



# ABU - WA Oil Barrow Island

## CBM Marine Terminal Manual

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## **1.0 Introduction**

The Barrow Island CBM Marine Terminal is located on the eastern side of Barrow Island.

### **1.1 Purpose**

The purpose of this Manual is to outline the general nature of conditions, facilities, services and regulations at the Barrow Island CBM Marine Terminal.

It does not replace or modify official publications such as Australian Pilot Books or Admiralty Charts covering the waters or subjects to which it pertains.

Moreover, although reasonable care has been taken in its preparation, Chevron neither warrants the accuracy of information herein, nor assumes responsibility for the consequences of using it regardless of purpose. Regarding any matter in question, it is the responsibility of port callers to request and obtain the necessary clarification.

Information furnished herein may be revised from time to time. It is the further responsibility of users to ensure that they are using the latest version.

### **1.2 Scope**

The scope of this document includes the Barrow Island CBM Marine Terminal used to load out crude oil for WA Oil Operations.

### **1.3 Objectives**

The objective of this Manual is to provide the operational personnel a single point of reference for the location of all operations associated with the Barrow Island CBM Marine Terminal.

### **1.4 Target Audience**

This Manual is intended for use by owners, charterers, and Masters of vessels calling at the Barrow Island CBM Marine Terminal

## 2.0 Condition of Use

### 2.1 Definitions

The Barrow Island CBM Marine Terminal facilities are operated by Chevron.

Facilities and assistance provided by Chevron in connection with the Terminal, whether or not any charge is made for such facilities or assistance, are provided subject to the following conditions:

- 2.1.1 Neither Chevron nor its officers, employees, servants, contractors and agents shall be responsible for any injury, death, loss, damage or delay from any cause arising in consequence of any assistance, advice, or instructions given or tendered in respect of any Tanker, whether by way of pilotage, berthing service, the provision of navigational facilities (including buoys or other markings), or for any other reason. In all circumstances, the Master of any Tanker shall remain solely responsible for the safety, condition and proper navigation of his Tanker.
- 2.1.2 While Chevron will take all reasonable steps that may be necessary to ensure that the Terminal berth, facilities, property, gear, craft and equipment provided are safe and suitable for Tankers permitted or invited to use them, no guarantee or warranty of such safety or suitability is given. Chevron and its officers, employees, servants and agents shall not be responsible for, and the Tanker Owners and charterers hereby agree to hold harmless and indemnify Chevron and its officers, employees, servants and agents from and against any claim, liability, or demand in respect of any injury, illness, or death of, or for any damage to or destruction of the property (including the Tanker and its cargo) belonging to the Tanker Owners or charterers, the Master, officers, crew, passengers, onboard contractors, or any other persons assisting the Tanker, and for any demurrage or similar claim for delays in loading, regardless of how the same may arise and regardless of whether it arises solely or partially by an act or omission on the part of any servant, agent or subcontractor of Chevron, or by any fault or defect in the Terminal, Berth, facilities, property, gear, craft or equipment of any sort. This applies notwithstanding any negligence on the part of Chevron, its officers, employees, servants, or agents; provided however that Chevron shall not be entitled to the benefit or protection of this clause if the Tanker Owner or charterer prove (the burden of proof being on them) that Chevron has not taken all reasonable and necessary steps to ensure that the Terminal berth and its facilities, property, gear, craft, and equipment are safe as aforesaid.
- 2.1.3 Neither Chevron nor its officers, employees, servants or agents will be liable or responsible for any loss, damage or delay, directly or indirectly caused by, or arising from war, riots, civil commotions, acts of terrorism, or sabotage, strikes, labour disputes, disturbances, lockouts, stoppages (whether they are a party thereto or not) or any refusal by any person (whether an officer, employee, servant or agent of Chevron or not) to perform their duties, or delays of any description howsoever caused or arising, including by the negligence of Chevron or its officers, employees, servants, contractors or agents.
- 2.1.4 If, in connection with, or by reason of the use by any Tanker of the Berth, any part of the Terminal facilities, or of any gear, or equipment provided by Chevron, or of any craft, or of any other facility, or property, of any sort whatsoever, belonging to or provided by Chevron, is damaged or lost, Chevron, or any officer, employee, servant, contractors or agent of Chevron suffers any injury, illness or death, then unless the Owners of the

Tanker and its charterers prove (the burden of proof being on them) that the damage, loss, injury or death was solely caused by the actual fault of Chevron or its officers, employees, servants, agents or subcontractors the Owners of the Tanker and its charterers shall hold Chevron harmless from and indemnify it against all claims arising therefrom and against all such damage or loss and the Tanker Owners and charterers agree not to invoke any statutory right of a ship-owner to limitations of civil liability in respect of any claim relating to the indemnities agreed to herein.

- 2.1.5 The Tanker Owners and charterers shall hold Chevron harmless from and indemnify it against all and any claims, damages, costs and expenses, of every kind and character, including those arising from pollution, injury to or death of any third parties, or for damage or for loss of property sustained by third parties, unless the Tanker Owner or charterer prove (the burden of proof being on them) that Chevron has not taken all reasonable steps to ensure that the Terminal berth and its facilities, property, gear, craft and equipment are safe.
- 2.1.6 The liability of the Owner and charterer of the Tanker as specified in this section shall be independent of fault and in particular but without limiting the generality of the foregoing the Owner and charterer shall not be relieved of any liability as aforesaid by reason that:
- a. such Tanker was under Pilotage at the time any damage, injury or mischief was caused as aforesaid whether or not such Pilotage was compulsory and whether or not the Pilot/ Mooring Master was an employee or contractor of Chevron; or
  - b. such damage, injury or mischief was caused or contributed to by force majeure or act of God.
  - c. The liability of the Owner and charterer shall extend to all damages, expenses or loss sustained by or occasioned to Chevron, its employees, contractors or agents by the aforesaid damage, injury or mischief.
- 2.1.7 The Master of a Tanker shall be wholly responsible at all times for the proper performance and observance of these conditions and procedures and for the proper conduct and safety, navigation, management and control of his or her Tanker and for his or her and the Owner's obligations to third parties and to Chevron even though the Tanker may be under Pilotage and whether or not the pilot is a compulsory pilot. Any Pilot/Mooring Master (PMM) aboard the Tanker whether or not he or she is a compulsory Pilot or Mooring Master shall at all times whilst he or she is aboard the Tanker be deemed to be the servant of the Owner of the Tanker and of its Master and the services duties and functions performed by the PMM shall be advisory only. Subject to these procedures and conditions, the Master shall decide what service he or she requires from the PMM. In accordance with the Pilot Limitation of Liability Act 1962 (WA), neither Chevron nor the PMM nor their servants shall be liable for any act neglect omission or want of skill on the part of the PMM.
- 2.1.8 Chevron shall not be liable for any damage to a Tanker or loss sustained by its Owner or charterer due to failure or refusal to provide a Mooring Vessel or Tug, delay in providing a Mooring Vessel or Tug, the inadequacy of the Mooring Vessel or Tug for the purpose required, or for any damage injury expense or loss caused in any way by the action, neglect or default of a Mooring Vessel or Tug, its master or crew all of whom shall be deemed to be the servants of the Owner of the Tanker. This applies notwithstanding any negligence on the part of Chevron or its officers, employees, servants, contractors or agents; provided however that Chevron shall not be entitled to the benefit or protection

of this clause if the Tanker Owner or charterer prove (the burden of proof being on them) that the loss, damage or claim has been solely caused by the failure of Chevron, and due to the actual fault and privity of Chevron, to make the Mooring Vessel or Tug seaworthy to act as a mooring vessel or Tug.

- 2.1.9 No act, matter or thing done or omitted to be done by Chevron or by any person acting with the authority of Chevron, or by any person whomsoever, for the purpose of the construction, management, operation, maintenance and use of any port facilities or of the Marine Terminal or approaches thereto or for the purposes of regulating, mooring, moving, directing or managing Tankers at the Marine Terminal and approaches thereto or for the purposes of handling accommodating or moving cargo or persons shall subject Chevron, its employees, contractors or agents to any liability in respect thereof, provided that nothing herein shall affect or diminish any liability of any person to Chevron.
- 2.1.10 If any Tanker sinks, grounds, or otherwise becomes, in the opinion of Chevron, an obstruction or danger to any part of the Terminal, or the approaches thereto, and the Owner or Master of the Tanker fails to remove the obstruction or danger within such reasonable time as may be specified by Chevron, then Chevron shall be empowered to take any actions it deems necessary to remove the obstruction or danger, and the cost of such removal shall be recoverable from the Owner of the Tanker at the time of the incident causing the danger or obstruction.
- 2.1.11 The Master, or person in charge of the Tanker, shall from time to time, place, transport, and remove the Tanker at or from the Berth, as the Terminal Operator shall reasonably require for the proper and efficient use of the Terminal.
- 2.1.12 The Barrow Island CBM Marine Terminal will be closed when weather or other conditions in the opinion of Chevron make for unsafe berthing, and a Notice of Readiness will not be accepted during periods when the Barrow Island CBM Marine Terminal is closed. All decisions regarding the opening and closing of the Terminal shall be made at the discretion of Chevron, but if the Terminal is closed, this will be noted on the Operations Log.
- 2.1.13 Chevron reserves the right at its discretion to refuse to berth a specific Tanker if in the opinion of Chevron, conditions or facilities are unsafe for berthing or loading, even though the berth may be open to other Tankers. If a Tanker is rejected for any reason, the Terminal will supply the Tanker and Owners/charterers with written reasons for non-acceptance. The decision of Chevron to permit a Tanker to berth shall be final. On receipt of such permission, berthing will be at the discretion of the Master in agreement with the PMM.
- 2.1.14 In addition to the conditions stated above, all services provided by Chevron including towing, piloting and berthing services are provided subject to the United Kingdom Standard Conditions for Towage and Other Services (Revised 1974), and those Standard Conditions are hereby expressly adopted and incorporated into these Conditions of use. For the purpose of those Standard Conditions:
- a. The term "Tugowner" means Chevron and its officers, employees, servants contractors and agents;
  - b. the term "Hirer" means the Tanker Owner and the charterer;
  - c. the term "Tender" includes the Mooring Vessels; and



d. "any service other than towing" and similar expressions used in the Standard Conditions include piloting services and the services provided by the mooring vessels. The *United Kingdom Standard Conditions for Towage and Other Services (Revised 1974)* are contained in [Appendix G](#)

2.1.15 All questions arising out of these procedures and conditions as to their validity, interpretation, performance or breach shall be governed by the law of the State of Western Australia and the parties agree to submit to the jurisdiction of the Courts of that State.

### 3.0 General Information

This section provides general information about the Barrow Island CBM Marine Terminal.

#### 3.1 Location

The Barrow Island CBM Marine Terminal is located to the East of Barrow Island, Western Australia as shown on the map in [Appendix A](#). The Moorings are located 9.875 km offshore at latitude 20° 48' 57" South, longitude 115° 33' 09" East. Refer to the current hydrographic charts AUS 62, AUS 65, AUS 66 and AUS 742 for further information.

#### 3.2 Mooring Fees

The Owner shall pay to Chevron a mooring fee for the use of the Berth and the assistance provided by Chevron in berthing and unberthing the Tanker at the Terminal within 30 days of the receipt of Chevron's invoice. Details of the mooring fee can be obtained from Chevron.

#### 3.3 Local Time

Western Australian Standard time is UTC + 8 Hours.

#### 3.4 Moorings

An eight-point mooring system, consisting of six (6) mooring buoys and two (2) Swamped Moorings, is installed in the Berth layout and shown in [Appendix C](#).

#### 3.5 Crude Oil Handling Facilities – Onshore

The onshore storage and pumping facilities include:

- a. three (3) x 200,000 bbl (31,782 kL) floating roof tanks
- b. two (2) gas engine driven centrifugal loading pumps rated to deliver a total of up to 12,000 bbls (1,900 m<sup>3</sup>) per hour of Barrow Island crude oil with up to a maximum pressure of 100 psi at the Tanker rail
- c. associated computer control and monitoring equipment

#### 3.6 Crude Oil Handling Facilities – Marine

The Submarine Pipeline is comprised of the following two sections:

- a. Linking the shore base facilities on Barrow Island to the CBM Marine Terminal is 9875 m of 510 mm x 9 mm steel pipe, the seaward end of which is marked with a spar buoy.
- b. At the seaward end of the steel pipeline described in (a) is a flexible rubber tail/rail hose measuring 64 m of 400 mm and 9 m of 300 mm. This flexible tail/rail hose is referred to in these procedures as the "Loading Hose". The "Tanker" end of the Loading Hose is fitted with a 300 mm (12") locking butterfly valve. The seaward end of the Loading Hose is marked with a yellow conical buoy. (*Refer to the diagram in Appendix B*) The Tanker's manifold shall be in compliance with Oil Companies International Marine Forum (OCIMF) *Standards for Oil Tanker Manifolds and Associated Equipment* and its presentation flange shall be equipped with a 300 mm (12") ANSI Class 150 flange.

### 3.7 Fittings and Connections Available at the CBM Marine Terminal

Chevron will make available the following fittings to connect the Loading Hose to the Tanker's manifold:

- a. 300 mm diameter #150 ANSI loading hose flange connection that will be bolted to Tanker's manifold
- b. hanging off connecting chain and specially modified "blake stopper" for use with Loading Hose
- c. nylon straps and associated slings to suspend Loading Hose from Tanker's crane/derrick runner
- d. flange gaskets and grease

### 3.8 Dirty Ballast Handling Facilities

There are no facilities at the CBM Marine Terminal to receive ballast from Tankers.

### 3.9 Weather Criteria for Berthing and Loading

Berthing may take place and loading may continue under the conditions mentioned in this procedure, provided cyclonic conditions are not in the forecast.

Limitations are imposed at the Barrow Island Marine Terminal in relation to the tanker SSA.

#### **Limitations for Use of the Barrow Island Marine Terminal for Tankers up to 5,288 m<sup>2</sup> SSA**

##### 1. Berthing (Ship Handling Restriction)

Limits	
Wind	Sea
Less than 20 kn at the berth	Less than 0.7 m

##### 2. Deciding to Berth or Remain in the Berth While Loading

When deciding to berth, the weather forecast shall be considered to ensure weather is suitable throughout tanker loading. It should be taken into account that the start and end of weather events may differ considerably from the forecast.

Limits	
Wind	Sea
Less than 25 kn at the berth	Less than 0.7 m

It must be stressed that these are not rigid limits of conditions for berthing. Only the PMM can only make the decision to berth, after reviewing all the circumstances at the time.

Both wind and sea conditions must be below their respective limits in order to berth. If the wind or the sea condition is predicted to rise above or is actually above the criteria, the berth should not be used.

When berthed at the Terminal, if revised weather forecasts show winds in excess of 25 kn wind limit during the remaining time at the Terminal, all attempts shall be made to suspend loading operations and prepare to depart ahead of the forecast increase in wind and ahead of any sea conditions required to let go the mooring lines.

In case of a thunderstorm or squall, or if winds in excess of 25 kn are expected, the tug should be under way, close to the tanker and ready to provide immediate assistance. Procedures should be planned to disconnect the hose in the event that a squall or thunderstorm approaches the terminal.

### 3.10 Tidal Berthing

Berthing at the CBM Marine Terminal shall take place, in daylight, during periods of ebb tides unless otherwise approved by the PMM.

Generally berthing will take place at high water or before low water slack tide, to avoid the period of strongest tidal stream in the middle of the ebb tide. The direction of the tidal stream is approximately 245° on flood and 065° on ebb and attains a rate of 1.0 knots at springs.

Unberthing may take place at any time, during the ebb tide or at other times as approved by the PMM.

### 3.11 Minimum Water Depth / Underkeel Clearance

The minimum water depth in the vicinity of the Berth and in the approach channel is 12.0 m below CHART DATUM at Barrow Island Tanker Moorings. Water depth surveys conducted as per OCIMF guidelines.

To provide a safety margin if sailing is delayed for any reason, the following underkeel clearances shall be maintained at all times throughout loading and up to and including the Tanker's projected sailing time:

- a. for Tankers up to 33 m beam: not less than 1.56 m
- b. for Tankers over 33 m beam: see clearances specified in Table 3-1:

**Table 3-1: Underkeel Clearance for Tankers over 33 m Beam**

Beam (metres)	Underkeel Clearance (metres)
33	1.56
34	1.60
35	1.63
36	1.67
37	1.71
38	1.74
39	1.78
40	1.81
41	1.85
42	1.89
43	1.92
44	1.96

Beam (metres)	Underkeel Clearance (metres)
45	2.00
46	2.03
47	2.07

### 3.12 Pilot/Mooring Master and Tanker Safety Officer

Chevron will provide a PMM to:

- a. assist in piloting and manoeuvring the Tanker in and out of the Moorings
- b. advise on mooring the Tanker
- c. advise on connecting and disconnecting the Loading Hose
- d. advise on matters concerning the safety of the Tanker and Terminal facilities
- e. act as Terminal Representative during the loading of the Tanker

All communications to the terminal should be directed through the PMM.

Chevron will provide a Tanker Safety Officer (TSO) to:

- a. assist the PMM in deploying the Tanker's anchors, by observing and reporting the position of the Tanker's bow relative to the leads
- b. assist the PMM in the mooring of the Tanker and act as Terminal Representative during rest periods taken by the PMM

### 3.13 Tug and Mooring Vessel

Chevron will provide two vessels to assist in mooring Tankers at the Barrow Island CBM Marine Terminal:

- a. A twin-screw omni-directional propulsion Tug, with a minimum bollard pull of 35 tonnes will be available for use on a tow line from its bow to the Tanker's stern when berthing. It will be positioned as near to the centre line as possible. The Tug will stand by throughout the loading and assist in unberthing, the tug will monitor VHF 10 & 14.
- b. A mooring vessel will be used to run mooring lines.

Chevron shall not be held liable for any costs or delays incurred due to a vessel awaiting a Tug or Mooring Vessel to berth.

Tankers should be ready to receive two large boxes from the mooring vessel or tug containing hose connection equipment, at the time the Pilot boards. These boxes will be lifted onboard the Tanker using the starboard crane. The Terminal Mooring Tails will be delivered when the PMM boards.

### 3.14 General Facilities

None of the following services are available at the Terminal:

- a. customs or quarantine
- b. ships agency, repairs, surveying, bunkers or potable water, garbage disposal facilities
- c. medical, consular facilities, telephone, accommodation or laundry

If a Tanker requires any of the above services, most can be obtained at the Port of Dampier. Chevron's prior approval must be obtained if the attendance of any person to the Tanker requires the services of a Mooring Vessel.

### 3.15 Accommodation for Chevron Personnel

The Tanker shall provide victualling and officer class accommodation for the PMM and TSO. Additional personnel may at times be required by Chevron to board Tankers. The PMM will advise numbers on such occasions.

### 3.16 Indicative Barrow Island Crude Oil Properties

Density at 15°C in vacuum:	0.8450 kg/L
API Gravity:	35.9
Reid Vapour Pressure:	4.6
Pour Point:	< -54°C
Flash Point (Abel):	< -27°C
Viscosity at 20°C	2.666 cSt

The average load temperature of the crude oil will vary from summer to winter. As a guide, the minimum temperature during winter (May to October) can be expected to be about 23°C. In the summer (November to April), the maximum temperature can be expected to be about 32°C. Masters requiring more information about loading temperature should contact the Terminal.

## 4.0 Minimum Standards of Acceptance for Tankers at the Barrow Island CBM Marine Terminal

A Tanker will be accepted for loading at the Terminal provided it conforms to the minimum requirements described herein. Chevron may at its discretion refuse to moor or load any Tanker that does not conform to the requirements or is deficient in any manner whatsoever. In all cases, the *Tanker Suitability Assessment Form* must be completed.

### 4.1 Size

The CBM Marine Terminal is restricted to Tankers that have:

- a. a loaded displacement of between 40,000 to 105,000 t
- b. a maximum beam of 47 m
- c. a maximum slab side area of 5,288 m<sup>2</sup> being the product of the overall length and moulded depth (see note below)

#### NOTE



Tankers with a slab side area between 4,838 m<sup>2</sup> to 5,288 m<sup>2</sup> are accepted with the condition that during the months of June through September, weather delays may result. Consequently, the decision to delay berthing or stop loading is solely at the discretion and judgment of the local terminal management.

### 4.2 Tanker Loading

Tankers loading at the CBM Marine Terminal must comply with the latest SOLAS and MARPOL conventions and protocols. Tankers found to be deficient or substandard in safety requirements will not be permitted to moor and load.

### 4.3 Deballasting

The Terminal will not be responsible for any free water or dead-freight. For acceptance at the Terminal, Tankers must have segregated ballast tanks and comply with the ballast procedures detailed in *Section 6.4, Ballast Operations*. There are no reception facilities at the Terminal for the discharge of dirty ballast.

### 4.4 Inert Gas System

The cargo tanks will be checked on arrival to verify that they are inerted to 8% oxygen or less by volume and maintained at a positive pressure. Vessels with tanks not properly inerted, and/or with an inoperative inert gas system, will be rejected. In the event of failure of the inert gas system during Tanker loading/Deballasting operations, or if the tank atmosphere exceeds 8% oxygen, cargo/ballast operations will be stopped and if the deficiency is not promptly corrected, the Tanker will be removed from the berth.

### 4.5 Hydrogen Sulphide (H<sub>2</sub>S)

Each cargo tank will be checked on arrival to verify that any hydrogen sulphide present is not more than 5 parts per million. Tanker with tanks that do not comply will be rejected.

## 4.6 Tank Vapour Quality

A tanker shall arrive in accordance with Table 4-1

**Table 4-1: Cargo Tank Environment Requirements**

Condition	Vessel
Oxygen (O <sub>2</sub> ) content	<8% in volume
Hydrogen Sulphide (H <sub>2</sub> S)	Maximum 5 parts per million

The PMM may witness all cargo system gas tests taken to confirm these requirements are met.

## 4.7 Mooring Equipment

Tankers shall be equipped with mooring equipment that complies with the minimum specifications described in the following sections.

Refer also to the diagram in [Appendix E](#).

### 4.7.1 Mooring Winches

The Tanker shall be equipped with mooring winches that shall meet the following specifications:

- a. be power operated and capable of warping the Tanker
- b. comply with OCIMF recommendations
- c. have a mooring line permanently attached
- d. be capable of making fast mooring lines by securing the brake on the winch
- e. have warping drums capable of handling Swamped Mooring Lines
- f. if equipped with constant tension devices, have these devices disconnected and the brake fully applied
- g. be able to deploy at least one mooring rope or wire to each of the Terminal's six (6) mooring buoys and be located in the following positions (see [Appendix E](#))
  - poop deck – four (4)
  - foc'sle head – one (1) each, port and starboard, located in such a position that the port and starboard Swamp Mooring Lines may be hove in and made fast to adjacent mooring bits. (A single winch in this position, located so that ropes may be similarly handled from either side may be acceptable);
  - aft main deck – one (1) each, port and starboard. Tankers fitted with only one winch in the aft main deck area will be accepted provided a line can be deployed mechanically from that winch to each beam. On Tankers fitted with only one winch where only one of the two lines can be handled (hailed or veered) at once, berthing may be delayed in marginal weather. A Tanker will not be accepted where only one mechanical line can be deployed and the other would be handled by hand.



### **4.7.2 Mooring Bitts**

The Tanker shall have at least eight (8) sets of mooring bitts, located near the winches specified in 4.5.1(g). Each set shall be of a size to enable making fast the Swamped Mooring Lines as the case may be.

### **4.7.3 Mooring Lines**

- a. The mooring line on each mooring winch shall have a minimum breaking load (MBL) of 80 t. Tankers with mooring lines with a MBL of less than 80 t will only be accepted at the discretion of the Terminal. Tankers with mooring lines of less than 80 t MBL may be subject to greater than normal delays when awaiting berthing in marginal weather conditions.
- b. Each mooring line shall have a minimum length of 220 m without tails.
- c. Each mooring line, if a wire line, shall be fitted with a stretcher or tail and 6 tails will be provided by the Terminal, 25 m long and 90 t MBL.
- d. Marine terminal requirements for tanker mooring equipment shall be vetted by terminal. (refer [Appendix D](#) Tanker Suitability Assessment Form)

### **4.7.4 Bow Anchors**

The bow anchors shall meet the following specifications:

- a. be located one each port and starboard bow
- b. have a minimum of 10 shackles (shots) of chain in Tankers up to 50,000t deadweight and a minimum of 12 shackles in Tankers over 50,000t deadweight
- c. comply with a classification society recognised by the Australian Maritime Safety Authority

### **4.7.5 Crane**

The Tanker shall have a crane or derrick on the starboard side with a minimum safe working load (SWL) of 10t. Arrangements for lifting and securing hose must comply with OCIMF recommendations. A stringer should be provided.

### **4.7.6 Personnel**

The Tanker shall provide competent personnel to perform, supervise, and approve all work to connect and disconnect the Loading Hose.

### **4.7.7 Manifold Specification**

The Tanker's manifold shall be capable of being connected to the 300 mm diameter #150 ANSI flange of the tail/rail loading hose and comply with the OCIMF standards for Oil Tanker Manifolds and Associated Equipment.

### **4.7.8 Responsibility of Owner**

The onus is exclusively on the Master or Owner to ensure that the Tanker is seaworthy and that all equipment is and remains in good working order and condition. Failure by Chevron to reject any Tanker not meeting the requirements will not relieve the Owner of liability.

## **4.8 Safety and Pollution**

### **4.8.1 Details of Chevron's safety requirements. (See [Appendix F](#)):**

- a. Tankers which contravene the International Convention for the SOLAS 1974 as consolidated 2004, will not be accepted.
- b. Tankers shall be in a state of readiness at all times to leave the Moorings. Engines should be on immediate 15 minutes' notice.
- c. Tankers visiting the Barrow Island CBM Marine Terminal must comply with the minimum safety requirements specified in ISGOTT.

### **4.8.2 Pollution**

Tankers shall:

- a. Comply with the relevant provisions of the International Convention for the Prevention of Pollution from Ships defined as the "Convention" in the Pollution of Waters by Oil and Noxious Substances Act 1987 of the State of Western Australia and the Protection of the Sea (Prevention of Pollution from Ships) Act 1986 of the Commonwealth, and comply with other legislation of the State or Commonwealth pertaining to pollution;
- b. Comply with the requirement of the Quarantine Act 1908 as amended 1998, relating to reporting and discharge of ballast;
- c. Ensure that no rubbish is dumped from the Tanker at or near the CBM Marine Terminal;
- d. Provide evidence to Chevron that the Tanker has in force insurances and certificates as are required of the Owner of Oil Tankers under Australian Law.

## **4.9 Tanker Inspections**

- a. When nominating a Tanker for loading at the Terminal, the Shipper shall provide Chevron with a statement in writing that the nominated Tanker has satisfactorily undergone a ship inspection, based on OCIMF guidelines, and that the results of the inspection are acceptable to the Shipper as at the time of inspection, and at the time of nomination. The PMM will verify that all clearance has been received.
- b. Where a Tanker has not undergone an inspection as specified in 5.7(a) Chevron, at its absolute discretion, may accept the Tanker for loading at the Terminal subject to the Tanker undergoing an inspection prior to loading commencing, by a qualified inspector at the Shipper's sole cost. In such case, Notice of Readiness shall not be tendered until the Shipper provides Chevron with a written statement, including, without limitation by facsimile, that the inspection was satisfactory. The PMM will appraise the condition of the tanker during deck rounds to establish that the tanker complies with Terminal requirements and industry standards. All operational and equipment concerns shall be rectified prior to berthing and unberthing activities taking place.

## **4.10 Tanker Security Requirements**

Barrow Island CBM Marine Terminal has in place an Offshore Facility Security Plan approved by the Australian Government in accordance with the *Maritime Transport and Offshore Facilities Security Act (MTOFSA) 2003*.

Tankers will only be accepted at Barrow Island Marine Terminal if they have a valid International Ship Securities Certificate.

Tankers should follow the guidelines contained in their Ship's Security Plan to ensure the appropriate security level is maintained at all times. The terminal security level in force will be communicated to Tankers prior to arrival.

Prior to Tanker operations commencing the Offshore Facilities Security Officer will conduct a pre-start meeting with Tanker and relevant service providers to discuss the security related arrangements that are in place.

## 5.0 Communications

This section describes the communications required between Tankers and the Marine Terminal, including estimated time of arrival, notice of readiness and general communications.

### 5.1 Initial Message

All incoming Tankers must send ETA notices to Barrow Island Port & WA Oil CBM Marine Terminal at least 168/120/96/72/48/24/12 hours prior to arrival at the Arrival Position (even if vessel is cargo working in port at time of notification) stating expected date and hour of arrival. Any changes in ETA of more than 3 hours to advise accordingly. Any delays resulting from a failure to give any of the above notices shall not count against laytime or, if vessel is on demurrage, as time on demurrage.

Where an incoming Tanker fails to provide the 96 hours ETA notice, as required by the Barrow Island Port, for the arrangement of the PMM, additional personnel, Tug(s) and mooring vessel at the Barrow Island CBM Marine Terminal, the Buyer shall be liable for all incremental costs (due to the lack of notice) incurred by the Barrow Island CBM Marine Terminal.

ETA message shall be sent via email to agent and each of the following centres (Time to be used for ETA is local time, which is UTC + 8 hours).

The first message should also include the following information in the below Table 5-1:

**Table 5-1: Tanker Arrival information form**

Form to be completed for Tankers arriving at the WA Oil Barrow Island CBM Marine Terminal.

Item	Information Required	Details
1.	Name of Tanker and Flag	
2.	International Ship Security Certificate:	
	• Number	(a)
	• Expiry Date	(b)
	• Present security level	(c)
3.	Cargo Requirements in M <sup>3</sup> at 15°C	
4.	• Segregated Ballast to be discharged at Barrow Island CBM Marine Terminal.	(a) Tonnes
	• Port of Origin of Ballast on board	(b)
	• Has ballast water exchange taken place at sea whilst on voyage to out terminal?	(c)
5.	Maximum loading rate through one 12" hose	
6.	Arrival draft in metres	
7.	Estimated departure draft in metres	
8.	Are bridge wings Gyro repeaters working?	
9.	Are all tanks inerted below 8% Oxygen?	
10.	Are all tanks H <sub>2</sub> S less than 5 parts per million?	

Item	Information Required	Details
11.	Can Vessel carry out closed loading?	
12.	Midship manifold pressure gauge connection size and thread type (Note: Terminal will be connecting their own portable pressure gauge at tanker's manifold during the loading)	
13.	Master's name as they wish it to appear on the Bills of Loading	
14.	Last Port of Call	
15.	Next Port of Call	
16.	Discharge Port of Barrow Crude Oil	
17.	Confirmation that Tanker has a clean bill of health	
18.	What electrical voltage has Tanker and what socket type?	
19.	Number of shackles (shots) on each anchor cable?	
20.	• Number and location of mooring wires / ropes on winches	(a) Wires
		Ropes
	• Number and location of spare mooring ropes	(b) Wires
		Ropes
21.	• Diameter and breaking strain of mooring wires / ropes in mm and tonnes	(a) Wires
		Ropes
	• Diameter and breaking strain of spare mooring ropes	(b)
22.	Diameter and safe working load of bitts	
23.	Holding power of mooring winch breaks	
24.	Is Manifold OCIMF Standard?	
25.	Safe working load of mid-ship crane at the manifold	
26.	Helicopter landing capability, winch or land on?	

## 5.2 CBM Terminal Contact Details

### BARROW ISLAND PORT

Telephone: +61 8 9184-3666  
Email: [BWIMCO@chevron.com](mailto:BWIMCO@chevron.com)  
CALL: Port of Barrow Island  
VHF: 10 (24 hours)

### PERTH (all hours)

#### WA Oil Marine Advisor

Telephone: +61 8 9216-4210  
Mobile: +61 429-012-478  
Email: [masbu-waoilmarine@chevron.com](mailto:masbu-waoilmarine@chevron.com)

## 5.3 Communications with Pilot/Mooring Master

### 5.3.1 Approaching the Terminal

Tankers shall listen to Marine VHF channel 10 and 14 when within 100 nautical miles of the Terminal.

### 5.3.2 During Berthing and Loading

Chevron will provide portable UHF radios for communications between the Tanker, Tug, Mooring Vessels and the Terminal onshore control room during berthing, loading and unberthing.

### 5.3.3 Notice of Readiness

Subject to any agreement between the Owner and the vendor of the crude oil to be lifted, provided that Chevron is supplied with a copy of that agreement not less than five days before the ETA, Notice of Readiness will be accepted when the Tanker is all fast in the berth (i.e., when all mooring lines, Backup Lines and Swamped Mooring Lines are made fast).

## 6.0 Operations and Procedures

### 6.1 Arrival Procedure, General

#### 6.1.1 Order of Berthing

Tankers will normally berth in the order of arrival, but due regard will also be given to nominated date ranges.

#### 6.1.2 Restrictions

Berthing shall take place in accordance with the requirements laid down in Chevron's ABU manual 091830032 – *ABU - WA Oil CBM Tanker Operations and Terminal Maintenance Procedures*:

- a. during the ebb tide, generally near slack water
- b. when sustained wind speeds at the berth do not exceed 20 knots
- c. when the seas are less than 0.7 m in height
- d. provided that forecast winds do not exceed 25 knots and seas do not exceed 0.7 m in height
- e. when there is no tropical cyclone, or tropical depression, which is likely to develop into a cyclone, within 400 nautical miles of the Terminal or likely to pass within that range within 24 hours of the Tanker berthing
- f. in daylight



#### NOTE

In order to berth during ebb tide, the Tanker must be at the Arrival Position at least 3 hours before the slack tide. A Tanker arriving after this time may be requested to await suitable tide conditions.

#### 6.1.3 Arrival Condition

The Tanker shall arrive ballasted to at least one quarter of its summer dead weight tonnage, with propeller (and bow thruster if fitted) submerged, unless directed to carry more ballast by the PMM during adverse weather. Tankers should have a stern trim of less than 4 m.

#### 6.1.4 Arrival Position

The Arrival Position is Inner Pilot Boarding Ground Latitude: 20° 48.6'S Longitude: 115°36.0'E. two miles east of CBM moorings as shown in ([Appendix A](#)). Contact "Port of Barrow on VHF channel 10" - 4hrs before arrival for advice regarding allocation of anchorage position.

#### 6.1.5 Pilot Boarding

The pilot ladder shall be available to the PMM and kept at a proper height for safe boarding and disembarkation. When the distance from the water to the deck exceeds 9 m, the pilot ladder shall be rigged with the accommodation ladder or an approved mechanical pilot boarding appliance used. The pilot boarding arrangements shall comply with IMO and IMPA recommendations. The Tanker shall provide an adequate lee for embarking and

disembarking the PMM, who will board at the Arrival Position. The hose connection equipment is contained in two large metal boxes which should be lifted onboard at the Arrival Position and landed just forward of the starboard manifold. The Terminal Mooring Tails will be delivered after the PMM has boarded the Tanker.

### **6.1.6 Crane**

The Tanker shall arrive with a crane rigged on the starboard side and in all respects ready to lift two tanker boxes (hose connection equipment) from a Terminal Tug or Mooring Vessel at the Arrival Position.

### **6.1.7 Swamped Mooring Lines and Terminal Provided Mooring Tails Lines**

The Swamped Mooring Lines shall be hove onboard with a messenger of at least 24 mm diameter, provided by the Tanker to the warping drum of the mooring winch. The Swamped Mooring Lines will be made fast to the bitts, being stoppered off, using the "Chinese" or "Westcountry" method, stoppers supplied by the Terminal.

The Terminal will provide 25 m long by 90 t MBL mooring tails, which will be substituted for the Tanker's own mooring tails in Tanker's fitted with mooring wires. The mooring tails will be shackled to the Tanker's mooring using the Tanker's mandal shackles.

### **6.1.8 Cathodic Protection**

In a Tanker equipped with an impressed current cathodic protection system, the Master shall ensure that the system is switched off prior to approaching the Moorings and until the Tanker is un-berthed. The Master will be required to sign a declaration to the effect that the impressed current cathodic protection system is turned off before the Tanker is allowed to berth.

## **6.2 Mooring Operations and Procedures**

### **6.2.1 General**

#### **Pilot/Mooring Master**

The PMM will board incoming Tankers at the Arrival Position. The PMM will advise the Master on approach to the Berth, mooring and unmooring, connecting and disconnecting hoses, and all other operations within the Terminal area including all manoeuvring of the Tanker. The Master or one of his or her qualified deck officers must be on the bridge at all times while the Tanker is being manoeuvred. The principles of Maritime Crew Resource Management (MCRM) shall be utilised to establish and maintain an effective bridge team as well as coordinate with terminal offshore support vessels and mooring teams. A passage plan should be prepared from pilot boarding ground to berth.

#### **Tanker Safety Officer**

The TSO will board incoming Tankers with the PMM and assists the PMM.

#### **Tug and Mooring Vessel**

Chevron will provide a Tug and Mooring Vessel to manoeuvre the Tanker and handle the Tanker's mooring lines and Terminal Backup Lines to the buoys and bring the Swamped



Mooring Lines to the Tanker and to assist in berthing and unberthing. The Tug and Mooring Vessel will be standing by during loading and unmoor the Tanker on completion.

The Tug and Mooring Vessel shall be under the direct control and supervision of the PMM. Any service and/or facilities provided by Chevron including, but not limited to, the services of a PMM, TSO, Tug, Mooring Vessel and their crews, or mooring and loading equipment, shall be at the Tanker's sole risk.

## 6.2.2 Tanker Mooring Procedure

The Mooring is a conventional buoy mooring, with six mooring buoys and two Swamped Mooring Lines. The Swamped Mooring Lines are at the port and starboard shoulders. These Swamped Mooring Lines lie on the seabed when not in use, well clear of the manoeuvring area.

The Tanker mooring procedure is as follows:

1. An open running moor is carried out, dropping the port anchor first, running ahead and paying out between 9 and 11 shackles (shots) of cable depending on the Tanker's size. When the Tanker is in the correct position to drop the second anchor, the starboard anchor is let go. The port cable is put into gear and the cable weighed as the Tanker is manoeuvred astern into the Berth, whilst the starboard anchor cable is paid out.
2. Whilst working the anchors, as much information as possible should be passed by the officer in charge of the foc'sle to the bridge and to the PMM. The amount of cable paid out, the direction of the cable, and the weight on the cable, is vital information for the PMM.
3. Berthing assistance will be rendered by a Tug and Mooring Vessel. As the Tanker manoeuvres astern, the PMM will advise the Master which of the Tanker's mooring ropes/wires, at the after end of the main deck, will be sent away first.
4. Once the Tanker is in position and all the Tanker's lines are fast, a Mooring Vessel will pick up the Swamp Moorings and tow them alongside the Tanker. The Tanker should provide a heavy messenger (see *Section 6.1.7*) with which to heave the Swamp Mooring Lines onboard. The first part of the Swamp Mooring Line to come onboard is the tail, which is 30 m x 32 mm rope. This soft line is connected by a shackle to 48 m of 26 mm steel wire rope, which is in turn connected by a 32 mm HMPE snotter to the 75 mm or 88 mm polyester rope, which is made fast onboard. The Swamp Moorings have a weak link with a minimum breaking load of 90 t.
5. Swamped Moorings Lines should be hove as tight as possible, stoppered off using the HMPE stoppers supplied by Chevron and made fast to the Tankers bitts. It is important the Swamped Mooring Lines be made fast in this way. Leaving the Swamped Mooring Lines wound onto the Tanker's winches and not made fast to the bitts, is not permitted.
6. Caution must be exercised when tensioning mooring lines on winch and onto bitts, using stoppers. Terminal tug should be utilised on opposite side to ease the tension of mooring line when transferring from winch onto bitts. The Tanker is not considered all fast in the Berth until all the Lines, required by the Master, and Swamped Mooring Lines are made fast.
7. Once the Tanker is all fast, the Mooring vessel will tow the Hose Marker buoy alongside and the PMM and/or TSO will advise the Tanker's crew on the connection of the Loading Hose. A responsible officer and sufficient members of the Tanker's crew should be available at the manifold to carry out this operation.

## 6.3 Hose Connection

- a. Upon completion of the mooring operation, the Loading Hose will be connected to the Tanker's starboard manifold. The hose connection will be made by the Tanker's crew who must be under the supervision of a responsible deck officer. The PMM or TSO will advise on the correct procedures to be adopted. A toolbox meeting will be conducted with all personnel prior to cargo hose handling.
- b. The crane rigged on the starboard side will be used to hoist the Loading Hose and assist in its connection to the starboard manifold. The crane will be used during loading to suspend and take the weight of the Loading Hose. The crane boom angle and respective load limits shall not be exceeded and standardised crane signals will be used.
- c. When the Loading Hose is hung off at the Tanker's rail, and lowered to manifold level, the blank flange on the end of the hose shall be removed and the Loading Hose bolted to the Tanker's presentation flange.
- d. The propeller shall not be turned over with the main engine while the Loading Hose is connected or after it has been disconnected without first notifying the PMM.

## 6.4 Ballast Operations

### 6.4.1 Procedure

The ballast operations procedure is as follows:

- 6.4.1.1. The terminal only accepts SBT Tankers. The condition of such ballast shall comply with all current laws and regulations of Australia and International Conventions. Australia has enacted regulations concerning the exchange of ballast water to prevent the discharge of high-risk ballast water in Australian ports or waters under the *Quarantine Act 1908*. Ballast regulations under the *Quarantine Act 1908* are administered by the Australian Quarantine and Inspection Service (AQIS). Masters of vessels stemmed to load at Barrow Island shall ensure that they comply fully with the current AQIS Regulations.
- 6.4.1.2. Tankers arriving with ballast unsuitable for discharge to sea will be rejected for loading. Any Tanker rejected because of contaminated ballast, sea pollution or failure to comply with AQIS Regulations will automatically invalidate her Notice of Readiness and will lose any priority of loading. Tankers discharging contaminated ballast overboard shall be subject to the anti pollution laws of Australia. Penalties for pollution are severe.
- 6.4.1.3. Tankers arriving at the Marine Terminal should have sufficient ballast to ensure safe handling and manoeuvrability in the prevailing weather and sea conditions and in accordance with good seamanship practice.
- 6.4.1.4. Tankers should have the ability to deballast concurrently with loading operations.

## 6.5 Loading Operation

### DANGER:



VALVES MUST NOT BE CLOSED AGAINST THE OIL FLOW WITHOUT PERMISSION FROM THE TERMINAL. PART OR FULL CLOSURE OF VALVES DURING LOADING IS EXTREMELY DANGEROUS AND CAN CAUSE EXTENSIVE DAMAGE TO EQUIPMENT. SUBJECT TO THE PROVISIONS OF SECTION 2, THE MASTER WILL BE HELD LIABLE FOR ANY DAMAGE ARISING FROM SUCH MALPRACTICE.

### 6.5.1 General

Throughout the loading operation, a responsible deck officer shall be in charge of operations, either on deck, or in the cargo control room. In addition, an efficient deck watch in constant contact with the cargo control room must be maintained at all times. A cargo transfer plan shall be properly documented and presented to PMM by tanker's Master.

### 6.5.2 Portable Gauge

Terminal **Digital** pressure recorder will be connected to Tanker's cargo manifold where tanker own pressure gauge is fitted. This is to permanently record the loading pressure and any pressure surges. **The recorder will be periodically changed due to battery life, and if any pressure spikes are observed the ship will be given a download copy of the recording period and a note of protest will be issued.** Please assist in facilitating the fitting of the pressure recorder as, without it being fitted, the vessel will not be allowed to load at this terminal.

### 6.5.3 Commencement Checks

The Submarine Pipeline is left full of crude oil between Tanker loadings. When all hose connections have been made and approved, and safety checks have been completed, the butterfly valve on the Loading Hose shall be opened. The butterfly valve on the Loading Hose will be bolted in the open position before loading commences, and should be checked frequently during the course of loading.

### 6.5.4 Loading Commencement

The Tanker's manifold and one or more cargo tank valves shall be opened and crude oil shall be loaded by gravity. Once checks for flow have been completed on the Tanker, the PMM will be advised to start the loading pumps.

### 6.5.5 Warning against Back Pressure



### CAUTION:

THE SUBMARINE PIPELINE AND LOADING HOSE MAY BE DAMAGED IF SUBJECTED TO SUDDEN INCREASES IN PRESSURE. BACK PRESSURE ON THE LOADING HOSE AT THE TANKER'S RAIL MUST NOT EXCEED 700 kPa (100 psi).

To avoid damage to the loading equipment, the Tanker shall ensure that the following precautions are taken:

- a. **The flow of crude oil shall not be shut off by closing the Tanker's valve or the butterfly valve on the Loading Hose without the prior approval of the PMM.**

- b. As many tanks as possible are to be open during loading. At least two (2) tanks must be open while onshore pumps are operating at full speed. If the Master considers it necessary to load into only one tank, or to reduce the loading rate for safety of its operations, he or she shall notify the PMM in sufficient time to reduce the loading rate. Ship/shore comparison intervals shall be determined by PMM to monitor the ship/shore cargo differences.
- c. The Master shall advise the PMM when 250 m<sup>3</sup> of crude oil are required to complete the loading so that the onshore pumps can be eased down slowly and reduced to idle.
- d. The Master shall advise the PMM when 60 m<sup>3</sup> of crude oil are required to complete loading so that the onshore pumps can be stopped and loading completed by gravity.
- e. On completion of loading, the Tanker's manifold valve shall be closed slowly to minimise the surge pressure of oil in the pipeline.

## **6.6 Availability of Deck Machinery**

The Master shall ensure that the deck machinery is available for immediate use at any time during the loading operation.

### **6.6.1 Test Calls During Loading**

In order to check radio communications between the Tanker and the onshore control room, the Tanker shall call Barrow Island CBM Marine Terminal every hour at 15 minutes past the hour. At 15 minutes past the hour, the Tanker shall advise the Terminal of the previous hour's loading rate, the total quantity loaded and the wind direction and speed at the Tanker. Chevron will provide a form in which the foregoing details shall be recorded.

Barrow Island CBM Marine Terminal shall call the Tanker every hour at 45 minutes past the hour.

Should either of these calls fail to establish communications between the Tanker and the Terminal, after taking reasonable steps to re-establish communications, the Terminal will shut down loading until communications are re-established. If the Tanker cannot contact the Terminal, the PMM shall be advised immediately.

### **6.6.2 Suspension of Loading During Strong Winds or Adverse Seas**

During periods of strong winds or adverse seas, the PMM may advise the Tanker's Master to discontinue loading and disconnect the Loading Hose.

The Loading Hose may be hung off ready to slip or be laid down.

## **6.7 Hose Disconnection**

The hose disconnection procedure is as follows:

- a. On completion of loading by gravity, the Tanker's manifold valve shall be closed slowly when requested by PMM. If the manifold valve is of the type that cannot be closed slowly, the flow of oil shall be stopped by slowly closing a proportional tank valve. The backpressure at the rail will be monitored during this operation. Once the Tanker's proportional valve and/or manifold have been closed and it is confirmed that all oil flow

- has ceased, the hose end butterfly valve will be closed. Finally, the PMM will instruct the Terminal to close the sealine valve.
- b. The Tanker personnel shall make every effort to drain the manifold outboard of the manifold valve between the manifold valve and loading hose end butterfly valve into the Tanker's cargo tanks.
  - c. When the hose is disconnected from the manifold, sufficient drip trays must be available to contain any oil remaining in the spool pieces and reducer and the blind flange will be replaced on the hose. The weight of the hose is taken on the blind pulling flange and the hose lifted above the deck. The hose is raised to sufficient height to enable the weight to be taken off the hanging off chain. The hanging off chain is then slipped and secured to the support chain. The hose is lowered to the rail and hung off by the slipping chain to the blake slip. The crane hook is removed from the blind pulling flange.
  - d. The hose buoy is then slipped to the water in a controlled manner and recovered by the mooring vessel. The PMM will instruct the mooring vessel to commence towing the hose buoy and when the weight comes on the hose buoy chain, the order will be given to slip the hose. The handle of the blake slip is pulled and the hose falls into the sea. All personnel will be requested to keep clear when the blake slip is activated to release the cargo hose. The mooring vessel tows the hose buoy to its resting position.

## **6.8 Cargo Documentation and Inspection**

The cargo documentation and inspection procedure is as follows:

- a. Documents such as the Bill of Lading, Quality Certificate, Quantity Certificate, Tanker Operations Log, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples etc., will be prepared at the Marine Terminal. When the Tanker has been loaded, the documents will be completed onboard the Tanker for the Master's signature.
- b. The official Bill of Lading quantity will be relayed to the PMM by radio. In the event of a dispute, the Tanker will be requested to recheck the measurement and calculations of the quantity, but the PMM will not witness such measurement and calculations. After both Tanker and terminal figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the PMM.
- c. Letters of Protest, if any, should be handed to the PMM for onward delivery to Chevron. The Mooring Master will acknowledge receipt of the Letter of Protest only, and is not authorised to approve such letters or otherwise.
- d. From time to time, Owners, charterers, consignees, or other interested parties may appoint third party inspectors to survey the loading operation on their behalf. Any delays caused by such inspectors shall be considered delays caused by the Tanker.
- e. The PMM shall keep an Operations Log, detailing the times of all operations, delays, quantities loaded, ballast discharged and arrival and departure drafts.
- f. Prior to the disembarkation of the PMM, the Tanker Master shall sight and verify the times and details contained in the Operations Log, sign the log in the space provided and affix the Tanker's official stamp thereto.

- g. If the Master should so require, the PMM will sight, verify and sign the Tanker's Record of Operations prior to his disembarkation.

## 6.9 Departure Procedures



**NOTE:**

Before unberthing, CONFIRM Tanker boxes are unloaded onto tug.

### 6.9.1 Unberthing

Conditions during departure shall be such that the safety of the mooring assistance vessels is not compromised. If weather conditions compromise safety, the PMM shall advise the Master that unberthing should be delayed until conditions improve.

The Tanker Operations Logbook and Operations Log Form shall contain details of such delays and copies of automatic weather station printouts attached, if possible.

The PMM may decide to unberth and sail during the hours of darkness provided he is satisfied that weather conditions and tide are suitable.

## 7.0 Acronyms and Abbreviations

Table 7-1 defines the acronyms and abbreviations used in this document.

**Table 7-1: Acronyms and Abbreviations**

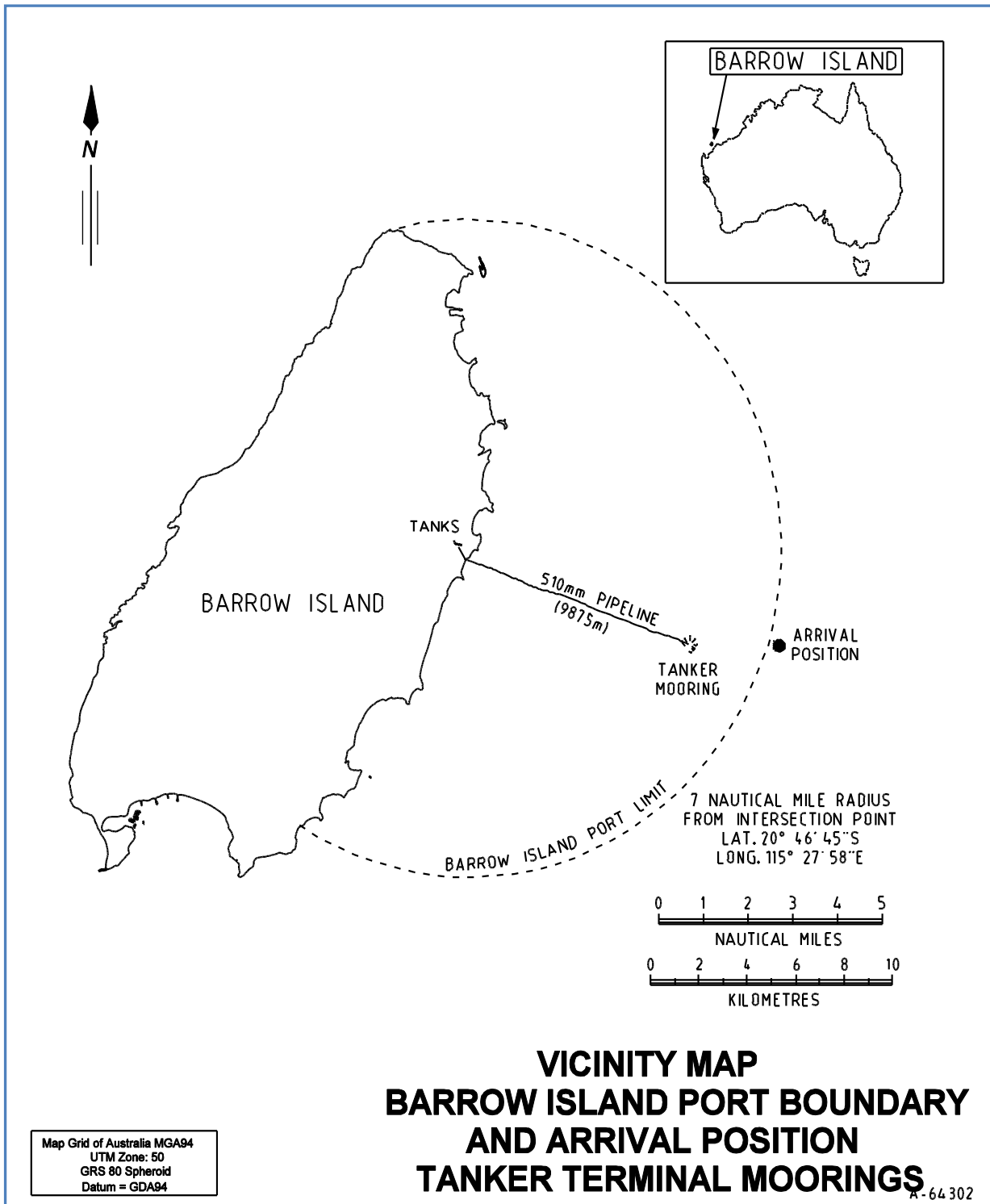
Acronym/Abbreviation	Definition
ANSI	American National Standard Institute
AQIS	Australian Quarantine and Inspection Service
Arrival Position	Position shown in <a href="#">Appendix A</a>
Backup Lines	Lines provided by Chevron at the Moorings
Berth	Moorings shown in <a href="#">Appendix C</a>
Chevron	Chevron Australia Pty Ltd (ABN 29 086 197 757) and the companies having a beneficial interest in the Saladin Oil Field, its appurtenances and crude oil produced there from namely Chevron Australia Pty Ltd, Chevron (TAPL) Pty Ltd, Mobil Australia Resources Company Pty Ltd, and Santos Offshore Pty Ltd.
CBM	Conventional Buoy Mooring
DCR	Document Change Request
ESDV	Emergency Shutdown Valve
ETA	Estimated Time of Arrival
FED	Facilities Engineering Database
H&S	Health & Safety
HMPE	High Modulus Polyethylene; a man-made fiber used to manufacture ropes of very high strength
IMO	International Maritime Organisation
IMPA	<b>International Maritime Pilots' Association</b>
ISGOTT	International Safety Guide for Oil Tankers and Terminals
ISPS Code	International Ship Security Certificate
ISSC	International Ship Security Certificate
Loading Hose	Flexible seaward portion of the Submarine Pipeline more particularly described in Section 4.0 and shown in: Appendix Figure <a href="#">A-1</a> : Location of Barrow Island CBM Marine Terminal Appendix Figure <a href="#">B-1</a> : Plan of Loading Hose and Submarine Pipeline
Marine Terminal or Terminal	Crude oil loading and tanker mooring facility, including the mooring buoys, spar buoys, Swamped Mooring Lines, Submarine Pipeline, hose buoy and lifting chains
MARPOL	Merchant shipping (prevention of oil pollution) regulations specified in the International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
Master	The Person so designated in the Ship's Register on board the Tanker

Acronym/Abbreviation	Definition
MBL	Minimum Breaking Load
Moorings	Array of mooring buoys and Swamped Moorings at the Marine Terminal as shown in <a href="#">Appendix C</a> :
Mooring Vessels	Vessels provided by Chevron and described in <i>Section 3.13</i>
MSDS	Material Safety Data Sheet
MTOFSA	Maritime Transport and Offshore Facilities Security Act
OCIMF	Oil Companies International Marine Forum
OFSO	Offshore Facility Security Officer
Operations Log	Chevron form
Owner	<p>In relation to a Tanker:</p> <ul style="list-style-type: none"> <li>• the owner</li> <li>• despondent owner</li> <li>• part owner</li> <li>• operator</li> </ul> <p>holder of any shares or interest in the Tanker, whether beneficially or otherwise</p>
P&ID	Piping and Instrumentation Diagram
Participant company	<p>Any of the following:</p> <ul style="list-style-type: none"> <li>• Chevron Australia Pty Ltd</li> <li>• Chevron (TAPL) Pty Ltd</li> <li>• Mobil Australia Resources Company Pty Ltd</li> <li>• Santos Offshore Pty Ltd</li> </ul> <p>and any successors or assigns from time to time.</p>
PMM	Pilot/Mooring Master - The Person appointed by Chevron Australia Pty Ltd to perform duties under the provisions of these procedures and conditions, and qualified as required by Chevron Australia Pty Ltd
PFD	Process Flow Diagram
PPE	Personal Protective Equipment
SBT	Segregated Ballast Tank
Shipper	Participant company whose allocation of crude oil is being loaded at the Marine Terminal
SOLAS	International Convention for the Safety of Life at Sea
SoR	System of Record
Submarine Pipeline or Pipeline	Chevron's crude oil loading pipeline at the Marine Terminal
Swamped Mooring Line	Mooring line supplied by the Marine Terminal. When the Mooring is not in use, it is swamped and towed well clear of the Tanker Mooring area
SWL	Safe Working Load



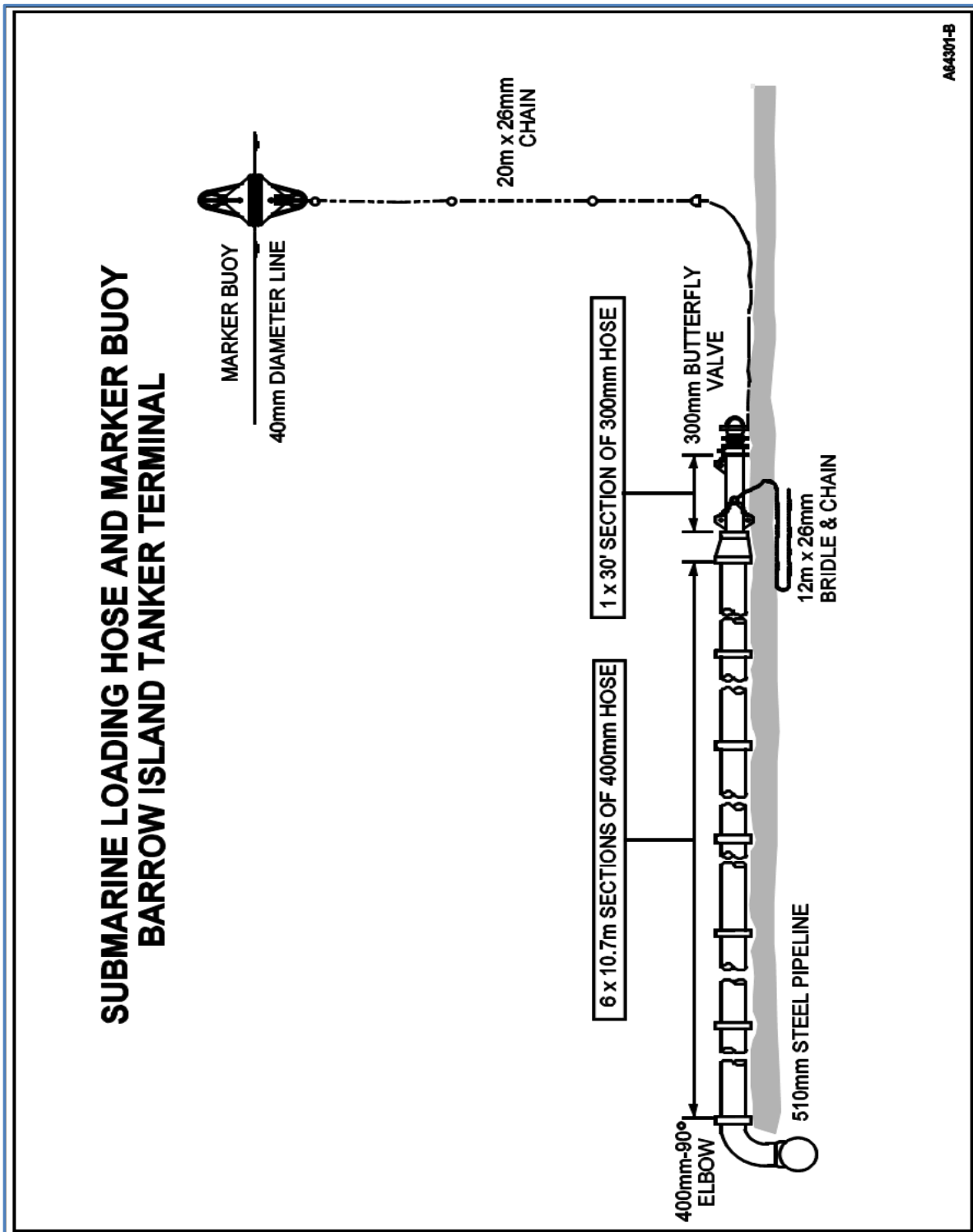
Acronym/Abbreviation	Definition
Tanker	Any crude oil lifting vessel using or intending to use the Marine Terminal
TSO	Tanker Safety Officer Person appointed by chevron to assist the PMM.
Tug	Vessel described in <i>Section 3.13</i>

## Appendix A Location of Barrow Island CBM Marine Terminal



Appendix Figure A-1: Location of Barrow Island CBM Marine Terminal

## Appendix B Plan of Loading Hose and Submarine Pipeline



Appendix Figure B-1: Plan of Loading Hose and Submarine Pipeline



## Appendix D Tanker Suitability Assessment Form

PLEASE PROVIDE DETAILS REQUESTED – ANSWER YES or NO – NO TICKS PLEASE

<b>Chevron Australia Pty Ltd</b> <b>Tanker Suitability Assessment Form</b>	
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Item.	Information Required	
1	Terminal	Barrow Island CBM Marine Terminal
2	Name of Tanker	
3	Type (Tanker, Product, Chemical)	
4	Year Built	
5	IMO Number	
6	Flag	
7	Classification Society	
8	Satellite Phone Number	
9	Summer Deadweight	Tonnes
10	Summer Displacement	Tonnes
11	Length Overall	Metres
12	Moulded Depth	Metres
13	Beam	Metres
14	Length of Port Anchor Cable (27.5 metre lengths)	Shackles
15	Length of Starboard Anchor Cable (27.5 metre lengths)	Shackles
16	Distance Bridge to Bow	Metres
17	Distance Bow to Manifold	Metres
<b>Please see attached plan to assess whether the Tankers Mooring System is suitable for the Terminal</b>		
18	Have Tankers' Anchor Swivels been inspected and found in good working condition?	
19	Is the Main Deck fitted with exposed cargo tank frames? (Vessels with exposed frames are not acceptable)	
20	Are mooring bitts located so that Backup and Swamp lines may be deployed to any of the six mooring buoys and hove in and made fast to bitts? Refer to attached diagram.	
21	What is the length of the Tanker's Mooring Lines permanently fitted to winches? (minimum length 220 metres without tails)	Metres
22	What is the minimum breaking strain of the Tanker's Mooring Ropes/Wires?	Tonnes
23	What is the minimum breaking strain of the Tanker's Mooring Bitts?	Tonnes
24	Are the ropes/wires permanently fitted to winches?	
25	Are Winches Pedestal Fairleads and Bitts suitable to heave in and make fast Tanker's Mooring Ropes and Terminal Swamp Moorings?	
26	Does the Tanker's Manifold conform to OCIMF specifications?	
27	Is the Tanker fitted with a Midship Crane? Please state position and SWL? (minimum SWL 10 tonnes)	

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<p><b>Chevron Australia Pty Ltd</b> <b>Tanker Suitability Assessment Form</b></p>	
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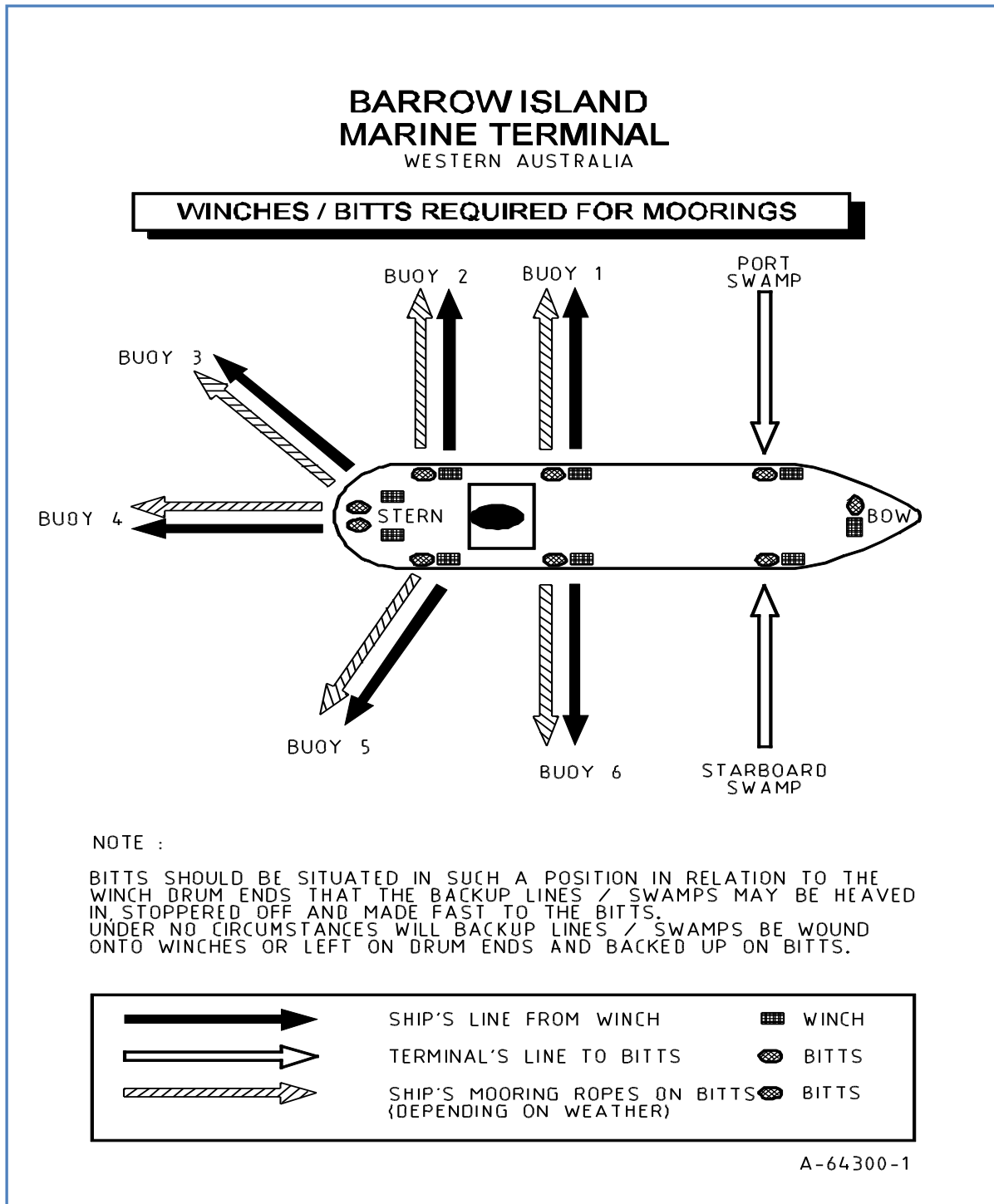
Item	Information Required	
28	Date of Load Test of Crane? Date of last inspection of crane wires by Tanker crew? Date of change of Crane wires?	
29	Is the Tanker double hulled?	
30	Is Propeller fixed or variable pitch?	
31	Is the Tanker's Inert Gas System operational?	
32	Does the Tanker have in force all Insurances and Certificates (including ISPS-International Ship Security Cert.) Required of Owners, Charterers, Cargo Owners and Masters of Tankers under Australian Law?	
33	Does the Tanker meet the financial requirements of the Civil Liability Convention 1992 as amended?	
34	Date of last OCIMF inspection and which Oil Company?	
35	Masters Name and Nationality	
36	Nationality of Officers and Crew	
37	Tanker Owner	
38	Tanker Operator Name, Address and Contact Number	
39	Primary Emergency contact person and contact numbers – Office and After hours	
40	Alternate Emergency contact person and contact numbers – Office and After hours	
41	P & I Club	
<b>Sign Off</b>		
42	Signed: (Please also print name)	Date and Time
43	For: (Company)	

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**Appendix Figure D-1: Tanker Suitability Assessment Form**

## Appendix E Winches / Bitts Required for Moorings



**Appendix Figure E-1: Winches/Bitts Required for Moorings**

## Appendix F Details of Safety Requirements



### SAFETY REQUIREMENTS

**VESSEL:** \_\_\_\_\_

**CARGO NO.:** \_\_\_\_\_

**TERMINAL:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

Dear Sir,

Responsibility for the safe conduct of operations onboard your ship while at our terminal rests with you as master. Nevertheless, since our personnel, property and other shipping may also suffer serious damage in the event of accident aboard your ship, we wish, before operations start, to seek your full co-operation and understanding on the safety requirements set in the Ship/Terminal Safety Check List. It is the policy of this terminal that no one will be on duty under the influence of drugs or alcohol. These safety requirements are based on safe practices widely accepted by the Oil and Tanker industries. We therefore expect you and all under command to adhere strictly to them throughout your stay at this terminal. We for our part, will ensure that our personnel do likewise and co-operate fully with you in the mutual interest of safe and efficient operation. In order to assure ourselves of your compliance with these safety requirements, the Pilot/Mooring Master will join one of your officers before the start of cargo and thereafter from time to time, to inspect the cargo deck and to ensure that the requirements of the Ship/Terminal safety check list are adhered to.

If we observe any infringements on board your ship of any of these safety requirements, we shall bring this immediately to the attention of yourself or your deputy for the corrective action. If such action is not taken in a reasonable time we shall adopt measures which we consider to be the most appropriate to deal with the situation and we shall notify you accordingly. If the Pilot/Mooring Master suspects or believes that any of your duty personnel are affected by drugs or alcohol, loading will be suspended.

If you observe any infringement of these requirements by terminal staff on board your ship, please bring this immediately to the notice of our Pilot/Mooring Master. Should you feel that immediate threat to the safety of your ship arises from any action on our part, or from equipment under our control, you are fully entitled to demand an immediate cessation of operations. Should you have reason to believe that any of the terminal or shore staff are under the influence of drugs or alcohol you are fully entitled to demand an immediate cessation of operations, using the emergency stop procedure in the case of the Pilot/Mooring Master being deemed to be under the influence of drugs or alcohol.

UHF/VHF communication channel UHF (1) 469.775MHZ and UHF (2) 469.8MHZ plus MARINE VHF 14

IN THE EVENT OF CONTINUED OR FLAGRANT DISREGARD OF THESE SAFETY REQUIREMENTS BY ANY SHIP, WE RESERVE THE RIGHT TO STOP ALL OPERATIONS AND TO ORDER THAT SHIP OUT OF THE BERTH FOR APPROPRIATE ACTION TO BE TAKEN BY THE CHARTERERS AND OWNERS CONCERNED.

Please acknowledge receipt of this letter by countersigning and returning the attached copy.

for: Chevron Australia Pty Ltd

Receipt of this letter is acknowledged.

\_\_\_\_\_  
Pilot/Mooring Master

\_\_\_\_\_  
Master:

Date \_\_\_\_\_ Time \_\_\_\_\_



## **Appendix G United Kingdom Standard Conditions for Towage**

1. (a) The agreement between the Tugowner and the Hirer is and shall at all times be subject to and include each and all of the conditions hereinafter set out.
- (b) For the purpose of these conditions:-
  - (i) "towing" is any operation in connection with the holding, pushing, pulling, moving, escorting or guiding of the Hirer's vessel, and the expressions "to tow", "being towed" and "towage" shall be defined likewise.
  - (ii) "vessel" shall include any vessel, craft or object of whatsoever nature (whether or not coming within the usual meaning of the word "vessel") which the Tugowner agrees to tow or to which the Tugowner agrees at the request, express or implied, of the Hirer, to render any service of whatsoever nature other than towing.
  - (iii) "tender" shall include any vessel, craft or object of whatsoever nature which is not a tug but which is provided by the Tugowner for the performance of any towage or other service.
  - (iv) The expression "whilst towing" shall cover the period commencing when the tug or tender is in a position to receive orders direct from the Hirer's vessel to commence pushing, holding, moving, escorting, or guiding the vessel or to pick up ropes or lines, or when the tow rope has been passed to or by the tug or tender, whichever is the sooner, and ending when the final orders from the Hirer's vessel to cease pushing, holding, moving, escorting or guiding the vessel or to cast off ropes or lines has been carried out or the tow rope has been finally slipped, whichever is the later, and the tug or tender is safely clear of the vessel.
  - (v) Any service of whatsoever nature to be performed by the Tugowner other than towing shall be deemed to cover the period commencing when the tug or tender is placed physically at the disposal of the Hirer at the place designated by the Hirer, or, if such be at a vessel, when the tug or tender is in a position to receive and forthwith carry out orders to come alongside and shall continue until the employment for which the tug or tender has been engaged is ended. If the service is to be ended at or off a vessel, the period of service shall end when the tug or tender is safely clear of the vessel or, if it is to be ended elsewhere, then when any person's baggage, goods, mails, specie, ship or engine parts or gear, or articles of whatsoever description have been landed or discharged from the tug or tender and/or the service for which the tug or tender has been required is ended.
  - (vi) The word "tug" shall include "tugs", the word "tender" shall include "tenders", the word "vessel" shall include "vessels", the word "Tugowner" shall include "Tugowners", and the word "Hirer" shall include "Hirers".
  - (vii) The expression "Tugowner" shall include any person or body (other than the Hirer or the owner of the vessel on whose behalf the Hirer contracts as provided in Clause 2 hereof) who is party to this agreement whether or not he in fact owns any tug or tender, and the expression "other Tugowner" contained in Clause 5 hereof shall be construed likewise.

2. If at the time of making this agreement or of performing the towage or of rendering any service other than towing at the request, express or implied, of the Hirer, the Hirer is not the owner of the vessel referred to herein as "the Hirer's vessel", the Hirer expressly represents that he is authorised to make and does make this agreement for and on behalf of the owner of the said vessel subject to each and all of these conditions and agrees that both the Hirer and the owner are bound jointly and severally by these conditions.
3. Whilst towing or whilst at the request, express or implied, of the Hirer rendering any service other than towing, the master and crew of the tug or tender shall be deemed to be the servants of the Hirer and under the control of the Hirer and/or his servants and/or his agents, and anyone on board the Hirer's vessel who may be employed and/or paid by the Tugowner shall likewise be deemed to be the servant of the Hirer and the Hirer shall accordingly be vicariously liable for any act or omission by any such person so deemed to be the servant of the Hirer.
4. Whilst towing or whilst at the request, express or implied, of the Hirer rendering any service of whatsoever nature other than towing:
  - (a) The Tugowner shall not be responsible for or be liable
    - (i) for damage of any description done by or to the tug or tender, or done by or to the Hirer's vessel or done by or to any cargo or other thing on board or being loaded on board or intended to be loaded on board the Hirer's vessel or being loaded on board or intended to be loaded on board the Hirer's vessel or the tug or tender or by or to any other object or property;
    - (ii) for loss of the tug or tender or the Hirer's vessel or of any cargo or other thing on board or being loaded on board or intended to be loaded on board the Hirer's vessel or the tug or tender or any other object or property;
    - (iii) for any personal injury or loss of life howsoever and wheresoever caused including personal injury or loss of life of the master and/or crew of and/or any person on board the tug or tender;
    - (iv) for any claim by a person not a party to this agreement for loss or damage of any description whatsoever, arising from any cause, including (without prejudice to the generality of the foregoing) negligence at any time of the Tugowner's servants or agents, unseaworthiness, unfitness or breakdown of the tug or tender, its machinery, boilers, towing gear, equipment, lines, ropes or hawsers, lack of fuel, stores, speed or otherwise, and
    - (v) The Hirer shall be responsible for, pay for and indemnify the Tugowner against and in respect of any loss or damage and any claims of whatsoever nature or howsoever arising or caused whether covered by the provisions of Clause 4(a) hereof or not (including any arising from or caused by the negligence of the Tugowner or his servants or agents) including the loss of or damage to the tug or tender, provided that the Hirer shall not be liable to the Tugowner for or in respect of loss, damage or claims which the Hirer proves (the burden of proof being on the Hirer) to have been solely caused by the failure of the Tugowner, and due to the actual fault or privity of the Tugowner, to make his tug or tender seaworthy for the towage or service other than towage.

Provided however, notwithstanding anything hereinbefore contained, the Tugowner shall under no circumstances be responsible for or be liable for any loss or damage caused or contributed to, by or arising out of any delay or detention of the Hirer's vessel or of any delay or detention of the Hirer's vessel or of the cargo on board or being loaded on board or intended to be loaded on board the Hirer's vessel or of any other object or property or of any person, or any consequence thereof, whether or not the same shall be caused or arise whilst towing or whilst at the request, either express or implied of the Hirer, rendering any service of whatsoever nature other than towing or at any other time whether before during or after the making of this agreement.

5. The Tugowner shall at any time be entitled to substitute one or more of the tugs or tenders for any other tug or tender or tugs or tenders. The Tugowner shall at any time (whether before or after the making of this agreement between him and the Hirer) be entitled to contract with any other Tugowner (hereinafter referred to as "the other Tugowner") to hire the other Tugowner's tug or tender and in any such event it is hereby agreed that the Tugowner is acting (or is deemed to have acted) as the agent for the Hirer, notwithstanding that the Tugowner may in addition, if authorised whether expressly or impliedly by or on behalf of the other Tugowner, act as agent for the other Tugowner at any time and for any purpose including the making of any agreement with the Hirer. In any event should the Tugowner as agent for the Hirer contract with the other Tugowner for any purpose as aforesaid it is hereby agreed that such contract is and shall at all times be subject to the provisions of these conditions so that the other Tugowner is bound by the same and may as a principal sue the Hirer thereon and shall have the full benefit of these conditions in every respect expressed or implied therein.
6. Nothing contained in these conditions shall limit, prejudice or preclude in any way any legal rights which the Tugowner may have against the Hirer including, but not limited to, any rights which the Tugowner or his servants or agents may have to claim salvage remuneration or special compensation for any extraordinary services rendered to vessels or anything aboard the vessels by any tug or tender. Furthermore, nothing contained in these conditions shall limit, prejudice or preclude in any way any right which the Tugowner may have to limit his liability.
7. Consequences of war, riots, civil commotions, acts or terrorism or sabotage, strikes, lockouts, disputes, stoppages or labour disturbances (whether he be a party thereto or not) or anything done in contemplation or furtherance thereof (refusal by any person (whether a servant or agent of the Tugowner or not) to perform his duties) or delays of any description, howsoever caused or arising, including by the negligence of the Tugowner or his servants or agents.
8. The Hirer of the tug or tender engaged subject to these conditions undertakes not to take or cause to be taken any proceedings against any servant or agent of the Tugowner or other Tugowner whether or not the tug or tender be substituted or hired or the contract or any part thereof has been subject to the owner of the tug or tender, in respect of any negligence or breach of duty or other wrongful act on the part of such servant or agent which, but for this present provision, it would be competent for the Hirer so to do and the owners of such tug or tender shall hold this undertaking for the benefit of their servants and agents.