CHIEF OFFICER'S STANDING ORDERS

These orders are to be read and observed by all officers involved in port operations. They are intended as guidance for all officers and cadets involved with cargo and ballast operations, to ensure that operations are conducted in a safe and efficient manner in accordance with Company requirements. In following these standard orders, primary consideration must be given to the safety of all personnel and of the vessel.

All officers should make themselves familiar with the following documents and / or manuals:

- Cargo Operating Manual
- MOL LNG SMS Chapter 8 - Cargo Operations Manual
- MOL LNG SMS Chapter 15 - Ballast Water Management Plan
- Liquefied Gas Handling Principles on Ships and Terminals (SIGTTO)
- IMO Ballast Water Management Convention
- MARPOL 73/78 and Amendments
- OCIMF Recommendations for Manifolds for LNG Carriers
- ISGOTT Guide
- ICS Tanker Safety Guide Liquefied Gas
- IMO International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code)

Officers are expected to have a practical working knowledge of relevant International, Flag State, Industry, Company and Terminal legislation, publications and procedures in order to effectively carry out the in-port operation of the vessel.

The procedures laid down in the above publications relating to normal cargo operations must be adhered to at all times, unless specifically ordered to do otherwise by myself. Deviations are unlikely to occur in the normal run of operations and will only be taken after consultation and discussion between the Master, Chief Engineer, Gas Engineer and myself.

SAFETY AND SECURITY

Safety of personnel, vessel, cargo and the environment are of paramount importance and cannot be emphasised strongly enough. At no time allow commercial pressure to take priority over safety. In case of emergency, an incident involving the failure or malfunction of the cargo/ballast systems or complaints from the shore terminal, then I am to be called immediately.

To maintain their intrinsically safe criteria, the hand held radios should be kept in their cases at all times - it is not permitted to change batteries on deck. Cameras and mobile phones are not permitted on deck at any time.

Fire fighting equipment should always be ready for immediate use. The OOW is to check all F.F.E., including the dry powder monitor valve at the quay-side manifold, which must be open on arrival. As the X-over valves at the manifold dry powder stations are open, it is indispensable that the dry powder monitor sea-side is closed. After departure ensure F.F.E. is correctly re-stowed.

Ensure that smoking regulations are being observed at all times. An announcement is to be made prior to starting cargo operations that "in port smoking regulations are now in force". Check that the conference room door is closed during cargo operations.

Safe access to the vessel is to be maintained at all times. The gangway / accommodation ladder is to be tended throughout the vessel's stay in port. Visitors should be met at the gangway; they are to be asked for photo identification, their business ascertained and then escorted to their destination. Unauthorised visitors are not permitted at any time and should be politely, but firmly, refused access. The CCR is to be informed if any visitor is unable to produce a photo ID, or at any time the watchman is in any doubt about the visitor's business or intentions. The gangway watchman is to record all persons boarding and departing and inform the CCR of these events. Depending upon the varying levels of security, random searches of personnel and their belongings are to be implemented. Refer to extracts from Security Manual in Gangway Log, explaining this further.

Shore leave is permitted where and when allowed by the terminal, providing sufficient personnel remain on board to cover all operational and emergency aspects. Shore leave will be granted by the Master after consultation with the department heads. A record of personnel going ashore is to be maintained at the gangway and kept up to date accordingly.

ENVIRONMENTAL CONCERNS

Officers should bear in mind the potential sources of pollution. Hydraulic oil leaks from deck machinery, valves and pipe lines are a possibility, and regular overside checks should be made for external sources of pollution. Extra vigilance is required during bunkering operations.

Pollution of any kind, however small, is unacceptable. When draining rainwater from the decks is necessary, the CCR is to be informed and the watchman is to stand by the scupper until the water has drained away. Absorbent mats must be used at all times to ensure that no film of oil can escape through a scupper. At some ports there is a policy of informing the terminal representative prior to draining water off the decks. It is important that the deck watch keepers are fully aware of these rules and do not open any scupper without CCR permission. Any minor oil leaks from valves or winches are to be cleaned up immediately. The Duty Engineer should be informed immediately of air pollution from funnel smoke. Signs of pollution within the vicinity of the vessel are to be investigated to establish if originating from the ship. If this is found to be the case, act immediately to minimise the incident. Raise the alarm and begin the 'Shipboard Oil Pollution Response Plan'

In the event of a vapour or cargo leak, the CCR should be informed immediately. Do not hesitate, if an emergency warrants it, to stop the cargo pumps or to activate the ESDS manual switches - that is what they are for and we can always restart.

No garbage of any type is to be disposed off over the ship's side. All garbage generated is to be stowed in the garbage bins provided for disposal as appropriate once clear of the coast.

CARGO & BALLAST OPERATIONS

All officers must be familiar with all aspects of cargo and ballast operations/procedures. I actively encourage checks being made on each other, as nobody is infallible. Prior to each port a cargo plan will be completed, the contents of which should be read, understood and signed for. Any questions regarding the plan should be brought to my attention. Cargo and ballast operations will follow the guidelines as outlined in the respective loading/discharging procedures. Any changes to the cargo plan or standard procedures will be pointed out as required. If you have any questions regarding the operations then do not hesitate to discuss them with me prior to the event.

The CCR shall be manned at all times by at least one OOW and as found required and necessary by me or the Gas Engineer.

If I am not around in the CCR, a set of "Night Orders" will be left, detailing the specific requirements for that period. During the period whilst the Gas Engineer has operational responsibility, the Deck Officer on watch will assist him as they would the Chief Officer - they will maintain responsibility for watchkeeper's performance and safety, ship security, deck and mooring watchkeeping duties and logbook keeping. There will be 4 deck watch keepers on watch at all times during the port operations to patrol the decks, manifolds, trunk deck, etc. and to adjust the moorings if so required. They should be encouraged to report any abnormal condition or occurrence and as a minimum should report on an hourly basis that all checks are satisfactory.

OOW shall be familiar with mooring tension monitoring system supplied by terminal representatives.

When ship is alongside terminals with high tidal ranges, strong currents and increased traffic movements, forward and aft mooring station will be tendered and frequent adjusting of moorings will be required.

Since operational and safety needs varying from port to port pre-arrival meeting would be held and operational procedures will be outlined.

The OOW is to make rounds of the deck, compressor house, manifolds and trunk deck whenever myself or Gas Engineer is in CCR, and after every completion of handover cargo watch.

OOW shall check ship's sides to confirm no any spills have occurred during the port stay as well as to confirm that all scupper plugs are in place.

On completion of the required ESD testing, both after the warm and cold ESD test, an Officer or Gas Engineer shall inspect the both passageways for any signs of hydraulic leak.

Please ensure all port paperwork (port log, hourly rate, stability, loading/discharging monitoring form etc.) is kept up to date as required and mentioned in the cargo loading/discharging plan. During the watch, cargo rates are to be calculated hourly with the shore advised as required. Any unexpected differences in rates, quantities, soundings or stability are to be brought to my attention immediately. Keep the loading computer in "*Online Mode*" throughout the port period and regularly check that the stability data agrees with the plan. Maximum shear force and bending moments are to be logged hourly. If you are in doubt about any operation being carried out please ask. Ensure that the duty Engineer is kept informed of finishing times, operational requirements and other relevant information.

The Cargo Log Book will be used to record all details and occurrences during the port duration. Only salient points (ESD connection, ESD test, commencing/completion of loading/discharge, etc.) will be

entered into the Deck Log Book. Please ensure the Deck Log Book is kept up to date and completed at the end of your watch.

During the commencement and finishing of cargo operations and during cool-down, the OOW or Gas Engineer will stand by at the manifold as required. Please be vigilant and keep the CCR well informed; you may be the first to know if things are going wrong. When the cargo or spray pumps are being started, ensure that no personnel are standing on the walkways above the valves - stand well back on the trunk deck until all pump starts for that tank are completed.

The OOW on taking over the watch, and at regular intervals, must satisfy himself that all valves are correctly set for the operation in progress. This should include load/discharge valves, ballast system, pump amps, cargo and ballast tank/line pressures and compressor house valves and system. Other relevant matters which must be covered during a handover are loading/discharging rates and expected time of ramp up/down, ballast and cargo tank levels, draught, trim and list, moorings, gangway, state of tide, weather predictions, overside checks, ship/shore communications and location of shore personnel on board.

When preparing for ballast operations, make sure that the line is flooded slowly so as to avoid any undue stress on the lines. Slightly open a valve at one end of the line so as to allow any air to vent from the system. Ballast pumps are to be started by permission of Chief Officer only. Maintain a good awareness of the tank levels and the flow of water at all times. A ballast overflow is considered a serious incident and should not be allowed to occur. Make sure that there is an open route for the ballast water at all times. Be especially careful when changing over tanks, topping off when ballasting or stopping when deballasting. Maintain a close watch on the valves to ensure that they do Open/Close as selected. Keep the vessel upright at all times. Ballast is normally started once bulk cargo rate has been attained and completed before ramp down. If this does not appear to be the case then inform me in good time.

It is preferable to start ballasting or de-ballasting operation by gravity first. Before starting and stopping ballast pumps, always inform the Engine Room. Line up the ballast lines sea to sea prior to starting the pump(s). When starting the ballast pumps, start them with the discharge valve shut. Once the pump has started, gradually open the discharge valve to the required setting.

During cargo operations do not exceed maximum draught as per cargo plan, usually 12 m and do not exceed 0.3 degrees of heel. For topping off in loading ports, we will be upright and on even keel, with final adjustment prior to CTMS. In the discharge port, to assist stripping the cargo tanks, we will usually aim to approximately 2.0m to 2.5m of the stern trim.

All local port regulations should be complied with at all times. For example, in some ports it is required to unlash the sea-side lifeboat and to lower the sea-side accommodation ladder. In all ports, on completion of mooring, check that the pins on the cable stopper bar for the anchors are out and that the anchor cable is not touching the stopper bar, thus allowing the bar to be lifted at all times.

Please keep the Engine Room advised of our requirements and anticipated time for these. Any machinery defects outside the Engine Room are to be brought to the attention of the Chief Engineer and myself.

Keep the Engine Room informed of latest estimates for completion, disconnection of cargo arms and departure times. Engine room requires a minimum of 1 hour notice for preparing the Engines.

Therefore, as soon as all cargo arms are clear of the ship (all arms disconnected), Engine Room is to be informed allowing them to start with preparations.

Any malfunction of cargo equipment, mooring gear and deck fittings are to be brought to my attention. Make a note of these on the white board in the CCR.

<u>During all cargo operations the OOW is to printout the following:</u>

1. Tank Radar CTMS Snapshot every hour
2. IAS Cargo Log every hour
3. Loading Condition Summary every hour

CTMS Snapshot will be set up to print hourly. Ensure that is being printed out once cargo tank cool down and cargo operations have started.
Cargo Log will be set up through Kongsberg IAS to print hourly, ensure that it is being printed.
Loading Condition (LODIC Report) is to be manually generated and printed out accordingly.

<u>During all cargo operations the OOW is to record the following:</u>

1. Hourly rate of loading/discharging is to be recorded on the appropriate file. This information may have to be passed on to the terminal as required. Any major discrepancy between ship and shore could indicate pipeline or valve leakage and require interruption of operation until investigated.
2. A record of the manifold pressure and the vapour arm angle. Trunk deck watchman to report hourly.
3. Hourly record of the local & remote Whessoe Float Gauge and Kongsberg readings comparison.
4. Tension Monitor readings to be obtained from the MLM Vessel repeater or from the terminal and recorded at least every 2 hours.
5. Ballast Log report has to be manually generated and filled in accordingly.
6. Record cargo pumps information on hourly basis during discharging operations only.
7. Record tank cool down data on hourly basis during cool down operations only.
8. Safety checklist is to be signed by the OOW and by the shore representative at the designated intervals, but not exceeding 4 hours.
9. Update Port log accordingly at the end of your watch.
10. Update Deck Log Book accordingly at the end of your watch.

Pay particular attention that Loading Computer (LODIC) is in "Online Mode", otherwise all volume calculations through Kongsberg IAS will remain in condition when Loading Computer was put in "Planning Mode" (Offline), thus displaying wrong and obsolete volumetric data. If "LODIC" starts to behave oddly (reports are refusing to generate, draught on the printout is obviously wrong, less than few centimetres etc.), first try to quit and reopen LODIC application, if it does not improve, restart the machine (regular Windows restart, password "bluesky"), which should put everything back in normal. If does not, call me without hesitation.

MOORINGS

No moorings are to be adjusted without permission from the CCR. Moorings are to be carefully monitored, making full use of the tension monitor if available. If not available, obtain the tension readings directly from the terminal in at least two hours intervals and record it accordingly. Maintain tension of a minimum 10 tons (100kN) and a maximum of 40 tons (400kN) on each line. Keep an even strain on all the moorings and avoid excessive strain. Be well aware of tidal and wind conditions throughout your watch, bearing in mind the effect these can have on the moorings. When adjusting the moorings, two watch keepers are to be involved - give them clear instructions as to the adjustment required. Be particularly careful when adjusting the spring lines, so as to avoid ship's movement along the berth. The manifold CCTV can be used to determine any such movement by observing chicksan limit markings, alternatively a check at the manifold with the shore marker will reveal any movement. Also ensure that you check the ship's position visually when on rounds. Line tending should be logged in Cargo/Deck Operation Log. Additionally, at times OOW may need to assist the watchkeeper in adjusting moorings, especially in bad weather conditions, ensure that either myself or the Gas Engineer are in the CCR during this time.

The weather forecast is usually discussed in the pre-cargo meeting, however, if for any reason the weather deteriorates unexpectedly and all moorings require adjustment, an another officer and/or additional crew can be called. If this is the case, then the Master and I are to be called.

RESPONDING TO AN EMERGENCY

Any emergency whilst alongside (LNG spillage, fire, breakaway, etc.) is to be responded to in a calm and controlled manner. Initial response is to activate the ESD, start the water spray system, raise the general alarm, inform the terminal and wait for Master's and shore instructions.

Please call Chief Officer and Master under the following circumstances, or at any time you are in any doubt whatsoever:

- If cargo operations are suspended for any reason.
- Leakage of LNG liquid or vapour.
- Any potential for pollution or if any pollution occurs.
- Difficulty with moorings maintaining the vessel alongside.
- Deteriorating weather situation / lightning etc.
- Any difficulty in maintaining the ballast operations.
- Any difficulty in understanding/working with the shore representatives.
- If you are unsure or you need an extra pair of hands.
- Any breach of Ship's Security Plan.

Loading/discharge plan consist actions to be taken if any of above mentioned emergencies has occurred.
I would rather be called unnecessarily than not called and come to find things going wrong or in an emergency situation. If you need to call me and I am not reachable for any reason, call Master instead.

CHIEF OFFICER'S STANDING ORDERS

COMMUNICATING PROCEDURES

All operational, safety and security procedures will be agreed during pre loading/discharging meetings. After meetings, OOW will be briefed on operational, safety and security needs for particular port.
If, in my absence, any communication difficulty with Loading Master, Terminal Operators or Port Authorities occurs, call me immediately or if for any reason I'm not reachable call Master instead.

Once again, you can call me at any time and if you are in any doubt!!!

We operate in a very high profile environment and as such the image that we create is very important. Remember that you are dealing with our customers and anything you do will reflect on us all. All personnel should ensure that they are wearing a clean boiler-suit, name tag and have the correct safety equipment at all times whilst on duty. Safety shoes are to be worn whilst on duty in the CCR. Smart appearance for officers and crew will be required at all times. Visitors shall be met and escorted to their destination, being treated in a courteous manner at all times.
Keep the CCR, Office and Conference Room in a clean and tidy manner at all times whilst the ship is in port.

Finally, I am always available and willing to listen to any ideas you may have to improve the efficiency of the deck department in all aspects of the operation. I am happy to help at any time you may have a question about operations or procedures, and I encourage understudying where appropriate.

Cadets and/or Training Officers are to make good use of their time on cargo watch and learn as much as they can - they will be Officers in charge sooner than they think!

I wish everyone a successful tour of duty, and hope that our presence on board this vessel adds to the prestige and professionalism of the entire company.

Please sign the attached form to indicate that you have read and understood these standing orders.

_____ _____

Chief Officer

Approved by Master

CHIEF OFFICER'S
STANDING ORDERS

By signing this sheet, the Officer named below confirms that he has read and fully understood these Standing Orders dated

Issued by: _____ ***Rank:*** ***Chief Officer***

NAME	RANK	SIGNATURE	DATE