FREEPORT LNG TERMINAL

FACILITY MARINE OPERATIONS MANUAL

Effective: April 29th, 2016
FREEPORT LNG TERMINAL
FACILITY MARINE OPERATIONS MANUAL

FREEPORT LNG CONTACT INFORMATION

TERMINAL OFFICES
Freeport LNG Terminal Manager
1500 Lamar Street
Quintana, Texas, USA 77541
979-415-8700
979-415-8733

Or

CORPORATE OFFICES
Freeport LNG Development, L.P.
333 Clay Street, Suite 5050
Houston, Texas, USA, 77002
713-980-2888
713-980-2903

Freeport LNG Website: www.freeportlng.com

Email: FLNGMarineOps@freeportlng.com

TUA Customer Website: www.efreeportlng.com

Issued By: H. A. Galt

Date: Apr. 29th, 2016
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### DEFINITIONS/ABBREVIATIONS

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<th>Arrival Location</th>
<th>The pilot boarding station which is one (1) mile southeast of the Freeport entrance lighted whistle buoy (FP Buoy) which is in position 28° 52’ 30” N, 95° 14’ 12” W</th>
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<tr>
<td>BTU</td>
<td>British Thermal Unit</td>
</tr>
<tr>
<td>CCR</td>
<td>Cargo Control Room on board an LNG vessel</td>
</tr>
<tr>
<td>CF</td>
<td>Cubic foot</td>
</tr>
<tr>
<td>cm</td>
<td>Centimeter</td>
</tr>
<tr>
<td>COTP</td>
<td>Captain of the Port, United States Coast Guard</td>
</tr>
<tr>
<td>DCR</td>
<td>Dock Control Room</td>
</tr>
<tr>
<td>DCS</td>
<td>Distributed Control System</td>
</tr>
<tr>
<td>Displacement</td>
<td>Light: the weight of the vessel and its spare parts, only; in metric tonnes</td>
</tr>
<tr>
<td></td>
<td>Ballast: the weight of the vessel plus spare parts, fuels, fresh water, stores, ballast and all personnel with their baggage; in metric tonnes</td>
</tr>
<tr>
<td></td>
<td>Loaded: the weight of the vessel plus spare parts, fuels, fresh water, stores, a full cargo and all personnel with their baggage; in metric tonnes</td>
</tr>
<tr>
<td>ERP</td>
<td>Emergency Response Plan</td>
</tr>
<tr>
<td>ESD</td>
<td>Emergency Shut Down</td>
</tr>
<tr>
<td>ETA</td>
<td>Estimated Time of Arrival</td>
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<tr>
<td>Facility</td>
<td>The waterfront facility handling LNG; 33 CFR 127.005</td>
</tr>
<tr>
<td>FiFi 1</td>
<td>Fire Fighting Class 1</td>
</tr>
<tr>
<td>FLNG</td>
<td>Freeport LNG Development L.P.; the terminal owner and operating company</td>
</tr>
<tr>
<td>FO</td>
<td>Fiber Optic</td>
</tr>
<tr>
<td>HSE</td>
<td>Health Safety Environmental</td>
</tr>
<tr>
<td>IG</td>
<td>Inert Gas</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organization</td>
</tr>
<tr>
<td>LAT</td>
<td>Lowest Astronomical Tide</td>
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<tr>
<td>Lifting Window</td>
<td>The period of time starting at 00:00, Central Time on a specified day and ending twenty-four (24) consecutive hours thereafter as specified in the Lifting Program for a particular Lifting</td>
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LNG  Liquefied Natural Gas
LOA  The Length Overall of a ship
LTA  Liquefaction Tolling Agreement
Manual  The current version of this operating handbook entitled, Facility Marine Operations Manual
Marine Transfer Area  That part of the waterfront facility handling LNG between the vessel, or where the vessel moors, and the last manifold or valve immediately before the receiving tank; 33 CFR 127.005
Marsec 1, 2 or 3  Maritime Security Level 1, 2 or 3, as dictated by the US Coast Guard
MCR  Main Control Room; the Terminal’s principal control room
Metric tonne  A weight equal to 1,000 kilograms
MLLW  Mean Lower Low Water
m  Meter
m/s  Meters per second
m³  Cubic meter; a volume equal to the volume of a cube, each side of which is one (1) meter in length
nm  Nautical mile; a distance of 6080ft
NOA  Notice of Arrival
NOAA  National Oceanic and Atmospheric Administration
Operations Superintendent  The individual in charge of the entire terminal’s operations
PERC  Powered Emergency Release Coupling
PPE  Personal Protective Equipment
PIC  Person-in-Charge; the terminal’s / vessel’s person in charge of the cargo transfer operation in the terminal or on the vessel, respectively. The terminal’s PIC will be stationed in the Dock Control Room (DCR). The vessel’s PIC will be stationed in the vessel’s Cargo Control Room (CCR) throughout the cargo transfer operation.
Pilot  A member of the Brazos Pilots Association who is licensed as a State Pilot by the State of Texas and is engaged by the Transporter to board an LNG vessel to provide advice to the ship’s Master in piloting, mooring and unmooring the vessel inside the limits of the Port of Freeport.
Psig  Pounds per square inch gauge
Responsible Officer  A person appointed by the vessel’s Master and empowered to make all decisions relating to a specific task, and having the necessary knowledge and experience to perform that task
sec(s) Second(s) of time

Security Zone An area of exclusion around certain ships and waterfront facilities, subject to the designated USCG regulations

Shift Supervisor The individual in charge of the terminal’s operations during the standard twelve (12) hour working shift. This individual has responsibility for operations activities throughout the entire terminal during the working shift. The terminal’s cargo transfer PIC reports to the Shift Supervisor.

SSL Ship-Shore Link; the data and voice communications umbilical cable between the LNG vessel and the terminal

SWL Safe Working Load

Terminal Manager The FLNG representative, or his/her designee, in charge of the entire terminal

Terminal The terminal’s berth, cargo transfer equipment and all other onshore structures, tanks and equipment.

Terminal User The customers who have entered into a Terminal Use Agreement, or a Liquefaction Tolling Agreement, with FLNG

Tollers Collectively, the following companies; Osaka Gas Co., Ltd., Chubu Electric Power Co., Inc., BP Energy Company, SK E&S LNG, LLC, and Toshiba Corporation.

Transporter Any person or company that owns or operates an LNG vessel that makes a delivery of LNG to the terminal, or which loads a cargo at the terminal.

TUA Terminal Use Agreement.

Unloading Window The forty-eight (48) hour period of time starting at 06:00, Central Time on a specified day and ending forty-eight (48) consecutive hours thereafter during which FLNG makes available to customers, a berth and LNG transfer services at the FLNG terminal.

USCG United States Coast Guard
1. PURPOSE AND OBJECTIVES

1.1 STATEMENT OF PURPOSE AND DISCLAIMER

This manual has been prepared by FLNG for the benefit of Terminal Users, Transporters, vessel Masters and ship’s agents. This manual provides important information on the FLNG marine terminal and its approach channel. Key components include information on terminal entry and departure procedures, berth and mooring structure diagrams, manifold and shore connection diagrams and FLNG corporate policies at the terminal.

FLNG shall use its reasonable endeavor to ensure the accuracy of the data contained herein, provided however FLNG does not warrant the accuracy of such data. FLNG reserves the right to modify this manual at any time. Unless otherwise agreed by FLNG in writing, it is the manual user’s responsibility to ensure that they have obtained the current edition of the manual. The latest version of this document can be obtained at www.freeportlng.com.

1.2 REQUIRED COMPLIANCE

Terminal Users, Transporters, shipping agents, vessel Masters, crew members, third party service providers to the vessel and FLNG employees are all required to comply with the provisions of this manual.

1.3 OBJECTIVES

This manual will:

I. Provide general information and contact information to terminal users and vessel Masters for port entry and departure

II. Inform vessel Masters and operators of FLNG marine terminal policies, procedures and restrictions

III. Allow vessel Masters to review port and terminal information to ensure vessel compatibility with the terminal

IV. Provide technical information about the terminal, its mooring arrangements and cargo transfer system

V. Provide technical information for emergency procedures
1.4 NOTES FOR TERMINAL USE AGREEMENT (TUA) CUSTOMERS


2. The executed TUAs between Freeport LNG Development L.P. and the Terminal Users will be the controlling documents should any conflicts arise between this manual and the TUAs.
2. GENERAL INFORMATION

2.1 TERMINAL DESCRIPTION

The FLNG terminal is located on Quintana Island on the west side of the Freeport Channel and south of the Intracoastal Waterway. The Freeport Entrance Channel and the Freeport Jetty Channel are dredged to a width of 600ft (182.9m) and a depth of -45ft (-13.7m) and the Freeport LNG dock basin is dredged to -46.5ft. (-14.1m) below MLLW (Mean Lower Low Water). Arriving LNG vessels proceed up the channel to the turning basin at the intersection of the channel and the Intracoastal Waterway and maneuver, with the assistance of tugs, stern-first towards the berth. All berthing is starboard side alongside the terminal. This maneuver is based on extensive full mission bridge simulations which have proved it viable and safe.

**NOTE:** As of March 11th, 2016, the Brazos Pilots increased the size of vessel that they will bring to the Terminal to that of a Q-Flex vessel, i.e. a vessel of no larger than one with the following physical dimensions:

<table>
<thead>
<tr>
<th>Cargo Capacity</th>
<th>LOA</th>
<th>Beam</th>
<th>Ballast Draft</th>
<th>Loaded Draft</th>
<th>Ballast Displacement</th>
<th>Loaded Displacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>216,200m³</td>
<td>1034ft</td>
<td>164ft</td>
<td>31.5ft</td>
<td>39.5ft</td>
<td>111,396mt</td>
<td>Approx. 147,000mt</td>
</tr>
<tr>
<td>315.16m</td>
<td>50.0m</td>
<td>9.6m</td>
<td>12.04</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The berth is of customary design and accommodates vessels of between 88,000 m³ cargo capacity and 267,000 m³ cargo capacity. The current channel dimensions have been shown, in simulation exercises, to be adequate for the safe passage of Q-Flex size vessels in benign environmental and tidal conditions. The berth is equipped with two breasting and three mooring dolphins both forward and aft of the vapor arm. The berth has three 16-inch liquid cargo arms and one 16-inch vapor arm. The rules and regulations governing the operation of the Terminal fall under the jurisdiction of the Federal Energy Regulatory Commission (FERC), the United States Coast Guard (USCG), the U.S. Department of Transportation (DoT), the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA) and various State of Texas regulatory agencies.

<table>
<thead>
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<th>Terminal Specifications</th>
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<tr>
<td>Number of Berths</td>
</tr>
<tr>
<td>Maximum Vessel LOA at Berth</td>
</tr>
<tr>
<td>Maximum Vessel Displacement at Berth</td>
</tr>
<tr>
<td>Maximum Vessel Draft at Berth</td>
</tr>
<tr>
<td>Maximum Vessel Beam at Berth</td>
</tr>
<tr>
<td>Water depth at berth</td>
</tr>
<tr>
<td>Ship Side Alongside</td>
</tr>
<tr>
<td>Berth Heading</td>
</tr>
<tr>
<td>Maximum Approach Speed to Fenders</td>
</tr>
<tr>
<td>Port’s Chart Datum Level</td>
</tr>
<tr>
<td>Mean Lower Low Water (MLLW)</td>
</tr>
<tr>
<td>Low Astronomical Tide (LAT)</td>
</tr>
<tr>
<td>Mean Higher High Water</td>
</tr>
<tr>
<td>Highest Astronomical Tide (HAT)</td>
</tr>
<tr>
<td>Dock Water Density</td>
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<tr>
<td>USCG LNG vessel transit Security Zone</td>
</tr>
<tr>
<td>Cargo arm manufacturers – SVT</td>
</tr>
<tr>
<td>Cargo arm size</td>
</tr>
<tr>
<td>Connectors</td>
</tr>
<tr>
<td>Design working pressure</td>
</tr>
<tr>
<td>Usual terminal working pressure</td>
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<td>Emergency release</td>
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<tr>
<td>Terminal design unloading rate</td>
</tr>
<tr>
<td>Terminal loading rate (Maximum)</td>
</tr>
<tr>
<td>Storage tanks</td>
</tr>
<tr>
<td>Tank working capacity</td>
</tr>
<tr>
<td>Return vapor temperature</td>
</tr>
</tbody>
</table>

2.2 LOCATION

[04-29-16]14
Nearest Major City: Houston, Texas.
Terminal Position: Latitude 28° 56.9' N
Longitude 95° 18.5' W
Time Zone: GMT (–) 6 hours
U.S. Central Time Zone
Daylight Saving Time: Second Sunday in March (+1 Hour)
First Sunday in November (–1 Hour)

2.3 WEATHER

Normal historic weather conditions in the Port of Freeport are as follows:
- General direction of prevailing winds: 135° – 180°
- General direction of maximum wind speed: 135° – 180°
- Average Wind Speed: 5–10 knots (5.7 – 11.5 mph)
- Current Direction: Winter Toward the SW
  Summer Toward the NE
- Normal Current directions: 138° / 318° ebb / flood
- Normal Current speed: 0 – 0.5 knots (0 – 0.6 mph)
- Sea Temperature (average): Winter 56°F (13.3°C)
  Summer 84°F (28.7°C)

2.4 RELEVANT CHARTS AND NAUTICAL PUBLICATIONS

Masters are to ensure that they have the latest editions of all relevant charts and other nautical publications for safe navigation:

NOAA Chart No: 11321 11322 11330

Pilotage Guides: Brazos Pilots Association
Annual Port Guide and Tide Tables

2.5 TUG REQUIREMENTS

2.5.1 Selection of Tug Services Provider

Terminal users are required to coordinate with and advise FLNG which tug company they choose to employ.

2.5.2 Required Tug Resources

FLNG requires that the following tug resources are in place to ensure the safe harbor channel transit and docking of LNG vessels calling at the terminal.
### 2.5.3 Vessels of Less than 200,000 m³ Cargo Capacity

I. A minimum of three (3) tugs shall be available for all vessel arrivals and departures.

II. A minimum of two (2) of the tugs on arrivals and departures must be equipped with marine FiFi 1 capabilities.

III. One (1) tug with FiFi 1 capabilities will remain on stand-by, in close proximity to the terminal and dedicated to the LNG vessel that is at the terminal.

IV. The total bollard pull of the three (3) tugs shall not be less than one hundred and eighty (180) short tons, none of the tugs having less than fifty (50) short tons bollard pull capability.

### 2.5.4 Vessels of 200,000 m³ Cargo Capacity and Greater

I. A minimum of four (4) tugs shall be available for all vessel arrivals and departures.

II. A minimum of two (2) of the tugs on arrivals and departures must be equipped with marine FiFi 1 capabilities.

III. One (1) tug with FiFi 1 capabilities will remain on stand-by, in close proximity to the terminal and dedicated to the LNG vessel that is at the terminal.

IV. The total bollard pull of the tugs on arrival and departure shall not be less than two hundred and twenty five (225) short tons, none of the tugs having less than fifty (50) short tons bollard pull capability.

### 2.5.5 Additional Tug Capability

It is up to the vessel’s Master and/or pilot to decide if additional tug capability is needed over and above the minimums required by FLNG.

FLNG does not require tugs with full FiFi 1 Classification Society capabilities in attendance at the LNG vessels. The FiFi 1 tugs that FLNG requires for attendance on the vessels at the berths are tugs with the water throwing and water deluge system capability that is required of Classed FiFi 1 tug.

### 2.6 DOCUMENTATION REQUIREMENTS

Vessel Masters are responsible for all required documentation for entry into the United States of America. Masters are advised to check with their local agents for the most up-to-date list of required port entry documents.
3. POLICIES

3.1 VIOLATION OF FLNG POLICIES

All vessel personnel and visitors are required to fully comply with FLNG policies at all times while within the Terminal limits. Failure to comply with all FLNG policies may result in actions up to and including removal of personnel from the terminal. Additionally, persistent violations of FLNG policies by vessel personnel, which are not corrected by the vessel’s senior staff, may result in action against the vessel by FLNG, including stoppage of the cargo operation and, in extreme cases, expulsion of the vessel from the terminal.

Neither the terminal nor the terminal users will be responsible for any costs or losses resulting from the actions taken by terminal personnel stemming from the failure of vessel personnel and/or visitors to comply with FLNG policies.

All illegal or criminal activity observed at the Terminal will be immediately reported to the law enforcement authorities.

3.2 FLNG POLICIES

Details of the following FLNG policies are available to TUA Customers at the FLNG Customer Website: www.efreeportlng.com

I Health, Safety and Environmental (HSE) Management System for Operations

II Emergency Response Plan

III Hurricane Preparedness Plan

3.3 TERMINAL SAFETY POLICIES

FLNG subscribes to all of the safety principles and practices detailed in the latest edition of the ISGOTT. The safety checklists used at the terminal are the ISGOTT checklists. Ship’s crew members are expected to comply with all of the provisions of ISGOTT when the ship is at the FLNG terminal and when they are passing through the secure area of the terminal, traveling to or from the vessel. Non-compliance with ISGOTT will result in the terminal management taking action as detailed in Section 3.1 above.

3.4 VISITOR POLICY

It is the policy of FLNG that no visitors below the age of eighteen (18) years will be allowed within the Terminal. This policy applies to all individuals including those who are passing through the terminal to board a vessel and those who are leaving a vessel to pass through and exit the terminal.
4. PORT ENTRY PROTOCOLS & INFORMATION

4.1 REQUIRED REPORTING PRIOR TO PORT ENTRY

It is the responsibility of all Terminal Users and Transporters to ensure timely communications with the terminal and issuance of notices as detailed in this section, to ensure the avoidance of delay in a ship’s schedule.

4.1.1 Ship Compatibility

I. Prior to a vessel being nominated to call at the FLNG terminal for the first time, the terminal user/vessel owners/operators are required to complete and submit to FLNG the vessel data requested by FLNG. The vessel owners/operators must provide all of the information requested by FLNG in order for FLNG to conduct and complete a ship-to-shore compatibility review to ensure the compatibility of the vessel with the terminal’s berth.

II. The terminal user/vessel owners/operators must receive written approval from the terminal manager, or his designee, of the vessel’s compatibility with the berth prior to the ship’s arrival. It is recommended that the terminal user or transporter supply FLNG with the vessel data as early as possible.

4.1.2 Cargo Condition on Arrival

I. For vessels delivering cargoes to the Freeport LNG terminal, which cargoes may be subject to deferred redelivery from the terminal, upon the ships’ arrival at the Port Freeport pilot station, the temperature and saturated vapor pressure of the cargo in each cargo tank should be, respectively:

   A. No warmer than -255°F (-159.5°C)
   B. No higher than 1150 mb Absolute

II. For vessels delivering cargoes to the Freeport LNG terminal, which cargoes are to be immediately vaporized and injected into the gas send-out pipeline, shippers are requested to make reasonable endeavors to ensure that upon the ships’ arrival at the Port Freeport pilot station, the temperature and saturated vapor pressure of the cargo in each cargo tank should be, respectively:

   A. No warmer than -255°F (-159.5°C)
   B. No higher than 1150 mb Absolute
4.1.3 Freeport LNG Marine Terminal Notifications

I. Prior to the arrival of a vessel at the terminal, the Master must coordinate the ship’s security needs and procedures with the terminal manager via e-mail, facsimile, or other electronic means and agree upon the content of the Declaration of Security form which will be executed following the vessel’s arrival at the terminal. Contact information for the terminal manager and the terminal security officer is contained in Appendix B of this manual. A copy of the terminal’s Declaration of Security form is contained in this manual in Appendix D, Exhibit 1, for the reference of vessels’ Masters.

II. Vessel master shall give FLNG the following notices:

A. A first notice ("First Notice"), which shall be sent upon the departure of the LNG Vessel from the Loading Port and which shall set forth the time and date that loading was completed, the volume (expressed in Cubic Meters) of LNG loaded on board the LNG Vessel, the estimated time of arrival (ETA) of the LNG Vessel at the Arrival Location, and any operational deficiencies in the LNG Vessel that may affect its performance at the Facility or berth;

B. A second notice ("Second Notice"), which shall be sent ninety-six (96) hours prior to the ETA set forth in the First Notice, stating the LNG Vessel’s then ETA. In this notice the master will advise the terminal of the average cargo temperature in each of the ship’s cargo tanks and also the cargo tank vapor space pressure, in millibars Absolute, in each of the ship’s cargo tanks. If, thereafter, such ETA changes by more than six (6) hours, the Vessel Master shall promptly give to FLNG notice of the corrected ETA;

C. A third notice ("Third Notice"), which shall be sent forty-eight (48) hours prior to the ETA set forth in the Second Notice, stating the LNG Vessel’s then ETA. In this notice the master will advise the terminal of the average cargo temperature in each of the ship’s cargo tanks and also the cargo tank vapor space pressure, in millibars Absolute, in each of the ship’s cargo tanks.

D. A forth notice ("Forth Notice"), which shall be sent twenty-four (24) hours prior to the ETA set forth in the Third Notice (as corrected), confirming or amending such ETA. In this notice the master will advise the terminal of the average cargo temperature in each of the ship’s cargo tanks and also the cargo tank vapor space pressure, in millibars Absolute, in each of the ship’s cargo tanks. Additionally in this notice the master will confirm that the ship’s deck cargo lines will be cooled and drained back to the cargo tanks, before, but as close as possible to, the time at which the Brazos pilot will board the ship for entering Port Freeport. If, thereafter, such ETA changes by more than three (3) hours, the Vessel Master shall promptly give to FLNG notice of the corrected ETA;
E. A fifth notice (“Fifth Notice”), which shall be sent twelve (12) hours prior to the ETA set forth in the Forth Notice (as corrected), confirming or amending such ETA. If, thereafter, such ETA changes by more than one (1) hour, the Vessel Master shall promptly give to FLNG notice of the corrected ETA; and

F. A notice of readiness, which shall be given at the time prescribed below.

III. Subject to any applicable restrictions, including any nighttime transit restrictions imposed by governmental authorities or pilots or any other reasonable timing restrictions imposed by FLNG, the Vessel Master or its agent shall give to FLNG its notice of readiness (NOR) to unload (berth or no berth) upon arrival of such LNG Vessel at the Pilots Boarding Station (“Arrival Location”). An NOR shall become effective as follows:

A. For an LNG Vessel arriving at the Arrival Location (as defined in the Terminal Use Agreement) at any time before 6:00 a.m., Central Time on the first day of the scheduled Unloading Window allocated to such LNG Vessel, an NOR shall be deemed effective at the earlier of (a) 6:00 a.m., Central Time on the first day of such scheduled Unloading Window; or (b) the time unloading commences;

B. For an LNG Vessel arriving at the Arrival Location at anytime between the period of 6:00 a.m., Central Time on the first day of the scheduled Unloading Window allocated to such LNG Vessel and two (2) hours before sunset, Central Time on the second day of such scheduled Unloading Window (such period referred to as the “NOR Window”), an NOR shall become effective at the time of its issuance; or

C. For an LNG Vessel arriving at the Arrival Location at any time after the expiration of the Unloading Window, an NOR shall become effective upon FLNG’s notice to the LNG Vessel that it is ready to receive the LNG Vessel at berth.

4.1.4 U.S. Coast Guard Notifications

I. Federal Regulations (33 CFR 160.201 – 160.215) require vessel operators to provide a Notice of Arrival to the USCG COTP at Sector Houston / Galveston, at least 96 hours in advance of the vessel’s arrival. Contact information for this USCG office is contained in Appendix A of this manual. Vessels must meet all USCG requirements for entering Port Freeport.

II. Vessel traffic in the Port Freeport area is monitored by the USCG through the notification communications between the Coast Guard and arriving/departing vessels. However, the USCG does not maintain full voice service contact with vessels operating in and around Freeport.
III. The Notice of Arrival required by the USCG must include a confirmation that all systems required by 33 CFR 164.25 have been tested and proven to be in working order. Should any system required by 33 CFR 164.25 not be in working order, Masters must also make the identification of those systems that are not fully functional.

4.1.5 Brazos Pilots Association

I. LNG vessels entering and departing Port Freeport are required to have two pilots (hereinafter referred to in the singular) on board. Pilot services are provided by the Brazos Pilots Association.

II. LNG carriers may enter and depart Port Freeport only during daylight hours as defined by the Brazos Pilots Association. The Brazos Pilots Association has established Basic Operating Procedures for vessels entering Port Freeport. These operating procedures include restrictions on the LOA, the Beam and the Draft of vessels which may enter the port.

III. LNG carriers which have an LOA of more than eight hundred and twenty feet (820 ft) (250 m) and/or a beam of greater than one hundred and forty five feet (145ft) (44.2m) and/or a draft of greater than forty two feet (42ft) (12.8m) are each required, at each and every port call, to obtain a waiver of the Basic Operating Procedures prior to port entry. Any vessel having a length greater than 820 feet, or a beam greater than 145 feet or a draft greater than 42 feet may enter the port area only after obtaining a waiver for a variance of the Basic Operating Procedures. Waiver requests are made by the ship operator, charterer or customer that is making the delivery to the terminal. They are made on the form which can be obtained at the Brazos Pilots Association website at the address detailed in Appendix A of this manual. Waiver requests are sent to the port authority, Port Freeport, either directly or through the ship’s agent for Freeport. Port Freeport will consult with the Brazos Pilots Association on the request and any waiver granted will be issued by Port Freeport upon recommendation of the pilots. Waivers will not be granted to any vessel with an LOA of more than one thousand and thirtyfour feet (1034ft) (315.16m), or a beam of more than one hundred and sixty four feet (164ft) (49.99m).

IV. Vessel movement orders are the responsibility of the Terminal User or Transporter or their designee. The Brazos Pilots accept movement orders by telephone and fax only. Requests made by radio (VHF) will not be accepted. A minimum of two (2) hours advance notice is required for vessel arrivals. A minimum of one (1) hour notice is required for routine departures. Unscheduled departure notifications will be facilitated by either the ship’s agent or FLNG Terminal personnel. Contact information for the Brazos Pilots and for tug assist companies is in Appendix A.
4.1.6 Master Pilot Exchange between Vessels and Brazos Pilots

I. To ensure the safest possible transit, at the Master Pilot Exchange the Pilots will, at a minimum, require the following information pertaining to the vessel:
A. Completed IMO standard Pilot Information Card
B. Draft fore and aft
C. Air draft
D. Type of propulsion, steering gear, and astern power limitations
E. Gyro compass error
F. Any other pertinent navigational information

II. Confirmation that all of the ship’s equipment, as detailed in the U.S. Code of Federal Regulations, 33 CFR 164.25, has been tested and is operating correctly

III. The vessel’s bridge VHF radios are set on channels 16 and 14.

4.1.7 Port Freeport

Port entry requirements, procedures and restrictions are the responsibility of the Brazos River Harbor Navigation District, which operates as “Port Freeport”. The Basic Operating Procedures and other information published by the Brazos Pilots reflect the Port Freeport protocols.

Specific information on the port and its operations is available from Port Freeport. Contact information for Port Freeport officials is contained in Appendix A of this manual.

4.1.8 Terminal’s Notifications to Arriving Ships

When a ship is fixed for the delivery or the loading of a cargo at FLNG, as soon as practicable after FLNG has been advised of the incoming ship’s local agent, FLNG will issue ‘Instructions for Arrival’ to the ship, via its agent. This notice will instruct the ship regarding its berthing prospects following its arrival at the pilot station, general plans for the cargo transfer, terminal arrangements that have been made for the supervision of visitors to the ship once they have entered the terminal’s secure area, requirements for PPE while inside the terminal’s secure area, etc.

In the event that circumstances in the terminal, in the port or elsewhere change to the degree that it will affect the ship’s berthing prospects following its scheduled arrival, FLNG will provide updated berthing information to the ship via its local agent.

When the ship arrives off the port of Freeport and issues its ‘Notice of Readiness’ to the terminal, FLNG will issue a ‘Notice to Proceed’ to the ship and/or to its agent. This notice will provide the ship with relevant information regarding its transit from its arrival position to the FLNG terminal.
4.2 PORT ENTRY INFORMATION

4.2.1 Typical Transit Routes

Freeport Harbor lies approximately 40 miles southwest of Galveston, Texas. The area is known locally as Brazosport because of its location near the mouth of the Brazos River.

Approaches to Freeport Harbor, including the Shipping Safety Fairways, the Freeport Entrance Channel and the Freeport Jetty Channel are depicted on NOAA Charts No. 11321, 11322 and 11330. Federal Regulations require that all commercial vessels calling at Freeport, Texas, have these charts on board.

4.2.2 Local Navigation Conditions

I. Electronic access to the Coast Pilot is possible through the NOAA Office of Coast Survey website: http://www.nauticalcharts.noaa.gov/nsd/coastpilot.php?book=5

II. Federal Regulations require that all commercial vessels calling at United States ports along the Gulf of Mexico have this publication on board.

4.2.3 U.S. Coast Guard Boarding Location

The USCG has advised FLNG that some LNG carriers approaching Freeport, Texas may be boarded and examined by USCG personnel before the vessel enters the port area.

The form of the examination may vary depending upon what the USCG COTP considers appropriate for a particular vessel. Whatever the selected form of examination, it will include a complete crew identity check involving the verification of crew members’ passports. The USCG boarding party will also check the validity of the vessel’s documents and certificates.

Prior to the USCG embarking the vessel, the USCG team leader will advise the Master to muster the entire crew in one location. The USCG team leader will also advise the Master to place a qualified crew member in charge on the bridge and another in the engine room to maintain the watch to ensure the safe operation of the vessel. It is preferred that the Master is available to the USCG boarding party during the entire boarding and inspection process to answer their questions and to provide requested documentation.

In the event that the vessel is under way when the leader of the USCG boarding party advises the Master that such a crew muster will be performed, the Master is at liberty to advise the leader of the boarding party of his intent to anchor the vessel prior to the crew muster being performed. The Master may also request to muster only crew members that are non-essential to the safe navigation of the vessel. The USCG team leader may allow this partial muster, as long as they are aware of the location of those crew members that are not at the prescribed muster location.

The USCG has not prescribed a specific offshore location for the boarding. The USCG personnel will choose to board the vessel before the pilot boards.
Masters are solely responsible for the safe navigation of their vessels during the entire USCG boarding and inspection process and should not hesitate to inform the USCG boarding party of any unsafe situation which arises and which requires immediate attention. The USCG boarding party’s top priority is the safety of the vessel and its crew. Vessel operators should contact the USCG COTP Sector Houston-Galveston to determine when and where the USCG boarding will take place. Contact information for the USCG is in Appendix A of this manual.

4.2.4 U.S. Coast Guard Moving Security Zone

Under the U.S. Code of Federal Regulations, 33 CFR 165.818, the USCG COTP Sector Houston-Galveston has established a moving security zone for certain vessels transiting the territorial waters of the USA to Port Freeport. This moving security zone is applicable to all LNG vessels. The moving security zone is applicable from the point at which the LNG vessel crosses from international waters into territorial waters, twelve (12) miles from the coastline, until it secures to the terminal’s berth. The security zone extends from the surface of the sea to the ocean bed, one thousand (1000) yards ahead of, one thousand (1000) yards astern of and five hundred (500) yards on each side of the LNG vessel. All vessels, to which this moving security zone applies, should fly the International Signal Flag pennant number five (5), to advise other vessels that a USCG imposed security zone exists around the ship.

4.2.5 Pilot Boarding

The pilot boat operator monitors VHF Channels 14 and 16 and vessel operators are required to contact the Pilot Boat on either of these channels for boarding directions. Pilot Boarding Station: One mile southeast of the Freeport Entrance Lighted Whistle Buoy (“FP” Buoy), which is in position:

Latitude: 28° 52’ 30” N
Longitude: 95° 14’ 12” W

Pilot Boarding Details: The Pilot Boat is 60 ft. long, has a black hull and white superstructure. The word “PILOT” is painted in large black letters on the side of the superstructure.

Vessels are requested to contact the pilot boat one hour before arrival at the FP Buoy on Channel 14 or 16 for pilot instructions.

The lowest rung of the pilot ladder should be rigged 8 ft. (2.5m) above the waterline. If the vessel freeboard is more than 23 ft. (7m), a combination pilot ladder / accommodation ladder is required.
When boarding, the pilot ladder shall be located at amidships.

NO man ropes and NO boat ropes shall be utilized.

Pilot boarding speed is 8 knots.

For reference the IMO / International Maritime Pilots’ Association standard placard detailing the rigging of pilot ladders is shown in Appendix D – Exhibit 2. Vessels must comply with the Brazos Pilots Association pilot ladder requirements and they differ in minor ways from the standard pilot ladder arrangements, which differences are detailed immediately above.

4.2.6 U.S. Customs and Border Protection

Freeport, Texas is a U.S. Customs port of entry. Typically, the U.S. Customs and Border Protection board the vessel together with the ship’s agent after the vessel has completed securing to the LNG berth. Contact information is located in Appendix A and all notification and coordination is the responsibility of the Terminal User, Transporter or their designee.

4.2.7 Mooring Line Assistance

Mooring line handling services will be scheduled, coordinated by, and are the responsibility of the terminal user or its shipping agent. The mooring line pattern to be used for each ship will be established through an ‘Optimoor’ study to be performed by the ship’s operators and agreed by the Terminal and the ship’s Master before the ship’s arrival at Freeport. Following agreement between the ship’s Master the ship operators and the Terminal regarding the mooring pattern to be used for the particular ship, the Terminal will distribute each ship’s mooring pattern to the mooring line handlers prior to the ship’s arrival at the Terminal.
5. BERTHING PROTOCOL / PROCEDURES

5.1 TERMINAL OPERATIONAL RESTRICTIONS

The FLNG terminal is normally open 24 hours a day, 365 days a year, weather and sea conditions permitting. However, it is a policy of the Brazos Pilots that, because of their sizes, all LNG ships will be daylight restricted vessels.

Port entry and berthing is always subject to daylight and the prevailing weather. When transiting the port and mooring in conditions of reduced visibility, the decision to move the vessel will be made jointly by the pilot and the ship’s Master. It is expected that they will discuss the prevailing conditions and only move the vessel when they both agree that it is safe to do so.

The following table provides a guide to the status of the terminal operations as it relates to prevailing wind conditions. These are guidelines; they are not hard and fast rules. At the time that a vessel movement is due to be carried out, should the prevailing wind conditions be complicated by unusual tidal flows, cross currents, or any other environmental, traffic, or other issues, the vessel movement will be contingent upon the agreement of the ship’s Master and the pilot.

5.2 FLNG MARINE TERMINAL OPERATIONAL STATUS - WIND CONDITIONS

5.2.1 Operating Wind Speed Guidelines

<table>
<thead>
<tr>
<th>Wind Speed</th>
<th>Operational Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25 knots (28.7mph)</td>
<td>Terminal open for all operations.</td>
</tr>
<tr>
<td>Greater than 25kts (28.7mph) but Less than 35kts (40.3mph)</td>
<td>No vessel arrivals or departures but if a vessel is at berth, cargo transfer operations already under way may continue.</td>
</tr>
<tr>
<td>At 35kts (40.3mph)</td>
<td>Cargo transfer to terminate and cargo arms to be disconnected and retracted into their locked position.</td>
</tr>
<tr>
<td>Greater than 35kts (40.3mph)but predicted not to exceed 50kts (57.5mph)</td>
<td>Vessel to remain at berth. Crew to deploy all other available mooring lines.</td>
</tr>
<tr>
<td>Predicted to increase to in excess of 50kts (57.5mph)</td>
<td>Cargo transfer to terminate. Cargo arms to be disconnected and retracted into their locked position. Vessel to put to sea.</td>
</tr>
</tbody>
</table>
5.2.2 Vessel Departing the Terminal Due to High Winds

Prior to the decision regarding the movement of a vessel as reflected in the table above, the issue will be discussed between the assigned pilot, the vessel’s Master and the FLNG terminal manager or his designee.

5.3 BERTH DESCRIPTION AND DOCKING PROCEDURES

5.3.1 Berth Capacity

The LNG berth is designed to accommodate ships from 88,000 m³ to 267,000 m³ cargo capacity with maximum dimensions of:

- **LOA:** 1132 ft. (345.0m)
- **Max Beam:** 180.5 ft. (55.02m)
- **Max Draft:** 42 ft. (12.08m)
- **Max Displacement:** 179,700 tonnes

**NOTE:** The berth is built to accommodate a ship that is longer and wider than the largest ship that is currently permitted to enter Port Freeport.

The berth is equipped with four (4) breasting dolphins and six (6) mooring dolphins.

The breasting dolphins are numbered BD-1 to BD-4 from the southwest to the northeast. Each breasting dolphin is fitted with a double quick-release hook assembly. Each hook in the assembly is rated at 150t SWL. Every breasting dolphin is equipped with a motorized capstan.

See Appendix D, Exhibit 3, for the Typical Breasting Dolphin plan drawing.

The mooring dolphins are numbered MD-1 to MD-6 from the southwest to the northeast. MD-1, MD-2, MD-5 and MD-6 are each fitted with a quadruple quick-release hook assembly. Each hook in the assembly is rated at 150t SWL. MD-3 and MD-4 are each fitted with a triple quick-release hook assembly. Each hook in the assembly is rated at 150t SWL. Every mooring dolphin is equipped with a motorized capstan.

See Appendix D, Exhibit 4, for the Typical Mooring Dolphin plan drawing.

See Appendix D, Exhibit 5, for the Mooring Diagram showing the layout of the entire LNG berth.

5.3.2 Berth Configuration

Arriving LNG vessels proceed from the port entrance to the turning basin where they will be turned, backed into the LNG dock basin and then pushed alongside the berth by the attending tugs.
The berth and cargo transfer systems are designed for LNG carriers to moor starboard side alongside, with the vessel’s bow facing the port’s entrance channel. This is the preferred mooring pattern for all vessels at the No. 1 berth.

See Appendix D, Exhibit 6, for the Fender-line Elevation diagram.

5.3.3 Mooring Line Handling

The line-handling supervisor on the berth will be in direct communication with the pilot on the vessel’s bridge. The pilot, in consultation with the Master, will direct the order in which the ship’s mooring lines are passed to the mooring and berthing dolphins. The terminal has pre-positioned messenger lines on each mooring dolphin which will be passed to the vessel using the vessel’s heaving lines. Mooring lines will be passed from the ship to the mooring and berthing dolphins in accordance with the Master’s instructions and the pilot’s advice. FLNG requires that a ship’s officer be stationed at the vessel’s vapor connection to communicate with the bridge team for ensuring the correct spotting of the vessel on the berth.

FLNG requires that vessels are secured at the berth with a minimum of eight (8) mooring lines at the bow, and eight (8) mooring lines at the stern, two (2) of which, at both the bow and stern, shall be spring lines.

5.4 BERTH EQUIPMENT

5.4.1 Approach Speed Indicator Board

The berth is equipped with an approach speed indicator board to aid in vessel alignment and to indicate the speed of approach of the ship to the berth. The indicator board is erected on Mooring Dolphin No. 3 (MD-3) and can be rotated to face any required direction.

The maximum permitted approach speed of the ship to the fenders is 15 cm. per sec.
The maximum permitted angle between the ship’s side and the fender-line for landing the vessel on the fenders is ten (10) degrees.
See Appendix D, Exhibit 7, for the Mooring Dolphin No. 3 (MD-3) plan, showing the location of the approach speed indicator board.

5.4.2 Mooring Line Tension Monitoring

The system installed at FLNG for mooring line tension monitoring data transfer between the berth and the vessel is the Trelleborg / Harbour Marine system which uses radio communication to transfer the data between the Dock and the vessel. On the moored vessel, the information is displayed on an FLNG-supplied laptop computer which is equipped with its own external aerial. The laptop computer and its external aerial will be brought aboard each LNG vessel by a terminal representative during the pre cargo transfer meeting.

The terminal PIC in the DCR also monitors the mooring line tension data on the DCR’s control panel.
5.4.3 Ship-to-Shore Communications Links

FLNG is equipped with two umbilical type Ship-Shore Link systems which are both manufactured by SeaTechnik. They are a fiber optic system and an electric system. Both systems are configured for voice/telephone communications and for ESD signal communications. The terminal’s “hot-line” telephone for both of these systems is located in the Dock Control Room. Neither of these two systems transfers mooring line tension monitoring data between the berth and the vessel.

The fiber optic system is compatible with the Sumitomo-Furukawa system. The terminal’s FO cable connector mates physically and optically with the six-way Furukawa connector and the system’s signals are compatible with all shipboard Furukawa systems.

The electrical system utilizes the Pyle National 37 Pin connector for coupling to the vessels.

The pin placement for the functions of the electrical Pyle National connection system is tabulated below:

<table>
<thead>
<tr>
<th>Pin Numbers</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 and 6</td>
<td>Hot-line telephone</td>
</tr>
<tr>
<td>9 and 10</td>
<td>Terminal telephone</td>
</tr>
<tr>
<td>13 and 14</td>
<td>ESD Shore to Ship</td>
</tr>
<tr>
<td>15 and 16</td>
<td>ESD Ship to Shore</td>
</tr>
</tbody>
</table>

5.4.4 Failure of Ship-to-Shore Voice Communications

I. In the event of any failure of the hot-line voice communication system between the vessel’s CCR and the terminal’s DCR, voice communications will default to communications via the handheld radios carried by the PIC in the DRC and the terminal’s representative stationed in the vessel’s CCR throughout the vessel’s stay at the berth. Any shipboard operations that are ongoing if the hot-line voice communications fail, including cargo transfer operations, will be stopped immediately until either the hot-line voice communications link is re-established through one or the other of the umbilical systems, or agreement is reached between the vessel and the terminal to rely on handheld radios for voice communications.

II. In the event that the vessel detects that hot-line voice communications and handheld radio communications between the vessel CCR and the terminal’s DCR fail at the same time during cargo transfer operations, the vessel shall signal the terminal that cargo transfer operations will immediately be stopped by giving one prolonged blast on the ship’s whistle/fog horn.

III. In the event that the terminal detects that hot-line voice communications and handheld radio communications between the terminal DCR and the vessel’s CCR fail at the same time during cargo transfer operations, the terminal shall signal the vessel that cargo transfer operations will immediately be stopped by advising the vessel of the
stoppage through the use of the voice loud hailer system installed on the berth. The stoppage signal will be the word ‘STOP’ repeated three times over the loud hailer at full volume.

IV. This failure of communications systems plan will be confirmed between the terminal’s PIC and the vessel’s PIC at the pre-cargo transfer meeting.

V. In the event of the failure of a voice communications system that causes the stoppage of cargo transfer, the transfer process will not be resumed until effective ship/shore voice communications have been re-established and tested to verify their ongoing reliability.

5.4.5 Cargo Arms

The cargo arms are manufactured by SVT of Germany. They are fitted with PERCs. The securing mechanisms for connecting the arms to the vessel’s manifold are cam-locks. The connection flanges are flat faced and utilize three concentric “O” ring type seals on each flange. It is recommended that, in order to avoid any possible damage to the vessel’s manifold connecting flanges, short spool pieces to which the arms can be connected, be fitted to all vessels’ cargo and vapor manifold pipes. It is further recommended that vessels arrive at the terminal with manifold spool pieces that have non-serrated, flat faced presentation flanges. Vessels must provide their own spool pieces.

From the southwest to the northeast the cargo arms’ numbered designations and services are as follows:

<table>
<thead>
<tr>
<th>Designation</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA-1C</td>
<td>Liquid</td>
</tr>
<tr>
<td>LA-2</td>
<td>Vapor</td>
</tr>
<tr>
<td>LA-1B</td>
<td>Liquid/Vapor hybrid</td>
</tr>
<tr>
<td>LA-1A</td>
<td>Liquid</td>
</tr>
</tbody>
</table>

For the avoidance of doubt, when the vessel is berthed Starboard side alongside, cargo arm LA-1C will be closest to the stern of the vessel and cargo arm LA-1A will be closest to the bow of the vessel.

See Appendix D, Exhibit 8, for the PLAN view of the Cargo Arm Operating Envelopes.

See Appendix D, Exhibit 9, for the PROFILE view of the Cargo Arm Operating Envelopes.

5.4.6 Gangway

The berth is equipped with a pedestal-mounted telescopic, self tread-leveling, gangway. The gangway is 3.6 ft. (1.09 m) wide and requires a landing area of 19.9 sq. ft. (1.85 sq. m). The maximum gangway height above the datum is 68.6 ft. (20.9 m) and the minimum gangway height above the datum is 35.1 ft. (10.7 m).
The gangway pedestal is located 54.1 ft. (16.49 m) from the vapor arm and is on the northeast side of the cargo arm array. Thus the gangway is forward of the ship’s manifold when the ship is berthed Starboard side alongside.

The distance from the gangway pedestal to the fender-line of the berth is 28.68 ft. (8.74 m).

The minimum gangway length is 27.9 ft. (8.5 m).

The maximum gangway extended length is 47.6 ft. (14.5 m).

5.4.7 Bonding Cable

In accordance with guidelines detailed in the ISGOTT, a bonding cable is not used at the terminal.

5.5 STANDBY TUG

The USCG requires that one tug with fire-fighting capability, rated at FiFi 1, remain on station close to the terminal for immediate response to a call by the ship or the terminal for the entire time that an LNG carrier is at the berth.

5.6 SECURITY ZONE

Under the U.S. Code of Federal Regulations, 33 CFR 165.814, the USCG COTP Sector Houston-Galveston has established a security zone that encompasses the entire Freeport LNG dock basin. The only vessels that are legally allowed to enter this security zone are commercial vessels transiting to or from other waterfront facilities within Port Freeport or commercial vessels providing logistic support to LNG vessels such as pilot vessels, tugs, storing launches and barges, etc.

5.7 INTERNATIONAL SHORE CONNECTION

The International Shore Connection and the valve controlling the flow of water to it are located on the uppermost platform of the gangway tower. The terminal’s fire main is always pressurized.
5.8 RECEIPT OF STORES AND DELIVERIES

5.8.1 Bulk Deliveries

Bulk deliveries of stores, galley provisions, spare parts, etc., may ONLY be made to LNG vessels by launch or barge on the outboard side of the berthed LNG vessel. No vessels, launches or barges are permitted to secure to the outboard side of a berthed LNG vessel while the berth’s cargo arms are connected to the LNG vessel. In accordance with the terminal’s USCG approved Security Plan deliveries to an LNG vessel may NOT be made at MARSEC Levels Two (2) and Three (3) without the express permission and approval of the USCG.

Vessels’ Masters must provide the terminal with at least two (2) hours notice of the arrival of any launch, boat, barge or water craft calling at the ship for any purpose. As stated in Section 5.6 above, the Freeport LNG dock basin is a USCG security zone. Consequently the terminal is required to notify the USCG at least two (2) hours before the planned arrival of any launch, boat, barge or water craft that will be entering the dock basin to service any needs of the berthed LNG vessel. Masters’ must therefore provide the required notification to the terminal of the planned arrival of any water craft servicing their ship. Bulk deliveries of stores or materials by shore vehicle are not allowed while the vessel is at the terminal. The FLNG berth is not equipped with any installed lifting equipment and therefore does not have the capability to assist in the transfer of vessel stores and supplies.
5.8.2 Deliveries of Small Quantities of Stores, Supplies or Equipment

Deliveries of small quantities of stores, supplies or equipment parts that do not require special handling and that can be hand-carried by crew members up the gangway are allowed during daylight hours upon specific authorization by the Terminal Manager or his designee. The terminal security staff will be responsible for searching personnel and packages entering the facility or items to be transferred across the marine terminal. It is the responsibility of the terminal user to ensure all documentation and manifests are prepared and in compliance with all applicable regulations. In accordance with the terminal’s USCG approved Security Plan deliveries may NOT be made at MARSEC Levels Two (2) or Three (3) without the express permission and approval of the USCG.

5.9 BUNKERING

Fuel oil transfer from a bunker barge to an LNG ship is not allowed at the Terminal.

Potable and/or fresh water bunkers are not available from the terminal. Water can only be supplied to an LNG ship by barge after the cargo arms have been disconnected from the ship’s manifold at the completion of cargo transfer operations. Arrangements for the delivery of water bunkers must be made through the ship’s agent.

In accordance with the terminal’s USCG approved Security Plan, at MARSEC Levels Two (2) and Three (3) specific permission must be obtained from the USCG for the delivery of water to the ship by barge.

Liquid nitrogen is not available from the terminal.

5.10 REPAIRS

There are no ship repair facilities at the terminal. Vessels may perform routine maintenance and inspection procedures while at the terminal, but they shall not perform any maintenance on any control or propulsion system that could compromise the vessel’s maneuverability in any way.

5.11 DISCHARGE OF BALLAST WATER

There are no facilities available at the terminal for the reception or disposal of ballast water. While at the terminal, vessels must control their ballast to provide sufficient trim for efficient steering and maneuverability while partially discharges or loaded.

5.12 HANDLING OF NON-BALLAST OILY WASTE AND GARBAGE

FLNG has no facilities for receiving or handling ship’s waste. All waste transfers are to be conducted on the outboard side of the vessel onto a barge provided by the identified waste handlers. Contact information for some local waste handling and disposal services is listed in Appendix A.
Vessels’ Masters should contact their local agents no later than twenty four (24) hours before arrival at the Freeport pilot station to arrange for oily waste and/or garbage disposal services to attend at the ship. Masters should also advise their agents of the type of garbage, the type of garbage transfer packaging necessary for its handling and/or the volume of oily waste to be discharged.

Oily waste and garbage must meet all federal, state and local regulations for port discharge and disposal. Details of federal, state and local regulations are available via the ship’s local agents.

Transfer of garbage and oily waste may not be conducted while the berth’s cargo arms are connected to the LNG vessel, and for security purposes transfer of garbage and oily waste must be approved by the Terminal Manager or his designee. Transfer of garbage and oily waste may be carried out at MARSEC Level 1 as specified above. In accordance with the terminal’s USCG approved Security Plan, at MARSEC Levels Two (2) and Three (3) specific permission must be obtained from the USCG for the transfer of garbage and oily waste from the ship to a waste disposal barge.

5.13 CREW SHORE LEAVE

Shore leave is allowed subject to the approval of the USCG and the U.S. Customs and Border Protection Agency. The Terminal User or Transporter or their designee will be responsible for and assist in all vessel personnel logistics, crew transfer and assignments. All vessel personnel will be required to pass through FLNG security when entering and leaving the facility. The terminal security staff will be responsible for searching personnel, vehicles and packages entering the facility or items to be transferred across the marine terminal.

By U.S. federal regulations, all crew members walking between the vessel and the nearest terminal gate, Gate No. 10, must be escorted by terminal security personnel. Gate No. 10 is approximately 150 meters from the gangway.
6. CARGO TRANSFER PROCEDURES

6.1 CARGO TRANSFER

6.1.1 Overview

After the LNG vessel is securely moored, the cargo transfer procedure starts. The cargo transfer operation is under supervision of the terminal’s PIC. In the FLNG chain of command, the terminal’s PIC reports to the Shift Supervisor, who reports to the Operations Superintendent who reports to the Terminal Manager. In addition to the terminal’s PIC on duty in the DCR, there is a terminal representative on duty in the vessel’s CCR throughout the cargo transfer operation. The terminal representative on duty in the vessel’s CCR is in communication with the terminal PIC via the terminal’s handheld radios.

6.2 TRANSFER PROCEDURES/PRE-TRANSFER MEETING

The LNG transfer operations and procedures are conducted in accordance with the USCG examined and approved Dock Operating Manual.

The transfer procedures will be discussed in detail by the terminal’s PIC and the vessel’s PIC at the pre-transfer meeting in the vessel’s office. During the same meeting the various safety and security checklists and declarations will be completed and signed by the appropriate representatives from the terminal and the vessel.

LNG transfer operations are controlled and monitored by the terminal’s PIC from the terminal’s DCR which is located to the southeast of the berth. The operations are also monitored from the facility’s MCR which is centrally located in the terminal complex.

6.3 DEPLOYMENT OF CARGO ARMS

The LNG cargo arms are extended and retracted using the controls at either the fixed control panel situated on the northeast end of the uppermost berth platform or through use of one of the two portable control units. These portable units are stored in the DCR.

The LNG arms can be controlled for purging, cooling, venting or draining from either the terminal’s DCR or the MCR.
6.4 CONTROLS

6.4.1 Controls in the DCR

The operation of the cargo arms, gangway, remote release of the mooring hooks, the ship-to-shore communication umbilicals, the fire pumps and the remotely controlled berth mounted fire water cannons are the only functions that are controlled from the DCR. However, the DCR contains control instrumentation and communication equipment necessary for monitoring all parameters of the transfer of cargo. The DCR is equipped with a plant-wide phone system and handheld radios for use in contacting operations personnel when they are not close to the telephones.

6.4.2 Controls in the MCR

All terminal operations, including the operation of the LNG transfer system are controlled and directed from the MCR.

6.5 TERMINAL MONITORING

6.5.1 Security

There are CCTV cameras at a number of locations throughout the terminal through which activities within and around the terminal are monitored. The images from the cameras are displayed in both the control rooms and in the terminal’s security office.

6.5.2 Local Weather

The prevailing weather conditions are monitored by the PIC in the DCR via a weather display monitor with an electronic feed from the terminal’s own weather station, mounted above the DCR. The wind conditions in which cargo transfer operations are conducted are defined in Section 5.2.1.

6.5.3 Long Range Weather

FLNG has contracted with ImpactWeather Inc. to provide continuous, real-time regional weather alerts to the terminal. The data reported to the terminal security and safety officer includes the proximity of electrical storms to the terminal. A warning is provided to the terminal when any electrical discharges from storms broach the ten (10) mile radius circle around the terminal. In this event, when cargo transfer operations are progressing, a warning will be given to the vessel by the terminal’s PIC and the storm’s projected direction of travel will be monitored by the terminal. Should the projected path of the storm bring it into closer proximity with the terminal, a notification will be given to the ship advising that the cargo transfer will be temporarily stopped until the passage of the storm, after which the cargo transfer will resume.
6.6 POST CARGO TRANSFER DOCUMENTATION

LNG transfer documentation and records are completed post transfer. Documentation is in accordance with the individual terminal use agreements (TUAs) and their respective applicable terms and conditions.
7. EMERGENCIES

7.1 FREEPORT LNG EMERGENCY RESPONSE PLAN

7.1.1 Regulatory Compliance

It is the policy of FLNG to comply with all applicable federal, state and local laws and regulatory requirements through the incorporation of the applicable requirements into FLNG policies and procedures. FLNG management expects all employees and contract personnel to adhere to company procedures and practices, which are communicated to all employees and contract personnel through training programs and performance management systems.

The terminal’s Emergency Response Plan (ERP) has been prepared in consultation with the U.S. Coast Guard, the Federal Energy Regulatory Commission, DOT-PHMSA, and state and local agencies. The principal requirements incorporated into the ERP are found at:

I. Section 311 of the Energy Policy Act of 2005
II. Conditions 76 and 77 in the Order Issuing Authorization under Section 3 of the Natural Gas Act for the construction of Phase 2 of the FLNG Terminal issued by the Federal Energy Regulatory Commission (FERC) on September 26, 2006 in Docket No. CP05-361-000

7.1.2 Purpose

The purpose of the ERP is to provide an effective operational plan that sets forth FLNG’s policies and procedures to respond to emergencies within the FLNG terminal, emergencies that could affect the public adjacent to the FLNG terminal and emergencies that could affect the public along the LNG vessel transit route.

7.1.3 Scope

The ERP addresses situations and conditions that require activation of FLNG’s ERP in order to contain and control emergencies. It provides general guidelines and procedures for responding to emergencies within the terminal.
7.1.4 Objectives

The objectives of the ERP are to give clear guidelines to FLNG staff and contractors, public officials and emergency responders, and the public in the event of an emergency in order to:

I. Be informed of FLNG plans and the Incident Command Structure used during an emergency at the terminal.

II. Ensure efficient and effective steps are taken to safely secure the terminal thereby preventing public and personnel injuries, minimizing the impact on the environment and protecting the physical assets.

III. Ensure that a formal communication structure is in place with relevant internal and external parties and governmental authorities in order to report and co-ordinate activities to ensure all parties are properly informed and updated on the steps taken to effectively handle the emergency.

IV. Conduct tactical direction (applying tactics appropriate to strategy, assigning the right resources and monitoring performance).

V. Initiate investigation into incidents with proper consideration of forensic evidence.

VI. Expedite the return of the asset to normal safe terminal operation.

7.2 EMERGENCY SITUATIONS AT THE LNG BERTH

7.2.1 General

An emergency at the LNG berth could be in the form of any one of a host of possible situations, be it on the vessel or on the berth. Each emergency requires responses particular to its own characteristics. The terminal’s USCG inspected and approved Emergency Response Manual contains details of specific responses to specific emergencies in the terminal. LNG vessels each have their own Emergency Response Manuals that contain response information specific to the particular ship.

This FLNG manual provides only guidelines as to what is expected of vessels, should an emergency occur while an LNG vessel is berthed.

7.3 EMERGENCY ON A VESSEL

7.3.1 Actions by the Vessel

If an emergency occurs on a vessel at the berth, the vessel must raise the appropriate alarm for the vessel that is recognized by its crew. At the sounding of the alarm all cargo and ballast transfer operations must be stopped and the ship’s main engines and steering gear brought to an instant readiness condition.
Responsibility for responding to the emergency on the vessel is that of the ship’s Master or his designated representative if he is not on the vessel. The same emergency response organization that the ship uses for an emergency when the ship is at sea will be used for responding to the similar emergency on the ship when it is in port.

It is the Master’s responsibility to decide if preparing to drain and disconnect the cargo arms from the ship’s manifold, or to request the Terminal to initiate an ESD 2 / PERC activation / cargo arm disconnection, is a necessary part of his response to a particular emergency. The stand-by tug will be called by the vessel to come into close proximity with the vessel to be available to respond in any way that the ship’s Master may deem practicable. This tug is always at the disposal of the LNG vessel’s Master.

7.3.2 Actions by the Terminal

On detecting the ship’s alarm, if there is any delay in the stoppage of cargo transfer, the PIC in the DCR should manually activate an ESD 1 and immediately report the situation to the MCR. The terminal will thereafter take emergency response action in accordance with its Emergency Manual, as deemed necessary. This could include summoning the local emergency services.

7.3.3 Preparations for Evacuation

The berth area of FLNG has a clearly signposted personnel muster area. In the event that evacuation of a docked ship becomes necessary, the ship’s crew will evacuate the ship via the terminal’s gangway and muster at the FLNG personnel muster station. If the particular emergency precludes the use of the terminal gangway the secondary evacuation route for the ship’s crew will be by the ship’s lifeboat(s).

7.4 EMERGENCY ON THE BERTH

7.4.1 Actions by the Vessel

If an emergency on the berth is detected by the vessel’s crew, the vessel must immediately report the emergency to the DCR via the phone hot-line, handheld radio or most expeditious method available. Although certain emergencies on the berth will more than likely automatically trigger an ESD 1 event, should cargo transfer still be ongoing when the ship detects the emergency, all cargo and ballast transfer operations must be immediately stopped. The ship’s main engines and steering gear must be brought to an instant readiness condition. The ship’s crew must be ready to drain and disconnect the cargo arms from the manifold if it is deemed necessary by either the ship’s Master or by the terminal’s PIC and if it is safe to do so.

Responsibility for responding to an emergency on the berth is that of the terminal. The vessel’s Master must assess the likelihood of the emergency effecting his vessel and take appropriate action to protect his crew, cargo and vessel. The Master’s action could include requesting the Terminal to initiate an ESD 2 / PERC activation / cargo arm disconnection.
The stand-by tug will be called by the vessel to come into close proximity with the vessel to be available to respond in any way that the ship’s Master or the terminal management may deem appropriate for the particular emergency.

### 7.4.2 Actions by the Terminal

On detecting the emergency on the berth, if the cargo transfer is still ongoing, the PIC in the DCR should manually activate an ESD 1 and immediately report the situation to the MCR. The terminal will thereafter take emergency response action in accordance with its Emergency Manual, as deemed necessary. This could include summoning the local emergency services.

### 7.4.3 Preparations for Evacuation

The berth area of FLNG has a clearly signposted personnel muster area. In the event that evacuation becomes necessary the terminal personnel will muster at that location. The ship’s Master must assess the emergency and decide if evacuation of the ship’s crew or taking his vessel off the berth and out of harm’s way is his best course of action.

If the particular emergency on the berth impacts the vessel and prevents its departure, while at the same time precluding the use of the terminal gangway as a route for evacuating the ship’s crew from the vessel, the secondary evacuation route for the ship’s crew will be by the ship’s lifeboat(s).

### 7.5 EMERGENCY ELSEWHERE IN THE PORT

#### 7.5.1 Actions by the Vessel and Terminal

If an emergency is detected at another terminal within the port of Freeport, the LNG vessel’s Master should immediately have the ship’s main engines and steering gear brought to a state of instant readiness and to summon the attending tug(s) to come alongside the vessel.

Thereafter the terminal management will consult with the ship’s Master in monitoring the emergency to assess the likely threat to which the LNG vessel may become exposed. Actions taken to ensure the safety of the ship’s crew, terminal personnel, the ship and the cargo may include stopping cargo transfer, disconnecting the cargo arms and taking the vessel off the berth and sending her to sea.

**Any decision to take the vessel out of the port must be coordinated with Port Freeport and the Brazos Pilots Association.**
8. DEPARTURE PROTOCOLS / PROCEDURES

8.1 PREPARING FOR DEPARTURE

8.1.1 Daylight Restrictions

LNG vessels may depart Port Freeport only during the hours of daylight. The hours of daylight are defined and published by the Brazos Pilots Association and vary with the seasons. Furthermore, departure of a vessel is always contingent upon other marine traffic in the Port as well as the prevailing environmental conditions being within acceptable limits in order to ensure the safe movement of the vessel from the berth to the sea buoy.

8.1.2 Pilots

Pilots must be ordered no later than one (1) hour before the vessel’s intended departure time. If the order for the pilot is placed a significant time before the one (1) hour pilot order deadline, vessel Masters should ensure that the pilot order is reconfirmed one (1) hour before the intended departure time.

Should there be a conflict as a result of other vessels planning to depart Port Freeport at the same time as requested by the LNG vessel, the pilots will determine the order of departure.

It is a general guideline of the Brazos Pilots Association that departing vessels will have transit priority over arriving vessels.

8.1.3 Vessel Engine Room Preparations

Steamships are prohibited from warming through their main engine turbines until all cargo arms have been disconnected from the vessel’s cargo manifold.

8.1.4 Cargo Arm Draining, Purging and Disconnection

At the completion of cargo transfer, terminal personnel will attend at the ship’s manifold for the draining and purging of the cargo arms. A ship’s officer shall attend at the manifold to coordinate the ship’s part in draining the cargo arms. The secondary arm of the cargo arm will first be drained to the ship. The primary arm of the cargo arm will then be drained to the shore. After draining and purging, the cargo arms will be disconnected by terminal personnel and retracted to their stowed position.
8.1.5 Ship-to-Shore Data Communication Devices and Gangway

Unless the Ship-to-Shore hot-line telephone connection must be maintained for some justifiable reason, under normal operating conditions the FLNG terminal berth operating personnel will remove the umbilical from the vessel’s receptacle after the cargo arms have been disconnected from the ship’s manifold. Ship-to-Shore communications will thereafter be maintained through the terminal representative stationed in the vessel’s CCR. The terminal representative will be equipped with one of the terminal’s hand-held radios.

On completion of post cargo transfer paperwork FLNG personnel will collect the terminal’s mooring line tension monitoring system laptop computer from the ship’s CCR. After all personnel traffic between ship and shore ceases, FLNG personnel will remove the gangway from the ship’s deck in readiness for the vessel’s departure.

8.2 DEPARTING

8.2.1 Tugs

The tug requirements as specified in Section 2.5 will be utilized upon departure.

8.2.2 Mooring Line Handlers

The terminal personnel and the line-handling supervisor and crew will await instructions from the pilot to begin releasing the mooring lines. The mooring lines will be released in accordance with the orders and requirements of the pilot.
APPENDIX A
FREEPORT AREA ORGANIZATIONS’ CONTACT INFORMATION

1. Port Freeport
   Executive Offices
   200 W 2nd Street
   Freeport, TX 77541-5773
   Phone: 979-233-2667
   Fax: 979-233-5625
   www.portfreeport.com

   Port Freeport Terminal
   1001 Navigation Blvd
   Freeport, TX 77541-5863
   Phone: 979-233-2667

2. Brazos Pilots Association
   Office address
   2502 Deep Sea Drive
   Freeport, TX 77541
   Phone: 979-233-1120
   Fax: 979-233-7071

   Mailing address
   P.O. Box 1076
   Freeport, TX 77542

   VHF Channel 14 & 16
   www.brazospilots.com

3. U.S. Coast Guard (Marine Safety Unit Galveston)
   3101 FM 2004
   Texas City, Texas 77591
   Phone: 409-978-2702
4. U.S. Coast Guard Sector Houston-Galveston COTP Office

USCG Sector Houston-Galveston
13411 Hillard St,
Houston, TX 77034,
Switchboard: 281-464-4800
Emergency: 281-464-4854
Fax: 281-464-4814
VHF Channels 16 and 21

5. U.S. Coast Guard (Freeport Station)

823 Coast Guard Drive
Freeport, TX 77541
Phone: 979-233-7551
Fax: 979-233-7551
VHF Channel 16

6. U.S. Customs and Border Protection

575 Pete Schaff Blvd
Freeport, TX 77541
Phone: 979-233-3004
Fax: 979-233-8661

7. U.S. Immigration and Customs Enforcement

601 Rosenberg, Suite 515
Galveston, TX 77550
Phone: 409-766-3581

8. Tug Services

Suderman & Young Towing Co.
2777 Allen Parkway
Houston, TX 77019
Phone: 409-763-2428

G & H Towing Company
200 Pennzoil Road
P.O. Drawer 2270
Galveston, Texas 77553
Galveston office- Phone: 409-744-6311
Houston office-Phone: 281-474-9501

9. Shipping Agency

GAC
226 West Park Avenue
Freeport, Texas 77541
Phone: 979-233-3208
Moran Shipping Agencies, Inc.
122 West Way, Suite 402
Lake Jackson, Texas 77566
Phone: 979-297-9143

Biehl & Co.
1201 North Avenue H
Freeport, Texas 77541
Phone: 979-233-0445

10. Launch Services

Freeport Launch Services
1201 E. Brazos Street
Freeport, TX 77541
Phone: 979-233-8044
Fax 979-233-1629

11. Fueling Services

Midstream Fuel Services LLC
1122 Marlin Lane
Freeport, TX 77541
Phone: 979-233-0176

J.A.M. Marine Services
7010 Mykawa Road
Houston, TX 77033
Phone: 713-844-7788
Fax: 713-844-7789

12. Oil and Chemical Spills / Releases

National Response Center
2100 2nd Street SW, Room 2611B
Washington, DC 20593
Phone: 800-424-8802
Phone: 202-267-1322

Texas General Land Office Region 2
11811 North ‘D’ Street
LaPorte, TX 77571-9135
Phone: 281-470-6597
Fax: 281-470-6679
VHF Channel 16
13. Marine Equipment and Supplies

Baron’s Marine Ways, Inc.
221 W. Brazos Street
Freeport, TX 77541
Phone: 979-233-4650

Evco Industrial Hardware, Inc.
606 N Brazosport Blvd
Freeport, TX 77541
Phone: 979-233-5303
Fax: 979-233-8610

14. Ship Repair

Baron’s Marine Ways, Inc.
221 W. Brazos Street
Freeport, TX 77541
Phone: 979-233-4650

Precision Pneumatic
6618 E. Highway 332
Freeport, TX 77541
Phone: 979-230-9003

15. Oily waste and garbage disposal

For disposal of oily waste, USCG certificated contractors are:
I. Intergulf Corp. – Phone: 281-474-1940
II. Houston Marine Services – Phone: 281-902-3413

For disposal of garbage, certified contractors are:
I. Global Environmental and Marine Services
   Phone: 281-572-3306

If alternative contractors are selected, a lead time of 30 to 45 days is required for the selected contractor to obtain the necessary operating certification through the USCG.
APPENDIX B
FREEPORT LNG CONTACT INFORMATION

Freeport LNG Corporate Headquarters
Freeport LNG Development, L.P.
333 Clay Street, Suite 5050
Houston, Texas, USA, 77002
Phone: 713-980-2888
Fax: 713-980-2903

Freeport LNG Terminal Administration Office
Freeport LNG Terminal
1500 Lamar Street
Quintana, Texas, USA 77541
P.O. Box 2230
Freeport, TX 77541
Phone: 979-415-8700
Fax: 979-415-8733

Freeport LNG Terminal Main Control Room
Phone: 979-415-8750

Freeport LNG Terminal Dock Control Room
Phone: 979-415-8760

Freeport LNG Terminal Security Office
Phone: 979-415-8721

Freeport LNG Terminal Senior Management Team

<table>
<thead>
<tr>
<th>Position</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal Manager</td>
<td>979-415-8777</td>
</tr>
<tr>
<td>Operations Superintendent</td>
<td>979-415-8742</td>
</tr>
<tr>
<td>Maintenance Superintendent</td>
<td>979-415-8773</td>
</tr>
<tr>
<td>Facility Security Officer</td>
<td>979-415-8721</td>
</tr>
<tr>
<td>Director Regulatory Affairs</td>
<td>979-415-8720</td>
</tr>
<tr>
<td>Gas Controller</td>
<td>979-415-8771</td>
</tr>
</tbody>
</table>
For TUA Customers, the following FLNG manuals and other information sources are incorporated by reference and are available on the FLNG Customer website:

I. FLNG Customer Website: www.efreeportlng.com
   A. Health, Safety and Environmental (HSE) Management System for Operations
   B. Emergency Response Plan
   C. Hurricane Preparedness Plan

II. U.S. Code of Federal Regulations, Title 46 - Shipping

   CHAPTER I--COAST GUARD, DEPARTMENT OF TRANSPORTATION
   PART 154--SAFETY STANDARDS FOR SELF-PROPELLED VESSELS CARRYING BULK LIQUEFIED GASES

# APPENDIX D
## FORMS AND DRAWINGS

<table>
<thead>
<tr>
<th>Exhibit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibit 1</td>
<td>Declaration of Security form</td>
</tr>
<tr>
<td>Exhibit 2</td>
<td>IMPA Standard Pilot Ladder placard</td>
</tr>
<tr>
<td>Exhibit 3</td>
<td>Typical Breasting Dolphin plan</td>
</tr>
<tr>
<td>Exhibit 4</td>
<td>Typical Mooring Dolphin plan</td>
</tr>
<tr>
<td>Exhibit 5</td>
<td>Mooring Diagram</td>
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<tr>
<td>Exhibit 6</td>
<td>Fender-line Elevation</td>
</tr>
<tr>
<td>Exhibit 7</td>
<td>Mooring Dolphin No. 3 (MD-3) plan</td>
</tr>
<tr>
<td>Exhibit 8</td>
<td>PLAN view of the Cargo Arm Operating Envelopes</td>
</tr>
<tr>
<td>Exhibit 9</td>
<td>PROFILE view of the Cargo Arm Operating Envelopes</td>
</tr>
</tbody>
</table>
# DECLARATION OF SECURITY

(Name of Vessel)  

(Freepoint LNG Development, L.P.)  

(Name of Facility)  

( IMO Number) /  

(Registry)/(Flag)  

This Declaration of Security is valid from
activities: Vessel unloaded under Security Level 1.
for the following

The involved parties agree to the following security responsibilities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>(Responsible party to initial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communications established between the vessel and facility:</td>
<td></td>
</tr>
<tr>
<td>(a) Means of raising alarm agreed upon between vessel and facility.</td>
<td></td>
</tr>
<tr>
<td>(b) Vessel/facility report/communicate any noted security non-conformities and notify appropriate government agencies.</td>
<td></td>
</tr>
<tr>
<td>(c) Port specific security information passed to vessel and notification procedures established (specifically who contacts local authorities, National Response Center, and Coast Guard).</td>
<td></td>
</tr>
<tr>
<td>2. Responsibility for checking identification and screening of:</td>
<td></td>
</tr>
<tr>
<td>(a) Passengers, crew, hand carried items, and baggage. (Sea-3 personnel nor their security guards are not responsible for determining what persons are allowed on or off the vessel.</td>
<td></td>
</tr>
<tr>
<td>(b) Vessel stores, cargo, and vehicles.</td>
<td></td>
</tr>
<tr>
<td>3. Responsibility for searching the pier/berth directly surrounding the vessel.</td>
<td></td>
</tr>
<tr>
<td>4. Responsibility for monitoring and/or performing security of the water surrounding the vessel.</td>
<td></td>
</tr>
<tr>
<td>5. Verification of increased MARSEC level and implementation of additional protective measures.</td>
<td></td>
</tr>
<tr>
<td>6. Communications established between the vessel and facility.</td>
<td></td>
</tr>
<tr>
<td>7. VSO or the designated representative will be responsible to identify crew members prior to them being allowed to return to the vessel or new crew member(s) coming aboard for a new change.</td>
<td></td>
</tr>
</tbody>
</table>

The signatories to this agreement certify that security arrangements during the specified interface activities are in place and maintained.

Date of Issue: ____________________________

(Signature of Master or Vessel Security Officer)  

(Signature of Facility Security Officer or Authorized Representative)

(Name and Title of Vessel Security Officer)  

(Contact information)

(Name and Title of Facility Security Officer)

(Contact information)

Exhibit 1 – Declaration of Security
REQUIRED BOARDING ARRANGEMENTS FOR PILOT

INTERNATIONAL MARITIME PILOTS' ASSOCIATION
HQ'S "Wellington", Temple Stairs, Victoria Embankment, London WC2R 2PN Tel: +44 171-240 3973 Fax: +44 171-240 3510

RIGGING FOR FREEBOARDS OF 9 METRES OR LESS
- HANGING HOOKS: Maximum 3 per 3.6m spreader
- Always at sides of ship
- SIDE ROPE: Maximum 1.8m per spreader
- STEPS: Must rest against ship's side
- SPREADER: Maximum 3 per 3.6m

SHIPS WITH HIGH FREEBOARD (MORE THAN 9M)
- PILOT LADDER: Must extend at least 3m above lower platform
- ACCOMMODATION LADDER: Must rest firmly against ship's side
- Lower platform horizontal
- Lady handrail provided
- A PILOT LADDER Supplied WITH AN ACCOMMODATION LADDER is usually the most method of preparing or designating a pilot's step with a handrail at more than 1.5m
- GUARD RAIL:
- VERY IMPORTANT:
- Steps must be a spreader
- Steps must be a spreader

MECHANICAL PILOT HOIST
- PILOT HOIST:
- PILOT PURCHASED AND OWNED BY PILOT
- PILOT PURCHASED AND OWNED BY PILOT
- PILOT PURCHASED AND OWNED BY PILOT
- PILOT PURCHASED AND OWNED BY PILOT

NO!
- No slip-on
- No ropes
- No spares
- The steps must be equally spaced
- The steps must be horizontal
- The steps must be equally spaced
- The steps must be equally spaced
- The steps must be equally spaced

AT NIGHT
- Pilot ladder and ship's deck lit by forward shining overriding light

Exhibit 2 – IMPA Standard Pilot Ladder Placard.
EXHIBIT 3

PLAN VIEW

29'-0" [8.84m]

TYPICAL SIDE ELEVATION

ELEV. +14 [4.27m]

FREEPORT
MARINE FACILITY PHASE 1

TYP. BREASTING DOLPHINS
PLAN AND ELEVATION
TYPICAL (SIMILAR) 4 PLACES

DRAWING NO.

SIGN: JPD
APR: 1
DATE
REV.
EXHIBIT 5

MOORING DIAGRAM

MARINE FACILITY PHASE 1