Port of Ras Tanura
Juaymah LPG Terminal

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Juaymah LPG Terminals

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Contents

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RULES REGULATIONS AND GENERAL INFORMATION

1 General

1.1 Location of Terminal

The Juaymah LPG Terminal consists of a two-berth pier at the end of a 10 km trestle.

1.2 Description of Terminal

The Juaymah LPG Terminal is a Saudi Aramco operated facility, designed to load Refrigerated Liquefied Petroleum Gas (RLPG) aboard LPG carriers ranging in size from 25,000 to 200,000 DWT.

A tower crane is located in the center of the loading platform. A helicopter landing platform and two small flares are located near the seaward end of the trestle. Note: For more information with regard to RLPG handling refer to GASRUL section.

1.3 Ship Assistance Fees

The Owners, Operators and Charterers of any vessel calling at Ras Tanura Port shall be liable and shall reimburse Saudi Aramco promptly and in full for all applicable Ras Tanura Ship Assistance Fees.

2 VHF Communications

2.1 While Underway/at Anchor

Vessels should maintain a constant listening watch - on VHF Channels 10 and 16, for information and instructions, from any of the following sources at Ras Tanura Port Control and/or Saudi Aramco Terminal Planners - when underway in the following areas:

- In the Arrival Channel north of Buoy “A.”
- Juaymah Pilot Boarding Area.
- Juaymah SPM Area.
- LPG Anchorage.

2.2 Under Pilotage

The Harbor Pilots carry portable, intrinsically safe radios for contact with tugs, which operate on Saudi Aramco dedicated mooring frequencies. In addition, the ship’s main VHF should be on Channel 13 as back-up communication.

2.3 At Berth

The Terminal will supply a portable intrinsically safe radio to the vessel. This radio operates on a UHF frequency, dedicated to each berth, by means of which constant communication can be maintained during loading.

3 Traffic Movements and Maneuvering

3.1 Vessel Traffic Management System (VTMS)

A mandatory Vessel Traffic Management System (VTMS) is in operation to improve navigational safety for all vessels within the Port of Ras Tanura.

The Ras Tanura VTMS Operators Will Never, Under Any Circumstances, Assume Control Of, Or Responsibility for Vessels Navigating in The Area. The Manager, Port Operations May Issue Special Instructions in Exceptional Circumstances.

3.1.1 The Service Provided to Masters

The VTS Operator will provide the following information service for the Masters:

Information on channel and port conditions, congestion, weather, tides, navigational aids, etc.

Information on the movement of other vessels, dangerous maneuvering situations, vessels violating port rules and regulations, berthing prospects and anchoring conditions.

Advice on port rules regarding the movement of deep draft vessels and the priorities of vessel movements. It may be necessary for vessels arriving to reduce speed to permit safe passage for outgoing deep draft vessels.

3.1.2 Special Orders and Exceptional Circumstances

Whenever a potentially dangerous or hazardous situation exists within the Ports of Ras Tanura, the Manager, Port Operations or his Deputy may issue orders regarding same. Such orders will normally be relayed through the VTMS and will be preceded by the phrase “By Order of the Manager, Port Operations.”

3.2 Traffic Rules

The following rules apply to all ships entering or leaving the Ports of Ras Tanura or Dammam by way of the Ras Tanura Channel. The separation zones and routes shown on the charts of the Ras Tanura Channel are approved by IMO. Violators of the routing recommendations will be reported to their Owners/Operators/ Agents and/or Charterers.

All limited speeds must be adhered to within Ras Tanura Port limits unless a controlled deviation is required for reasons of safety.

3.2.1 General

Vessels departing from North Holding Anchorage shall advise Ras Tanura Port Control on VHF, channel 10, of their intentions 30 minutes before weighing anchor. Vessels

departing from Ras Tanura Inner Anchorage shall advise Ras Tanura Port Control on VHF, channel 13.

Ships maneuvering in the area between the south extremity of the Ras Tanura Tanker Anchorage and the entrance to the “Departure Channel” (Buoy “H”) shall limit their speed to a minimum safe maneuvering speed.

3.2.2 Crossing Channel Separation Zones

Vessels crossing the Ras Tanura Channels for any reason should do so only with the concurrence of and under the guidance of Ras Tanura Port Control. This includes, for example, entering the arrival channel from the Northern Holding Anchorage.

3.2.3 Ships Bound to And from the Port of Dammam

Ships bound to and from the Port of Dammam shall keep to the eastern part of the Tanker Anchorage and avoid the maneuvering areas extending from the anchorage to the Sea Islands and Piers.

Outbound ships from Dammam shall, when passing Dammam Channel Buoy No. D11, alert Ras Tanura Port Control on VHF channel 13 of their estimated time of arrival at the southern extremity of the Tanker Anchorage.

3.2.4 Ras Tanura Arrival Channel Rules All inbound ships:

Navigating in The Departure Channel: Under No Circumstances Shall Inbound Vessels Navigate in The Departure Channel.

Reporting Positions: When Passing the Entry Buoy Report to Ras Tanura Port Control on VHF Channel 10. When Passing The “A” Buoy, Report Again to Ras Tanura Port Control on VHF Channel 10, Who Will Then Advise to Shift VHF Channel To 13.

Limited Speed: All ships using the Ras Tanura Port, Traffic Separation Scheme shall on passing the Ras Tanura, Approach Buoy or joining at any other point approved by Ras Tanura Port Control Center proceed at the following mandated speeds:

From Approach Buoy to Delta (D) Buoy: Not exceed a speed of 12 knots.

From Delta (D) Buoy to the South extremity of the Tanker Anchorage, all ships shall limit their speed to 5.0 knots or to the minimum required for safe maneuvering.

Overtaking: Vessels Shall Not Overtake Other Vessels After Passing The “D” Buoy.

Minimum Distance Between Vessels: Vessels Shall Maintain A Distance Of At least Two Miles from Vessels Proceeding in The Same Direction After Passing The “D” Buoy.

Navigate with Caution: Vessels Shall Navigate with Caution and Give Way to Vessels Departing from the Berths and Anchorages.

3.2.5 Ras Tanura Departure Channel Rules All Ships Using the Outbound Channel:

Navigating in the Inbound Channel: Under No Circumstances Shall Outbound Vessels Navigate in The Arrival Channel.

Overtaking: Vessels Shall Not Overtake Other Vessels Until After Passing The “B” Buoy.

Minimum Distance Between Vessels: Vessels Shall Maintain A Distance Of At Least Two Miles from Vessels Proceeding in The Same Direction Until Both Vessels Have Passed Clear of the “B” Buoy.

Limited Speed: All departing ships approved by Ras Tanura Port Control Center to use or join at any point the Ras Tanura Port, Traffic Separation Scheme shall proceed at the following mandated speeds:

From the South extremity of the Tanker Anchorage to the entrance to the Departure Channel and until passing Foxtrot (F) Buoy shall limit their speed to 5.0 knots or to the minimum required for safe maneuvering.

From Foxtrot (F) Buoy to Approach Buoy: Speed not exceeding 12 knots

Maximum Sailing Draft in The Departure Channel:

Shall Not Exceed 21.0 Meters Draft.

Have an Under-Keel Clearance Of At Least 1.5 Meters.

3.2.6 Anchorages and vessel Maneuvering Areas:

Limited Speed: Vessels not proceeding within the Ras Tanura Traffic Separation scheme and maneuvering while proceeding to and departing from the following areas shall limit their speed to 5.0 knots or to the minimum required for safe maneuvering.

The area between the South extremity of the Tanker Anchorage and the entrance to the Departure Channel (‘H’ and ‘20’ buoys).

North Holding Anchorage and within its boundaries

Juaymah LPG Anchorage and within its boundaries

Juaymah SPMs, 5.0-mile radius

Juaymah NGL Pier, 5.0-mile radius

4 Entering the Terminal

4.1 Routing to the LPG Terminal

See “Port of Ras Tanura” Section 4.1 “ARRIVAL DIRECTIONS” for general approach directions to the “Entry” buoy.

4.1.1 Arriving from Sea and From the Northern Holding Anchorage

After passing the Entry Buoy, turn toward the Juaymah Pilot Boarding Area approximately 2.5 miles NW of Buoy “A” and follow the normal routing given below.

4.1.2 Arriving from Ras Tanura Terminal

Having departed from Ras Tanura Terminal, follow the Departure Channel toward the mid-channel marker Buoy “A.” Proceed with due diligence through the Caution Area toward the Juaymah Pilot Boarding approximately 2.5 miles NW of Buoy “A” area and follow the normal routing given below.

4.1.3 Normal Route to the LPG Terminal

During normal conditions of weather and traffic, an arriving vessel will be advised to proceed, from a position at Juaymah Pilot Boarding Area, by a route passing north of "J4" Buoy, to a position 1.8 miles E of the LPG Terminal.

4.2 Juaymah LPG Anchorage

This anchorage has been centered about 2.5 miles NE of the loading pier. The depth of water varies from 16 to 29 m and holding ground is fair. Ships shall use this anchorage only when directed to do so by Ras Tanura Port Control.

5 Berthing of Vessels

5.1 Pilot Boarding Position

The Juaymah LPG Pilot Boarding Area is situated in a position 1.5 miles E of the south end of Juaymah LPG terminal.

5.2 Mooring Procedures

5.2.1 Mooring Boats/Line Boats

Mooring boats are not used at Juaymah LPG Terminal.

5.2.2 Handling the Mooring Lines

Vessels should have heaving lines ready to take the shore messenger after landing alongside. The shore messenger should be made fast to the vessel's mooring line, which is then heaved ashore by capstan. The ship's heaving line should re- main secured to the shore messenger, so that the messenger can be passed back and forth between shore and ship. Heavy wires should be sent one at a time and ropes two at a time. Jetty crews are continuously on duty to handle mooring lines but will not handle mooring lines aboard vessels.

5.3 Information on Berths

5.3.1 Construction and Alignment

There are two loading berths that are situated on opposite sides of a platform.

Berth 51 is the East (outer) berth.

Berth 52 is the West (inner) berth. There are four breasting dolphins at each berth and six mooring dolphins.

The berths are aligned 335° true compass bearing.

5.3.2 Products Available

Butane and Propane

(Note: Diesel oil bunkers and fuel oil bunkers are not available).

5.3.3 Ballast and Slop Reception

None.

5.3.4 Dock Water Density

Approximately 1.032.

5.3.5 Gangways

Shore gangways are used.

5.3.6 Cargo Loading Arms and Flange Sizes

Each berth is equipped with four 16” cargo loading arms. Each arm is fitted with connections, that can be adjusted to 12”, 14” or 16” Class 150 ANSI/ASME flanges.

Each arm may be used for RLPG liquid or vapor return and each is fitted with quick connect/disconnect hydraulic couplers (QCDC). Each LPG loading line has an associated circulation return line.

5.3.7 Emergency Automatic Disconnection

All loading arms are fitted with a system for sequential automatic disconnection. This system will only be activated in an emergency situation, which requires the urgent removal of a ship from the berth.

5.3.8 Cargo Loading Rates

The maximum loading rate for individual products is 23,000 barrels per hour if only one product is requested. If the vessel is requesting two products, the maxi- mum loading rate is 15,000 barrels per hour for each product.

5.3.9 Jetty Crews

Jetty crews are on duty continuously to operate the loading arms as required.

5.3.10 Ship/Shore Bonding

All loading connections are equipped with electrically insulated flanges, therefore ship to shore bonding wires must not be used.

5.3.11 Connecting a Vapor Line

A vapor line must be connected prior to loading LPG cargo or coolant. All excess vapors that cannot be handled by the vessel’s recovery equipment, will be metered to flare.

5.3.12 Ship Manifolds

Manifolds should comply with the OCIMF publication ‘Recommendations for Liquefied Gas Carrier Manifolds’. Due to the size and bulk of the QCDC couplers, a clear area around each manifold flange of at least 60 cm is required. The vessel should have suitable Class 150 ANSI/ASME reducers and spool pieces fitted to the manifolds it intends to use.

5.3.12.1 Manifold Strainers LPG

Vessels are advised to use a manifold strainer mesh suitable for LPG with a normal aperture of between 3.0mm and 5.0mm as detailed in SIGTTO/OCIMF 'Recommendations for Liquified Gas Carrier Manifolds'.

6 Procedures at Berth

6.1 Duty Harbor Pilot and Tugs

6.1.1 Liaison

Whenever a vessel is at berth, a Harbor Pilot will stand by, either on board the vessel or on the loading platform. He will be in constant radio communication with the staff of the vessel and the jetty.

6.1.2 Stand-By Tugs

One or more tugs will stand by at anchor or moored in sight of the loading berths.

6.2 Loading Procedures

6.2.1 General

Special regulations govern the acceptance and loading of gas tankers at Saudi Aramco, which are detailed in the GASRUL section of this publication.

6.2.2 Stopping Operations

It is the responsibility of the vessel to advise the jetty operators to shut down cargo and bunker loading when the vessel's requirements of cargo and bunkers are met.

7 Completion and Departure

7.1 Vacating the Berth

Upon completion of loading, cargo calculation and disconnecting cargo arms, the vessel will be unberthed.

7.2 Pilotage

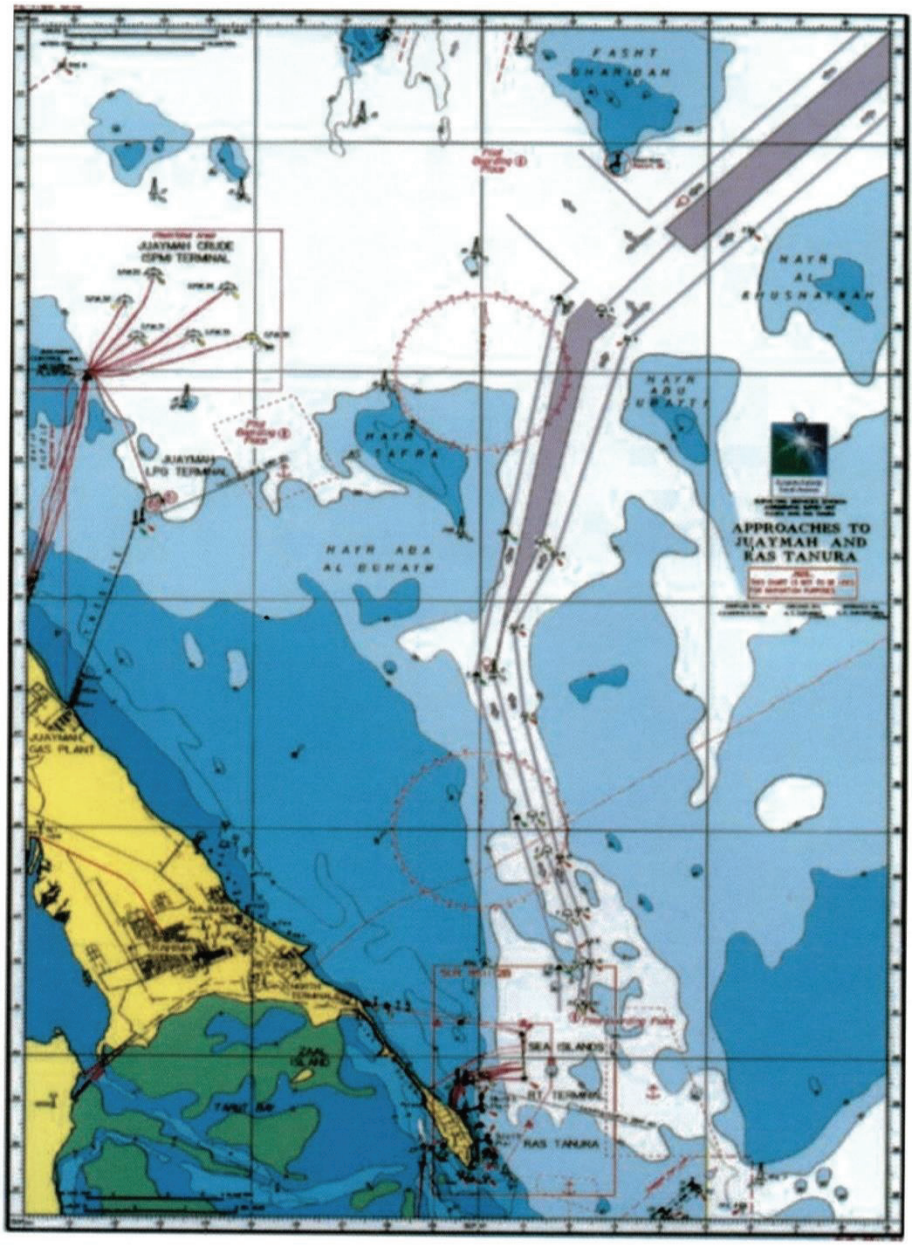
As soon as vessel is clear of the berth, the Harbor Pilot will disembark. The vessel will then be free to leave the Port, via the Juaymah Departure Channel, if early departure procedures are used and outward clearance has been received.

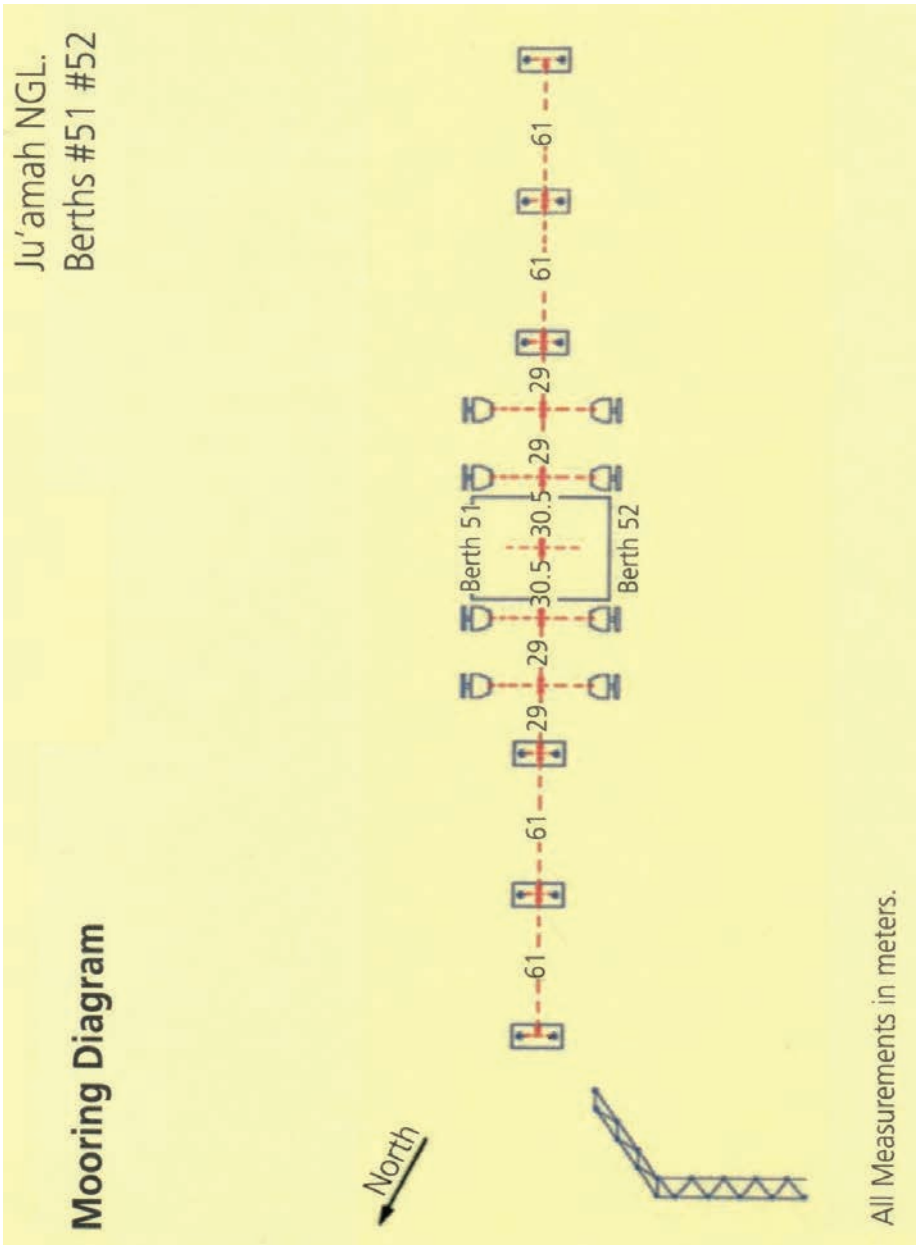
7.3 Proceeding to Anchorage

If the early departure procedure is not used, the vessel will proceed to either the Juaymah LPG anchorage or the North Holding Anchorage, to await document delivery by the Agent.

8 ANNEX

Location Chart - Approaches to Juaymah and Ras Tanura




Ju'amah NGL.
Berths #51 #52
Mooring Diagram
North
61
61
29
29
30.5
30.5
29
29
61
61
Berth 51
Berth 52
All Measurements in meters.