Information and regulation of the SARLUX refinery marine terminal

Preface

These general guidelines are addressed to all vessels that call at the Marine Terminal of the SARLUX refinery in Sarroch, Sardinia.
Maximum attention has been paid to ensure that the information contained herein is as accurate as possible. However, SARLUX disclaims all responsibility for any possible mistakes or omissions.
Masters of vessels calling at Sarroch must be aware and comply with all National and International regulations on Shipping Safety and on the Marine Environment in general, and with the "Regulations of sea and harbour activities in the Port of Sarroch" contained in ruling 54/1971 as issued by the Cagliari Harbour Master, and with the "SARLUX procedures", as described herein.
General information on the Port of Sarroch and the Marine Terminal of SARLUX refinery with its main operating procedures are reported herebelow.

1 - Ships authorised to operate at the SARLUX refinery marine terminal

All ships that wish to operate at the SARLUX refinery marine terminal must comply with the following requirements:
1. be a member of the *International Tankers Owners Pollution Federation Ltd*;
2. have a valid certificate of insurance, in compliance with the *Civil Liability Convention 1992* and *Civil Liability Bunker Convention 2001.*
3. have an insurance cover against any damages caused by hydrocarbon pollution, not inferior – as to the amount and coverage – to the standards established by the rules of the *P&I* Clubs adhering to the IGA;
4. comply with all *IMO* regulations and recommendations;
5. fulfil, when performing any operation, all the *OCIMF* rules/recommendations codified in the *International Safety Guide for Oil Tankers & Terminals (ISGOTT)*;
6. meet all guidelines established by *OCIMF* for the control of drugs and alcohol on board of ships;
7. satisfy all international regulations in force at the time of arrival (Marpol, Solas, ISM);
8. know and comply with all the rules and regulations enforced by the local Authorities (Harbor Master, Port Authority, etc.) and with all related Italian/European laws;
9. satisfy *SARAS Safety Criteria* latest edition.
If a vessel fails to comply with the above listed rules, even partially, SARLUX reserves the right, at its sole discretion, to refuse to berth it and to hold the vessel responsible for any and all damages which may arise as a consequence.

2 - Information prior to arrival

2.1 - E.T.A.
All ships calling at the SARLUX refinery marine terminal must give, directly or through their local agents advance notices, as required by the commercial agreements in force, but in any case not less than 72, 48 and 24 hours prior to the expected time of arrival.
2.2 - Information on the ship
Vessels must transmit to the Terminal, at least 48 hours before arrival, the "ship data and cargo information" as detailed in Annex 1 and the Ship pre-arrival Security information.
2.3 - Where to address notices
Notices and other information can be sent either through the local agents or directly to the Terminal as follows:
by Telex (from abroad, dial Italy telex code number) 540540 790350
by Fax +39 070 9091 715
by E-Mail terminal@saras.it

3 - General information on the terminal and on the port of Sarroch

3.1 - General information

The Terminal is located in the sea area in front of the Southern coast of the Gulf of Cagliari, between Torre Loi and Punta Zavorra, at 39° 05'.1 latitude North and 009° 02'.2 longitude East.
The sea bottom is sandy and provides a good hold for anchors.
Prevailing winds blow in the following directions:
from the IV quadrant 40%
from the II quadrant 20%
from the other quadrants 20%
calm 20%
Average wind force is approximately 10 knots, with peak values of 60 knots from the West and North-West.
The average speed of currents is 0.1 - 0.2 knots, with peak values of about 0.7 knots.The direction of the currents varies and is generally opposite to the direction of the wind.
Maximum variation of the sea level due to tides is approximately 0.45 metres.
The SARLUX refinery marine terminal and the sea area between Punta Zavorra and the Port of Cagliari come under the jurisdiction of Cagliari's Harbour Master (Coast Guard).
The Cagliari Harbour Master has a local branch office called "Seziomare Sarroch" which is located in Porto Foxi.
There exist on the part of the vessel an obligation to observe National and International Regulations on Shipping Safety and on the Marine Environment in general, and with the "Regulations of sea and harbour activities in the Port of Sarroch" contained in ruling 54/1971 as issued by the Cagliari Harbour Master, and with the "SARLUX procedures", as described herein.

3.2 - Quality certification

All unloading/loading operations are regulated by the SARLUX Quality System procedures – ISO 9001 / 14001 / 18001 – a copy of which is available on request.

3.3 - Operations at the port of Sarroch

The SARLUX refinery marine terminal and all port services generally provide, weather permitting, a round-the-clock service. (see art. 2.3 of the Harbour Regulation and ruling 90/99 of July 15, 1999).
Moorings can be temporarily suspended in the case of bad weather. The declaration of "port closed" is at the discretion of the Harbour Master. In the event that a "port closed" declaration is issued, vessels on the berth and which are operating can decide whether to remain moored or to cast off, according to the safety of the vessel and of the berths.
The Master of the vessel shall always be held liable for the safety of his ship and for any damages it might cause.

3.4 - Arrival at Sarroch roads

The landing point in Sarroch roads is the "Q" offshore buoy, located at 39° 03'.8 latitude North and 009° 06'.1 longitude East.

3.5 - Pilots (Decree of the Italian Ministry of Transport and Shipping dated September 2, 1996)

A pilot service is compulsory for all ships having a gross tonnage above 500 tons.
The Pilot station located in Porto Foxi is controlled by "Corporazione Piloti di Sarroch" (the Sarroch Pilots Association), which works round-the-clock and can be contacted on VHF channel 9.

3.6 - Anchoring

The waiting and anchorage areas are identified by ruling 115/2000, issued by the Cagliari Harbour Master.
The Pilot, given advance notice of arrival, will indicate the anchorage position.

3.7 - Tugboat service

The tugboat service, offered by an independent company, is compulsory for the mooring and unmooring of any vessel (see ruling 171/November 12, 2008).

3.8 - Mooring services

A mooring service is supplied by "Gruppo Ormeggiatori di Sarroch" (Mooring Workers of Sarroch), which has an office in Porto Foxi. This service can be requested by the Pilot or, if necessary, directly by the Master or by the ship's agency.

3.9 - Garbage collection

All vessels berthed or anchored in Sarroch are forbidden to discharge any garbage or other materials into the sea. Daily garbage collection is performed by a local independent company, authorized by the Cagliari Harbour Master (see ruling 2190/July 21, 1990).

3.10 - Crew transport service

The crews of vessels calling at SARLUX refinery marine terminal are not allowed to access the berths or any other part of the refinery area. The nearest landing point is Porto Foxi, which can be reached by boat, through a service supplied by "Gruppo Barcaioli di Sarroch" (the Sarroch Boatmen Group) (authorized by the Cagliari Harbour Office, see Decree 432/July 1, 1968). They provide a 24 hour service and listen on VHF channel 13.

3.11 - Bunkering

No bunkering service is available at the SARLUX refinery marine terminal or in the Port of Sarroch.

3.12 - Fresh water

Each berth at the Terminal is equipped with a fresh water line, having standard connections and a water meter. However, the supply of fresh water is not always assured. In case fresh water is not available, water can be supplied by tugboat on request to MOBY Divisione Rimorchiatori (the Tugboat Company).

4 - Description of the SARLUX refinery marine terminal

The SARLUX terminal consists of a main structure, in reinforced concrete, which branches off the coast in front of the refinery, at an angle of approximately 60° and is 1420 metres long.

The product lines pass along this structure.

Six smaller structures branch off the main one, providing 7 operating berths called: P1, P2, P3, P4, P5, P7 & P9. (P6 and P10 are not operational at the moment).

From the seaward extremity of the above-mentioned structure a steel gangway branches off, oriented at 87° and is 1150 metres long. This leads to 2 further berths called Island 1 and Island 2.

At the seaward extremity of the concrete structure there is a platform which houses the control room of the SARLUX refinery marine terminal. The staff are on duty round-the-clock and can be contacted on VHF channel 14.

The sizes of the vessels, which can be moored at the various berths, are shown in the table contained in Annex 2.

The two islands and P1 are allowed to receive crude oil.

The platforms on the berths can load and receive oil products.

The platforms on berths P7 and P9 can load and receive LPG.

The various lines on the berths are all dedicated product lines, so that each line is always full of the same kind of product.

5 - Mooring procedures

Island 1 and Island 2 can be reached through a dredged access channel 3,100 metres long and 400 metres wide, which is an obligatory route for all vessels having an arrival draft over 14.63 metres (48`).

This channel is marked with 3 pairs of buoys, green on the starboard side and red on the port side.

Island 1 has a manoeuvering area, but ships generally moor on the port side. Un-mooring with the bow in a North-Westerly direction is possible only if the maximum sailing draft is 13.41 metres (44`).

Please refer to art. 4.3 of the Harbour Regulation for the correct use of the cables.

During mooring, Masters must ensure that the ship nears the berth parallel to its axis, and that the approaching speed does not exceed a maximum value of 0.05 metres/second.
Masters must follow carefully the indications received from the Pilot and the possible suggestions of the SARLUX marine terminal staff. They must always operate according to good seamanship taking the utmost care so as not to damage in any way the structures and the equipment of the berths.
The Master, if he deems it proper, can ask the SARLUX marine terminal staff for advice on manoeuvering and mooring. SARLUX marine terminal staff will be ready to provide information based on their experience with local conditions.
In any case the Master remains the only person responsible for the correct mooring of the ship.
The Master holds full and sole responsibility for any damage caused to the structures and equipment of the berths, including any/all, indirect/consequential damages (such as, but not limited to, any costs as a result of refinery throughput loss due to the vessel damaging the lines, direct and indirect demurrage etc.) that might be caused by the vessel during manoeuvering and/or while on the berth.

6 - Rules to be complied with while on the berth

6.1 - VHF listening

The vessel's control room and the ship`s officer on duty must keep a permanent radio contact with the Terminal, through VHF channel 14.

6.2 - Deck surface

The deck transit areas must be kept free of obstacles and of any water, oil and hydrocarbons.

6.3 - Ship`s Manifolds

The ship`s manifolds must be kept in good condition and, if not connected to the loading/unloading arms, must be intercepted and blank flanged.The manifold area must be continuously manned by the ship's crew.

6.4 - Protruding manifolds of cargo lines

The above-mentioned manifolds, if present, must be fitted with a valve and counter-valve. During mooring, both these valves are to be kept closed with a seal and, possibly, blank flanged.

6.5 - Cargo tanks

Except for the vents circuit, which must be kept perfectly efficient and equipped with proper flame trap nets, any other cargo tank openings must be closed.

6.6 - Vessel readiness

Berthed vessels must always be ready to move and cast off from the berth by their own means should it become necessary.

6.7 - Repairs on board (art. 7.2 of the Harbour Regulation)

It is forbidden to execute repairs on board or carry out any other type of work that requires the use of open flames and/or any work of whatsoever nature that could hinder the vessel's readiness to move and cast off from the berth by their own means.

6.8 - Tank washing (art. 8.2 paragraph(a) of the Harbour Regulations)

Any washing of the tanks, including cold water washing, while alongside is forbidden.

6.9 Safety of the berth

The ship shall be held liable for safety while at the berth. It is not allowed to perform any operation which could damage any part of the terminal structures and/or of the loading arms.

6.10 - Pollution prevention (see section 12)

Masters must take all proper precautions to prevent any kind of sea pollution.
Masters must inform the SARLUX refinery marine terminal immediately if there is leakage from the ship and/or if any quantity of hydrocarbons is detected in the sea, even if it is not directly connected to their vessel.

6.11 - Safety of the berth
Masters must comply with the rules provided for in chapter IV of the Harbour Regulations.

7 - Gangways
On all berths, the ship has to use its own portable flying gangway, which can be positioned perpendicular to the ship side in proximity of the cargo manifolds, assuring its safety and suitability for the passage of people to and from the ship (see art. 4.6 sub-paragraph “p” of the Harbour Regulations).
Ships have to approach the berth keeping the gangway ready on the mooring side, as follows:
Island 1 - port
Island 1 - starboard, but only if the maximum draft on departure is over 13.41 metres 44`
Island 2, P2, P3 and P5 - port
P1, P4, P7 and P9 – starboard
Since the Islands 1 and 2 are equipped with a mobile gangway hydraulically controlled by the SARLUX refinery marine terminal staff, it may not be necessary the use of the ship gangway on those berths.

8 - Safety inspections
Safety and the measures to prevent any sea pollution are an absolute priority for SARLUX.
At the SARLUX refinery marine terminal there is a “Safety Control” procedure in force and all ships calling are subject to a safety inspection (from the mooring to the un-mooring of the vessel), carried out by SARLUX entrusted inspectors.
8.1 - Pre-mooring inspections
SARLUX can, at its sole discretion, decide to perform a pre-mooring inspection on a vessel to verify compliance with all the guidelines and regulations as detailed in section 2.
In case deficiencies are detected SARLUX can refuse to berth a vessel and any related costs as a consequence will be for the account of the vessel.

9 - Unloading – General information, operations, procedures
The berths suitable for crude oil discharge are the two Islands and P1, connected to the refinery by means of two 42” lines, one of which is heated.
Additionally, the two Island berths can receive or load fuel oil through a 30” line and are equipe with a 30” line for ballast. Receiving tanks are located approximately 4,000 metres away, at a few metres above sea level. Each Island is equipped with four 16” arms, fitted with ASA 150 rapid connections measuring 12”/14”/16”.
Maximum pressure allowed at the manifolds is 784.5 kPa (8 Kg/cm2), corresponding to an hourly rate of 10,000 cubic meters/hour.
Two fixed, electronic, flow proportional samplers are placed at the bottom of the connecting arms on the two Islands, which take a representative sample of the unloaded product and which in turn becomes the official custody transfer sample.
The SARLUX refinery marine terminal is fitted to receive methanol and MTBE at berths P5 and P9 (equipped with arms having 6” connections) and LPG at berths P7 and P9 (fitted with 6” arms).
The correct sequence of operations at the end of berthing/beginning of discharge is as follows:
9.1 - Gangway positioning
See section 7
9.2 - “Grounding” connection
All berths are equipped with an “electrical grounding system”.The staff of the SARLUX refinery marine terminal will provide for the connection of the clamps and cables to accomplish the correct electric continuity between the ship and the berth.

9.3 - Preliminary meeting with the Loading Master, Safety Inspector and Cargo Inspector.
As soon as possible after berthing the Loading Master, the Safety Inspector and the Cargo Inspector must go on board of the vessel, meet with the Master and agree on the discharge procedure.
9.4 - Drawing up of the "Ship/shore safety check list"
The Safety Inspector, together with the Master, must set out and verify the "ship/shore safety check list".
9.5 - Unloading arms connection
The SARLUX marine terminal staff, in co-operation with the crew, will connect the unloading arms. Once connection has been completed, the arms are pressurized to 784,5 kPa (8 Kg/cm2) to verify proper sealing of the berth manifolds/ship`s manifolds.
9.6 - Vessel`s tank measurement
As soon as possible the Cargo Inspector, together with the ship's crew, must take or assist in the taking of the ship`s tanks ullages. At times, the Terminal staff and/or the Safety Inspector may also attend these operations.
9.7 - Back-up sample
When ullaging is completed, the Cargo Inspector, in co-operation with the crew and Terminal staff, takes a "back-up sample", to be used as a representative sample of the unloaded product in case the performance of the fixed sampler on the shoreline does not meet the requirements provided for under the ISO 3171 standards.
9.8 - Beginning of discharge
Discharge can be started, provided that the Master and the SARLUX refinery marine terminal duty officer fully approve the safety of the berth, of the connection of the unloading arms and of the arranged discharge procedures.
As soon as the refinery advises that it is ready to receive the cargo, the order to start discharge will be given through VHF channel 14 or by the Safety Inspector on board.
9.9 - Discharge pressure report
The Master must ensure that manifolds are equipped with properly working pressure gauges, in order to fill out the "ship's manifold pressure log".
The crew, together with the Terminal staff and/or with the Safety Inspector, must take readings each hour, and the reports must be properly signed and stamped by the two parties.
In case the manifolds are not equipped with gauges or in the case of their failure, the hourly readings must be taken using the pressure gauges fitted at the bottom of the unloading arms.
9.10 - C.O.W.
Except in special cases generally SARLUX does not require crude oil washing to take place.
In case the ship decides to perform C.O.W. for other reasons (e.g. because requested by the Charterer, Shipowner, etc.) any additional time and related costs will be for the vessel`s account.
C.O.W. operations must be performed in compliance with SOLAS and MARPOL regulations, the inert gas system (IGS) must be fully operational and in use, the percentage of O2 present in the tanks and in the IGS main line must be below 5%.The pressure in the cargo tanks must be positive and the ship must be equipped with both a fixed O2 analyzer and mobile analyzers, all fully operational and in use.
If the ship does not require to perform C.O.W., the quantity of O2 in the tanks must be below 8%.
To perform C.O.W., vessels must make a specific request (directly or by means of their local agency) to "Seziomare Sarroch" (local Harbour Master`s office). They grant a preliminary authorization subject to the technical opinion of R.I.NA. (the Italian Shipping Registry) and of the Harbour Chemist who, generally, go on board once discharge operations have started (see ruling 68/83 dated October 7, 1983).
9.11 - End of discharge
During the final stages of the discharge, the ship must drain all lines into a single tank, and strip its contents ashore in order to minimize the cargo quantities remaining in the tanks (R.O.B.).
When unloading is completed (as soon as the pumps are stopped and the ship valves are closed) the ship must give immediate notice to the SARLUX refinery marine terminal.

9.12 - Drainage of the arms

Once the valves fitted on the berth line have been closed, the unloading arms must be drained according to the following procedure: the ship must connect one line with a tank so that it will receive the content of the part of the unloading arm on the ship's side (1.1 cubic meter for each arm), while the part of the arm on the side of the berth will be drained into a tank on the berth.

For LPG, the Terminal staff will flux nitrogen into the unloading arm at the end of the unloading. The ship must connect the unloading arm to a tank that can receive the content of the part of the unloading arm on the ship's side (0.5 cubic meter).

9.13 - Tank inspection at the end of the discharge

At the end of the discharge, the vessel`s tanks must be inspected by the crew, by the Cargo Inspector and by a representative of the SARLUX refinery marine terminal.

9.14 - Arm disconnection

When the arms have been drained, the Terminal staff will disconnect them and, subsequently, release the electrical grounding connections.

9.15 - Document delivery

The aforementioned operations being completed and the time of the various operations agreed upon, the Loading Master will go on board to arrange for the countersignature of the Time Sheet.

9.16 - Vessel sailing

Once the foregoing operations have been completed, discharge is concluded.

The Master decides the time of unmooring, notifies it to the Loading Master and arranges with the Pilot the time of the removal of the gangway.

10 - Loading – General information, operations and procedures

21 (dedicated) product lines are available on the main berth axis.

The line sizes range from 6" to 24".The flow rates and the berths to which they are connected are reported in the following table:

PRODUCT	Temperature range	Hourly rate in Cm/H	Berths to which connected
Fuel oil	35 - 90 °C	600 - 3000	Is 1, Is 2, P1, P2, P3, P4
Gas oil	10 - 45 °C	300 - 2500	P1, P2, P3, P4, P5, P7
Petrochemical distillates	40 - 70 °C	300 - 700	P1, P2, P3, P4, P5
Jet - Kerosene	5 - 35 °C	300 - 1200	P1, P2, P3, P4, P5, P7
Gasoline	5 - 25 °C	300 - 1800	P1, P2, P3, P4, P5, P7
Virgin Naphtha	5 - 25 °C	300 - 1200	P1, P2, P3, P4, P5
LPG	3 – 25 °C	50 - 350	P7, P9

In order to improve safety and to prevent marine pollution during loading operations, the entire loading equipment is protected by a Safety System (E.S.D.), which can be controlled manually or automatically, and has been devised to stop loading pumps and to automatically close the valves placed on the arms as soon as any extra pressure is detected in the system:

A set of pressure gauges - fitted on all the manifolds of the loading arms, and adjusted to a maximum pressure of 784.5 kPa (8 kg/cm2)- controls the stoppage of the pumps and the closure of the valves set at the bottom of the loading arms, in case the pressure exceeds the above-mentioned value. The activation of the blocking system is signaled by an alarm siren.

The average loading pressure on the various berths and loading arms varies according to the delivery pressure of the loading pump, to the counter-pressure determined by the size of the lines and to the number of the connected tanks on the ship.
In case of an emergency, the E.S.D. system can also be manually operated from a control board located next to the loading arms and close to the room used by the Terminal staff.
The loading arms are all hydraulically operated and are equipped with rapid connections, the size of which ranges from 6" to 12".
The LPG arms placed on berths P7 and P9 are connected to the return line (3" ASA 300). The gas phase is always connected and is only used for safety reasons, subject to the Loading Master`s authorization.
The correct sequence of operations at the end of mooring is as follows:

10.1- Gangway positioning

See section 7.

10.2 - Grounding connection

See section 9.2.

10.3 - Meeting with the Loading Master

Generally, the Loading Master goes on board as soon as the gangway has been fixed.
Subsequently, the necessary documents are exchanged, in order to define the operations for loading and any procedure to be followed while the vessel is berthed. In particular, the following must be agreed:

a) Deballasting procedure, see section 10.6
b) Type and quantity of products to be loaded
c) Loading sequences (in case more than one product is to be loaded to the ship)
d) Loading rate
e) Compilation and verification of the "ship/shore safety check list"

10.4 - Tank inspection

The Cargo Inspector checks the tanks and, if the result is favorable, issues the "clean tank certificate" (generally required to permit beginning of loading).
If the ship needs to discharge washing water/slops from the slop tanks, the Cargo Inspector will return on board at the end of the deballasting operation to check the tanks.

10.5 - Arm connection

The Terminal staff, in co-operation with the vessel`s crew, shall connect the loading arms and run a pressure test to verify the seal of the manifolds.

10.6 - Deballasting

According to the type of ballast, the discharge will be allowed into the refinery`s reception system or into the sea.

a) *Washing waters to the refinery*

The refinery is equipped to receive previous cargo washing waters containing hydrocarbons, but cannot receive such waters resulting from the washing of tanks with chemicals, nor with "oil on top" having a pourpoint greater than +5° C.

b) *Discharge of segregated ballast into the sea*

The discharge of segregated ballast into the sea must comply with ruling 114/98, issued by the Cagliari Harbour Master, and with the SARLUX refinery marine terminal procedure, which prescribe the following:

1 the tanks containing segregated ballast must be inspected to verify the absence of hydrocarbons;
2 "dirty" vessels (crude oil/fuel oil) are allowed to discharge segregated ballast into the sea only during daylight hours.
3 "clean" vessels are allowed to discharge segregated ballast, even at night, provided that they satisfy the following conditions:

3.1 they have obtained the authorization of the Cagliari Harbour Master through the local office (Seziomare Sarroch);
3.2 the ship`s structures, such as tanks, lines, pump room etc. have been approved by the Loading Master.
4 if the vessel's crew detects any trace of hydrocarbons in the sea during deballasting, or if the sea near the ship turns an anomalous colour, or if a smell of hydrocarbons is perceived in the surrounding sea area, the discharge operation must be suspended immediately, and immediate notice must be given to the SARLUX refinery marine terminal. If further controls confirm that any of the above-mentioned phenomena are due to the discharge of ballast into the sea, notice must also be given to the local office of the Harbour Master immediately.

10.7 - Beginning of loading

Loading operations can be started as soon as the Master fully approves the safety of the mooring, the connection of the loading arms and the procedures agreed at the meeting with the loading master for the loading operations and any other activity to be performed while the vessel is berthed. Furthermore, it is necessary that the Cargo Inspector has approved the vessel`s tanks as being suitable to load the cargo.
Provided that these conditions have been satisfied, the ship must give notice to the Terminal that it is ready to begin the loading operations.
The loading will start by gravity and if, after a few minutes, the ship confirms that the product is flowing into the cargo tanks and provided the ship specifically requests it the loading pump will be started.
The loading rate will be regulated as arranged and agreed between the ship and the shore.

10.8 - Sampling during loading

SARLUX sampling procedure provides for a continuous sampling to take place throughout the loading procedure. The obtained samples are used for a real time analytical control, and to prepare representative samples of the loaded product. Sampling taps are placed at the bottom of the loading arms, after the last valve of the shore system.The Cargo Inspector must attend this operation and the Masters representative is also encouraged to attend.

10.9 - End of loading

If the stop loading instruction is to be given by the vessel 15 minutes before the expected completino of loading the ship must give a preliminary notice to the Terminal staff present at the berth and to the control room of the SARLUX refinery marine terminal (VHF channel 14). Subsequently, arrangements will be made to stop the loading pump and the loading will be completed by gravity.
If the stop loading instruction is to be given by the shore, about 15 minutes before the requested quantity to be loaded is attained arrangements will be made to stop the loading pump and the loading will be completed by gravity.

10.10 - Measurements

Once all of the valves on the ship and on the berth have been shut, the Cargo Inspector will take the vessel's tank ullages, together with the Master`s representative.
For SARLUX and the Italian Fiscal Authorities the valid quantities are those measured by the fiscal volumetric meters (to be compared with the shore tank levels).

10.11 - Disconnection of the arms

The loading arms disconnection sequence is as reported in sections 9.12 and 9.14.

10.12 - End-of-loading meeting

Upon completion of the measurements, the Loading Master will go on board to agree upon the "time sheet" and the time at which vessel will be unberthed (see section 9.15 and 9.16).

10.13 - Samples delivery

The samples sent to the refinery laboratory (see section 10.8) are used to prepare representative cargo samples, marked with proper numbered seals, in the presence of the Cargo Inspector. The samples are to be

delivered to the receiver (possibly c/o the Master), to the ship, to the refinery storage and to the Cargo Inspector.
The refinery must deliver any samples to the ship, before the ship sails.

10.14 - Delivery of cargo documents
According to the type of ship (see ruling 115/2000), to the time necessary to prepare the documents and to weather conditions, the documents can be delivered at the berth or while the vessel is on the roads. Arrangements for this purpose are to be made during the end-of-loading meeting.

11 - Emergencies

11.1 - General information
Ruling 54/197 of July 31, 1971, issued by the Cagliari Harbour Master, identifies the tasks, the liabilities and the responsibilities of the various officials who are called to take action in the event of an emergency.
It is therefore of crucial importance that the above-mentioned ruling is known, particularly in relation to articles 4.7 and 4.13 of the said ruling.
Article 4.7, inter alia, provides that either the Master or one of his Officers must collect information on and be familiar with the fire-fighting equipment available ashore. Following Master's request, the SARLUX refinery marine terminal will provide the Master, with answers to any questions and any requests for clarification regarding the information given therein.
In case of a fire on board, all interventions and actions will be coordinated by a Representative of the Harbour Master, supported by the Master of the ship, by the Cagliari Fire Brigade and by the fire-fighting chief of the refinery.
All berths are equipped with a water line, fitted with monitors and remote controls, with manually operated water guns and with fixed foam extinguishers. Furthermore, fixed powder extinguishers are available on berths P5, P7 and P9.

11.2 - Kinds of emergency
Two different emergencies are possible:
a) Emergency on the berth
b) Emergency on the vessel

11.3 - Emergency on the berth
In the event of an emergency on the berth, the general alarm signal – used for all states of emergency in the refinery - will be activated, giving three horn blasts, each lasting 5 seconds.
Any operation in progress at that moment (unloading, loading, deballasting) must be stopped. The emergency squad and the first aid teams of the refinery will take action. All berthed vessels, after a careful evaluation (to be made with the support of the officer on duty of the SARLUX marine terminal, of the fire-fighting chief, and of the Harbor Master) and taking into account the risks associated with the disconnection of the arms (and especially of the LPG arms), must disconnect the arms and, if necessary, cast off immediately (art. 4.13).The all-clear signal is a protracted horn blast.

11.4 - Emergency on the vessel
In the event of an emergency on board, the ship must signal it immediately, giving several horn blasts each of which lasting at least 10 seconds, and activating its general alarm system.
At the same time, the ship must:
a) stop any operation (unloading, loading or deballasting);
b) start any fire fighting operations, which are the direct responsibility of the Master;
c) give immediate notice to the Harbour Master (Seziomare Sarroch) on VHF channel 16 and to the control room of the SARLUX marine terminal on VHF channel 14.

The Master must perform any fire-fighting operations in compliance with the rules provided by the Harbour Master who will be assisted by the fire Brigade.
SARLUX refinery marine terminal personnel will simultaneously protect the equipment on the berth, activating the cooling system, and will prepare for a possible intervention on board - if requested by the Harbour Master assisted by the fire Brigade - supplying fire-fighting equipment and the emergency squad.

The Master of the vessel can request assistance from the shore, which can be granted at the sole discretion of the fire-fighting chief of the refinery, either by supplying equipment and/or personnel. Any SARLUX personnel who boards the vessel will operate on the ship's main deck under the control and responsibility of the Master.
The Harbour Master's Representative in charge of the co-ordination of these operations will assess, together with the Master of the ship, whether to unberth the vessel or not.
All ships which are at berth, and not directly involved in the emergency, must maintain contact with the SARLUX refinery marine terminal, stop any operation in progress and be ready to disconnect the loading arms and cast off.

12 - Protection of the marine environment

The protection and the safety of the marine environment is of paramount importance to SARLUX and all means possible to prevent any pollution have the highest priority.
In case of pollution, all operations (unloading, loading or deballasting) in progress in the area involved must be stopped. The refinery anti-pollution team, with its equipment, will take immediate action in order to seal off the sea area involved in the spillage. As soon as he arrives, the Harbour Master`s Representative will be in charge of operations.
In the event that the crew detects a hydrocarbon leakage from the ship, or the presence of hydrocarbons in the sea, even if not ascribable to his vessel, the Master must give immediate notice to the control room of the SARLUX refinery marine terminal (VHF channel 14).
The Master shall be held responsible for ensuring that all actions and precautions are taken in order to prevent any possible spillage.
In case a ship causes sea pollution - without prejudice to the civil and/or criminal liability of the owner, the disponent owner, the Master or the crew, in compliance with the applicable conventions of uniform rights and with the Italian laws in force - all direct costs related to the clean up, at sea and on shore, plus any/all, indirect/consequential damages e.g. non-production of refinery plants, direct and indirect demurrage, etc., shall be for the account of the ship.
SARLUX refinery has available an anti-pollution squad, appropriate boats and equipment suitable to meet the needs of containing oil spillages in the sea area surrounding its berths.
The main anti-pollution equipment available is the following:
1. "Nettuno" motorboat, class rec-oil, equipped with floating booms, skimmers, rec-oil tanks for light and heavy products;
2. "Pegaso" pilot boat, serving as support to lay down the floating booms;
3. "Proteo" boat, serving as support to lay down floating booms;
4. 4 rolls, each 250 metres long, of inflatable "Vikoma" floating booms, located at fixed positions, on the islands (2) and on the berths (2);
5. Floating booms, various kinds of skimmers, various absorbent materials placed at the head of the main berth.
The SARLUX marine terminal, has available, round-the-clock, personnel of a specialized company, duly qualified by the Port Authority, ready to operate the anti-pollution equipment and perform all anti-pollution operations.

13 - TELEPHONE/RADIO/FAX NUMBERS

CONTACT LIST	Telephone	Fax	VHF channel
SARLUX refinery marine terminal Control Room	+39 070 9091 345 +39 070 9091 458	+39 070 9091 715	14
SARLUX refinery marine terminal Chief	+39 070 9091 801 +39 070 9091 145 +39 070 9091 977		
SARLUX refinery marine terminal PFSO / DPFSO	+39 070 9091 801 +39 070 9091 898	+39 070 9091 916	
Harbour Master, Sarroch office “Seziomare Sarroch”	+39 070 900 057	+39 070 900 193	16
Harbour Master, Cagliari “Compamare Cagliari”	+39 070 659 225	+39 070 6051 7218	16
Sarroch Pilots	+39 070 900 187	+39 070 900 006	9
Sarroch Mooring services	+39 070 900 036		13
Sarroch Boat service	+39 070 900 039		13
Tugboat Company	+39 070 6056 1		
Cagliari Port Authority	+39 070 679 531		
Sarroch Frontier Policy	+39 070 900 063		
Sarroch Customs office	+39 070 900 060		
R.I.Na Cagliari	+39 070 651 331		
Anti pollution Company	+39 070 669 464 +39 070 654 704	+39 070 6703 2	

ANNEX 1_loading

LOADING VESSELS

1) *Vessel's name, call sign, year of building*
2) *Country of registration (flag)*
3) *E.T.A. at Sarroch*
4) *Charterer*
5) *Inmarsat tlx number*
6) *Inmarsat phone and fax number*
7) *Present position (area and coordinates)*
8) *Deadweight*
9) *Gross register tonnage*
10) *Length overall and beam*
11) *Max draft and trim on arrival*
12) *Max draft and trim on departure*
13) *Ballast on board, quantity in cubic meters*
14) *Type of ballast (clean/dirty/segregated)*
15) *To be discharged (ashore/to sea/kept on board)*
16) *Ballast discharge rate in cm/h*
17) *Requirements regarding tank cleaning (cow, other) or slop disposal*
18) *Any product on board (type and quantity)*
19) *Products to be loaded (type and quantity)*
20) *Loading plan (indicating product sequence and also products that can be loaded simultaneously)*
21) *Loading rate*
22) *Type and dimension of manifolds for each product*
23) *Number and color code of each manifold counted from bow to stern*
24) *Products that can be loaded at each manifold*
25) *Total operation time at berth*
26) *IGS (present/operational/tanks inerted)*
27) *ITOPF membership*
28) *Details of statutory certificates and their period of validity (compliance with OCIMF, ISGOTT and IMO recommendations)*
29) *Document of compliance (DOC) and safety management (SMC) as per ISM code*
30) *Any deficiency of hull, machinery, or equipment. Any deficiency which may affect safe manoeuvrabilìty of the tanker, affect the safety of the vessel, constitute a hazard to the marine environment, to persons or property*
31) *Flying gangway on board, length*

ANNEX 1_discharging

DISCHARGING VESSELS

1) *Vessel name, call sign, year of building*
2) *Country of registration (flag)*
3) *E.T.A. at Sarroch*
4) *Charterer*
5) *Inmarsat tlx number*
6) *Inmarsat phone and fax number*
7) *Present position (area and coordinates)*
8) *Deadweight*
9) *Gross register tonnage*
10) *Length overall and beam*
11) *Max draft and trim on arrival*
12) *Max draft and trim on departure*
13) *Quality of cargo on board (technical name or that of common usage)*
14) *UN number (if applicable)*
15) *Cargo quantity in cubic metres at observed temperature*
16) *Cargo to be discharged*
17) *Temperature of cargo in each tank and average*
18) *Slops, indicate also if LOT applied*
19) *Discharge plan*
20) *Discharge rate*
21) *Available discharging equipment (manifold details: type, number, size and material of connections to be presented)*
22) *Discharge time, including COW if any*
23) *COW time, if to be performed*
24) *Total operation time at berth*
25) *IGS (present/operational/tanks inerted)*
26) *ITOPF membership*
27) *Details of statutory certificates and their period of validity (compliance with OCIMF, ISGOTT and IMO recommendations)*
28) *Document of compliance (DOC) and safety management (SMC) as per ISM code*
29) *Any deficiency of hull, machinery, or equipment. Any deficiency which may affect safe manoeuvrability of the tanker, affect the safety of the vessel, constitute a hazard to the marine environment, to persons or property*
30) *Flying gangway on board, length*
31) H_2S content in all tanks

ANNEX 2

TABLE OF SHIP'S DIMENSIONAL LIMITS FOR EACH BERTH.

Berth	Max Draft		DWT		Distance manifolds fwd-aft		Height manifolds to sea level	
	Feet	Meters	Min	Max	Min	Max	Min	Max
I1	68'	20,70	40.000	300.000	90	180	4.5	24
I2	57'	17,35	45.000	160.000	110	160	4.5	19
P1	39'06"	12,00	8.000	40.000	45	105	1.5	14.5
P2	36'	11,00	8.000	33.000	45	105	1.5	14.5
P3	37'06"(1)	11,45	8.000	65.000	40	115	2.5	14.5
P4	38'	11,60	8.000	50.000	40	105	1.8	14.5
P5	35'	10,65	4.000	8.000	35	80	1.6	12.0
P7	31'	9.45	4.000	15.000(2)	30	80	1.6	13.0
P9	22'	6.70	2.000	4.000	30	50	1.4	7.8

Note: Ships close to limits of the above table must operate with good weather conditions

(1) ***Maximum draft on departure 40' / 12,19 mt***

(2) ***Maximum LPG DWT is 12.000***