RUBY TERMINAL HANDBOOK

DISCLAIMER

This Terminal Handbook has been compiled for the benefit of Masters, Vessel Owners and their agents. While believing the information contained herein to be correct, PVEP makes no warranties in respect of and accepts no responsibility for its accuracy or completeness (regardless of its purpose of use) or for any action or omission taken in reliance on the information. As the Terminal Handbook may be amended from time to time, the user must ensure that he has the latest edition issued by PVEP.

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1. INTRODUCTION

The Ruby Oil Field is located in Blocks 01 & 02 offshore of the Socialist Republic of Vietnam, approximately 155 km north-east of Vung Tau. To ensure the orderly, safe, efficient and pollution-free operations at the Ruby Terminal, Petro Vietnam Exploration and Production (PVEP) has compiled this Terminal Handbook which must be strictly observed by all Trading Tankers (Vessels) visiting for Ruby crude oil lifting purposes.

This document describes the crude oil offshore loading terminal (Terminal) and requirements, regulations and conditions applicable to Vessels visiting the Terminal. It includes all Annexure attached thereto and formed an integral part of the Terminal Handbook. Annexure A provides general descriptions and some information relating to the Facilities which Masters, Vessel Owners and their agents may find useful.

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2. DEFINITIONS AND INTERPRETATION

In this Terminal Handbook, the following words have the following meanings:

"Terminal"	FPSO Ruby II located at Ruby Oil Field for loading of crude oil onto Lifting Tankers. Determination of the applicable "Terminal" shall be at the discretion of PVEP.
"Terminal Handbook"	The Ruby Terminal Handbook and all Annexure and diagrams which are attached hereto and made an integral part of the Terminal Handbook including any amendments made from time to time.
"Terminal Operator"	PVEP acting in that capacity under the Operations Contract with Petro Vietnam (PVN) in respect of Blocks 01 & 02.
"Lifting Party"	The party (PVN), which lifts crude oil from Ruby Terminal in accordance with the Lifting Agreement for Ruby Crude Oil in respect of the Blocks 01 & 02.
"Lifting Coordinator"	A person is appointed by Lifting Party to act in coordinating the lifting of Ruby crude oil between Lifting Party, Marketing Agent (PVOIL) and Terminal Operator (PVEP).
"MEZ"	Maritime Exclusion Zone for Ruby Oil Field as declared in the Maritime Notice issued on 22th December 2013 by the Vietnam National Maritime Administration, (as shown in Diagram E-1).
"FPSO"	The Floating Production Storage and Off-loading unit at the Ruby Oil Field
"Platforms"	Drilling-Production Platforms (or Well Head Platforms) at the Ruby Oil Field, named RBDP-A, RBDP-B, PLDP-A, TPDP-A, DMDP-A
"FSV"	Field Support Vessel is an Anchor Handling Tug Supply vessel standing by at Ruby Oil Field (as referred to in Clause 8.8)
"Facilities"	The FPSO, Platforms, Drilling Rigs plus any dedicated support vessels, (including the FSV) located within the Ruby MEZ.
"Facility Services"	means all and any services of any description and nature provided or performed by or on behalf of PVEP at or about the Facilities and/or the Vessels within 05 nautical miles of the Terminal directly or indirectly in connection with lifting crude oil from the Terminal including, without limitation, pilotage, navigation, berthing, mooring, loading/off-loading, communications, watch or other services, assistance, direction, advice, instruction or conduct whatsoever.
"IMO"	International Maritime Organisation.
"ICS"	International Chamber of Shipping.
"ISGOTT"	International Safety Guide for Oil Tankers and Terminals.
"ITF"	International Transport Federation Agreement.
"ITOPF"	International Tanker Owners Pollution Federation Limited.

"MARPOL"	International Convention on Marine Pollution 1973 as modified by Protocol 1978.
"SOLAS"	International Convention for the Safety of Life At Sea 1974 and its Protocol of 1978.
"OCIMF"	Oil Companies International Maritime Forum.
"STCW"	Standards of Training, Certification and Watch keeping.
"DWT"	Total cargo plus bunkers and stores that a ship can carry up to her Plimsoll Line or Marks, here stated in metric tons.
"SWL"	Safe Working Load, herein expressed in tons.
"ETA"	Estimated date and time of arrival at the Terminal of the Vessel in question.
"Turret Mooring"	The single point mooring at bow of the FPSO, which permanently anchored at the Ruby Oil Field and equipped with a single product swivel to receive crude oil from RBDP-A, RBDP-B, PLDP-A, TPDP-A, PLDP-A, DMDP-A platforms.
"Vessel"	A Crude Oil Carrier (Trading Tanker) which requires the facility services to be provided or performed in connection with crude oil lifting from the Ruby Terminal.
"Shall"	a mandatory instruction
"Should"	a recommended instruction

RUBY TERMINAL ORGANISATION FOR CRUDE OIL LIFTING OPERATIONS

"ECC"	Emergency Coordination Centre located at PVEP Office in Ho Chi Minh City.
"Head of Operations"	Based at PVEP office, the "Head of Operations" has overall responsibility for all aspects of production operations in the block 01 & 02.
"Marine Manager"	Based at PVEP office, the "Marine Manager" is overall responsible for safety and efficiency of Marine and Logistic aspects to support for production operations in the block 01 & 02. He is a qualified Master of Mariner.
"Field Superintendent"	Based on the FPSO Ruby II, as the PVEP Representative at the Ruby Oil Field, The Field Superintendent has legal responsibility for the hydrocarbon production activities on the platforms (RBDP-A, RBDP-B, PLDP-A, TPDP-A, DMDP-A).
"OIM"	Based on the FPSO, the Offshore Installation Manager is responsible for all safety and operational aspects of the FPSO "RUBY II".
"Loading Master"	PVEP Marine Executive, the Loading Master is responsible for safety of the crude oil lifting activities at the offshore location. He is usually located onboard the Lifting Tanker for actual supervision purpose.
"Master"	The Master of Vessel (Lifting Tanker).
"Vessel Owners"	Mean jointly and severally the Vessel (Lifting Tanker), its owners, charterers (demise or otherwise), owners of cargo and/or bunkers aboard the Vessel, and their respective directors, officers, employees, servants (including Master, crew agents and contractors), as applicable.

In case of ambiguity or dispute with respect to the meaning of any words, phrases or provisions of this Terminal Handbook excluding the Conditions of Use (Annexure B) such ambiguity or dispute shall be resolved by the Production Manager or, in his absence, the Loading Master and his interpretation shall be final and conclusive.

3. COMPLIANCE WITH VIETNAMESE LAWS

The Facilities including the Terminal are located in Vietnamese territorial waters, within a Restricted Area or Maritime Exclusion Zone (MEZ-refer to diagram (E1) of the Ruby Oilfield. Sea traffic shall keep a distance of two (2) nautical miles or more from the Ruby MEZ. Vessels shall only enter the Maritime Exclusion Zone at the request or permission of PVEP.

The Terminal has been classified by the Vietnamese authorities as a "non-wharf port" crude oil export terminal residing within the Restricted Area (MEZ) one over which the Binh Thuan Maritime Administration has jurisdiction. The Ruby Terminal is also one of the Vietnamese ports to which the ISPS Code has been officially applied since 1st July 2004.

Vessels visiting the Terminal shall comply with the provisions of the Vietnamese maritime laws including implementation of the ISPS Code at the ports within the Vietnamese water, as they apply to the Terminal in this context, and other applicable Vietnamese laws and regulations. Where there is no specific regulation in Vietnamese law, Vessels shall follow good international practices.

The Master, Vessel Owners and their agents shall comply with all directions by the Government of the Socialist Republic of Vietnam and all its authorities or agencies having jurisdiction over the Facilities, this Terminal Handbook, or controversies arising from acts done upon or relating to the sea or continental shelf. Procedures specified by the Vietnamese Government whether relating to health, customs and immigration or otherwise shall be strictly adhered to.

4. COMPLIANCE WITH TERMINAL HANDBOOK PROVISIONS

4.1 Conditions for Provision of Facility Services

All Facility Services provided or performed by PVEP are strictly subject to the terms and conditions of this Terminal Handbook. Compliance with Terminal Handbook provisions is mandatory for all Masters, Vessel Owners and their agents who wish to bring Vessels to the Terminal for the purpose of lifting crude oil. By entering the Terminal and generally accepting the Facility Services, Masters, Vessel Owners and their agents, and all persons on board the Vessels agree or are deemed to agree to comply with the Terminal Handbook provisions.

Not withstanding anything to the contrary in this Terminal Handbook, if at any time the Operator forms the reasonable judgment that the Vessel has breached the Terminal Handbook provisions or is likely to compromise the safety or environmental integrity of the Terminal or is likely to adversely effect the operational efficiency or capability of the Terminal, then the Operator shall have the right to immediately reject the Vessel or terminate the provision of any Facility Services including the loading of crude oil. All and any cost incurred by the Vessel by such rejection or termination shall be to the Vessel Owners' account.

4.2 Signing Conditions of Use

4.2.1 The Master of a Vessel shall:

4.2.1.1 Obtain from PVEP or ensure that he has a copy of the latest edition of the Terminal Handbook and conversant with its provisions;

4.2.1.2 Signify his agreement to comply with the Terminal Handbook provisions by signing the Conditions of Use (see Annexure B) which is required before the Notice of Readiness is accepted by the Terminal, and

4.2.1.3 Transmit or pass the signed “Conditions of Use” to the Loading Master for his signature on behalf of PVEP.

4.2.2 A Vessel whose Master fails to comply with the procedures specified in this Terminal Handbook shall be refused permission to approach or berth at the Terminal. All and any costs incurred by such refusal shall be to the Vessel Owner's account.

5. COMPLIANCE WITH DRUGS AND ALCOHOL POLICY

A Vessel made fast to the Terminal, its crew and passengers shall comply in every respect with OCIMF Guidelines for Drugs and Alcohol. No alcohol or non-prescription performance affecting drugs may be consumed under any circumstances by any Facilities or Vessel personnel whilst at or in the vicinity of the Facilities.

PVEP may cease oil transfer operations and disconnect the Vessel for failure to comply with this requirement. All and any costs incurred by such failure shall be to the Vessel Owners' account.

6. STANDARD OF VESSELS

6.1 Vessel Size

The Terminal normally only accepts Vessels between 60,000 and 120,000 DWT. Vessels are required to carry out tandem mooring lifting. As a general guideline the minimum parcel size is depending on arrangement between Lifting Party and Operator, based on Terminal conditions (including weather). The maximum export parcel size is of 500,000 barrels.

6.2 Vessel Vetting

Vessel Owners (or Vessel Master) shall complete the Vessel Questionnaire (Annexure C), including a clear copy of the forecastle plan which shall be signed as correct by the Vessel Owner or his representative and transmitted to the Lifting Party. The plan shall conform in terms of detail and clarity to OCIMF - "Mooring Equipment Guidelines".

The Lifting Party is responsible for transmitting the completed Vessel Questionnaire to the Terminal at the following address:

PVEP
Petronas Tower, Royal Centre, 235 Nguyen Van Cu Street,
District 1, Ho Chi Minh City, S.R. Vietnam.
Attn.: Lifting Coordinator and Marine Manager
Telephone: (84-8) 3830 9966
Facsimile: (84-8) 3833 3589 / 38309988

The PVEP Vessel Vetting process includes technical review of the completed Vessel Questionnaire and submitted plan as described. A detailed Vessel database is maintained and Vessel management review is also performed. The review results are coordinated by the Lifting Coordinator, as are Vessel surveys if required.

Within twenty four (24) hours of receipt of a Vessel nomination for a lifting which includes a correctly completed Vessel Questionnaire and the required plan, the Terminal shall advice the Lifting Party whether PVEP accepts or rejects the Vessel. The O.B.O type vessels are not be accepted for loading crude oil at Ruby Terminal.

In compliance with the ISPS Code, a vessel that is not in possession of a valid “International Ship’s Security Certificate” shall not be accepted to load the crude oil at the Ruby Terminal.

Upon arrival at the Terminal, the Loading Master shall conduct a final inspection to confirm the Vessel's acceptability. This final acceptance by PVEP is a condition, which shall be satisfied before the Vessel may approach, berth and lift crude oil from the Terminal.

If the particulars given in the Vessel Questionnaire change in any respect or otherwise become inaccurate, the Master or Vessel Owner shall promptly notify the Terminal in writing. Without prejudice to any other consequence of such inaccuracy or change, failure to so notify may cause delay or rejection at the Terminal, and all costs incurred shall be to the Vessel Owner's account.

6.3 Vessel Age

Vessel of twenty (20) years old and above shall have undergone and passed physical examination by a professionally qualified surveyor acceptable to PVEP within the previous six (6) months. If required, Vessel survey shall be arranged by PVEP liaising with the Lifting Party via the Lifting Coordinator.

Vessel of twenty-five (25) years old and above (from date of delivery) shall not be considered for vetting/inspection and not to be accepted to load crude oil at Ruby terminal.

6.4 Tandem Moored Lifting

Vessels for planned tandem moored lifting shall be fitted with the appropriate equipment in accordance with the OCIMF "Recommendations for Equipment employed in the Mooring of Ships at Single Point Moorings" and "Mooring Equipment Guidelines". The equipment shall include a 200T SWL chain stopper designed for use with 76 mm chain.

The windlass/winch at the forecastle of the Vessel shall have one empty drum capable of accepting 300 m of pick-up rope and messenger to winch the SPM mooring assembly.

6.5 Terminal Restrictions

6.5.1 Access terms

Right of access to the Terminal shall be restricted at Loading Master's sole discretion to Vessels meeting the following conditions:

- Be of such size, draught, equipped and manned as to be in every way fit to enter, secure to FPSO, load at and leave safely and without delay and always safely afloat.
- Be capable of accepting the nominated cargo quantity.
- Have Segregated Ballast System.
- Crew to comply with the Standards of Training, Certification and Watch Keeping as per STCW 1995.
- Be manned and maintained to fully comply with the guidelines set out in the International Safety Guide for Oil Tankers and Terminal (ISGOTT).
- Comply with the Maritime Organization's conventions in force.
- Comply with the latest SOLAS and MARPOL Conventions, specifically regarding fire fighting capabilities and oxygen content in inerted cargo tanks.
- Be classed and maintained as certified and comply with all laws, regulations, codes, requirements and directives of all relevant governmental authorities having jurisdiction.
- Comply with and, as the case may be, be approved in accordance with all applicable governmental laws, rules, regulations, instructions and requirements applying on the approach to and departure from the mooring, including without limitation all environmental, safety and other regulations existing at the time of presentation of the Vessel for loading.
- Be covered by Civil Liability Convention and its "92 Protocols "as applicable.
- Be seaworthy, with all winches for mooring lines and anchors in full operating condition and prepare at all times to be able to safely vacate the Terminal.

6.5.2 Terminal close

The Terminal is closed for berthing operations:

- From 17:00 hours to 06:00 hours (local time)
- Any time when weather conditions do not allow for safe berthing operations.

6.6 Lifting and Other Equipment

Vessels shall have manifolds and associated loading equipment conforming to OCIMF "Recommendations for Oil Tanker Manifolds and Associated Equipment", and a derrick or crane rated at 15 tons SWL as a minimum. The Vessel shall be equipped and supply the necessary sundries like chain blocks, slings, shackles to efficiently effect the hose connection.

Masters and Vessel Owners shall ensure that Vessels mooring arrangements and equipment comply in all respects with the requirements of the Terminal Handbook before finalisation of charter arrangements and before arrival at the Terminal. Without prejudice to any other consequence, failure to comply with these requirements may result in delays or rejection at the Terminal, and all and any costs incurred shall be to the Vessel Owners' account.

6.7 Inert Gas System

The Vessel shall arrive at the Terminal with all crude oil storage tanks inerted, and the inert gas system shall be operable while the Vessel is at the Terminal. PVEP may check the condition of the Vessel's tanks at any time. If the system fails or the tank pressure or atmosphere is outside industry accepted limits, as per recommendations contained in the latest ISGOTT edition, the Vessel shall be unmoored from the Terminal, and all and any costs incurred shall be to the Vessel Owner's account.

6.8 Oil Pollution Insurance

The Owner of the Vessel shall be a member of the International Tanker Owners Pollution Federation Limited (ITOPF) or INTERTANKO and have insurance covering liabilities under the International Convention on Civil Liabilities for Oil Pollution Damage 1969 and 1992 protocols; the cargo to be loaded shall be covered by the International Convention on the Establishment of International Fund for Compensation for Oil Pollution Damage 1992 or equivalent. Owner of the Vessel shall have in place the maximum (USD 1 billion) P&I Club Insurance for Oil Pollution Liability.

6.9 Accommodation

It is preferred that Vessels should be covered by a current ITF certificate to ensure a basic standard for crew working and living conditions. While at the Terminal, a Vessel shall be required to provide accommodation, where available, for all of the following personnel,

- 1 Loading Master (PVEP)
- 1 Loading Master Assistant (Bow-man)
- 1 Vietnamese Pilot
- 1 Independent Cargo Surveyor
- 1 Shipping Agent (Vessel Owner)

And /or any other person as may be required by the Loading Master.

6.10 Cargo Heating

Due to the high pour point and waxy property of Ruby crude, the Vessel shall be equipped with a cargo heating system capable of maintaining the Ruby crude temperature at 45^{o}C, or at a lesser value if so stipulated by the Lifting Party (which value shall be advised in writing to the Lifting Coordinator by the Lifting Party at the time of Vessel nomination).

6.11 Classification Society

The Vessel's Classification Society shall be a member of the International Association of Classification Societies.

6.12 Officer Qualifications

At least two of the Vessel's Deck Officers complement shall be familiar with crude oil lifting operations and shall have Tanker Endorsements to their current Deck Officer Certificates.

Senior vessel personnel who will be required to liaise with the Loading Master or his assistant during any parts of the lifting operation shall be fluent in spoken and written English.

6.13 Deck Equipment

All equipment used on deck shall be either explosion-proof or intrinsically safe, to avoid introducing potential ignition sources.

6.14 Manifold Hose Adapters

The Vessel's manifold must be prepared to receive and connect a 16 inch 150 # ANSI "Cam-lock" quick release coupling, as used on the Terminal's floating hose.

6.15 Ballast System Configuration

Vessels carrying Segregated Ballast Tanks (SBT) are the standard.
Clean Ballast Tanks (CBT) configuration as defined by MARPOL shall not be accepted at the Ruby Terminal.

6.16 Helicopter Operations

The Vessel shall comply in all relevant respects with ICS "Guide to Helicopter / Ship Operations" requirements relating to any helicopter operations advised as a contingency. PVEP shall endeavour to advise the Lifting Party that such a contingency capability is required prior to nomination of a Vessel by the Lifting Party. Should such a contingency requirement be thus notified after a nominated Vessel is already accepted under PVEP Vessel Vetting procedure, helicopter operations shall only be performed if the Vessel is able to comply in all relevant respects with ICS requirements. The standard helicopter operations contingency is "Public Transport Helicopter Winching".

PVEP shall state helicopter model (if not the standard aircraft, Super Puma model AS 332L Mark 2 with rotor disc diameter of 18.7m) and type of activity planned when advising of the need for helicopter operations.

6.17 Vessel History

Vessels with a history of major safety and environmental incidents such as fire on board, spill of crude oil cargo, non-conforming effluent disposal, serious injury/loss of life, or reported violations of marine law, shall be reviewed with particular care before acceptance by PVEP Vessel Vetting process. The management of such Vessel, if nominating any Vessels to PVEP, shall be subject to similar careful review prior to Vessel acceptance.

7. VESSEL SAFETY CHECK

On arrival, the Vessel shall undergo a physically safety check by the Terminal. Prior to approaching to the terminal, the Loading Master shall also conduct visually a pre-berthing inspection on the suitability of the mooring and lifting gears onboard the Vessel.

The Vessel shall comply with the latest SOLAS and MARPOL conventions and protocols.
The Terminal may refuse to allow a Vessel to berth or order a Vessel away from the berth, or otherwise suspend or terminate provision or performance of services to the Vessel if PVEP considers that the Vessel fails to meet the requisite safety standards and all or any costs incurred shall be to the Vessel Owner's account.

8. APPROACH AND MOORING AT THE TERMINAL

8.1 Advice of Arrival

Immediately after having received instructions (Loading Order) to proceed to Terminal, Master of the Vessel is required to notify his local agent and PVEP of Ruby ETA seventy two (72), forty eight (48), twenty four (24) and twelve (12) hours in advance.

The first message from the Master shall include:

- Vessel name and Master's name
- ETA, date and local time (UTC + seven (7) hours) and estimated time of NOR tender
- Last port of call / next port of call.
- Whether the vessel is in possession of a valid ISS certificate
- The current security level of the vessel
- Whether any additional security measures
- Grade and quantity of cargo on arrival (if any) or "in ballast ". Cargo quantity to be loaded at Terminal. Maximum loading rate on one manifold.

The Vessel Master shall promptly notify the Terminal of the new arrival time if the ETA changes by more than three (3) hours following the twelve (12) hour ETA notice.

On approaching within twenty (20) nautical miles of the Terminal, the Vessel's Master shall contact the Ruby Cargo Control Room (CCR) via VHF Channel 08 or Ruby FSV via VHF Channel 16 for further instructions.

8.2 Anchoring

No anchoring is permitted therein or within the Ruby Maritime Exclusion Zone. If a Vessel cannot moor on arrival at the Terminal and wishes to anchor, it shall be at the nominated anchorage area. The anchorage area is a circular area with a radius of 01 nautical mile centred at position:

Latitude : 10^0 22' 00" N
Longitude: 108^0 37' 00" E

8.3 Draft requirements

Only the Vessels fitted with segregated ballast tanks are permitted to visit Ruby Terminal. Due to the exposed location of Ruby Terminal, Vessels are required to arrive with maximum amount of ballast for safe handling. The Vessel's trim shall never exceed 0.015 L, where "L" is the length of the Vessel.

A Vessel shall not be allowed to moor to the Terminal if it is found by the Loading Master that to be not adequately ballasted.

8.4 Notice of Readiness

The buyer, its representative or the Master of the Vessel (who shall deemed to be acting on buyer's behalf) will inform the Terminal a tender of "Notice of Readiness" for the Vessel to load. The Notice of Readiness shall not be given until the Vessel has crossed limits of the Ruby MEZ and is ready in all respects to load.

Notice of Readiness given within last two (2) hours in which the Terminal is open on any day (between 06:00 and 17:00 hours local time) shall be deemed given to the Terminal in the next opening day.

If not withstanding having tendered the Notice of Readiness, the Vessel is found by Terminal not to be ready to load, such Notice of Readiness will be disregarded and buyer shall be obligated to give new Notice of Readiness when it is in fact ready to load.

Notice of Readiness will be received and accepted by the Loading Master after safety check and pre-berthing inspection as per Articles 7 and when prevailing weather conditions and daylight are sufficient to permit safe mooring.

8.5 Pilotage

Pilotage is mandatory in the Vietnamese water. The Vietnamese Pilot shall act as an adviser to the Master while piloting the Vessel however overall responsibilities remain under the command of the Master.

Vietnamese Pilot and Offtake Personnel Team will usually embark the Vessel at a position two (2) Nautical Miles from stern of FPSO RUBY II as instructed by the Loading Master.

In the case of adverse weather condition at offshore terminal, the Pilot Boarding Area would be in port of Vung Tau, at the location selected by Vung Tau Maritime Administration, as follows:

Latitude: 10° 16' 02" N
Longitude: 107° 04' 08" E

The Loading Master Assistant and other personnel, as described in clause 6.9, may also board the Vessel with the Loading Master. Suitable accommodation shall be provided for these personnel remaining onboard the Vessel until completion of the offtake operation.

8.6 Safe Access

The Master shall provide safe access to and from his Vessel at all times in accordance with the SOLAS convention and IMO recommendations. Failure to comply may result in delay of berthing or sailing, and all and any costs incurred shall be to the Vessel Owner account.

8.7 Pre-Offtake Meeting

After completion of pre-berthing inspection and prior to approaching to the Terminal, the Loading Master shall hold a pre-offtake meeting onboard the Vessel with attendance of all key personnel involved. In the meeting, the Loading Master shall brief on operational criteria, work procedures, safety check-list, emergency plan, and safety regulations of the Terminal. He shall hand-deliver a copy of Terminal Handbook and ensures the master sign the "Condition of Use" for receipt of the Terminal Handbook.

8.8 FSV - Field Support Vessel

A dedicated FSV as of the Anchor Handling Tug and Supply (AHTS) vessel configuration is permanently on located at the Terminal. The use of FSV for mooring and/or floating export hose handling are compulsory and under supervision of the Loading Master. For control and static tow function, the FSV shall be working as a static-tow tug.
The tug shall make fast at the stern of the Vessel for the entire lifting operation from approach and mooring until crude oil transfer has been completed and the Vessel has finally un-moored.

During crude lifting operation another support vessel should be present at location to provide operational support (i.e handling of floating export hose, transfer of personnel) and standby function for emergency response.

8.9 Tandem Mooring (Refer Annexure E)

Loading of Vessel at the Terminal shall be completed only by way of tandem mooring.

8.9.1 Static-tow assistance

Any service or facility provided by Terminal, including but not limited to Field Support Vessels and their crews or berthing and hose equipment, is solely at the Vessel's risk as defined by the Disclaimer Clause in the Terminal Handbook.

8.9.2 Preparation of Mooring

For approach control reasons, a static-tow tug shall be made fast at the stern of the Vessel when the Vessel is at position approximately 1.5 miles astern of the FPSO. The Vessel shall provide two mooring ropes (80mm dia.) that may be used to connect with towing wire on board the static-tow tug.

8.9.3 Mooring

The general tandem mooring pattern is as follows:

- At a distance of 300m-350m from the FPSO stern, tail-buoy at the end of messenger of tandem mooring assembly shall be collected from the sea via grapnel at the Vessel's bow. The tandem mooring messenger that would be streamed down wind/current shall be slowly winched up while the Vessel is continually approaching to the FPSO stern.

- When the Vessel has been positioned at a distance of 40-60m astern FPSO the tandem hawser/chafe chain assembly shall be heaved aboard. Then the chafe chain shall be finally homed and secured at the Vessel's chain stopper.

- During mooring operation, the Laser Range Finder shall be operated at the FPSO stern to monitor movement (distance and speed) of the Vessel.

- While the Vessel is tandem-moored to the Terminal, tension on the tandem mooring hawser shall be continually monitored by means of the load monitoring system onboard the FPSO.

8.9.4 Marginal Weather Mooring/Unmooring

The Terminal shall continually monitor weather conditions through a recognized forecasting service and local observation.

In the event of deteriorating weather conditions or the approach of a typhoon, berthing operation may be delayed. If the Vessel is already moored, shut down the crude lifting operations shall be implemented in a timely manner and the Vessel unmoored.

The criteria for unmooring of tandem-moored Vessels will be advised by the Loading Master during the mandatory pre-offtake meeting.

9. LOADING OF CRUDE OIL

9.1 Engines on Standby

While the Vessel is made fast, it shall always be ready to respond to requests for engine movements immediately.
The Loading Master shall be informed immediately of a main engine failure.

9.2 Static Tow

As stated in 8.8, the FSV shall take the Vessel on stern - to - stern static tow in order to prevent unwanted movement of the Vessel and to provide extra control during Vessel mooring and unmooring operations.

9.3 Watch

A deck crew of the Vessel (with handheld radio) shall keep a bow watch continually for the period the Vessel is made fast. Reliable radio communications shall be established and maintained at all times with the Vessel CCR and Loading Master or his assistant. All communications shall be in English.

9.4 Floating Export Hose – Transfer and Connection (Refer Annexure E)

After the mooring hawser has been made fast, the floating hose end (barbell hose) will be towed to the port side manifold of the Vessel that is tandem moored to the FPSO.

The hose end is usually transferred by means of another attended tug. When the sea condition or tug's availability at the Terminal are not preferable, the hose end shall be towed by means of soft mooring ropes and mooring winch onboard the Vessel.

The hose end shall then be lifted onboard using the Vessel's derrick or crane. The winching and connecting of the hose end is the responsibility of the Vessel crew, under the guidance of the Loading Master or his assistant.

The hose end connection is a 16 inch "CAMLOCK" quick release coupling and will fit standard 16 inch 150# ANSI flanges. Manifold reducers to suit the above shall be supplied by the Vessel. The floating export hose is fitted with a self sealing breakaway coupling.

9.5 De-ballasting

The Vessel's de-ballasting plan shall be approved by the Loading Master. The Vessel shall not commence de-ballasting operations without prior consultation with, and agreement of, the Loading Master. At no time shall the propeller immersion be allowed to become less than on arrival.

9.6 Discharge of Bilge

Discharge of engine and pump room bilge is not allowed while alongside.

9.7 Dumping of Waste

Dumping of waste, dangerous, toxic or other hazardous material within the Ruby Terminal area is strictly prohibited.

9.8 Fines and Claims

Any fines imposed by governmental authority for pollution shall be for the Vessel's account. In the event that the Company has to settle any third party claims as a result of damages to property caused by pollution attributable in any way to the Vessel, they will have the right to reimbursement by those responsible for the Vessel for the all expense incurred.

In the event of oil spillage or pollution of the waters all labor and equipment use for cleaning operations will be for the Vessel's account.

9.9 Control of Cargo Transfer Operations

The Terminal shall control the transfer of oil according to the instructions received from the Loading Master or his delegate on the Vessel. The Vessel's officers shall be responsible for de-ballasting the Vessel and monitoring the tank levels.

9.10 Suspension of Cargo Transfer

The Terminal shall halt transfer operations when:

- radio communication between the Terminal and the Vessel is lost,
- instructed to do so by the Master,
- instructed to do so by the Loading Master or his delegate,
- an emergency situation concerning the Terminal, mooring or floating hose occurs,
- weather conditions exceed safety limits.

or at any other time as may be determined by PVEP under these Terminal Handbook provisions.

9.11 Actions in an Emergency

The Facilities have in place an Emergency Response Plan which is coordinated with ECC at PVEP Office in Ho Chi Minh City. Through this plan, shore based emergency support can be initiated and controlled. Nonetheless, the Vessel Master remains ultimately responsible for the Vessel, its crew and passengers at all times.

If an emergency situation arises on the Facilities, the Loading Master (or his delegate) shall inform the Vessel Master of the situation and advice of actions the Vessel should take.

If an emergency situation arises on the Vessel, the Master shall immediately inform the Loading Master of the situation and the actions being taken, who shall advise the Facilities.

The FPSO emergency alarm signals are:

- Fire alarm: continuous ringing of alarm bells.
- General alarm: interrupted sounding of alarm bells / horns, and specific announcements over the Public Address system.

In case of fire or explosion aboard the FPSO, the pumping of cargo shall immediately cease and the Vessel shall be released from the tandem mooring as expeditiously as possible, steering clear of the area under her own power after being released from the FSV static tow where relevant.

In case of fire or explosion aboard the Vessel the cargo loading shall immediately cease and the Vessel shall be released from the mooring as expeditiously as possible, maintained clear from other Facilities via assistance from the FSV or other attendant tug as necessary.

Where feasible the Loading Master shall coordinate these and ensuring emergency response procedures with the Master and Person In-charge of Facilities concerned (i.e OIM, Field Supt.,) who retain legal ultimate responsibility for the safety of their facilities, crew and other persons on board.

Each such Facility shall follow the Emergency Response Procedures already in place for that Facility, but retaining internal coordination so as not to prejudice the safety of any other Facility, if applicable.

9.12 Pollution Control

The Vessel shall fully comply with all relevant provisions of the MARPOL Convention, and with all applicable Vietnamese environmental laws.

Any oil leakage or spillage shall be immediately reported to the Loading Master. All loading operations shall be suspended until the cause of the spill is established and remedied, and cleaning completed to the satisfaction of PVEP and any relevant Vietnamese governmental agency. All and any cost incurred by the Vessel by such suspension of operations shall be to the Vessel Owners' account.

Without derogating from the Terminal Handbook provisions, liability for any pollution caused by oil which has passed the first flange of the inlet manifold of the Vessel shall be for the account of, and recoverable from, the Vessel Owners.

The Vessel Owners and Masters are responsible to observe International Convention laws and the Socialist Republic of Vietnam regulation concerning Pollution of the Sea. Any incident of pollution from the tanker within the Ruby Terminal is contravention of the Socialist Republic of Vietnam Regulations.

In the event of escape of oil or oily water from any source, operations must be suspended immediately and every effort made to identify, stop, contain and clean up the pollution. The ECC must be informed via the Loading Master in order that the Oil Spill Contingency Plan can be initiated.

In the event of a major spill, the Terminal Operator reserves the right to mobilize and co-ordinate, on behalf of the Vessel Owner, the National or International Oil Pollution Response Providers. Crude loading operations will not be resumed until such time as the Loading Master and the ECC are satisfied that the cause of pollution no longer exists and that the effected area is sufficiently cleaned and safe.

Oil pollution incidents that occur within the Ruby Terminal area will be fully documented and the necessary documents signed by the Master before transfer is resumed.

The Masters are warned that any breach of the Socialist Republic of Vietnam regulations will render themselves liable to prosecution.

9.13 Completion of Cargo Transfer

The Loading Master or his assistant shall advise the Vessel crew on disconnecting the floating hose, closing-up the hose end, lowering and releasing the hose end to the sea.
Depending on the weather condition, the hose end may be lowered to other support tug for towing to be clear with the Vessel, prior to unmooring.

9.14 Unmooring

The Loading Master shall advise the Master in unmooring procedures, which is dependent on prevalent weather, current conditions and the position of the platforms in relation of the direction of the mooring spread.

The general unmooring pattern however is as follows:

- The Vessel eases the tension from the mooring chain assembly by using her engine, to allow release of the mooring chain from chain stopper. The static-tow tug as still moored to the stern of the Vessel shall tow the Vessel clear from the FPSO, inclusive floating hose, mooring assembly and the platforms.

- Cargo document and samples will normally be transferred from the Terminal to the Vessel via a messenger prior to commencement of unmooring. Otherwise, documents shall be transferred by means of the FSV.

10. EARLY DEPARTURE PROCEDURE (EDP)

For operational and safety reasons, the Terminal may require a Vessel which has completed its loading operations to depart prior to completion of all the following documents served by PVEP.

- The Master should make a written request for EDP and present this to the Loading Master on the arrival of the Vessel.

- The Master shall issue a Letter of Authority to the Agent, with copy to the Loading Master, authorizing the Agent to sign the Bill of Lading and other cargo documentation for and on behalf of the Master once the Bill of Lading and other cargo documentation has been completed.

- After departure of the Vessel, the final density, sediment and water content of the Vessel's cargo shall be determined by PVEP and witnessed by an independent surveyor. This shall be derived from the analysis of the representative sample taken from the metering unit.

- A sealed portion of this sample shall be placed on board the Vessel before departure.

- The Loading Master shall inform the Master of the gross and net cargo (gross vessel cargo less base sediment and water at 15^{o}C) quantity loaded. This will usually be in the form of a faxed, unsigned, non-negotiable Bill of Lading pro forma.

- The Master shall as promptly as possible inform the Agent to sign cargo documentation on his behalf or give such other instructions, as he deems necessary.

- When the cargo documents have been signed by the Terminal and the Agent (on behalf of the Master), a complete set of cargo documents shall be faxed to the Master. These will be:

  * Bill of Lading
  * Certificates of Origin
  * Certificates of Quantity
  * Certificates of Quality
  * Cargo Manifest
  * Tanker Loading Time Report
  * Notification of Departure
  * Receipt for Documents and Samples
  * Notice of Protest (if applicable)

It should be noted that the FPSO metering unit figures are those which shall be inserted on the Bill of Lading and other cargo documentation. However, an independent survey shall still be conducted on board the Vessel to act as back-up should a technical fault occur in the metering unit.

11. TERMINAL FEES AND CHARGES

11.1 Terminal Charge

This is nominal charge, to be made for berthing/loading services supplied by PVEP.
Effective from 1st January 2014, the terminal charge is thirty five thousand (35,000) dollars of USA. (It is referred to Decision No.: 98/2008/QĐ-BTC of Vietnam Ministry of Finance).
The terminal charge will be subject to periodical review and may be varied.

11.2 Charges for Visitors

Visitors who are not PVEP personnel or normally required to attend the offtake operations, regardless of their purposes for the visits, shall reimburse or pay PVEP for all costs incurred in connection with the visits.

ANNEXURE A

INFORMATION RELATING

TO RUBY TERMINAL

1 DESCRIPTION OF FACILITIES

Ruby Marine Exclusion Zone

Ruby Maritime Exclusion Zone (MEZ) is a Restricted Area of maritime shipping activities for Ruby Oil Field. This is the water area bordered by polygon with co-ordinates of vertexes as (shown in diagram E-1):

A.	$10^0$21'54.86" N	$108^0$27'23.11'' E
B.	$10^0$33'50.00''N	$108^0$27'23.11'' E
C.	$10^0$33'50.00"N	$108^0$30'40.00'' E
D.	$10^0$26'55.75'' N	$108^0$40'52.05'' E
E.	$10^0$18'13.21'' N	$108^0$33'05.79'' E

This MEZ, which encompasses the Ruby Oil Field and Facilities, was established by PVEP and granted by Vietnamese Nation Maritime Administration to protect the Facilities avoiding risks of collision cause by passing traffic in the offshore seaway and the fishing boats. Drilling rigs, construction / installation work barges and associated support vessels may be working in the Ruby MEZ.

The coordinates of Facilities at the Ruby Oil Field are as following:

Name of Facility	Latitude	Longitude
FPSO RUBY II	10^o23'09.18" N	108^o30'28.30" E
Platform RBDP-A	10^o23'00.53" N	108^o29'23.11" E
Platform RBDP-B	10^o24'16.863" N	108^o30'29.726" E
Platform PLDP-A	10^o20'49.58" N	108^o32'44.70" E
Platform TPDP-A	10^o26'45.48" N	108^o38'02.25" E
Platform DMDP-A	10^O31'48.525"N	108^O28'55.324"E

Vessels shall also remain alert on planning of seaway traffic to ensure that will be NOT passing the Ruby MEZ.

FPSO RUBY II

FPSO RUBY II is fixed with External Bow Turret Mooring which is permanently anchored at 2000m Eastern of platform RBDP-A. The FPSO is a converted from Crude Oil Tanker 100,024 DWT.

The FPSO is continually receiving crude oil from platforms through multi-pipelines and product risers for processing then storage onboard. Total crude oil storage capacity of FPSO is 600,000 barrels with maximum processing capacity of 45,000 barrels/day. The mooring system is of tandem configuration and capable of handling offtake tankers ranging from 60,000 up to 110,000 DWT (Aframax size).

Tandem berthing performed with the FPSO by utilization of a mooring hawser and chafe chain assembly configuration of 200 tons SWL. Crude oil is offloaded by means of a 270 m x 16" floating export hose with manifold connection of 150# ANSI calm-lock at the tanker's end.

Well Head Platforms

The RBDP-A, RBDP-B, PLDP-A, TPDP-A and DMDP- A are jacket well-head platforms which are installed within Ruby MEZ. Crude oil is transferred from platforms to the FPSO via 10" pipeline and riser.

1.4 Communication with Terminal

VHF Channels	:	08 and 16 < Ruby CCR >
HF call sign	:	9WNB5
Vsat fax	:	84 8 38333572
Vsat tel	:	84 8 38309966 <Ext. 3308>
Inmarsat B tel/fax	:	870 – 764890495 / 764890496
Inmarsat C No	:	870 - 453300926 / 453300927

Vessel's communication with the Terminal shall be made to the Ruby CCR on VHF Ch.08 (Cargo Control Room) or with the Ruby FSV on VHF Ch.16 in the first instance.

Contact by VHF should be established as early as possible. Vessels should report their bearing and distance relative to the FPSO as well as their course and speed.

2 GENERAL INFORMATION

2.1 Charts

International Chart Series Pacific Ocean - South China Sea INT 508 and British Admiralty Chart 3986 and 3987 (Eastern Sea, Southern part) both cover the general area.

2.2 Time

The time zone at the Facilities is UTC plus 7 hours.

2.3 Anchorage – Holding of Anchor

The designated anchorage area for Ruby Terminal is a circular area with a radius of one (1) nautical mile centered on the following position:

Latitude : 10^0 22' 00" N
Longitude: 108^0 37' 00" E

Vessels instructed to wait on anchor for crude oil lifting at Ruby Terminal shall only be in this designated anchorage area.

A summary of the soil stratigraphy of the area is given below:

Reference level : below mud line
From 0 to 0.6 meters: very loose dark greenish gray, very silty clayed sand
From 0.6 to 6.8 meters: firm light brown very silty

2.4 Ruby Crude Oil

The characteristics of the Ruby crude oil are varies between wells and between zones.
Specific details of the crude oil to be lifted will be provided at the time of contracting the Vessel.
The general properties of the crude oil are:

Density at 15°C, g/ml	0.84 –0.85
API° Gravity	35.2 – 36.2
Viscosity at 40°C, cSt	9.0 – 9.5
Pour Point (°C)	27 - 29
Wax content, weight %	3.2
Reid Vapour Pressure, psia	6.4
Temperature range of crude oil (°C)	40 - 45

The crude oil shall require to be heated during transportation.

2.5 Navigation Aids

2.5.1 Ruby field fixed structure lights have been located onboard all platforms: RBDP-A, RBDP-B, PLDP-A, TPDP-A and DMDP-A.

Omni-directional light: White, range 10 nautical miles,
U-morse (short-short-long) every 15second

FPSO RUBY II:	Omni-directional light: White, range 10 nautical miles U-morse (short-short-long) every15 second
Fog horn:	Manual operate U-morse (short-short-long) every 15 second

2.5.2 Temporary obstructions

Temporary obstructions may be caused by drilling rigs which have normally the same Navigation Aid facilities as the Ruby Terminal (FPSO).
Additional structures may be installed in due time.

2.6 Environmental Conditions

2.6.1 Weather seasons
Two monsoon seasons dominate the weather patterns of the location:
Northeast monsoon: November - February
Southwest monsoon: May - September
The weather during the northeast monsoon to be more dominant

2.6.2 Operational criteria for the FPSO (One hundred year survival condition):

– Maximum wave height	14.7 m
– Significant wave height	07.5 m
– Significant wave period	11.1 s
– One minute sustained wind (mean)	50.0 m/s
– One hour average wind speed	39.0 m/s

2.6.3 Criteria for carrying out tandem berthing operation

– Maximum wave height up to:	3.5 m
– Maximum wind speed up to:	35 knots

2.6.4 Criteria for the Vessel remaining tandem moored to the FPSO

– Maximum wave height up to:	4.5 m
– Maximum wind speed up to:	45 knots
– Tandem Mooring Tension up to:	120 tons

2.6.5 Criteria for personnel transfer by boat (FSV):

– Maximum wave height up to:	2.5 m
– Maximum wind speed up to:	27 knots

2.7 Supplies and Services

The Terminal provides **no** logistical support.

At the Ruby Terminal no arrangements are available to supply food, water, fuel, stores. Also no arrangements for shore leave or crew change are available at the Terminal.

Dirty ballast/slops or refuse can not be accepted at the Terminal and under no circumstances can they be discharged to the sea.

2.8 Medical Services

Medical services are limited at the Facilities. In emergencies, medical evacuation to shore can be arranged, which may take three (3) hours or more. The FPSO crew includes a qualified Medic, who can provide Masters with guidance on medical matters. In good weather conditions and if the circumstances are warranted a request may be made to the Field Superintendent for the Medic to visit the Vessel.

2.9 Repairs

Repairs to critical shipboard systems and hot work are not permitted whilst a Vessel is moored at the Terminal. Under no circumstances are the main engines to be disabled for any period of time while the Vessel is tandem-moored to the Terminal.

2.10 Firefighting

The Facilities have only fire-fighting equipment required for their own purposes. Only limited aid may be given to Vessels in the event of fire.

2.11 Pollution Control

The Facilities hold a small quantity of dispersant for pollution control which can be dispensed from the FSV or, subject to call-out delay, from an aircraft should this be necessary. A small quantity of equipment to contain and recover oil from the water shall be held on the Facilities.

2.12 Visitors to the Facilities

Access to the Facilities is by a helicopter flight from Vung Tau to the Facilities. Because of the limited capacity of scheduled flights, the difficulties in arranging extra flights and the severe accommodation constraints onboard the Facilities, the attendance of visitors is not normally possible. Forty-eight hours notice, together with passport details, is required to obtain an offshore travel pass from Vung Tau.

Persons required to visit for lifting purposes will have arrangements made for their travel via the PVEP office in Ho Chi Minh City.

Other persons intending to visit should seek permission via the PVEP Office at least four days before scheduled arrival of the Vessel. Earlier advice would be appreciated.

2.13 Fishing

Due to the presence of subsea facilities that are serviced by divers and Remotely Operated Vehicles, no fishing is permitted within the Ruby Maritime Exclusion Zone.

2.14 Alcohol

Alcoholic drink is not permitted to be available to any person while vessels are in the vicinity or at the Ruby Terminal.

ANNEXURE B

CONDITIONS OF USE

CONDITIONS OF USE

The followings are the Terms and Conditions of Use of the Facility Services provided by PVEP at the Ruby Terminal as agreed

BETWEEN: **PVEP (PVEP)**
Royal Centre, 235 Nguyen Van Cu Str., Dist.1, Ho Chi Minh City, Vietnam.

AND .....
Master of the ("Vessel"), acting for and on behalf of the Vessel Owners.

The parties agree as follows:

1. DEFINITIONS AND INTERPRETATION

Words and phrases defined in the Terminal Handbook and used in these Conditions of Use, unless the contrary intention appears, have the same meaning herein.

2. PROVISION OF FACILITY SERVICES

Subject to the Terminal Handbook provisions including these Conditions of Use, PVEP agrees to the Vessel approaching and berthing at the Terminal and to providing Facility Services to the Vessel.

3. NO LIABILITY BY PVEP

The parties agree that, in permitting the Vessel to approach and berth at the Terminal and in providing Facility Services to the Vessel, PVEP and its employees or agents shall not be responsible for or liable to the Vessel Owners in respect of:

(i) any death, personal injury or illness of any person;

(ii) loss of or damage to any property of any person (including particularly the Vessel and all property and cargo on board);

(iii) delay of any description

howsoever arising irrespective of whether or not caused or contributed to by the negligence of PVEP or its employees or agents and whether directly or indirectly in consequence of the provision or performance of (or failure to provide or perform) any Facility Services, and Vessel Owners shall indemnify and hold PVEP harmless from all actions, proceedings, suits, claims, demands, damages, losses, costs, charges, expenses (including legal fees) and government fines arising therefrom.

4. NO WARRANTY AS TO SAFETY AND SUITABILITY

Whilst PVEP endeavours to ensure that the Facilities and Facility Services are safe and suitable for the Vessel, PVEP makes no warranty or representation (express or implied) as to the safety or suitability or otherwise in respect of the same

5. POWER OF THE LOADING MASTER

The parties agree that the Loading Master may withhold the commencement of, suspend or terminate the provision or performance of Facility Services, or take such action as he thinks fit (which, without limitation, shall include the right to order the Vessel to leave the berth and to prohibit the Vessel from berthing or re-berthing) if in his reasonable judgement:

(a) the Vessel fails, or is likely to fail, to comply with any provision or requirement of the Terminal Handbook or the OCIMF standards; or
(b) the Vessel is not, or is likely not to be, fit to berth or load at the Terminal due to a likely compromise of the safety and/or environmental integrity of the Terminal, or the Vessel is likely to adversely affect the operational efficiency or capability of the Terminal.

(c) such action is necessary due to landing or departure at the Terminal of a helicopter; or

(d) the weather or other safety conditions exceed, or are likely to exceed, normal limits for safe operations; or

(e) the Master of Vessel wishes to undertake repairs to the Vessel.

PVEP shall not be liable for any and all costs, losses and damages arising therefrom which shall be to the Vessel Owners' account.

6. PERSONNEL

All personnel employed or contracted by PVEP in connection with the provision or performance of Facility Services are supplied upon the condition that in so providing or performing, each shall be deemed a servant or contractor of the Vessel in every respect and not the servant or contractor of PVEP. The presence of such personnel in or about the Vessel and their provision or performance of Facility Services in no way relieves the Vessel (and in particular the Master of the Vessel) of any obligation, responsibility or liability in connection with the safety, condition, operations or proper navigation of the Vessel or of its personnel, property and cargo.

7. RESPONSIBILITY FOR VESSEL

Vessel Owners (and in particular the Master of the Vessel) shall at all times remain solely responsible for the safety, condition, operations and proper navigation of the Vessel and its crew, and all property and cargo on board the Vessel. Without limiting the generalities of the foregoing, the Master is solely responsible for navigation, berthing, mooring and unmooring, manoeuvring, connecting and disconnecting the Terminal's floating hose to the Vessel's manifold, ballasting, prevention and control of pollution or contamination, pollution or contamination remediation, and safety.

8. RESPONSIBILITY FOR POLLUTION

Vessel Owners shall at all times:

8.1 remain responsible for any liability for pollution or contamination or the direct or indirect consequences of same (including, without limitation, death, injury or illness of any person, loss or damage to property, statutory and civil liability for penalties and/or damages, liability to all persons having a claim against the Facilities, PVEP and/or the Vessel Owners) where such pollution or contamination occurs as a result of the escape, for whatever reason, of crude oil or any other pollutant from the Vessel; and

8.2 indemnify and hold PVEP harmless against all actions, suits, proceedings, claims, demands, damages, liabilities, losses, costs or expenses of whatsoever nature arising in connection with any pollution or contamination occurring as a result of the escape of crude oil or other pollutants from the Vessel.

9. POWER OF PVEP TO DEAL WITH VESSEL

Subject to applicable Vietnamese Laws, the parties agree that if the Vessel or part thereof sinks, becomes a constructive loss, or otherwise becomes, in the opinion of PVEP, an obstruction or danger to any part of the Facilities, or the approaches thereto, or any sub-sea installations related or connected to the Facilities, and the Master or the Vessel Owners fail for any reason to remove such obstruction or danger within such reasonable time as may be required by PVEP, then PVEP shall be empowered to take all such necessary actions as may be required to effect removal of the obstruction or danger (or to otherwise deal with it to that end) at the sole risk, cost and expense of the Vessel Owners and such cost and expense shall be recoverable as a debt presently due, owing and payable to PVEP. Where the Vessel is abandoned by the Vessel Owners, the Vessel Owners shall still remain liable to PVEP notwithstanding such abandonment.

10. COMPLIANCE WITH VIETNAMESE LAWS

Vessel Owners and Master undertake:

(i) that the Vessel, all its crew and passengers shall strictly observe, perform and comply with all applicable Vietnamese laws while they are in Vietnamese territorial waters; and

(ii) to indemnify and keep PVEP indemnified and harmless against all actions, suits, proceedings, claims, demands, damages, liabilities, losses, costs or expenses of whatsoever nature rising as a result of a breach of Vietnamese laws by the Vessel or any of its crew or passengers.

11. APPLICABLE LAWS AND DISPUTE RESOLUTION

11.1 Applicable Law

Except for any matter which is necessarily subject to and exclusively regulated by the laws of the Socialist Republic of Vietnam, these Conditions of Use shall be governed by, construed, interpreted and applied in accordance with the laws of England, excluding any choice of law rules which would refer the matter to the laws of another jurisdiction.

11.2 Arbitration

(a) Any dispute, controversy or claim arising out of or in relation to or in connection with these Conditions of Use, including without limitation any dispute as to the construction, validity, interpretation, enforceability or breach of these Conditions of Use, shall be exclusively and finally settled by arbitration in London by three (3) arbitrators, in accordance with the Conciliation and Arbitration Rules of the International Chamber of Commerce.

(b) The right to arbitrate disputes, controversies or claims shall survive the expiration of these Conditions of Use.

12. WARRANTY BY MASTER

The Master represents and warrants and PVEP relies on his representation and warranty that the Master:

(i) is authorised by the Vessel Owners to bind the Vessel Owners and to accept, observe, perform and comply with the Terminal Handbook provisions including these Conditions of Use for and on behalf of the Vessel Owners;

(ii) has a copy of the current Terminal Handbook on board;

(iii) has read and understood the Terminal Handbook including these Conditions of Use

(iv) accepts and agrees to observe, perform and comply with the Terminal Handbook provisions.

(v) while the Vessel is at or in the vicinity of the Terminal, shall grant an Independent Surveyor access to the Vessel's cargo tank gauging system for purposes of verifying the volume of cargo loaded at the Terminal.

(vi) shall grant access to the Vessel for any or all of those persons and officials required to attend the Vessel for purposes associated with crude lifting operations at the Terminal, listed in clause 6.9 of the Terminal Handbook.

13. EFFECTIVENESS

These Conditions of Use take effect on signing by the Master and expire when the Vessel no longer requires Facility Services to be provided or performed, departs and is at least 10 nautical miles from the Terminal.

For the avoidance of doubt, the parties confirm that the signing of these Conditions of Use does not obviate the need for the Vessel to be vetted and accepted by PVEP in accordance with the Terminal Handbook provisions.

EXECUTED as an agreement on this day.....

ACCEPTED by the)
Master for and on behalf)
of the Vessel Owners) _____

ACKNOWLEDGED by the)
Loading Master for and on behalf)
of PVEP) _____

ANNEXURE C

VESSEL SAFETY CHECKLIST

RUBY TERMINAL - VESSEL SAFETY CHECKLIST

Vessel's Name: .....

Date/Time of arrival: .....

Instructions for completion:

The safety of operations requires that all answers should be answered affirmatively ☐ in the appropriate box. If an affirmative answer is not possible, the reason should be given and agreement reached upon appropriate precautions taken between the Vessel and the Terminal. Where any question is not considered to be applicable, then a note to that effect should be inserted in the remarks column.

- The presence of this symbol ☐ in the columns V (Vessel) and T (Terminal) indicates that the checks shall be carried out by the party concerned.

The presence of the letters **A, P** or **R** in the column 'Code' indicates the following:

- **A** - A procedures and agreements should be in writing in the remarks column of this Checklist or other mutually acceptable form. In either case, the signatures of both parties should be required.

- **P –** In case of negative answer the operation shall not be carried out without the permission of the Mooring Master.

- **R** - Indicates items to be re-checked at intervals not exceeding that agreed in the declaration

Part 'A' – Bulk Liquid General – Physical Checks

Bulk Liquid - General		V	T	Code	Remarks
1	There is safe access between Vessel and Terminal?	☐	☐	R	
2	Is the Vessel securely moored?	☐	☐	R	
3	The agreed Vessel/ Terminal communication system is operative	☐	☐	A R	System: Backup system:
4	Emergency towing – off pennants are correctly rigged and positioned	☐	☐	R	
5	The Vessel's fire hoses and fire fighting equipment positioned and ready for immediate use?	☐		R	
6	The Terminal's fire fighting equipment is positioned and ready for immediate use?		☐	R	
7	The Vessel's cargo and bunker hoses, pipelines and manifolds are in good condition. Properly rigged and appropriate for the service intended.	☐			

8	The Terminal's cargo and bunker hoses or arms are in good condition properly rigged and appropriate for the service intended.		☐		
9	The cargo transfer system is sufficiently isolated and drained to allow safe removal of blank flanges prior to connection.	☐	☐		
10	Scuppers and save - all on board are effectively plugged and drip trays are in position and empty	☐		R	
11	Temporarily removed scupper plugs will be constantly monitored	☐		R	
12	Shore spill containment and sumps are correctly managed		☐	R	
13	The ships unused cargo and bunker connections are properly secured with blank flanges fully bolted.	☐			
14	The terminals unused cargo and bunker connections are properly secured with blank flanges fully bolted.		☐		
15	All cargo, ballast and bunker tank lids are closed	☐			
16	Sea and overboard discharge valves, when not in use, are closed and visibly secured	☐			
17	All external doors, ports and windows in the accommodation, stores and machinery spaces are closed. Engine room vents may be opened.	☐		**R**	
18	The Vessel's emergency fire control plans are located externally.	☐			

If the ship is fitted, or required to be fitted, or required to be fitted, with an inert Gas System (IGS) the following points should be physically checked.

Inert Gas System		**V**	**T**	**Code**	**Remarks**
19	Fixed IGS pressure and oxygen content recorders are working	☐		R	
20	All cargo tank atmospheres are at positive pressure with oxygen content of 8% or less by volume	☐		P,R	

Part 'B' – Bulk Liquid General – Verbal Verification

Bulk Liquid - General		**V**	**T**	**Code**	**Remarks**
21	The Vessel is ready to move under its own power?	☐		P,R	
22	There is an effective deck watch in attendance on board and adequate supervision of operations on the ship and in the terminal.	☐	☐	R	

23	There are sufficient personnel on board and ashore to deal with an emergency.	☐	☐	R	
24	The procedures for cargo, bunker and ballast handling have been agreed	☐	☐	A R	
25	The emergency signal and shutdown procedure to be used by the ship and shore have been explained and understood	☐	☐	A	
26	Material safety data sheets (MSDS) for the cargo transfer have been exchanged where requested.	☐	☐	P R	
27	The hazards associated with toxic substances in the cargo being handled have been identified and understood	☐	☐		
28	An International Shore Fire Connection has been provided.	☐	☐		
29	The agreed tank venting system will be used.	☐	☐	A R	Method:
30	The requirements for closed operations have been agreed.	☐	☐	R	
31	The operation of the P/V system has been verified.	☐			
32	Where a vapour return line is connected, operating parameters have been agreed.	☐	☐	A, R	
33	Independent high level alarms, if fitted, are operational and have been tested.	☐		A, R	
34	Adequate electrical insulating means are in place in the ship/shore connection.		☐	A R	
35	Shore lines are fitted with a non - return valve or procedures to avoid ‘back filling’ have been discussed.		☐	P R	
36	Smoking rooms have been identified and announcement over PA to remind crew that smoking requirements are to be observed.	☐	☐	A R	
37	Naked light regulations are being observed.	☐	☐	A R	
38	Ship/shore telephones, mobile phones and pager requirements are being observed.	☐	☐	A R	
39	Hand torches (flashlights) are of an approved type.	☐	☐		
40	Fixed VHF/UHF transceivers and AIS equipment are on the correct power mode or switched off.	☐			
41	Portable VHF/UHF transceivers are of an approved type	☐	☐		
42	The ships main radio transmitter aerials are earthed and radars are switched off.	☐			
43	Electric cables to portable electrical equipment within the hazardous area are disconnected from power.	☐	☐		
44	Window type air conditioning units are disconnected.	☐			

45	Positive pressure is being maintained inside the accommodation, and air conditioning intakes, which may permit the entry of cargo vapours, are closed	☐			
46	Measures have been taken to ensure sufficient mechanical ventilation in the pump room.	☐		**R**	
47	There is provision for an emergency escape.	☐	☐		
48	The maximum wind and swell criteria for operations has been agreed.	☐	☐	**A**	*Stop cargo at:* *Kts* *Disconnect Hose at:* *Kts* *Unberth at:* *Kts*
49	Security protocols have been agreed between the Ship Security Officer and the Port Facility Security Officer, if appropriate.	☐	☐	**A**	
50	Where appropriate, procedures have been agreed for receiving nitrogen supplied from shore, either inerting or purging ships tanks, or for line cleaning into the ship	☐	☐	**A P**	

If the ship is fitted, or required to be fitted, with an inert Gas System (IGS) the following statements should be addressed

	Inert Gas System	**V**	**T**	**Code**	**Remarks**
51	The IGS is fully operational and in good working order.	☐		P	
52	Deck seals, or equivalent, are in good working order.	☐		R	
53	Liquid levels in pressure/vacuum breakers are correct.	☐		R	
54	The fixed and portable oxygen analysers have been calibrated and are working properly	☐		R	
55	All the individual tank IGS valves (if fitted) are correctly set and locked.	☐		R	
56	All personnel in charge of cargo operations are aware that in the case of failure of the Inert Gas Plant, discharge operations should cease, and the terminal be advised	☐			

If the ship is fitted with a crude oil washing (COW) system, and intends to crude oil wash, the following statements should be addressed.

	Crude oil Washing	**V**	**T**	**Code**	**Remarks**
57	The Pre-Arrival COW checklist, as contained in the approved COW manual, has been satisfactorily completed.	☐			

58	The COW check lists for use before, during and after COW, as contained in the approved COW manual, are available and being used.	☐		R	

If the ship is planning to tank clean when staying at terminal, the following statements should be addressed:

Tank Cleaning		V	T	Code	Remarks
59	Tank cleaning operations are planned during the ships stay alongside the shore installation.	Yes/No*			
60	If yes the procedures and approvals for tank cleaning have been agreed.	Yes/No*	Yes/No*		
61	Permission has been granted for gas freeing operations.	Yes/No*	Yes/No*		

**** Delete Yes or No As appropriate***

Declaration:

We, the undersigned, have checked, where appropriate jointly, the items on this checklist, and have satisfied ourselves that the entries we have made are correct to the best of our knowledge.

We have also made arrangements to carry out repetitive checks as necessary and agree that those items with the letter "R" in the column **"Code"** should be re – check at intervals not exceeding..... .hours.

If to our knowledge the status of any items changes, we will immediately inform the other party.

For Ship		**For Terminal**	
Name		**Name**	
Rank		**Rank**	
Signature		**Signature**	
Date		**Date**	
Time		**Time**	

Record of Re-checks

For Ship			**For shore**		
Date	**Time**	**Signature**			

ANNEXURE D

VESSEL QUESTIONNAIRE

LIFTING TANKER QUESTIONNAIRE

TO: **Ruby Terminal Operator (PVEP)**.

Petronas Tower, Royal Centre, 235 Nguyen Van Cu Str, Dist.1, HCMC, Vietnam.

ATTN.: Marine Manager

FAX: 848 3833 3589 / 848 38309988

FROM: _____

DATE: _____

The following vessel details are required prior to acceptance to lift crude oil by tandem mooring from Ruby Terminal, offshore Vietnam.

NOTES:

1) **A legible copy of the forecastle deck arrangement plan shall be supplied showing the proposed mooring lead from the bow fairlead to the winch drum.**

   The plan shall be signed by an Owner's representative with the company name noted and dated to acknowledge that the plan is accurate and that all equipment shown is operable and in service.
   (Hand drawn sketches or drawing revisions are not accepted).

2) **For YES or NO answers, tick the box that applies.**

3) **The completed Questionnaire and the forecastle (or other) plan shall be copied to the Master of the Vessel.**

ACKNOWLEDGMENT OF THE STATED INFORMATION

All information stated in this questionnaire is accurate at the date of completion shown below;

Signed .....Dated .....

Position .....Name .....

SECTION 1: GENERAL VESSEL DETAILS

1. Name of vessel: …… ……Previous names, if any: ……
2. Type of vessel: (Crude Oil Tanker, Product Oil Tanker, Oil/Bulk/Ore, Bulk/Oil Carrier)…… ……..
3. Call sign / IMO number: .....
4. Port of Registry and Flag: .....
5. Year/ Place of build:…….
6. LOA / Summer Dead Weight: .....
7. INMARSAT: Telephone…….. ……..Fax: ……
8. Name of Owner / Operator: ……
9. Registered Office Address:…….
10. Does the Vessel comply with the requirements of the ITF agreement? YES ☐ NO ☐
11. Protection & Indemnity (P & I) Club insuring the Vessel: ……
12. What is the Pollution Liability Insurance limit (Include supplementary limit)? .....
13. (a) Is the Vessel Owner a member of the ITOPF or INTERTANKO YES ☐ NO ☐

    (b) Does the Vessel have a valid Civil Liability Convention Insurance certificate

    that is valid through loading date and may be inspected at the terminal? YES ☐ NO ☐
14. Does the Vessel operate a management system certified to ISO 9001 or equivalent? YES ☐ NO ☐
15. Does the Vessel have in place a Drug and Alcohol Policy complying with

    the OCIMF guidelines for the Control of Drugs and Alcohol Onboard Ship? YES ☐ NO ☐
16. Nationality of Master, officers and crew: ……..

    .....
17. What were the last three cargos? (Which was carried out by SPM or tandem mooring method)

    1) Cargo, Port and Date: ……..
    2) Cargo, Port and Date:.....
    3) Cargo, Port and Date:.....
18. What will be the Vessel's last port of call prior to the Ruby Terminal?.....
19. Has the Vessel visited Ruby Terminal previously? YES ☐ NO ☐
20. Has the Vessel had Ruby Terminal Handbook onboard? YES ☐ NO ☐
21. Has the Vessel been inspected by Petronas Maritime Services Sdn Bhd? YES ☐ NO ☐

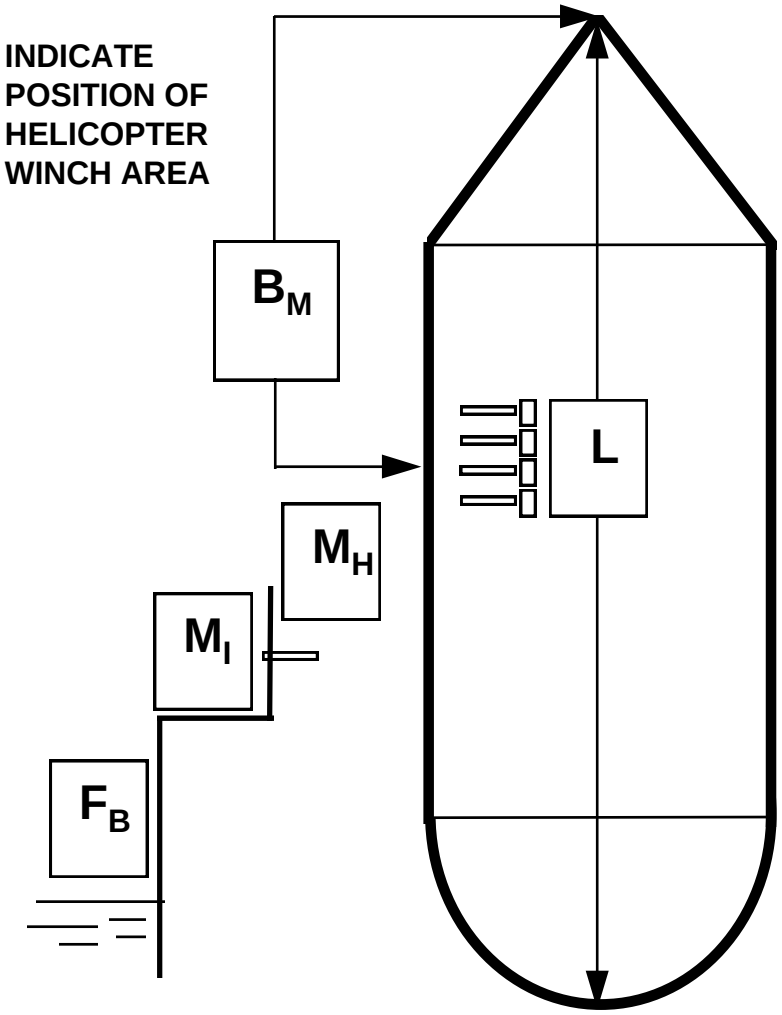
    If YES please give details and date of inspection……

All information stated on this drawing is accurate at the date of completion shown below;

Signed .....Dated .....

Position .....Name .....

FOR TANDEM HOSE CONNECTION



L **Length**
B_M **Bow to centre of manifold**
F_B **Arrival Freeboard**
M_I **Distance inboard of manifold**
M_H **Manifold height above deck**

Figure 1 - GENERAL DIMENSIONS

SECTION 2: CARGO HANDLING FACILITIES

1. Diameter of manifold: ……
2. Does manifold/associated equipment comply with the OCIMF
   "Standards for Oil Tanker Manifolds & Associated Equipment" YES ☐ NO ☐
   (If NO, what does not comply with? .....)
3. Type /Number and SWL of Crane / Derrick at manifold: .....
   (If a Derrick type, an attached photograph is requested)
4. Cargo Tank capacity at 98% full? : .....
5. Maximum loading rate (m^3/hr) through 1 x 16" connection? : .....
6. Has the Vessel segregated ballast tanks (SBT)? YES ☐ NO ☐
7. Has Vessel heating coils able to maintain temperature of cargo at 45^oC? YES ☐ NO ☐

SECTION 3: TANDEM MOORING

1. Has Vessel a bow fairlead on the forecastle for acceptance of the mooring chain? YES ☐ NO ☐
   Dimensions of the bow fairlead that shall be used for the mooring chain……
2. Has Vessel a chain stopper that complies with the latest editions of OCIMF
   "Recommendations for Equipment Employed in the mooring of ships at SPM"? YES ☐ NO ☐
3. What is the certified Safe Working Load of the Bow chain stopper? .....
4. Can chain stopper accept 76mm diameter mooring chain YES ☐ NO ☐
5. Distance from bow fairlead to chain stopper (m)? ……..
6. What is the lifting capability of the windlass / mooring winch (tons)? .....
7. Does the lead of the pick-up rope of mooring chain allow it to be hauled from bow-fairlead via the chain stopper onto an empty drum (not drum end) of windlass/winch by a direct route without acute angles (less than 90) and all deck-rollers to be used (maximum of 3) free to rotate? YES ☐ NO ☐
8. Can the drum of windlass/winch have capacity to accept one pick-up line of 200m (length) x 80 mm (diameter) polypropylene rope? YES ☐ NO ☐

SECTION 4: PUBLIC TRANSPORT HELICOPTER WINCHING

1. Does the Vessel have a winching area suitable for a Super Puma Mark.2
   (As shown in Figure 2 on Page 38)? YES ☐ NO ☐
2. If NO, can an area on the Vessel be identified and set aside for the
   above winching area? YES ☐ NO ☐
3. Where is the winching area located? Indicate on figure 1 on page 37.
4. Obstructions:
   a) Plot all obstructions within Maneuvering Zone on figure 2 and state their heights.
   b) b) Are obstructions in the MZ marked with bright contrasting colours? YES ☐ NO ☐
5. Is the following fire fighting equipment or its equivalent available for operations?
   a) At least two dry powder extinguishers with capacity of not less than 45Kg YES ☐ NO ☐
   b) Foam application system (fixed or portable) capable of delivering
      a foam solution at a rate of 6 litters per minute, for at least five minutes YES ☐ NO ☐
   c) Carbon Dioxide (CO_2) extinguishers with capacity of not less than 18Kg YES ☐ NO ☐
   d) Deck water system capable of delivering at least two jets of water to any
      part of the helicopter operating areas? YES ☐ NO ☐
   e) At least two fire hose nozzles of the dual purpose type? YES ☐ NO ☐
   f) Fire resistant blankets and gloves? YES ☐ NO ☐
   g) Fire proximity protective suits? YES ☐ NO ☐
   h) At least two self contained breathing apparatus sets? YES ☐ NO ☐
   i) Is all fire fighting equipment inspected, tested? YES ☐ NO ☐
6. Is the following rescue and medical equipment in serviceable condition and
   close to the helicopter operating area?
   a) Large axe, Crow bar, Wire/Bolt Cutter YES ☐ NO ☐
   b) First aid equipment YES ☐ NO ☐
7. Is the following level of manning available for all helicopter operations?
   a) Deck party Officer in Charge YES ☐ NO ☐
   b) At least one person wearing a fire suit and two persons
      to attend fire fighting equipment and to act as rescue party YES ☐ NO ☐
8. Is the ICS latest edition-“Guide to Helicopter/Ship operations”, onboard? YES ☐ NO ☐
9. Does the P & I insurance mentioned in Section 1 cover the aviation operations? YES ☐ NO ☐
10. How many helicopter operations has the Vessel handled in the last 12 months? .....

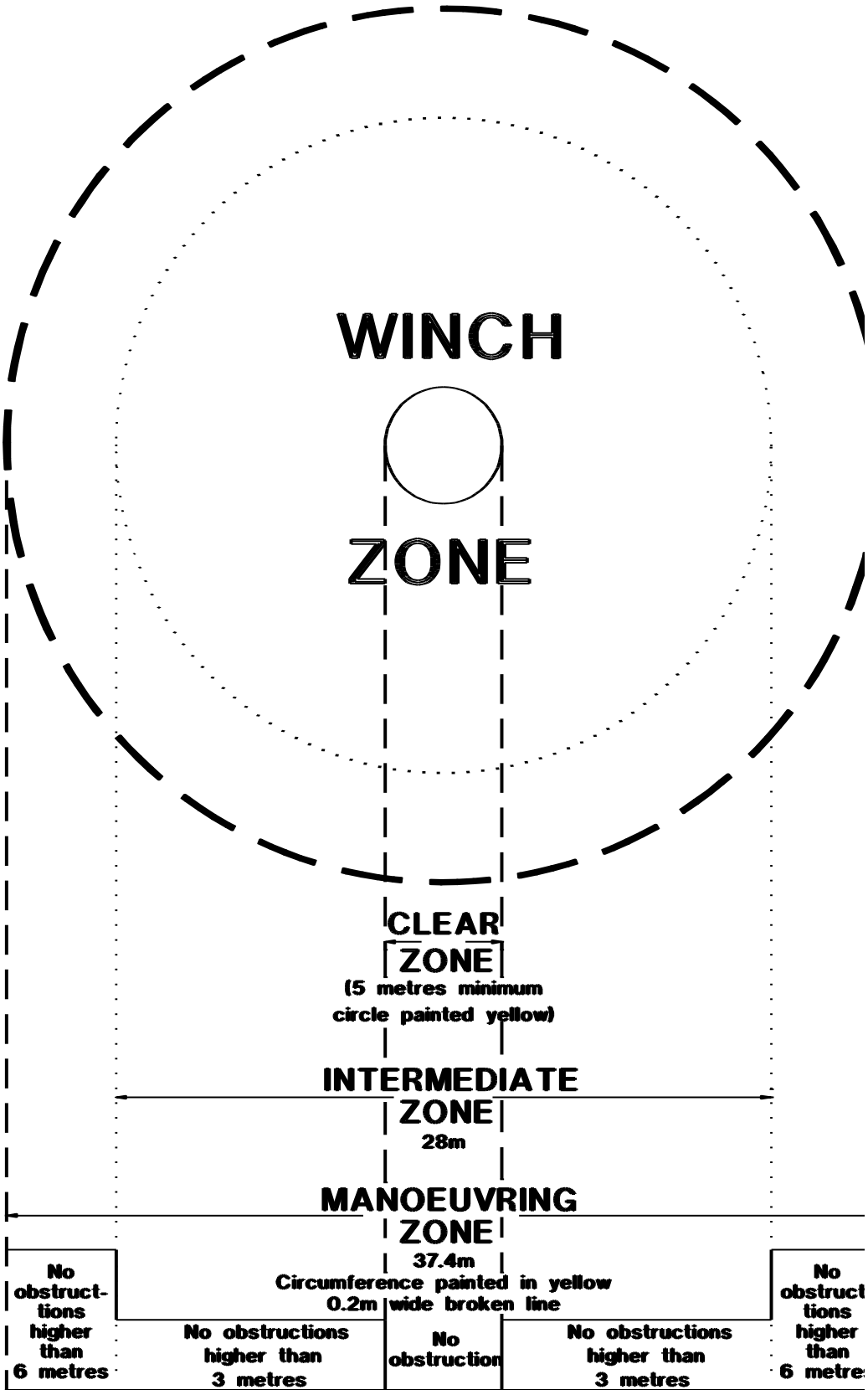


Figure 2 - REQUIRED HELICOPTER WINCHING ZONE LAYOUT

ANNEXURE E

DIAGRAMS