty-eight) hours prior to arrival at the Terminal. See [Attachment 11.2 Pre-Arrival Information](#).

Masters are obliged to report to ALNG without delay any defects or deficiencies that may affect the safety or the performance of operations to be conducted while the LNG Carrier is within the Safety 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 3 (three) days prior to the estimated time of berthing:

- *Water Spray systems*
- *Fire pumps*
- *Atmosphere condition of hold spaces if inerting is not required*
- *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 Emergency Shut-down system (ESD)*

The Master must report to ALNG without delay any defects or deficiencies concerning these checks and tests.

The Master provides confirmation of such checks to ALNG during the Pre-Transfer Meeting.

3.2.1 Notice of Readiness

Upon arrival at the Pilot boarding station, the LNG Carrier Master or the Ship's Agent ~~Ships agent~~ must give notice to ALNG that the LNG Carrier is ready to berth at the Terminal and to Unload ("Notice of Readiness")

Prior tendering a Notice of Readiness the LNG Carrier Master must verify that the LNG Carrier has reached the Pilot boarding station, that the LNG Carrier is ready for all purposes of berthing and for Unloading.

The Notice of Readiness (NOR) is tendered by fax or e-mail no later than 24Hrs prior to the berthing and shall:

- *Be Signed by the Master of the LNG Carrier; and*
- *State the time and date when it was given; and*
- *Be Addressed to the Offshore Installation Manager.*

On receipt of the Notice of Readiness, ALNG will provide the LNG Carrier with instructions for berthing at the Terminal

In the event the LNG Carrier has tendered Notice of Readiness without satisfying the conditions to tender, then ALNG shall issue to the LNG carrier, in due time, a notice of protest invalidating such Notice of Readiness.

3.3 Navigation, Pilotage and Berthing

3.3.1 Pilotage

Pilotage is compulsory using the ALNG approved Pilotage service. VHF contact shall be established with the "Chioggia Pilot station" on Channel 11 when within range. The boarding position for the Pilot and Terminal Representative is approximately CST (Chioggia Small Tanker) anchorage area, or, subject to safe weather condition, the Pilot can board at 3.5 nautical miles West North West of the Terminal.

During the unberthing, in case of adverse weather conditions, the Pilot can request, at his discretionary option, to disembark close to the CST.

The LNG' Carrier shall guarantee the best lee conditions to allow safety embarkation and/or disembarkation.

Pilot Ladder : Pilot ladders for embarkation **must** be as per 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."

3.3.2 Tug Assistance Vessels

LNG Carriers are required to berth and un-berth with ALNG-approved tugs.

Tugs are also required to remain in close proximity to the Terminal throughout the LNG Carrier's stay at the berth and be available in case of early departure requirements or emergency situations.

At least two of the tugs will remain in the immediate vicinity of the LNG Carrier and be available to render assistance or firefighting support within 10 minutes; the remaining tugs will be available within 30 minutes within the safety zone or ATBA.

The tugs in immediate vicinity to the LNG Carrier and Terminal will maintain a security watch to the offshore side of the LNG Carrier.

The number and power of tugs indicated in the following table :

LNG Carrier DWT	Number of tugs – Berthing	Number of Tugs – Unberthing
All LNG Carriers	4 x 65t Bollard Pull	4 x 65t Bollard Pull

However, if, for any reason, a fourth tug is unavailable, temporarily or not, the Offshore Installation Manager, Senior Marine Advisor, Pilot and Master may agree, subject to the approval of the Maritime Authority, that only three tugs are used for berthing and/or unberthing the LNG Carrier.

3.3.3 Line Handling Service

LNG Carriers will be assisted by ALNG approved line-handling boats and mooring crews. Line-handling boats and crews together with mooring crews on the Terminal stationed at each end of the LNG Carrier will transfer and secure the mooring lines.

A mooring crew will also remain (at least two Persons) on the Terminal during the LNG Carrier offloading on call to unberth the LNG Carrier and be available in case of emergency or requirement to renew or secure a mooring line.

[See: 4.0 Mooring and Unmooring](#)

3.3.4 Ship Agency

The LNG Carrier-appointed Ship's Agent is responsible for booking and coordination of the Pilot, Tug and Line Handling services.

Ship Owner, Charterer and Ships Agents are directed to the ALNG website (www.adriaticlng.it) for further details.

The Ship's Agents shall liaise and communicate with ALNG concerning the LNG Carrier ETA and the schedule requirements of the Pilot, Tug and Line-handling services.

The Ship's Agent will also advise ALNG of other requirements that the LNG Carrier may have while at the Terminal, including:

- Planned storing activities
- Crew changes
- Visiting personnel to the LNG Carrier
- Cargo surveyor arrangements

- Other planned activities

The Ship's Agent will be responsible for arranging transportation to and from the LNG Carrier to conduct business on behalf of the LNG Carrier.

3.4 Status of LNG Carrier Equipment

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

- *Propulsion,*
- *Steering equipment,*
- *Lines or gear,*
- *Cranes/booms, or*
- *Cargo equipment.*

The Terminal Representative may conduct a Pre-Berthing Operational Safety Inspection of the LNG Carrier including but not limited to the following:

- *Mooring arrangements and equipment*
- *Brake test winches certificates*
- *Anchor status*
- *Cargo manifold*
- *Cranes and associated gear*
- *Cargo control room*
- *Any other area that the inspection may confirm master-reported status of the following items:*
 - *Main engines*
 - *Rudder and back-up steering systems*
 - *Emergency generator systems*
 - *Emergency fire pump*
 - *Emergency shut down*
 - *Emergency Power and lighting system*
 - *Fire fighting systems (including pumps)*
 - *Emergency signaling systems (general alarms & whistle)*
 - *Lifesaving equipment (life boats, rafts)*
 - *Radars and navigation systems*
 - *Navigation lights*
 - *Internal and external emergency communication systems*
 - *Auxiliary equipment*
 - *Operational Control equipment*
 - *Pre checks as per section 2.2*

If the LNG Carrier is found unacceptable for Terminal berthing or unloading, the Terminal Representative will as soon as practical advise the Master, the Pilot, the Marine Terminal Offshore Installation Manager (OIM), and the Ship's Agent.

3.5 Berthing Schedule

The berthing schedule will be in accordance with the Terminal's procedures and requirements and shall include but not necessarily be limited to:

Acceptability of the LNG Carrier by Government Entity
Berth and storage availability Scheduled Arrival Range

3.6 Berthing/Un-berthing Criteria

The following table shows environmental limits (wind and waves) for operations.

Activity	Direction of Wave	Significant wave height (m) Conventional LNGCs*	Significant wave height (m) Moss, Q-Flex and Larger conventional LNG'c**
Berthing	From any direction	1.5 m	1.0 m
Stop Cargo Transfer and Disconnect Loading Arms	From 110-190 degrees (deg)	1.4 m	1.2 m
	From 300-60 and 190-240 deg	1.7 m	1.0 m
	From 60-110 and 240-300 deg	2.0 m	1.2 m
Unberthing	110-190 deg	1.7 m	1.2 m
	300-60 and 190-240 deg	2.0 m	1.0 m
	60-110 and 240-300 deg	2.5 m	1.2 m

Activity	Time & Direction of Wind	Wind speed Conventional LNGCs*	Wind Speed Moss, Q-Flex and Larger conventional LNG'c**
Berthing	1 hour (hr.) from any direction	25 knots	15 knots
Stop Cargo Transfer and Disconnect Loading Arms	1 hr. from any direction	28 knots	25 knots
	30-second gust from any direction	34 knots	30 knots
Unberthing	1 hr. from any direction	30 knots	25 knots
	30-second gust from any direction	36 knots	30 knots

* Conventional LNGC is in the range of 65,000 m³ to 152,000 m³ of LNG membrane LNG Carrier.

** Q-Flex/Larger conventional LNG'c is in the range of 152,000 m³ to 217,000 m³ of LNG membrane LNG Carrier.

NOTE:

- The visibility for berthing operations shall be more than 500m.
- Terminal is fitted with anemometer and wave measurement equipment that will be used to determine the prevailing wind and sea state conditions.

ALNG is not liable under any circumstances towards the LNG Carrier and/or Third Parties for the use of the information provided.

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

3.7 Berthing Approach

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

The berthing principle is to maneuver the LNG Carrier into a position parallel to the berth. With the LNG Carrier stopped in this position, the tugs will then push or pull the LNG Carrier onto the breasting dolphins.

LNG Carriers will generally berth starboard side alongside unless previously discussed and agreed by the Master, the Offshore Installation Manager and the Pilot.

The Terminal is provided with a berthing aid and mooring line tension monitoring system with approach speed indicator panels positioned on the Terminal.

A portable PC unit linked to the Terminal by wireless telemetry during docking is available. This unit will, in LNG Carrier approach mode, display dynamic graphical data presentation of LNG Carrier speed, distance and longitudinal angle.

After docking, this unit can be transferred to a mode where it displays mooring line tension loads.

The following table provides detail on the approach limit warning settings

Berthing Speed	0-15cm/s	15-19cm/s	20cm/s and over
Approach Angle:	Green: 0-5deg	Yellow: 5-9deg	Red: 9 deg and over

To avoid damage especially but not limited to the fenders, the LNG Carrier shall be landed squarely onto the fenders with a contact speed **not exceeding 15 cm/second**.

The Master and ALNG will agree on the final position in accordance with the LNG Carrier and Terminal cargo handling arrangements.

3.7.1 Status of Anchors

During Pilotage operations and when entering the Safety Zone LNG Carrier personnel must be stationed forward with both anchors ready for immediate use in case of an emergency

On completion of mooring operations and while alongside the Terminal, the anchors must have the compressor bar across and pin in place to prevent accidental release.

4.0 Mooring and Unmooring

4.1 Mooring Arrangements

At the latest 24 (twenty-four) hours prior to first arrival of the LNG Carrier, ALNG will forward a proposal of mooring plan as established during the ship/shore compatibility studies. The mooring plan will include details of the number of mooring lines to be used.

The minimum mooring line requirements for LNG Carriers are indicated in the following table. However, the Master shall use its best endeavor to use all usable mooring lines to increase the number of mooring lines, if he considers it is diligent to do so.

All usable lines must be wire or high-modulus ropes located on winches that can be used effectively to moor the LNG Carrier.

Lines	Forward	Aft
Head / Stern	3	3
Breast	3-4*	3-4*
Springs	2	2
Fire wires	1 Not anymore compulsory by ISGOTT	1 Not anymore compulsory by ISGOTT

* Depends on carrier size

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

The arrangement of mooring lines and the sequence of mooring operations that will take place will be agreed upon between the Master, the Pilot and the Terminal Representative.

A maximum of two mooring lines can be handled by each mooring boat at one time.

The LNG Carrier must be moored to the complete satisfaction of the Pilot and Terminal Representative.

The layout for the mooring arrangement of the LNG Berth was developed to suit a wide range of LNG Carrier designs. All mooring hooks are equipped with load sensors and are monitored with a Tension Monitoring system.

- **Conventional LNG'c:**
Head, Stern and Breast line-mooring lines must be fitted with 22-m 8 strand type polyester mooring tails and springs with 11 mtr polyester/ **nylon** tails.
- **Moss, QFLEX Lng'c and Larger Conventionals:**
Polyester/Nylon tails for Head, Stern and Breast lines and exclusive use of Polyester compound material in case 22m tails are used for spring lines. As alternative to Polyester compound, Nylon may still be used for spring lines if 11m tails are deployed for this type of mooring lines.

Certificates and inspection data shall be made available by the Master to the Terminal Representative on request.

Mooring lines attached to the same mooring dolphin or in the same direction shall be of a similar breaking strength and same material.

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

4.1.1 Mooring Winches

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

Where spilt drums are fitted, wire-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 to meet the requirement of keeping the LNG Carrier in a proper and safe position alongside the berth at all times.

4.2 Status of Mooring

The safety of the moored LNG Carrier is the Master's responsibility under any circumstances. Without prejudice to Master's liability, for safe cargo handling, the Terminal Representative and jetty operators will check the LNG Carrier's mooring. If the mooring is found to be unsatisfactory, the Terminal Representative will request the Master to correct or adjust the moorings. If the Master does not fulfil the Terminal Representative request in due time or in extreme cases (i.e. safe operation or Terminal integrity is jeopardized), the Terminal Representative may decide to suspend the Unloading. Such check by the Terminal Representative and Jetty operator shall not be interpreted or construed, under any circumstance, as a relief of Master's liability.

It is the Master's responsibility to ensure that the LNG Carrier is securely moored having due regard, among other things, to the forecasted weather conditions. Weather forecasts and prevailing weather and sea conditions are monitored by the LNG Carrier during the LNG Carrier's stay alongside. In case of deteriorating weather appropriate action shall be taken in advance by respectively ALNG and/or the Master, each for their own duties and obligations. Sufficient and competent personnel maintain a strict mooring watch to ensure that proper adjustments are made as required to prevent slack or over-taut lines and movement of LNG Carrier.

Mooring line tension shall be carefully monitored especially when conditions approach the environmental/weather limits. The mean tension should be maintained as close as practical in the range of 10-20 tonnes

<i>Line tension alarm set points</i>	
Low	5 tonnes
High	60 tonnes

On activation of a low-mooring-tension alarm the Officer In Charge ("OIC") must immediately rectify the tension of the alarmed mooring line. On activation of the high-mooring-tension alarm the OIC must immediately inform the Terminal Control Room and / or the Terminal Representative.

The Terminal Representative will also continuously assess the weather conditions and make decisions regarding the start, continuation, or end of operations. Such decisions are made in consultation with the Master who keep the right to order the end of any operation.

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

4.3 Partial Fill Operations for Membrane LNG Carriers

Masters shall conduct a due diligence review and risk assessment prior to the LNG Carrier's first arrival at the Terminal to confirm vessels capability to Unload at the Terminal within the operating parameters set and hind cast data.

Master shall be guided by their Classification Society and or Membrane System Designer on limitations, operations and mitigation measures for operating at the Terminal or if the LNG Carrier has to depart the Terminal in the partial fill condition.

Master shall develop a safe condition departure plan in the event the LNG Carrier is required to depart the Terminal prior to Unloading 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 at least:

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

The Master and Terminal Representative will review the latest weather forecasts prior to:

- *Berthing; and*
- *Commencement of Unloading; and*
- *Entering the partial fill condition.*

Forecasts must indicate a 24-hour look-ahead period for conventional LNG carrier (36-hour look-ahead for Q-Flex/Larger conventional LNG'C) in order to satisfy themselves that weather conditions will remain favorable to allow safe discharge without interruption and un-berthing of the LNG Carrier.

5.0 Communication

5.1 Verbal Communication

The following applies to verbal communication:

All communication between the LNG Carrier and ALNG shall be in English. ALNG will provide to LNG Carrier a HOT LINE for emergency communication to ALNG.

ALNG provides a PaBx Telephone Line that will enable communication via the ship/shore communication link.

During Unloading communications between LNG Carrier and ALNG are primarily carried out using a ALNG provided UHF radio.

Alternative communication will be via agreed VHF radio Channel.

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

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

5.2 Communications Link

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

- *Fiber Optic link; or*
- *Copper cable (Electrical) link.*

A back-up Pneumatic ESD link will also be provided.

Subject to LNG Carrier system characteristics, one primary and the Pneumatic ESD 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 emergency shutdown (ESD) signaling. The copper cable link shall transmit all of the above, but on a dedicated pair of wires per signal.

ALNG personnel and LNG Carrier's personnel will connect the Fiber Optic or electrical link and pneumatic link as soon as the gangway has been set.

The fiber Optic, the Electrical Link and pneumatic link will be tested to ensure that adequate and compatible communication link are in place. After testing only one system, fiber optic or electrical will remain connected.

The Fiber Optic or electrical Link and pneumatic link will remain connected until the gangway is about to be removed prior to the LNG Carrier's departure.

Following the disconnection of the Fiber Optic or electrical link, the LNG Carrier should monitor on VHF [Ch08]

In the event of a failure of the communications system providing the ESD / data link, Unloading shall be suspended until the fiber optic or electrical link is re-established, or until such time that an alternative Communication/ESD system is established and agreed upon between the LNG Carrier and the Offshore Installation Manager and approved by the Maritime Authority.

Prior to any LNG Carrier calling for the first time, ALNG will conduct a Ship Shore Compatibility Survey. During that survey any issue associated with communications will be identified and steps will be taken

with the Master to ensure that an adequate and compatible communication link exists between LNG Carrier and ALNG.

Reference: ALNG Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual) for details of the communication systems and pin configurations

5.2.1 Communication Agreement

[Attachment 11.5 Communication Agreement](#) shall be completed and signed by the Master during the Pre-transfer Meeting. This attachment defines the communications systems and procedures to be implemented between the LNG Carrier and ALNG.

6.0 Access & Security

6.1 LNG Carrier Access

The Master has the sole jurisdiction on controlling access to LNG Carrier.

ALNG will provide and operate a gangway with a saddle or tripod landing arrangement for location on the LNG Carrier's handrail or deck.

It is the responsibility of the Master to provide safe access that includes at least (but not limited to):

- *The provision of a life-buoy with at least 25 meters of floating lifeline; and*
- *Appropriate illumination; and*
- *Safe access between the termination of the gangway steps and the LNG Carrier main deck*
- *Continual manning and monitoring of the gangway access area; and*
- *Posting of a notice at the gangway advising personnel that only "Authorized personnel may board the LNG Carrier or Terminal".*

The LNG Carrier must be ready to receive the Terminal gangway as soon as the berthing has been completed.

The Master is required to provide assistance on the main deck to enable the proper and safe positioning and removal of the Terminal gangway.

The LNG Carrier and ALNG must ensure that there is a safe transit for personnel between the LNG Carrier and the berth by inspecting, each for their own duties and obligations, the gangway once in position.

Reference: *ALNG Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual) for details of the gangway arrangements* *Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual)*

6.2 Security - Berth/LNG Carrier Access Control

No Person other than the Pilots, Customs officials, immigration officer, Ship's Agents, Maritime Authority or Terminal Representative is allowed to board or disembark from an LNG Carrier until clearance has been obtained from the Government Entity having jurisdiction on the Terminal, the LNG Carrier and the Master.

ALNG, among other things:

- *Reserves the right to request that personnel produce personal identification; and*
- *Reserves the right to escort to or from the LNG Carrier any unannounced visitors or persons whose conduct may present a hazard to personnel or Terminal property; and*
- *Reserves the right to board the LNG Carrier at any time to ensure that the Terminal Regulations are being complied with and to stop any and all operations of the LNG Carrier in the event of breach of the Terminal Regulation; and*
- *Has the sole and exclusive right to give access to the Berth area.*

SHIPBOARD PERSONNEL ACCESS TO THE TERMINAL IS NOT PERMITTED WITHOUT PRIOR APPROVAL FROM THE ALNG AND WITH ALNG ESCORT

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

6.4 **Security - ISPS**

All security-related questions shall be addressed to the Terminal Representative.

The PFSO /DPFSO (Port Facility Security Officer) is authorized to sign the "Declaration of Security" which shall be signed also by the LNG Carrier Security Officer or Master and will concur with the LNG Carrier Security Officer on any additional security measures in case the LNG Carrier and/or Terminal is at a security level other than 1.

[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 standards. The LNG Carrier's personnel are responsible for the safety of the LNG Carrier. LNG Carrier Master and personnel **MUST** take all necessary 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.

THE LNG CARRIER'S CREW AND TERMINAL STAFF SHALL IMMEDIATELY:

- **NOTIFY ALNG OR LNG CARRIER CONTROL ROOM OF ANY SITUATION OR CONDITION THAT MAY COMPROMISE THE SAFETY AND/OR INTEGRITY OF THE OPERATION AND**
- **IF REQUIRED, ACTIVATE THE EMERGENCY SHUTDOWN.**

ANY SITUATION THAT COMPROMISES THE OPERATION MUST BE REPORTED TO THE MASTER AND TERMINAL Offshore Installation Manager

7.2 Reduced visibility

When visibility at the Terminal falls below 100 meters as determined by observation of a known fixed distance, the Terminal Offshore Installation Manager (OIM) and Master will jointly review the situation to manage Unloading and provide appropriate safety measures. This may include but is not limited to:

- Placing tugs at closer stand-by; and
- Additional deck and berth personnel for monitoring purposes.

7.3 Emergency Procedures and Response

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

- *Sounds a continuous blast on the whistle;*
- *Sounds the general alarm;*
- *Stops Unloading and prepares to disconnect loading arms;*
- *Informs the Terminal Representative;*
- *Initiates the LNG Carrier's emergency response procedure;*
- *Informs the Maritime Authority ;*
- *If necessary, request mobilization of the tugs fire-fighting capability (Based on information provided by LNG Carrier, ALNG will inform all relevant functions within ALNG and arranges for the Terminal's fire-fighting capability to be mobilized as required);*
- *Coordinates the fire fighting operations onboard and directing the use of official emergency teams and the Terminal's fire fighting equipment. If the fire cannot be controlled or contained or if the Terminal installation is seriously endangered, the Master and Terminal Offshore Installation Manager shall 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 Offshore Installation Manager, Master and Maritime Authority to confirm and organize an appropriate level of response.*

The following incidents, or combination of incidents, may potentially occur while the LNG Carrier is alongside the Terminal (Non exhaustive list):

- *Fire/Explosion;*
- *Pollution;*
- *Uncontrolled release of LNG or LNG Vapor;*

- 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 prime consideration is the safety of personnel, protection of environment and the protection of the integrity of the Terminal and LNG Carrier. Quick appropriate 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.

Reference: Terminal Emergency Response Plan

7.4 Emergency Mooring Release

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

The remote emergency mooring hook release will only be activated in the case of emergency which places either the LNG Carrier or the Terminal at risk. The emergency mooring hook release may be activated by ALNG from either the Terminal control room or locally at the mooring hook stations.

In case of emergency, following communication between OIM and the Master, the LNG Carrier shall be released from the jetty. Master will maneuver the LNG Carrier to unberth from the Terminal.

7.5 Fire Prevention

Industry standard practices and fire prevention measures shall be complied with in line with the Ship/Shore Safety checklist, including but not limited to the following:

The LNG Carrier's Fire Control and Safety Plan must be posted adjacent to the gangway and accommodation entrance.

The LNG Carrier's water-spray system must be available at all times. The LNG Carrier's fire main system must be pressurized at all times. All fire hoses fitted with jet/spray branches to be available at each cargo tank dome area and the cargo manifold area are to be connected to the LNG Carrier's fire main system, of sufficient length, and ready for immediate use.

Portable Dry Powder fire extinguishers must be conveniently placed 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 external doors, windows and portholes of the LNG Carrier must remain closed. 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 re-circulation in order to maintain a positive pressure in the accommodation. 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 loading 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 an ALNG approved type for such areas (for example EX) and satisfactorily maintained so as to ensure that its original certificate is not jeopardized.

The use of naked lights is strictly prohibited.

Smoking in the berth area is strictly prohibited. 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 Non-smoking 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, unless the Terminal Offshore Installation Manager provided his written agreement.

The use of mobile telephones and pagers is prohibited on the Terminal and in the LNG Carrier's hazardous areas, unless of an approved type. Non-approved types must be switched off. Mobile telephones and pagers may be used on board the LNG Carrier inside the accommodation area and only with the Master's permission.

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

7.6 Emergency Towing Wires

Except at Terminals where no tugs are available, towing off wires of adequate strength and condition should be made fast to bollards on the tanker, forward and aft, and their eyes run out and maintained at, or about, the waterline. (ISGOTT Chp. 3,7,2)

7.7 Personal Protective Equipment

It is the 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 Terminal Safety area.

Fall protection must be worn in accordance with OCIMF regulations while handrails are collapsed at the manifold area.

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 3.0 meters by the stern.

For custody-transfer measurement, the LNG Carrier shall arrive at the Terminal on even keel and upright.

8.2 Defects and Deficiencies

Any defect or deficiency occurring in the LNG Carrier's manning, propulsion, 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) WHICH WOULD 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 OFFSHORE INSTALLATION MANAGER AND MARITIME AUTHORITY.

Prior written authorization from Off-Shore Installation Manager and Maritime Authority (72 hours before arriving at the Terminal) is required for:

- *Any hot work; or*
- *Enclosed space entry; or*
- *Repairs and maintenance that may temporarily reduce the firefighting, readiness to maneuver or safety systems for the LNG Carrier.*

Such exceptional authorization will not be granted during cargo-handling operations. It will only be considered where unavoidable and not deferrable repair / breakdown occurs and may be conditional on the Master ensuring sufficient tugs to move the LNG Carrier are in place, as a contingency measure if so required.

The Master shall advise ALNG in advance and due time 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 remain ready on board the LNG Carrier to ensure that the correct level of personnel are 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 by the Master to enable the LNG Carrier to be un-berthed under her own engine power at short notice in case of emergency.

The LNG Carrier shall not to be operated in the unmanned machinery space (UMS) mode at any time while in the Terminal Safety area or at the berth.

8.6 **Engine Safety**

TO PREVENT INADVERTENT OPERATION OF THE LNG CARRIER'S MAIN ENGINE WHILE THE LOADING ARMS ARE CONNECTED, ALNG REQUEST THAT THE MAIN TURBINE STEAM INLET V/V IS SECURED IN THE CLOSED POSITION PRIOR TO THE TERMINAL GANGWAY LANDING ON THE LNG CARRIER'S DECK.

ALNG will give formal permission to the LNG Carrier to remove the seal as soon as the loading arms are disconnected and clear of the LNG Carrier.

THE 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 LOADING ARMS ARE DISCONNECTED

IT IS THE MASTER'S RESPONSIBILITY TO ADVISE THE PILOT IF THERE IS ANY LIMITATION ON THE RANGE OF USE OF THE LNG CARRIER'S MAIN PROPULSION.

9.0 Pollution Avoidance

9.1 Introduction

The Master is responsible for preventing any kind of pollution. This includes bunkers, LNG, bilge water, dirty ballast, plastics, garbage, or any other matter that results in the pollution of the environment (sea and/or atmosphere). The Master shall ~~must~~ ensure that all applicable International Convention for the Prevention of Pollution from Ships (MARPOL) and Laws are—complied with.

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 personnel onboard have received training in responding to emergencies.

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

9.2 Leaks and Pollution Prevention

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

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

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 Terminal area.

9.2.3 Venting

Venting cargo vapor to the atmosphere is not permitted. The Master is required to report in due time 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 notwithstanding Masters diligence cargo handling operations will be immediately stopped.

9.2.4 Bilge Discharge

The discharge of bilge effluents, oil, or any mixture containing oil to sea is strictly prohibited.

Bilge overboard valves are to be visibly locked shut.

9.2.5 Ballast Discharge

Subject to compliance with the Maritime Safety Regulations and Law, only clean segregated ballast can be discharged from the LNG Carrier when at the Terminal.

9.2.6 Excessive Smoke

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

9.3 Action in event of Pollution

In the event of pollution, immediate notification **MUST** be given by the Master to ALNG and the Terminal Representative who will initiate the Terminal Emergency Response Plan.

This notification shall not relieve the Master of any of his responsibility among which, but not limited to, to activate the LNG Carrier emergency response plans and procedures.

In the event of infringements to pollution prevention rules, ALNG, at its sole discretion, will order the LNG Carrier, for example but not limited to, to stop berthing operation, to stop Unloading, to unberth and/or to leave the ATBA area as the case may be, until appropriate actions are taken by the LNG Carrier to avoid any risk of pollution or further risk of pollution.

9.3.1 LNG Leakage

In the event of LNG leakage (including vapor release), LNG Carrier personnel shall immediately stop Unloading and/or activate the emergency shutdown system, if necessary.

If the gas cloud formed threatens the Terminal/berth area, the remote-controlled water monitors and other water spray systems shall be used by ALNG to control the gas cloud. If necessary, the personnel at the berth will be evacuated.

Operations may resume only when leakage is fixed and the cause of leakage is definitely established.

In the event that LNG leakage occurs on the jetty and/or loading arms, ALNG shall immediately request the LNG Carrier to stop Unloading or will activate the emergency shutdown system, if necessary.

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

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

10.0 Cargo Operations

10.1 Cargo Handling Agreement

The procedures for the intended cargo handling must be pre-planned, discussed and agreed upon in written in the attached form by the Terminal Representative and the Master prior to the start of operations.

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

10.2 Control and Supervision of Operations

The LNG Carrier Cargo Control Room is to be manned at all times and under the control of a competent Officer on behalf of the Master.

The person(s) so appointed shall maintain communications with ALNG.

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

10.3 Ship/Shore 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 Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual).

The Terminal Representative will attend this meeting.

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

The following forms (provided as attachments to this document) will be provided by ALNG to the LNG Carrier. These forms will be discussed, completed and agreed upon by LNG Carrier and ALNG during pre-transfer meeting:

ATTACHMENTS	IN AGREEMENT WITH	REMARKS
ATTACHMENT 11.3 SHIP/SHORE SAFETY CHECK-LIST	LNG Carrier/Terminal	
ATTACHMENT 11.4 CARGO HANDLING AGREEMENT	LNG Carrier/Terminal	
ATTACHMENT 11.12 MASTERS LETTER OF ACKNOWLEDGEMENT	LNG Carrier/Terminal	
ATTACHMENT 11.5 COMMUNICATION AGREEMENT	LNG Carrier/Terminal	
ATTACHMENT 11.6 EMERGENCY CONTACTS	LNG Carrier/Terminal	
ATTACHMENT 11.10 ISPS DECLARATION OF SECURITY	LNG Carrier/Terminal	

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 minimum items:

- Confirmation of pre-arrival safety checks
- Status of cargo tanks on arrival (temperature and pressure).
- Custody transfer and CTMS status
- Connection and disconnection of Unloading Arms.
- Testing of ESD
- Unloading Arms cool-down procedure.
- 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.
- Weather Forecast.
- Communications with ALNG.
- Work Permit requirements
- Stand-by Tugs.
- Emergency Procedures, including unmooring operations and evacuation plans
- Emergency Shutdown
- Security Arrangements.
- No Smoking Areas

10.4 ESD

To minimize the potential hazard of an LNG release, the LNG transfer system is protected by two emergency shutdown steps: ESD-1 and ESD-2.

ESD-1

ESD 1 allows the rapid shutdown of the LNG Carrier's transfer pumps operation during an emergency and closure of the Terminal and LNG Carrier shutdown valves.

ESD-2

The second of two emergency shutdown steps minimizing the potential hazard of an LNG release, ESD-2 automatically uncouples the loading 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 loading arms.

Reference: For more details, see Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual).

10.5 Emergency Shutdown

Justifications for activating an Emergency Shutdown include any emergency situation such as, but not limited to:

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

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

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

After the incident, a joint investigation of the incident and a survey of the LNG Carrier may be carried out by the Master, the Offshore Installation Manager, Maritime Authority and other ALNG Personnel.

10.6 Resumption of Operations

When the emergency is over and the situation is secure, the initiator of the Cargo Emergency Shutdown shall notify all stations accordingly and operations must be resumed.

Details of the occurrence are to be entered on the Emergency Shutdown Report form, and the cause is to be investigated.

The OIM may require, at its own discretion, the LNG Carrier to leave the Terminal.

See: [ATTACHMENT 11.8 Emergency Shutdown Report](#)

OPERATIONS MAY NOT RESUME UNTIL IT IS DETERMINED THAT IT IS SAFE TO DO SO. OPERATIONS MAY RESUME ONLY WITH OFFSHORE INSTALLATION MANAGER AND LNG CARRIER MASTER AGREEMENT AS DOCUMENTED ON THE EMERGENCY SHUTDOWN REPORT.

10.7 Liquid and Vapor Arms Connection

Unloading will normally be carried out through three liquid-loading arms on the berth, unless previously agreed upon between the LNG Carrier and the Terminal Representative during the Pre-Transfer Meeting.

The LNG Carrier shall provide personnel to assist in the preparation of the loading arm connection assistance system under the coordination of the Terminal Representative. The connection assistance system will be placed on the LNG Carrier prior to berthing (*Ref: Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual)*)

The Master is required to 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 has been started **before** the Terminal maneuvers the arms on board.

To allow use of the cable-guided connection system and avoid interference with the Loading Arm, the LNG Carrier Manifold handrail needs to be lowered or removed prior to loading arm connection and disconnection. On completion of connection the handrail must be re-installed for offloading operations.

Liquid-loading arms and the vapor-return arm will be connected by the Terminal upon the LNG Carrier's confirmation of readiness, and after ALNG is satisfied that the LNG Carrier is in compliance with the requirements of the Ship / Shore Safety Checklist.

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

Reference: For more details, see Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual).

10.8 Cargo Measurements/CTMS

The Master shall ensure that the cargo measurements are conducted in compliance with the Regassification Code requirements..

The LNG Carrier's Custody Transfer Measurement system shall be in compliance with the requirements of the Marine Operations Manual, including:

- Calibration of LNG tanks
- Tank gauge approval and accuracy
- Liquid level gauging device accuracy, both primary and auxiliary systems
- Temperature gauging devices
- Pressure gauging devices

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

10.9 Unloading Rates

The Master and the Terminal Representative will agree to the maximum transfer rate at the pre-transfer meeting. The agreed upon transfer rate will be noted on the cargo handling agreement. The Master and ALNG will monitor the transfer rates throughout all stages of cargo operations.

ALNG can request a reduction in transfer rates if required before changing tanks or at any time during the transfer 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 Master shall make all reasonable efforts to limit the vapor pressure in the cargo tanks to 140 mbarg.

The LNG cargo will not be considered to be Off-Spec solely due to the cargo tank vapor pressure being above 140 mbarg; however, ALNG may, at its sole option:

- (i) declare the LNG Carrier to be not ready for unloading; or
- (ii) stop the discharge of LNG until the vapor pressure is reduced below this limit, or
- (iii) reduce the rate of unloading of the LNG Carrier.

10.11 Liquid and Vapor Arms Disconnection

The liquid and vapor arms will be drained to be free of LNG and purged with nitrogen (Hydrocarbon Content < 1% By Vol) by ALNG prior to disconnection.

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

THE MASTER SHALL ENSURE THAT STEPS ARE TAKEN TO PREVENT INADVERTENT OPERATION OF LNG CARRIER ESD/MANIFOLD VALVES THAT MAY RESULT IN A RELEASE OF LNG OR VAPOR THROUGH THE MANIFOLD AT THE TIME OF DISCONNECTION.

The liquid and vapor arms will be disconnected and stowed one by one by ALNG. The Master is required to provide assistance from his crew on the LNG Carrier's manifold for communication purposes with ALNG during arm draining/purging and disconnection.

To allow use of the cable-guided connection system and avoid interference with the Loading Arm, the LNGC Manifold handrail needs to be lowered or removed prior to disconnection of the loading arms.

LNG Carrier personnel shall remain at a safe distance from the loading arms while they are being maneuvered by ALNG ~~the Terminal~~.

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 Marine Operations Manual Chapter 8, "LNGC Operations" (previously known as Cargo Handling Manual).

The Terminal Representative representing ALNG ~~the Terminal~~ and the designated responsible person(s) appointed by the Master to supervise the cargo handling operations on board the LNG Carrier representing the LNG Carrier shall both attend the post transfer meeting.

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

11. Appendix

Attachment 11.1 Conditions of Use

1- Acceptance of LNG Carrier

All LNG Carriers calling at the Terminal are first subject to acceptance by ALNG and must satisfy among others:

- *Terminal vetting requirements (Ref: Marine Operations Manual Chapter 10 – LNGC Vetting and Acceptance) ; and*
- *Berth compatibility requirements; and*
- *Terminal Insurance liability requirements.*

Combinations of weather and current conditions, size, trim, and handling qualities can also affect ALNG's decision to allow an LNG Carrier to berth at the Terminal. Should an LNG Carrier be rejected or delayed by ALNG for any reason, ALNG will supply the Master and the Ships Agent with written reasons for the rejection or delay.

The Terminal Representative is authorized by ALNG to confirm the continued eligibility of an LNG Carrier to remain at the Terminal.

ALNG reserves the right at all times to direct an LNG Carrier to leave the Terminal if the Terminal Representative or OIM determines, at his discretion, that the ~~continued~~ presence of the LNG Carrier poses any threat to the Terminal, to safety, or to the environment. In such cases the ~~LNG Carrier~~ Master will ~~first~~ be consulted.

2- Master's Responsibility

Masters of LNG Carriers calling at the Terminal are solely responsible on behalf of the owners or charterers for the safe navigation, and operation of their LNG Carriers.

Nothing contained in these Terminal Regulations relieves Masters of their responsibility from taking precautions and behave diligently to prevent among others:

- *Fire;*
- *LNG release;*
- *Tank over pressurization or vacuum;*
- *Environmental pollution;*
- *Damage to the Mooring System;*
- *Damage to the Loading Arm System;*
- *Damage to the Terminal;*
- *Incident especially during the period that the handrail is collapsed; therefore, no person shall cross the seaside area and Master shall make safe the open area of the handrails by temporary lashing. In case of man overboard from handrails or loading arms, recovering responsibility is upon Master. LNG Carrier's personnel must use safety harness in addition to the life jacket when lowering/raising the handrail*

The Master remains at all times wholly and fully responsible for his or her LNG Carrier and for its officers and crew.

3- Government Officials

Italian government officials may be included in the boarding party. These may include:

- *Customs Officer; and*
- *Immigration Officer; and*

- *Maritime Authority Representative.*

The Ship's Agent is responsible for advising the Master of the number of personnel expected to board and if they will be required to stay onboard throughout Unloading.

4- Agency.

The LNG Carrier Owner or Master must have arranged local agency services. The representative of the agency may board with the boarding party. ALNG and its personnel do not perform any LNG Carrier agency functions.

5- Anti-Pollution Regulation

To prevent any kind of pollution it is the responsibility of the Master to ensure that his or her LNG Carrier complies with all applicable Laws aimed at preventing pollution. This includes cargo, bunkers, bilge water, 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 Laws are complied with.

LNG Carriers must have in place a Shipboard Oil Pollution Emergency Plan (SOPEP) approved by flag State and have records to substantiate that the personnel onboard received training in responding to emergency situations.

Any fine imposed by any Government Entity for any pollution caused by the LNG Carrier or for which the LNG Carrier or its Owner are liable under any applicable law shall be for the LNG Carrier's Owner's account.

6- Terminal hours of operation

LNG Carriers are discharged at any hour, weather and other circumstances permitting, at the full discretion of ALNG and the Harbor Master.

Mooring and unmooring operations are conducted on a 24-hour basis, always consistent with favorable wind and sea conditions, visibility, and availability of Pilot, tugs and line handling crews.

7- Marine Terminal Closure

Any decision regarding the opening and closing of the Terminal is made solely at the sole discretion of ALNG. ALNG will provide the Master with a written notice of the times during which the Terminal is closed.

LNG Carriers required to leave the Terminal area during periods of closure and must keep in contact with the Terminal via VHF so that they are readily available when the Terminal reopens.

Closure could be caused by adverse weather conditions or any other operational reasons that prevent, or may prevent, an LNG Carrier from mooring and/or remaining safely moored.

8- Pilotage

All berthing, mooring, and unmooring operations within the Terminal areas shall be conducted with a Pilot onboard, except in emergency un-berthing situations and when the Pilot is not available for a duly motivated reason.

The Master at all times remains in command of his or her LNG Carrier and is fully responsible for the safety of life, the LNG Carrier, the environment, and for third-party property damages.

The Pilot and Terminal personnel remaining on the LNG Carrier during Unloading must be provided with food and accommodation of the standard usually provided for the LNG Carrier's officers.

9- Surveyors and Government Representatives

The LNG Carrier Officer in Charge (OIC) must inform any independent cargo surveyor or Government Entity representative appointed to inspect the cargo on board that LNG Carrier of cargo information including stowage, load-port information, LNG quantities and specifications.

The OIC must ensure that surveyors and Government Entity representatives are properly accommodated and that all reasonable requests are satisfied.

If the OIC has any doubts, or if a problem or misunderstanding occurs, the OIC must inform the Terminal Representative who will endeavor to resolve any situation to the satisfaction of all concerned.

10- Drugs and Alcohol

As part of the pre-qualification screening requirements that allows the LNG Carrier to operate at the Terminal, the Master must have in force effect a drug and alcohol abuse policy. The Master's drug and alcohol abuse policy must meet or exceed the standards specified in the Oil Companies International Marine Forum Guidelines for the Control of Drugs and Alcohol Onboard LNG Carrier.

The Master must ensure that no drugs (other than those in the medical locker) are onboard and that no alcohol is used or is available for use while the LNG Carrier is present in the Terminal Safety area.

All personnel onboard the LNG Carrier located within the Terminal area must comply with the Master Substance Abuse and Drug and Alcohol Use Policy, a copy of which must be posted onboard in order to advertise it.

LNG Carrier personnel are reminded that while approaching, at and leaving the Terminal all personnel must have a zero blood alcohol level.

11- Visitors to the Terminal or LNG Carrier

All visitors to the Terminal or LNG Carrier, including user ALNG's customers representatives, independent surveyors and Ship's Agents will comply with the Terminal procedures and policies, including Safety, and Drug and Alcohol policies.

12 - Removal of Wrecks

For removal of wreck purpose, ALNG will order the LNG Carrier in writing to remove the wreck, the LNG Carrier or part thereof that becomes an obstruction to the performance of the Terminal in any part of the Restricted areas and Safety Zones (as defined by art. 2.2 of the Terminal Regulation) or in the approaches to the Restricted areas and Safety Zones ("Wreck"). If the Wreck is not removed within 24 (twenty-four) hours from the above request, ALNG is empowered to act on behalf of the Master. In this capacity, ALNG may take any steps deemed necessary to remove the Wreck even without further notification to the Master.

All expenses for such removal will ~~must~~ be borne by the Owner(s) of the LNG Carrier causing the obstruction. ALNG is entitled to full reimbursement by the Owner(s) ~~Owner~~ of the LNG Carrier for any reasonable expenses.

13 - Provision of services

13.1 - Compliance with Laws : All services, facilities and assistance provided by or on behalf of ALNG, 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 ALNG therefore, are provided subject to all Laws.

13.2 - ALNG's representative on vessel : The services of the Terminal Representative are provided with the express understanding and condition that when any Terminal Representative furnished by ALNG goes on board a LNG Carrier for the purpose of assisting such LNG Carrier, he or she becomes for such purposes the servant of the Owners or Charterers of the vessel; and ALNG shall in no way be liable for any damage or personal injury including death of any nature whatsoever, incurred by any person whomsoever, in any way connected with, contributed by, or resulting from the advice or assistance given or for any action taken by such Terminal Representative, whether negligent or otherwise, while on board or in the vicinity of such assisted vessel.

13.3 - LNG Carrier Navigation : except gross negligence or willful misconduct, neither ALNG its servants, co-venturers, agents, contractors in whatever capacity it may be acting shall not be in any way whatsoever responsible for or liable for any contribution with respect to any loss, damage, or delay, from whatsoever cause, or 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. In all circumstances the Master of any LNG

Carrier shall remain solely responsible on behalf of his or her owners for safety and proper navigation of his or her LNG Carrier.

14 - Liabilities and indemnities

14.1 While ALNG shall exercise reasonable care to ensure that the mooring, premises, facilities, property, gear, craft, and equipment provided by ALNG are safe and suitable for vessels permitted or invited to use them, no guarantee, express or implied, of such safety and suitability is given by ALNG that such mooring, premises, facilities, property, gear, craft, and equipment are devoid of defects or are fit for the service or use to which it is put, and every vessel shall be and remain at the sole risk of the Owners and Master thereof .

14.2 ALNG, shall not be held responsible (or liable for any contribution) with respect to any loss, damage, or delays whatsoever that may be sustained by or occur to any vessel or to its Owners or its crew or cargo or for any part thereof (whether such cargo is on board or in the course of discharge) by whomsoever and by whatsoever cause such as loss, injury, damage, or delay is occasioned, unless it is caused in whole by the negligence of ALNG

14.3 If in connection with or by reason of the use by any LNG Carrier of any berth, or any other part of the Terminal or other ALNG premises, or of any gear or equipment provided by or on behalf of ALNG, or of any craft, or of any other facilities or property, of any sort whatsoever, belonging to or provided by on behalf of ALNG, any damage or injury is caused to such mooring, premises, gear or equipment, craft, or other facility or property, or any third party, or any vessel its owners and crew, from whatsoever cause such damage may arise, as a result of any negligence or fault on the part of the LNG carrier and/or its Master and/or its crew, in any such event the vessel and the LNG Carrier shall hold ALNG harmless from and indemnified against all such damage and injury and against loss sustained by ALNG consequent thereon, unless such damage has been caused in whole by the negligence of ALNG.

14.4 The LNG Carrier shall hold ALNG harmless from and indemnified against all and any action, liabilities, claims, damages, cost, awards, and expenses arising whether directly or indirectly out of any loss, damage, personal injury, including death or delay of whatsoever nature occasioned to any third party or any vessel, its Owners and crew, including the LNG Carrier and owners and crew, caused or contributed to by any negligence or fault on the part of the LNG Carrier or any part thereof or by any substance or material leaking or escaping therefrom or by any negligence or fault on the part of the Master or crew or by any other servant or agent of the Owners unless such loss, damage personal injury, including death or delay has been caused in whole by the negligence of ALNG.

14.5 Neither party shall be responsible for indirect or consequential damages, including but not limited to the loss of profit

15 - Limitation of Liability

15.1 Each party shall be liable with respect to the other party for any claim under article 14, for a sum not exceeding the amount of 150.000.000,00 (one-hundred-fifty-million) USD per event. It is expressly agreed that this is the maximum liability of each party to the other party under article 14

15.2 For any claim other than those specified in paragraph 15.1, including but not limited to those under articles 12 and 18, the LNG carrier and/or their Owners and/or ALNG as the case may be, shall not be deprived of any right they may have to limit their liability in accordance with any applicable law for the time being in force.

16 - Force Majeure

1)- Meaning of Force Majeure

Force Majeure means any event or circumstance beyond the reasonable control of the Party claiming such Force Majeure, which could not be prevented by due care and reasonable expense, which has the effect of making performance by such Party of its obligations under the Terminal Regulation, in whole or in part, impossible and/or unlawful ("**Force Majeure**" or "**Force Majeure Event**").

2)- List of Force Majeure Events

Force Majeure shall include, but not limited to the following events:

- (a) war (whether declared or undeclared), civil war, acts of terrorism, riot, civil disturbance, blockade, insurrection;
- (b) acts of God, explosion, fire, flood, atmospheric disturbance, lightning, storm, typhoon, tornado, earthquake, landslide, soil erosion, subsidence, washout or epidemic;
- (c) any change in a Regulation or other applicable laws, regulations, administrative or judicial provisions or such like, or coming into effect of a new regulation or other applicable laws, regulations, administrative or judicial provisions or such like, excluding any that concern tax;
- (d) any refusal, revocation, cancellation, or non-renewal of any authorization, permit, license and/or concession required by the Affected Party to perform its obligations under this Terminal regulation;
- (e) loss of, damage to, or any failure of all or part of the ALNG or of the Grid;
- (f) strikes including any national strike (*sciopero generale*), gas or energy sector strike (*sciopero di categoria*), or company strike (*sciopero aziendale*); and
- (g) any condition or situation which presents an imminent threat of loss or damage to any property, or of danger to the life or health of any person.

- Relief for Force Majeure

Should a Force Majeure Event occur, the Party affected by such Force Majeure Event (the "Affected Party") shall be relieved of its obligations under the Terminal regulation for as long as and to the extent that the performance of its obligations is rendered impossible and/or unlawful by such Force Majeure Event, and the other Party shall be relieved of its corresponding obligations under Terminal regulation to the same extent.

3)- Action to be taken on Force Majeure

Should any Force Majeure Event occur, the Affected Party shall:

- (a) promptly give notice to the other Party, by stating (i) the date, hour and place where the claimed Force Majeure Event has occurred (ii) a detailed description of the claimed Force Majeure Event (iii) the effects of the claimed Force Majeure Event; and (iv) the program that the Affected Party intends to implement to remedy the Force Majeure Event and resume normal performance of its obligations under the Terminal Regulation; and
- (b) in addition to paragraphs (i) through (iv) above, where the Affected Party is ALNG: (aa) the estimated period during which performance of the service will be suspended or reduced due to the Force Majeure Event and (bb) the service that the ALNG reasonably expects will not be performed or will only be partially performed during the period for which the Force Majeure Event and its effects are estimated to last; and
- (c) upon the expiry of each consecutive thirty (30) Day period following service of the notice pursuant to paragraph (a) above, update the information described in paragraph (a) above by notifying the other Party the following: (i) the developments in the situation; (ii) the actions being taken to remedy the Force Majeure Event and its effects; and (iii) the date on which it is reasonably expected that such Force Majeure Event and its effects will end;
- (d) use all reasonable endeavours (including the incurrence of reasonable expenditure) to overcome the Force Majeure Event and minimise where possible its effects on the performance of such Affected Party's obligations;
- (e) allow or procure the other Party, its employees, contractors, agents and/or other third party representatives (each acting for or on behalf of such other Party and with its specific approval), upon giving reasonable prior notice and at such other Party's sole risk and expense, to have access to the Terminal and/or any other place where the Force Majeure Event has occurred (to the extent that it is within the reasonable control of the Affected Party to do so),

- in order to check and assess the duration and effects of the Force Majeure Event, provided that such access would not present a danger to the life or health of any person; and
- (f) promptly give written notice to the other Party when the Affected Party is again able to perform its obligations under the relevant Capacity Agreements and shall thereupon promptly resume performance of its obligations thereunder.

17- Changes to the Terminal Regulation: ALNG may change the terms of these Terminal Regulations by giving the LNG carrier Owner at least three months' written notice by registered letter or e-mail. Such change applies as of the date ALNG provides for ~~specifies~~ in the notice. It is understood and agreed that the LNG carrier Owner ~~agrees that he~~ consents to any such change if he does not notify ALNG in writing, at the latest 15 (fifteen) days prior to the effective date provided for in ALNG's written notice, that he disagrees with the change. If the owner of LNG Carrier disagrees with the change ALNG has the option to withdraw from the Terminal regulation with a 15 (fifteen) days notice without any penalty or liability to the owner LNG Carrier, ~~ALNG~~ or any third party. In this last case the LNG Carrier has no more access to the Terminal and/or the Restricted areas and Safety Zones.

18- Pollution

LNG Carriers shall be member of the International Tanker Owners Pollution Federation Limited (ITOPF) and declares he knows its guidelines. 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 ALNG from and against any loss, damage, liability, suit, claim, or expense arising therefrom.

19- Parties and related parties.

It is hereby expressly agreed that no servant or agent of ALNG 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 ALNG or to which ALNG is entitled hereunder shall also be available and shall extend to protect every such servant or agent of ALNG acting as aforesaid, and for the purpose of all the foregoing provisions of this clause ALNG 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.

20- 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.

21. Termination

21.1 - Notice

Each Party shall have the right at any time to give to the other Party notice of termination of this agreement on Terminal Regulation through registered letter or registered email. Such notice shall be sent with at least 30 (thirty) days notice and is effective upon receipt.

21.2 Effect of Termination

From the termination the LNG Carrier has no right to access the Safety Area and/or the Terminal. Termination of this agreement on Terminal Regulations, howsoever caused, shall be without prejudice to any rights or remedies that may have accrued prior to the time of such termination, and any provisions of this agreement necessary for the exercise of any such accrued rights or remedies shall survive expiry or termination of this agreement for such period as so required.

22. Waiver of Immunity.

Each Party acknowledges and agrees that this agreement constitute a transaction and that it is not entitled to plead sovereign immunity for any purpose whatsoever, including any right to plead sovereign immunity in respect of any action to refer a matter to dispute resolution.

Attachment 11.2 Pre-Arrival Information	
1	LNG CARRIER NAME AND CALL SIGN
	LNG Carrier Owner:
2	PORT OF REGISTRY:
3	NAME OF MASTER:
4	GRT/NRT:
5	ARRIVAL DISPLACEMENT:
6	SUMMER DEADWEIGHT (METRIC TONNES)
7	LENGTH OVERALL (m) :
8	DRAFT FORE AND AFT ON ARRIVAL (m):
9	DRAFT FORE AND AFT ON SAILING (m):
10	ADVISE ANY LNG CARRIER DEFECT AFFECTING CARGO OPERATIONS OR MANEUVERING / MOORING ABILITY.
11	CONFIRM P&I CLUB NAME AND VALIDITY:
12	CONFIRM POLLUTION COVER
13	LAST 3 PORTS OF CALL
14	IS GAS DETECTION SYSTEM FULLY OPERATIONAL?
15	DOES LNG CARRIER HAVE A FULLY OPERATIONAL IG SYSTEM?
16	ARE VOID SPACES GAS FREE?
17	ARE SMOKE/FIRE DETECTION AND FIXED FIRE EXTINGUISHING SYSTEMS FULLY OPERATIONAL?
18	AMOUNT AND GRADE OF CARGO FOR DISCHARGE:
19	SIZE, RATING AND STANDARDS OF CARGO MANIFOLD CONNECTION?
20	DISTANCE OF CENTER MANIFOLD FROM THE BOW AND DISTANCE OF SPRINGLINE FAIRLEADS FROM THE CENTER OF THE MANIFOLDS
21	HEIGHT OF MANIFOLD ABOVE THE KEEL:
22	DISTANCE BETWEEN MANIFOLD FLANGES CENTERS:
23	DISTANCE OF MANIFOLD FROM SHIP'S SIDE:
24	DISTANCE FROM MANIFOLD FACE TO FIRST FULL RESTRAINING BRACKET:
25	MAXIMUM UNLOADING RATE:
26	ANTICIPATED UNLOADING TIME:

27	CONFIRM CARGO TRANSFER EMERGENCY STOPS FULLY OPERATIONAL AND DATE OF LAST TEST		
28	CONFIRM TANK HIGH LEVEL AND PRESSURE ALARMS OPERATIONAL:		
29	CONFIRM THAT REMOTELY OPERATED MANIFOLD VALVES HAVE BEEN OPERATED THROUGH A COMPLETE OPEN/CLOSED CYCLE, ENSURE CORRECT FUNCTIONING AND ADVISE VALVE TYPE AND ACTUAL CLOSING TIME.		
30	MAIN ENGINE TESTED ASTERN, BOW THRUSTER TESTED BEFORE PILOT BOARDS		
31	DOES LNG CARRIER COMPLY WITH ISM CODE?		
32	VALIDITY OF ISM DOC/SMC AND ISSUING AUTHORITY		
33	COPY OF UP TO DATE "SIRE" OFFICER MATRIX		
34	CONFIRM RECIEPT OF TERMINAL REGULATIONS AND PORT REGULATIONS		
35	LNG CARRIER'S INMARSAT No.	TEL No.	FAX No.
36	LNG CARRIERS AGENT AND CONTACT DETAILS		
37	LNG CARRIER OPERATOR EMERGENCY CONTACT DETAILS		

Attachment 11.3 Ship/Shore Safety Check-List

LNG Carrier:

Date:

INSTRUCTIONS FOR COMPLETION:

The safety of operations requires that any and all queries provided for in the Ship/Shore Safety Check List receive a positive answer.

0 If a negative answer has been provided, due justification shall be given and ALNG and the Master will try, but are not obliged to, to find a written agreement on appropriate measures to be taken to reach a satisfactory safety level. In case of absence of agreement the LNG Carrier will have no access to the Terminal.

If a query is not applicable, a note to that effect should be provided by the Master in the remarks column.

Detailed guidelines for completing this check-list are contained in the International Safety Guide for Carrier and Terminals version 5. This check-list is to be completed during the Pre-Loading Meeting, except Part C, Item 11, which will be confirmed after the ESD (1) test under cold condition. Cargo handling operations will not be started until this check-list has been fully completed to the discretionary satisfaction of ALNG.

0 - The presence of this symbol in the columns "LNG CARRIER" and "TERMINAL" indicates that checks shall be carried out by the party concerned.

The presence of the letter A and P or R in the column "CODE" indicates the following:

A - Any referenced procedures and agreements should be provided in writing in the remarks column of this checklist or other mutually acceptable form. In either case, the signature of both parties is required.

P - In the case of a negative answer the operation shall not be carried out without the permission of the Port Authority.

R - Indicates items to be rechecked at time intervals not exceeding the one ~~that~~ agreed upon in the declaration.

Note: Detailed Guidelines for completing this check list are contained in ISGOTT, Fifth Edition, Section 26,4 – Guidelines for completing the Ship / Shore Safety Checklist

PART 'A' GENERAL

GENERAL		LNG Carrier	TERMINAL	CODE	REMARKS
1.	There is safe access between the LNG Carrier and shore ¹	<input type="checkbox"/>	<input type="checkbox"/>	R	
2.	The LNG Carrier is securely moored	<input type="checkbox"/>	<input type="checkbox"/>	R	
3.	The agreed ship/shore communication system is operative	<input type="checkbox"/>	<input type="checkbox"/>	AR	<u>System</u> <u>Back up system</u>
4.	Emergency towing off pennants are correctly rigged and positioned	<input type="checkbox"/>	<input type="checkbox"/>	R	
5.	The LNG Carrier's fire hoses and fire-fighting equipment are positioned and ready for immediate use	<input type="checkbox"/>		R	
6.	The Terminal's fire-fighting equipment is positioned and ready for immediate use		<input type="checkbox"/>	R	
7.	The LNG Tanker's cargo and bunker hoses, pipelines and manifolds are in good condition, properly rigged and appropriate for the service intended	<input type="checkbox"/>			
8.	The Terminal's cargo and bunker hoses or arms are in good condition, properly rigged and appropriate for the service intended		<input type="checkbox"/>		
9.	The cargo transfer system is sufficiently isolated and drained to allow safe removal of blank flanges prior to connection	<input type="checkbox"/>	<input type="checkbox"/>		
10.	Scuppers and save-alls on board are effectively plugged and drip trays are in position and empty	<input type="checkbox"/>		R	
11.	Temporarily removed scupper plugs will be constantly monitored	<input type="checkbox"/>		R	
12.	Shore spill containment and sumps are correctly managed	<input type="checkbox"/>	<input type="checkbox"/>		
13.	The LNG Carrier's unused cargo and bunker connections are properly secured with blank flanges fully bolted	<input type="checkbox"/>			

¹ As used herein, unless the context requires otherwise, references to "shore" shall be to the Terminal.

GENERAL		LNG Carrier	TERMINAL	CODE	REMARKS
14.	The Terminal's unused cargo and bunker connections are properly secured with blank flanges fully bolted		<input type="checkbox"/>		
15.	All cargo, ballast and bunker lids are closed	<input type="checkbox"/>			
16	Sea and overboard discharge valves, when not in use, are closed and visibly secured	<input type="checkbox"/>			
17	All external doors, ports and windows in the accommodation, stores and machinery spaces are closed. Engine room vents may be open	<input type="checkbox"/>		R	
18	The LNG Carrier's emergency fire control plans and located externally	<input type="checkbox"/>			Position
19.	The LNG Carrier is ready to move under its own power	<input type="checkbox"/>		PR	
20	There is an effective deck watch in attendance on board and adequate supervision of operations and in the Terminal	<input type="checkbox"/>	<input type="checkbox"/>	R	
21	There are sufficient personnel on board and ashore to deal with an emergency	<input type="checkbox"/>	<input type="checkbox"/>	R	
22	The procedures for cargo, bunker and ballast handling have been agreed upon	<input type="checkbox"/>	<input type="checkbox"/>	AR	
23	The emergency signal and shutdown procedure to be used by the LNG Carrier and shore have been explained and understood	<input type="checkbox"/>	<input type="checkbox"/>	A	
24	Material Safety Data Sheets (MSDS) for the cargo transfer have been exchanged where requested	<input type="checkbox"/>	<input type="checkbox"/>	PR	
25	The hazards associated with toxic substances in the cargo being handled have been identified and understood	<input type="checkbox"/>	<input type="checkbox"/>		
26	An International Shore fire connection has been provided	<input type="checkbox"/>	<input type="checkbox"/>		
27	The requirements for closed operations has been agreed upon	<input type="checkbox"/>	<input type="checkbox"/>	R	

GENERAL		LNG Carrier	TERMINAL	CODE	REMARKS
28	Where a vapor return line is connected, operating parameters have been agreed	<input type="checkbox"/>	<input type="checkbox"/>	AR	
29	Independent high-level alarms, if fitted, are operational and have been tested	<input type="checkbox"/>		AR	
30	Adequate electrical insulating means are in place in the ship/shore connection	<input type="checkbox"/>	<input type="checkbox"/>	AR	
31	Terminal lines are fitted with a non-return valve, or procedures to avoid back filling have been discussed		<input type="checkbox"/>	PR	
32	Smoking rooms have been identified and smoking requirements are being observed	<input type="checkbox"/>	<input type="checkbox"/>	AR	Nominated smoking rooms
33	Naked light regulations are being observed?	<input type="checkbox"/>	<input type="checkbox"/>	AR	
34	Ship/shore telephones, mobile phones and pager requirements are being observed	<input type="checkbox"/>	<input type="checkbox"/>	AR	
35	Hand torches (flashlights) are of an approved type	<input type="checkbox"/>	<input type="checkbox"/>		
36	Fixed VHF/UHF transceivers and AIS equipment are on the correct power mode or switched off	<input type="checkbox"/>			
37.	Portable VHF/UHF transceivers are of an approved type	<input type="checkbox"/>	<input type="checkbox"/>		
38.	The LNG Carrier's main radio transmitter aerials are earthed and radars switched off	<input type="checkbox"/>			
39	Electrical cables to portable electrical equipment within the hazardous area are disconnected from power	<input type="checkbox"/>	<input type="checkbox"/>		
40	Window-type air conditioning units are disconnected	<input type="checkbox"/>			
41	Positive pressure is being maintained inside the accommodation, and air conditioning intakes, which may permit the entry of cargo vapors are closed	<input type="checkbox"/>			
42	Measure have been taken to ensure sufficient mechanical ventilation in the pump room	<input type="checkbox"/>		R	

GENERAL		LNG Carrier	TERMINAL	CODE	REMARKS
43	There is provision for emergency escape	<input type="checkbox"/>	<input type="checkbox"/>		
44	The maximum wind and swell criteria for operations has been agreed upon	<input type="checkbox"/>	<input type="checkbox"/>	A	Stop cargo at Disconnect at Un-berth at
45	Security protocols have been agreed between the LNG Carrier's Security Officer and the Terminal's Security Officer, if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	A	
46	Where appropriate, procedures have been agreed for receiving nitrogen supplied from shore, either for inerting or purging LNG Carrier's tanks, or for line clearing into the LNG Carrier	<input type="checkbox"/>	<input type="checkbox"/>	AP	
47	The agreed tank venting system will be used	<input type="checkbox"/>	<input type="checkbox"/>	A R	Method: Vapor return line to shore
48	The operation of the P/V system has been verified				

PART 'C' BULK LIQUEFIED GASES

Bulk Liquefied Gases		LNG Carrier	Terminal	Code	Remarks
1.	Material Safety Data Sheets are available giving necessary data for safe handling of the cargo	<input type="checkbox"/>	<input type="checkbox"/>		
2	A manufacturer's inhibition certificate, where applicable, has been provided	<input type="checkbox"/>	<input type="checkbox"/>	P	
3.	The water spray system is ready for immediate use?	<input type="checkbox"/>	<input type="checkbox"/>		
4.	There is sufficient suitable protective equipment (including self-contained breathing apparatus) and protective clothing ready for immediate use?	<input type="checkbox"/>	<input type="checkbox"/>		
5.	Hold and inter-barrier spaces are properly inerted or filled with dry air, as required	<input type="checkbox"/>			
6.	All remote control valves are in working order	<input type="checkbox"/>	<input type="checkbox"/>		
7.	The required cargo pumps and compressors are in good order, and the maximum working pressures have been agreed between LNG Carrier and shore	<input type="checkbox"/>	<input type="checkbox"/>	A	

Bulk Liquefied Gases		LNG Carrier	Terminal	Code	Remarks
8	Pre-liquefaction or boil-off control equipment is in good order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
9.	The gas detection equipment has been properly set for the cargo, is calibrated, has been tested and inspected and is in good order	<input type="checkbox"/>	<input type="checkbox"/>		
10	Cargo system gauges and alarms are correctly set and in good order	<input type="checkbox"/>	<input type="checkbox"/>		
11	Emergency shut down systems have been tested and are working properly	<input type="checkbox"/>	<input type="checkbox"/>		
12.	LNG Carrier and shore have informed each other of the closing rate of ESD valves, automatic valves or similar devices	<input type="checkbox"/>	<input type="checkbox"/>	A	
13.	Information been exchanged between LNG Carrier and shore on the maximum / minimum temperatures / pressures of the cargo to be handled	<input type="checkbox"/>	<input type="checkbox"/>	A	
14.	Cargo tanks protected against inadvertent overfilling at all times while any cargo operations are in progress	<input type="checkbox"/>			
15.	The compressor room is properly ventilated, <u>the electrical motor room is properly pressurized and is the alarm system working</u>	<input type="checkbox"/>			
16.	Cargo tank relief valves are set correctly and actual relief valve settings clearly and visible displayed (record settings below)	<input type="checkbox"/>	<input type="checkbox"/>		
Tank No 1		<input type="text"/>	Tank No 4		<input type="text"/>
Tank No 2		<input type="text"/>	Tank No 5		<input type="text"/>
Tank No 3		<input type="text"/>	Tank No 6		<input type="text"/>

Bulk Liquefied Gases	LNG Carrier	Terminal	Code	Remarks
<p>Declaration</p> <p>We, the undersigned, have checked, where appropriate jointly, the items on this checklist and have satisfied ourselves that the entries we have made are correct to the best of our knowledge.</p> <p>We have also made arrangements to carry out repetitive checks as necessary and agreed that those items with the letter "R" in the column "Code" should be re-checked at intervals not exceeding _____ hours.</p>				
For LNG Carrier		For Terminal ALNG		
Name :		Name :		
Rank :		Position :		
Signature		Signature		
Date:		Date:		
Time:		Time:		
Date/ Time:				
For LNG Carrier				
For ALNG				

Attachment 11.4 Cargo Handling Agreement

LNG CARRIER : _____ DATE : _____

QUANTITY OF CARGO ONBOARD: _____ m3

QUANTITY OF CARGO TO DISCHARGE : _____ m3

CNFIRM VAPOR WILL BE SENT BACK TO LNG Carrier:

NUMBER OF BERTH LIQUID ARMS TO BE USED FOR TRANSFER : _____ 1
 2 4 LIQUID 3 VAPOR

LNG's CARGO LINES CONDITION : WARM COOLED-DOWN TO : _____ C

TANKS CONDITION	TK No. 1	TK No.2	TK No.3	TK No.4	TK No.5	TK No.6
PRESSURE (bar or Kpa)						
CARGO TANK TEMPERATURE (°C) Top & Bottom Average (Membrane)						
Equator (Moss)						
LEVEL						
VOLUME						

CONFIRM OPTICAL/ELECTRICAL E.S.D. IS OPERATIVE : _____ CONFIRM PNEUMATIC E.S.D IS OPERATIVE: _____

CONFIRM OPTICAL/ELECTRICAL E.S.D WILL BE USED AS PRIMARY MEANS IN CASE OF EMERGENCY : CONFIRM PNEUMATIC E.S.D WILL BE USED IN CASE OF OPTICAL/ELECTRICAL E.S.D FAILURE :

CLOSING RATES OF SHORE E.S.D VALVES: _____ CLOSING RATES OF SHIP E.S.D VALVES: _____

STARTING TIME COOLDOWN (EST): _____ DURATION OF COOL-DOWN : _____

STARTING TIME OF DISCHARGE (EST) : _____ DURATION OF DISCHARGE (EST) : _____

CONFIRM STOP DISCHARGE ON : TERMINAL REQUEST LNG CARRIER REQUEST

LNG COOLDOWN RATE REQUD BY TERMINAL (M3/HR.) _____ **AGREED UPON MANIFOLD BP :** _____ Bar or Kpa

MAX. DISCHARGE RATE FOR TERMINAL: (M3/HR.) _____ **MAX. DISCHARGE RATE FOR LNG CARRIER: (M3/HR.)** _____

MAXIMUM MANIFOLD BP : Bar or Kpa	MAXIMUM MANIFOLD BP : Bar or Kpa
TERMINAL STARTING RATE REQUIRED: (M3/HR.)	STRIPPING RATE: (M3/HR.)
NOTIFICATION TIME REQUIRED FOR SLOWING DOWN	NOTIFICATION TIME REQUIRED FOR STOPPING
EXPECTED RANGE OF VAPOR RETURN TEMPERATURE (Degree C)	MAXIMUM FLOW OF VAPOR RETURN (M3/HR)
CONFIRM ALL NECESSARY CARGO HANDLING PROCEDURES HAVE BEEN UNDERSTOOD:	
FOR ALNG TERMINAL (person in charge)	FOR LNG Carrier (person in charge)
Name	Name
Position	Position
Signature	Signature
Time/...../.....	Date

Attachment 11.5 Communication Agreement

A FIBER OPTIC / ELECTRICAL LINK HAS BEEN CONNECTED TO YOUR LNG CARRIER. IT WILL ENABLE THE FOLLOWING MEANS OF COMMUNICATIONS:

E.S.D FROM THE LNG Carrier (emergency shut-down)	→	uni-directional. Can be activated at any time from the LNG Carrier in case of emergency. Inform Terminal as far as possible before use.
E.S.D FROM TERMINAL (emergency shut-down)	→	uni-directional. Can be activated at any time from the Terminal in case of emergency. Inform LNG Carrier as far as possible before use.
☎ HOT LINE	→	bi-directional. To contact directly the Terminal Control Room in case of emergency.
☎ TERMINAL INTERNAL LINE	→	bi-directional. To exchange normal information between LNG Carrier and Terminal Control Room during cargo handling operations.
☎ PUBLIC LINE	→	bi-directional. Enable the LNG Carrier to use the national telephone network.
MOORING LINE TENSION DATA	→	uni-directional. For the LNG Carrier to receive information on the tension of each mooring line.

A PNEUMATIC LINK HAS BEEN CONNECTED TO YOUR LNG Carrier. IT WILL ENABLE THE FOLLOWING MEANS OF COMMUNICATION :

E.S.D FROM THE LNG Carrier (emergency shut-down)	→	uni-directional. Can be activated at any time from the LNG Carrier in case of emergency. Inform Terminal as far as possible before use.
E.S.D FROM TERMINAL (emergency shut-down)	→	uni-directional. Can be activated at any time from the Terminal in case of emergency. Inform LNG Carrier as far as possible before use.

In the event that your LNG Carrier does not have a fixed U.H.F. radio system compatible with the Terminal, a PORTABLE U.H.F RADIO will be provided to your LNG Carrier. IT WILL ENABLE THE FOLLOWING MEANS OF COMMUNICATIONS :

Terminal Control Room	UHF ch.	VHF ch.
Jetty Personnel	UHF ch.	VHF ch.
Marine Terminal Representative		

FOR LNG Carrier (person in charge)	FOR TERMINAL
Name/Position	Name/Position
Signature	Signature
Time	Date/...../.....

Attachment 11.6 Emergency Contacts and Signals

EMERGENCY CONTACTS AND SIGNALS

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

Terminal Control-room Via:

HOTLINE
UHF
VHF

If no contact immediately contact the onboard Terminal Representative

In the event of an EMERGENCY on the Terminal the following Audible and Visual Signals will be given out/ made

Alarm Type	Audible	Visual
Terminal General Alarm	Intermittent audible Signal	Flashing Red Light
Terminal Prepare for Evacuation Alarm	Continuous audible Signal	Flashing Blue Red Light/Orange Light Orange Light

Attachment 11.7 Adverse Weather – Terminal Operating Policy

Maximum Conditions		Operation	Action	Comments
Conventional	Moss, Q-Flex, Larger Conventional			
Wind Speed Wind 25 knots Wave 1.5mHs	Wind Speed Wind 15 knots Wave 1.0mHs	Berthing	Berthing operations suspended if above maximum limits	
Wind Speed 28 knots 1hr or 34 knots 30 second gusts Significant Wave Height 1.4mHs 110-190deg 1.7mHs 300-60 and 190-240 deg 2.0mHs 60-110 and 240-300deg	Wind Speed 25 knots 1hr or 30 knots 30 second gusts Significant Wave Height 1.2mHs 110-190deg 1.0mHs 300-60 and 190-240 deg 1.2mHs 60-110 and 240-300deg	Arm Connection	Use of Loading arm cable guidance system	Cable guidance system will be used for all arm connection operations only for Carriers already provided with male spool pieces.

<p>Wind Speed</p> <p>28 knots 1hr or 34 knots 30 second gusts</p> <p>Significant Wave Height</p> <p>1.4mHs 110- 190deg</p> <p>1.7mHs 300- 60 and 190- 240 deg</p> <p>2.0mHs 60- 110 and 240- 300deg</p> <p><u>Monitoring Systems</u></p> <p>On activation of ESD1 or ESD2 due loading arm movement</p> <p>On alarm of the Mooring tension monitoring system</p>	<p>Wind Speed</p> <p>25 knots 1hr or 30 knots 30 second gusts</p> <p>Significant Wave Height</p> <p>1.2mHs 110- 190deg</p> <p>1.0mHs 300- 60 and 190- 240 deg</p> <p>1.2mHs 60- 110 and 240- 300deg</p> <p><u>Monitoring Systems</u></p> <p>On activation of ESD1 or ESD2 due loading arm movement</p> <p>On alarm of the Mooring tension monitoring system</p>	<p>Stop Cargo Transfer and Loading arm Disconnection and prepare for unberthing</p>	<p><u>Communication</u></p> <p>Monitor Wx forecasts</p> <p>Monitor prevailing Wx & wind speed ex Terminal.</p> <p><u>Extra Vigilance</u></p> <p>Close observation of LNG Carrier position.</p> <p>Close visual observation of mooring line integrity.</p> <p>Close monitoring of mooring line tension data.</p> <p>Close visual observation of LNG Carrier movement due sea/swell.</p>	<p>Decision to suspend transfer and prepare for loading arm disconnection can be taken at any time by Terminal in consultation with Master.</p> <p>The decision to suspend transfer and disconnect loading arms shall be made on the basis of all information available concerning:</p> <p>Prevailing Wx. Forecasted Wx. Anticipated rate of increase of wind speed. Condition of mooring system. Position & movement of LNG Carrier Loading Arm monitoring system data Time to de- ice/drain/purge & disconnect loading arms. Time to complete unloading vs risk to LNG Carrier remaining alongside /risk of disconnection /reconnection.</p>
---	---	--	--	--

			<p><u>Stop Transfer</u></p> <p>Drain loading arms</p> <p>Purge loading arms</p> <p>Disconnect Loading arms.</p> <p>Raise shore gangway clear of LNG Carrier handrail following disembarkation of shore staff.</p>	<p>Shore gangway to be raised to prevent damage in case of LNG Carrier movement.</p> <p>Fibre Optic Cable or Electric communications cable to remain connected so that LNG Carrier may receive Mooring Line Tension Data.</p>
			<p><u>Prepare for Unberthing</u></p> <p>LNG Carrier made ready to maneuver</p> <p>Tugs made fast</p> <p>Unmooring Crews ready (LNG Carrier and Terminal)</p>	<p>Decision to prepare for unberthing can be taken at any time by Terminal Senior Marine Advisor / OIM in consultation with Master and agreed in agree with line handlers and Pilot.</p>

Wind Speed 30 knots 1hr or 36 knots 30 second gusts Significant Wave Height 1.7mHs 110- 190deg 2.0mHs 300- 60 and 190- 240 deg 2.5mHs 60- 110 and 240- 300deg	Wind Speed 25 knots 1hr or 30 knots 30 second gusts Significant Wave Height 1.2mHs 110- 190deg 1.0mHs 300- 60 and 190- 240 deg 1.2mHs 60- 110 and 240- 300deg	Unberthing	Unberthing operations	Decision to prepare for unberthing can be taken at any time by Terminal Senior Marine Advisor / OIM in consultation with Master in agree with line handlers and Pilot
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Attachment 11.8 Emergency Stop Report

The Cargo Emergency Stop Report form must be completed when a cargo emergency stop is initiated. The form must in all cases be completed by the Terminal Representative and Master and as appropriate by Marine Terminal personnel or Maritime Authority personnel.

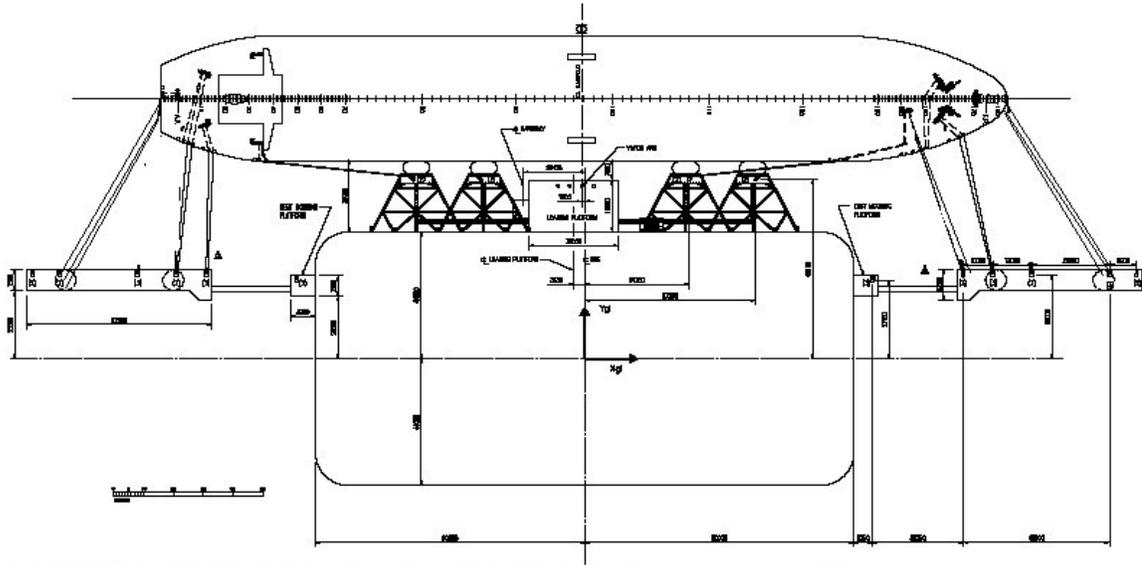
LNG Carrier name				
Port of Registry				
Terminal Representative name				
LNG Carrier Master name				
Cargo Emergency Stop initiated	Date		Time	
Cargo Emergency Stop initiated by	LNG Carrier		Terminal	
Person initiating Cargo Emergency Stop	Name		Name	
Position				
Cause (tick)	Fire	<input type="checkbox"/>	LNG Release	<input type="checkbox"/>
	Weather	<input type="checkbox"/>	Injury	<input type="checkbox"/>
	Equipment failure	<input type="checkbox"/>	Other (specify)	<input type="checkbox"/>
Details				
Unmooring required?	Yes <input type="checkbox"/>		No <input type="checkbox"/>	

	Date	Time	
Operations resumed?	Yes <input type="checkbox"/>		No <input type="checkbox"/>
	Date	Time	
Are appropriate reports completed and processed?	Yes <input type="checkbox"/>		No <input type="checkbox"/>
	Details		
Are recommendations made to prevent recurrence before operations resume?	Yes <input type="checkbox"/>		No <input type="checkbox"/>
	Details		
Has Maritime Authority been informed and approved of resumption of operations?	Yes <input type="checkbox"/>		
Recommendations approved	OIM signature Terminal Representative signature Master signature		
Report acknowledgment	Terminal Cargo Emergency Stop initiator signature LNG Carrier Cargo Emergency Stop initiator signature		
Date and Time	/		

Attachment 11.9 Example Mooring Layouts

Example Mooring Layouts

1. 138-152km³ Membranes



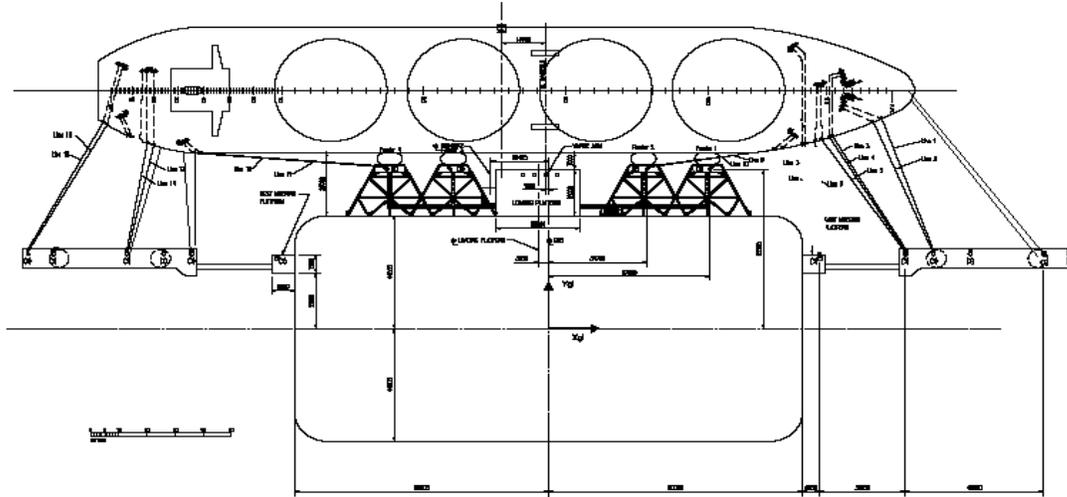
Mooring Lines	HS1		HS2		HS3			HS4			HS5			HS6			HS7		HS8		
Hook	1	2	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	1	2
Head/Stern					18	17															
Breast							16	15	14	13	12										
Spring																11	10				

Mooring Lines	HS9		HS10		HS11			HS12			HS13			HS14			HS15			HS16	
Hook	1	2	1	2	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
Head/Stern																					
Breast							7	6	5	4	3										
Spring	9	8											2	1							

Lines	Forward	Aft
Head/Stern	2	2
Breast	5	5
Spring	2	2
Total Lines:	18	

NB: Mooring Hook stations numbered from West to East/Mooring lines from Forward to Aft

2. 145km³ Spherical



Mooring Lines	HS1		HS2			HS3			HS4			HS5			HS6			HS7		HS8	
Hook	1	2	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	1	2
Head/Stern	19	18																			
Breast			17	16	15	14	13														
Spring																		12	11		

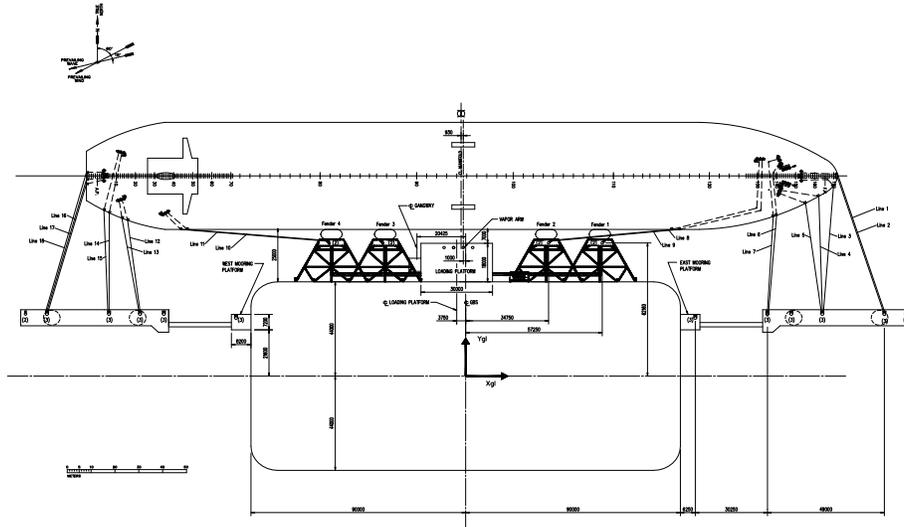
Mooring Lines	HS9		HS10		HS11			HS12			HS13			HS14			HS15		HS16		
Hook	1	2	1	2	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
Head/Stern											2	1									
Breast					8	7	6	5	4	3											
Spring	10	9																			

Lines	Forward	Aft
Head/Stern	2	2
Breast	6	5
Spring	2	2
Total Lines:	19	

NB: Mooring Hook stations numbered from West to East/Mooring lines from Forward to Aft

- Mooring Layout for LNG Carrier with 15m manifold offset
 - Mooring Hook stations numbered from West to East /Mooring lines from Forward to Aft

4. Mooring Layout for Qflex LNG Carrier



Mooring Lines	HS9		HS10		HS11			HS12			HS13			HS14			HS15			HS16	
Hook	1	2	1	2	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
Head/Stern																					
Breast								7	6				5	4	3						
Spring	9	8															2	1			

Lines	Forward	Aft
Head/Stern	2	3
Breast	5	4
Spring	2	2
Total Lines:	18	

NB: Mooring Hook stations numbered from West to East /Mooring lines from Forward to Aft

Attachment 11.10 ISPS Declaration of Security

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 ALNG Terminal from the above named LNG Carrier, and is issued under the following security levels:

Security level(s) for LNG Carrier: _____
 Security level(s) for ALNG Terminal _____

ALNG 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	ALNG:	LNG carrier:
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		
Delivery of LNG Carrier stores		
Handling of unaccompanied baggage		
Controlling the embarkation of persons and their effects		

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	ALNG:	LNG carrier:
Ensuring that security communication is readily available between the LNG Carrier and the Terminal		

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 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 <i>(to be completed as appropriate)</i> <i>(indicate the telephone numbers or the radio channels or frequencies to be used)</i>	
for ALNG:	for the LNG Carrier:

Terminal
Terminal Facility Security Officer

Master
LNG Carrier Security Officer

Company
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.

ALNG and LNG Carrier must be directed by their respective Emergency Response Plans

The following contains bulleted immediate actions are to be taken by the principle parties.

If marine craft (s) are required to approach or go to alongside the LNG Carrier concerned, they must only do so after ALNG has confirmed that unloading operations have been stopped.

The following list of minimum actions of Masters is provided without prejudice to the actions the Master shall undertake in addition as a prudent and diligent operator.

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 ALNG and keep informed, of the nature and location of incident (e.g., Mooring Failure/LNG Carrier out of position/Fire) and action being taken by LNG Carrier and assistance required ALNG and Maritime Authorities,
- 4) Inform onboard Terminal Representative and Pilot
- 5) Notify Tugs to be on stand-by and ready to provide assistance as required.
- 6) Prepare for loading arm disconnection and unmooring, including emergency unmooring

ACTION BY ALNG

- 1) Initiate emergency shut-down of cargo transfer.
- 2) Initiate Terminal Emergency Response Plan
- 3) Establish communications with stand-by tugs.
- 4) Establish communications with onboard Terminal Representative.
- 5) Advise Maritime Authorities of the nature of incident and to stand by in case assistance is required.

ACTION BY TUGS & PILOT

- 1) Go to immediate stand-by
- 2) Tugs Initiate water spray or deluge systems as required
- 3) Await instructions as directed by ALNG or LNG Carrier Master.

Terminal Related Incidents

ACTION BY ALNG

- 1) Raise General Alarm and initiate Terminal Emergency Response Plan.
- 2) Initiate emergency LNG transfer shut-down and closure of ESD valves.
- 3) Inform the LNG Carrier of the nature of the incident and keep them informed of status.
- 4) Advise Maritime Authorities of the nature of the incident and to stand-by in case assistance is required.
- 5) Request all tugs to go to standby.
- 6) Establish communications with onboard Terminal Representative and to standby as directed

ACTION BY LNG Carrier

Action required by LNG Carrier's berthed alongside the Terminal's jetty will depend on the nature, location and proximity of the incident to the jetty:

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

ACTION BY TUGS & PILOT

- 1) Go to immediate stand-by
- 2) Tugs Initiate water spray or deluge systems as required
- 3) Await instructions as directed by Terminal or LNG Carrier Master.

Specific Incidents

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

Oil spill from LNG Carrier

ACTION BY LNG Carrier

- 1) Isolate source of pollution and take whatever steps necessary to prevent or minimise
- 2) Mobilize onboard pollution response plan.
- 3) Initiate clean up onboard.

ACTION BY ALNG

- 1) Verify source and type of pollutant

- 2) Secure all sources of ignition

ACTION BY TUGS

- 1) Stand-by tugs prepare to assist.
- 2) Stand off upwind until nature and type of spill has been established.

Uncontrolled release of LNG Vapor or Liquid from Ship / Shore

ACTION BY LNG Carrier

- 1) Secure all sources of ignition and impose a total smoking ban.
- 2) Initiate water spray systems or deluge as required

ACTION BY ALNG

- 1) Secure all sources of ignition and impose a total smoking ban
- 2) Allow automatic Fire and Gas, fire extinguishing and emergency shutdown and depressurization systems to work.
- 3) Operate Jetty fire monitors if applicable.

ACTION BY TUGS & PILOT

- 1) Stand-by tugs 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 Safety Zone

ACTION BY LNG CARRIER(S)

- 1) Identify other vessel and render assistance as required

ACTION BY ALNG

- 1) Initiate call out of Terminal Man-overboard response team.
- 2) Place medical services on standby.

ACTION BY TUGS

- 1) Stand-by tugs to respond as directed by Terminal or LNG Carrier Master.

Man overboard Incident within the Terminal

In the event of a man overboard situation within the Terminal Safety Zone, all LNG Carrier movements are to 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 person in the water a life buoy or floating aid.
- 2) Raise the alarm by sounding three long blasts on the LNG Carrier's whistle.
- 3) Inform Terminal Central Control Room who will stop the unloading if the person in the water is within 100m of the Terminal and advice circumstances.
- 4) Place lookout and constantly monitor position of person in the water.
- 5) Request Terminal Central Control Room to mobilize rescue from the Maritime Authorities.
- 6) Direct responding vessels to the person in water.

ACTION BY ALNG

- 1) Stop unloading if requested or if person in water is within 100m of the Terminal.
- 2) Inform Maritime Authorities
- 3) Initiate call out of Terminal Man-overboard response team.
- 4) Place medical services on standby.

ACTION BY TUGS

- 1) Stand-by tugs to respond as directed by Terminal or LNG Carrier Master.
- 2) Remaining tugs to be mobilized, if required

LNGC Out of Position

ACTION BY LNG Carrier

- 1) Initiate emergency shut-down procedures.
- 2) Clear manifold area in case of ES2 activation
- 3) Prepare to for tug connection and unmooring, including emergency unmooring

ACTION BY ALNG

- 1) Initiate or confirm emergency shut-down.
- 2) Prepare for Loading arm disconnection and raising of gangway
- 3) Consider Initiating Jetty area fire and deluge systems
- 4) Prepare for release of LNGC, including emergency release

ACTION BY TUGS & PILOT

- 1) Proceed to LNGC and prepare for connecting towlines.

2) Await instructions from Pilot or LNGC master for unberthing operations

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Attachment 11.12 Masters Letter of Acknowledgement – Acceptance of the terms and conditions

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' Owners. In the event this Letter is not signed (or otherwise accepted), ALNG shall be under no obligation to perform or provide any services referred to in this Letter or elsewhere in the *Terminal Regulations*.

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 of, among others, the safety requirements set out in the Safety Checklist contained in these Terminal Regulation.

These safety requirements are based on safe practices widely accepted by LNG terminals and Carrier industries. We, therefore, expect you and all under your command to adhere strictly to them throughout your stay at this the Terminal. For our part, our personnel will cooperate with you in the mutual interest of a safe and efficient operation.

To assure ourselves of your compliance with these Terms and Conditions and safety requirements, the Terminal Representative together with a responsible LNG Carrier officer will, before the start of operations and thereafter from time to time, carry out inspection(s) of cargo decks and accommodation spaces.

If we observe any actual or potential infringement on board your LNG Carrier of any of these safety requirements, we shall immediately bring this to the attention of you or your deputy requesting corrective action. If such action is not taken in 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 consider in your best opinion that there's an immediate threat to the safety of your LNG Carrier arising from any action on our part, or from equipment under our control, you are entitled to request to stop the marine operations and/or Unloading as the case may be.

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

Please sign to indicate:

Your receipt of this letter and to confirm that

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

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

Signed for and on behalf of Terminale GNL Adriatico S.r.L.

Signed for and on behalf of Master of the LNG Carrier:

I, hereby, unconditionally approves, pursuant to and for the purposes of, articles 1341 and 1342 of the Italian Civil Code, the following clauses of the Terminal regulation: *Article 2.2 Restricted areas and Safety 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 ; Termination) ; Attachment 11.11 Emergency Response Actions.*

Signed for and on behalf of Master of the LNG Carrier:

Attachment 11.13 Pre Transfer Meeting Agenda

Vessel:		Voyage:		Date:
A. Safety				
	<ol style="list-style-type: none"> 1. Safety Check by ALNG and Ship staff 2. Handrail lowering for cable-guided connection system 3. Pre Transfer Meeting 4. Unloading Schedule 5. Weather forecasts 6. Partial fill operations 7. Muster point location 	<ul style="list-style-type: none"> - 'R' Items re-check every 4 hrs. by ship staff and shore staff. - Safety Check to send by fax to Port Authority before commencing unloading. - Review of forecasts, confirm operation go ahead. - Confirm emergency departure plan in place. - Handrail lowered or removed one by one, and re-installed immediately after each arm connection. - During handrail is collapsed no person crosses the area of sea side. - Ensure the open area of the handrail by temporary lashing. - In case of Man overboard from handrails or loading arms, recovering responsibility is upon LNG'c Master. - Carrier's personnel must use safety harness in addition to the life jacket when lowering/raising the handrail. - In case of general alarm where a muster is required personnel will muster at the location where they are (ship personnel on the terminal will muster at terminal, terminal personnel on ship will muster on Lng'c) 		
B. Communications				
	<ol style="list-style-type: none"> 1. Commission Pyle, F.O., Pneumatic Cable. 2. ESD function ship shore 3. Mooring Tension Monitoring System 4. Communication Checks: UHF, VHF Ch 08 /16, phone line 	Terminal personnel and LNG Carrier's personnel connect the Fiber Optic, Electrical link and pneumatic link as soon as the gangway has been set and remove before gangway removal.		
C. Operations				
1	Vapor/ Liquid Arms Connection	Shore	Ship	3 x 16" Liquid, 1 x 16" Vapor. - Steam to Engine off prior connection. - Arm angles to be monitored hourly.
		1		
		2		
		3		
4				
2	Vapor/ Liquid Arm N2 Purge (O2 < 2%) & Leak Test (Soap Test)	Loading Arms pressure test up to 5.0 bar.		
3	Opening CTMS.	Vapor manifold shut / No Gas Burning (if gas burning BOG counter reading print-out taken at same time of Opening CTMS).		
4	ESD Trip Test (Warm condition)	1 - Ship to Terminal 2 - Terminal to Ship		
5	Loading Arm Cool down	Approx. time 120 mins, start with fully recirculation cooling pump reaching 0,5 bar on manifolds, avoiding eventual over		

				pressure at first stage, proceeding by instruction from Terminal Double shut by-pass valve open 15%, manifold pressure 2.0 bar. As per terminal representative
6	ESD Trip Test (Cold condition)			1 - Ship to Terminal 2 - Terminal to Ship
7	LNG Cargo Un-Loading:	P/P	Interval	<ul style="list-style-type: none"> Rate increased over approximately 60 minutes to full rate. Maximum rate 13600m3/hr Maximum manifold pressure ___4.2 barg___ Shore back pressure ___2.0 barg_____ Advise Loading Master when opening vapor return. Terminal CRO and Loading Master to be advised before of any rate reduction during full rate. Sampling to commence when at full rate.
		1 & 2	10 min	
		2 & 3	5 min	
		3 & 4	5 min	
		4 & 5	5 min	
		5 & 6	5 min	
		6 & 7	5 min	
		7 & 8	5 min	
8	Ramp down/Cargo tank stripping			<ul style="list-style-type: none"> Loading Master/ Terminal/ Cargo Surveyor to be advised 1 hr. before commencing ramping down. Notify Loading Master of each pump stop. Notify Loading Master when discharge completed. Mutual agree liquid flow stopped and closing of manifold ESD valves.
9	Loading Arms Draining			<ul style="list-style-type: none"> Draining to terminal side first with N2. Closing CTMS after arms draining completed and before N2 purge.
10	Closing CTMS			<ul style="list-style-type: none"> Stop burning gas. (if gas burning BOG counter reading print-out taken at same time of Closing CTMS) Vapor Manifold closed.
11	Loading Arm Disconnection			Steam to Main Engine to be kept closed until all Arms are disconnected and gangway removed.
12	Gangway			To be removed as soon as terminal staff, tension monitor (orange box) and Terminal tools (Black bag) is come back to the Terminal side.

Master:

ALNG Terminal Representative: