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# PORT MOODY TERMINAL

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# INFORMATION TO VESSELS

Current versions of approved documents are maintained online. Printed copies are uncontrolled

# IMPORTANT

- Smoking is strictly prohibited outside designated smoking areas!
- Cargo operations require at least one qualified person to be stationed on deck during loading or discharge!
- In case of an oil spill or other emergency, cargo operations must be stopped immediately and the terminal control room and Voyage Order contact must be informed.
- In case of any situation or incident that could possibly have an impact on health and/or environmental conditions, the terminal control room should be informed immediately on the emergency telephone number:

**(604)-933-3009**

or by the portable radio. Voyage Order contact should also be informed.

***For more information***

marineop@suncor.com

<http://www.suncor.com/marine>

**Version**

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**DISCLAIMER**

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# **GENERAL INFORMATION**

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## 1 GENERAL INFORMATION

### 1.1 LOCATION

The facility is shown on Canadian Hydrographic Service Chart number 3495, Vancouver Harbour, Eastern Portion, in latitude 49° 17.4' North, longitude 122° 53.8' West. Its location requires vessels to transit through Vancouver Harbour and the Second Narrows Bridge. The Vancouver Port Authority (VPA) has established specific requirements for vessels transiting the Second Narrows which are published in the "Second Narrows Movement Restriction Area, (MRA), Standing Orders. The requirements include specific restrictions for tankers and oil barges which address safety issues such as maximum allowable tidal currents; minimum allowable tidal heights; maximum transit speed; minimum visibility; daylight navigation and attendant tugs. Masters must operate their vessels in strict compliance with the MRA Standing Orders, which may be obtained from the Vancouver Port Authority. (see section 1.7)



## 1.2 BERTH DESCRIPTION

- The facility has two separate docks, which accommodate a wide range of vessel types from small non-propelled barges to deep-sea tankers.
- The facility loads and discharges vessels carrying refined petroleum products (i.e. no crude oil or petro chemical transfers are undertaken).

### 1.2.1 The West Dock

- The West dock is the primary transfer location. All deep-sea tankers and import/export barges berth at this dock as well as some of the small domestic trading barges.
- The West dock is an “L” shaped finger pier with a 45-metre dock and two breasting dolphins, which provide an effective breasting length of 84 metres.
- The dock structure is fitted with a log fender system that is suitable for the small barges whose overall length is less than the spacing between the breasting dolphins. The dock structure however is not designed to withstand large vessel berthing impacts. Deep-sea tankers and the large import/export barges should land on the breasting dolphins.
- The breasting dolphins are fitted with a fendering system that is adequate for vessels up to the maximum approved criteria (*see Section 3.1*) within the maximum berthing force criteria (*see Section 3.5*).
- The berth is equipped with four mooring dolphins that are well placed and together with the mooring points on the dock structure and the breasting dolphins, provide for a balanced deployment of moorings for the varied vessel sizes visiting the facility.
- The face of the dock lies approximately 049° - 229° true and is well to the South of the centre of the navigational approach channel. Masters should however guard against passing vessel effect when deep-sea vessels pass the dock enroute to or from terminals East of the facility.
- Vessels to be berthed starboard side to (i.e. without turning the vessel around to approach the berth) which allows for proper gangway landing/alignment.
- There is a shore gangway that is adequate for barges. The gangway is not adequate for deep-



sea tankers for all combinations of freeboard and height of tide (e.g. light ship and high tide).

- Tankers should come to the dock with an adequately long ship's gangway ready for deployment (NB. the elevation of the dock is approximately 6.5 metres above the water level at chart datum). The gangway landing location is at the Western end of the dock (NB. Gangways must be fitted with safety nets).
- Masters are cautioned that the deployment of ship's accommodation ladders to effect shore access is not normally possible due to the short length of the dock and its location relative to the position of most ship's accommodation ladders.

### **1.2.2 The East Dock**

- The East dock is used to load small, domestic trading barges when the West berth is unavailable.
- The facility is an "L" shaped finger pier with a 40-metre dock. There are no supplemental breasting or mooring dolphins, so all moorings must be deployed to bollards on the dock. Masters should prepare their mooring plan accordingly.
- The dock is fitted with a log fender system that is adequate for the small barges approved to visit this facility (*See Section 3.2*).
- The face of the dock lays approximately 048° - 228° true. It is well clear of the navigational channel. Bargemen should however guard against passing vessel effect when deep-sea vessels pass the dock enroute to/from terminals East of the facility.
- Tug masters may elect to berth the barge either side to at their discretion.
- There is a shore gangway provided.

## **1.3 WATER DEPTH AND AIR DRAFT**

### **1.3.1 Water Depth**

- The facility is situated in salt water.
- The controlling depth of water is at the dock itself (i.e. any vessel transiting the harbour at the maximum draft(s) for the dock(s) will have adequate water depths available at chart datum for the navigational passage).
- Vancouver Port Authority publishes the latest soundings which can be found by [clicking here](#) , or can be provided by local vessel agents.
- The Vancouver Port Authority Second Narrows “Movement Restriction Area Standing Orders” establishes maximum drafts for deep-sea tankers that are linked to minimum tidal transit heights. *(see Section 1.7)*
- The vessels must follow their company ISM policies for under keel clearances and be guided by Canadian Coast Guard regulations. Masters are advised to be in full compliance with the Canadian Coast Guard guidelines reference to net under keel clearance when alongside the terminal. Copies of these regulations can be obtained from the vessels agents.

### **1.3.2 Air Draft**

- Vessels must pass under three bridges and three overhead cables enroute to the facility. The limiting height factor is 44 metres above higher high water.

## **1.4 SERVICES AT THE BERTH**

NO SERVICES ARE AVAILABLE AT THE FACILITY

- Services like garbage scow, oily slop receiving barge and bunker barges are available within Vancouver Harbour at commercial rates. No provisioning of ship’s stores or delivery of packages is allowed and freshwater or sewage services are not provided.

## **1.5 SECURITY**

### **1.5.1 Access to and From the Vessel**

- Access to and from the vessel is controlled by a gate. Taxicabs are not allowed past the
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gate, which is a short walk to/from the berths. Masters should advise the refinery operations centre of persons who are approved to visit the vessel. All vessels must provide a crew list and visitors to vessels at the berths who are not crew members must be pre-approved by the marine scheduler.

- All persons and property may be subject to search. If you elect to enter the terminal area, you are deemed to have given consent to search and inspection.

#### **Marine Facility Security Officer (MFSO)**

<b>Contact</b>	<b>Numbers</b>
Global Security Operation Centre GSOC 24/7	Office: +1-403-296-3000 Toll Free 1-833-623-2100
E-mail	<a href="mailto:securityoperations@suncor.com">securityoperations@suncor.com</a>

- The terminal is compliant with the requirements of the International Code for the Security of Vessels and of Port Facilities and the relevant amendments to Chapter XI of SOLAS (ISPS Code). It is mandatory that all vessels comply with the referenced ISPS code. If required, Declaration of Security (DoS) between vessels and shore to be completed as per Transport Canada guidelines.

### **1.5.2 Access to the Terminal**

#### **1.5.2.1 General**

- Anyone who has been granted access to the premises has to proceed to and from the vessel via the marked walkway. When available, the security officer may drive individuals to/from the dock entrance.

**Suncor has a “Zero Tolerance” policy for Alcohol and Drug intoxication for vessel crew and personnel entering or leaving the facility.**

#### **1.5.2.2 Crew**

- Crew that are mentioned on the crew list have permission to leave and re-enter the terminal. They must carry identity papers to enable the security guard to check their identity against the crew list.
- Suncor has “Zero Tolerance” policy for Alcohol and Drug intoxication for vessel crew and personnel entering or leaving the facility.

### 1.5.2.3 Other Visitors to the Vessel

- Access to the premises is only allowed to visitors mentioned on the visitor list, issued by the agent or after approval by the vessel's master. All visitors have to identify themselves at the gate by means of a passport or driving licence. Government officials, in their official capacity, will be granted access upon presentation of their official ID-card.
- Furthermore, anyone carrying goods that are to be delivered on board a vessel must present documents (i.e. a waybill, packing list etc.) covering the carriage of such goods to security guards before entry is granted.

**Note:** This refers to small packages carried by individuals during the course of business on the vessel. There are no deliveries of goods allowed (section 1.4)

### 1.5.2.4 Unaccompanied Luggage

- Depending on the security level, Suncor reserves the right to refuse unaccompanied luggage at the gate. Alternatively, when unaccompanied luggage is presented at the gate, Suncor may invite the vessel's security officer to personally take receipt of this luggage on behalf of its rightful owner.

## 1.6 WEATHER

- The British Columbia Coast (South Portion) Volume 1 (current edition) contains extensive historical weather criteria of the Vancouver area and should be consulted.
- Weather is not usually a problem at the facility, which is generally well protected from wind and wave action.

## 1.7 TIDAL RANGE AND CURRENT

- The tidal range at the berth can vary between 3.3 and 5.5 metres. Due to its location, tidal currents off the dock are not extreme (i.e. maximum rates are approximately 1 to 2 knots).
- Significant tidal currents do occur at Second Narrows and the *Second Narrows MRA Standing Orders* manage this risk by establishing periods of operation (i.e. transits, on either side of high and low water slack with deep-sea vessels transiting under the Second Narrows Bridges at slack water or stemming the current).
- Standing orders for the Second Narrows movement restrictions can be found on the Port of Vancouver website, or through attending vessel agents.

# 2

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# COMMUNICATIONS

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## 2 COMMUNICATIONS

### 2.1 ESTIMATED TIME OF ARRIVAL (ETA)

- Masters are required to co-ordinate their arrival in accordance with the terms of the charter party, (deep-sea vessels) and local agreements (tug and barge) and to advise the terminal as follows:

**Deep-sea Vessels:** 72 hours prior to arrival; 48 hours update; 24 hours update; 12 hours update; 3 hours prior to arrival. Masters should take into account the impact of the requirements of the Second Narrows MRA Standing Orders on the vessels ETA at the berth.

**Domestic Vessels:** In accord with local agreement.

### 2.2 USEFUL LOCAL NUMBERS

CONTACT	NUMBER
Suncor Port Moody Marine Terminal Supervisor, Lower Terminal	Tel: (604)-933-3211 (604)-933-2324
Suncor Port Moody Marine Terminal Scheduler	Tel: (604)-933-3026 (Office hrs) Tel: (604)-230-2790 (After hrs)
Vancouver Harbour Master – Operations Centre	Tel: (604)-665-9086 (24 hrs)
Vancouver Pilot Dispatch	Tel: (604)-666-6776
Victoria Pilot Dispatch	Tel: (250)-363-3878
Pacific Pilotage Authority	Tel: (604)-666-6771 (24 hrs)
Western Canada Marine Response Corp	Tel: (604)-294-6001 Tel: (604)-294-9116 (24 hrs)
Police Fire Ambulance	911
Canadian Coast Guard	Tel: (604)-666-6011
Oil Spills, Fire/Emergencies - MCTS	Tel: 1-(800)-889-8852
Canadian Border Service Agency	Tel: (604)-666-0272
Tug support - berthing and emergencies	Tel: (604)-984-5165

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Marine Facility Security Officer	Tel: +1-403-296-3000 Toll Free 1-833-623-2100
Corporate Security	Tel: (780)-453-5538
24 hour Security	Tel: (604)-933-3000 Cell: (604)-290-2678 – 24/7 (604)-290-2670 – Mon-Fri 0600-1800

### 2.3 CARGO TRANSFER COMMUNICATION

- The terminal provides a portable radio for the vessel's use in communicating with terminal staff during cargo transfer operations. All communications must clearly identify the specific dock to which the communication applies (ie. East Dock or West Dock).

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## **BERTHING AND MOORING**

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### 3 BERTHING AND MOORING

#### 3.1 VESSEL SIZE AND RESTRICTIONS – WEST BERTH

- The dock accommodates vessels from the small non propelled Canadian flag coastal trading barges, to the larger U.S. flag import export barges, up to the large deep-sea tankers. The facility is well designed and located. The key maximum criteria are vessel displacement, vessel length and maximum allowable draft at chart datum.
- Suncor requires vessels connecting to the hard arms to deploy mooring wires/ropes or similar low elasticity material moorings to provide the best circumstances for maintaining the vessel within the operating envelope of the hard arms. The terminal would prefer to use ropes when available. See section 3.4 for additional details.

Vessel Size/Equipment Criteria	Restriction
Maximum Displacement	66,000mt
Maximum height of manifold*	18.4m
Minimum height of manifold*	2.7m
Maximum Length Overall	222m
Maximum bow to centre/manifold	111m
Maximum stern to centre/manifold	111m
*Above water level at Chart Datum (low-low water level)	

#### 3.2 VESSEL SIZE RESTRICTIONS – EAST BERTH

- This dock is used to load small regularly trading Canadian flag coastal barges. The key criteria are maximum displacement and maximum overall length to provide for an equalized distribution of mooring lines when mooring vessels at this relatively short berth.
- Cargo transfer is via barge cargo hoses and vessels may accommodate the bow to centre of manifold restriction with additional hose length.

Vessel Size Criteria	Restrictions
Maximum Displacement	7,000mt
Maximum Length Overall	85m

Maximum bow to centre/manifold	50m*
Maximum stern to centre/manifold	35m*
* Assumes vessel starboard side to.	

### 3.3 SPOT APPROVAL

- The parameters shown in 3.1 and 3.2 may be relaxed for an individual vessel call subject to a marine technical review of the special circumstances of the relaxation request and written approval by Suncor Marine Department.

### 3.4 MOORING CRITERIA

- The two berths (i.e. the East dock and the West docks), do not have a history of mooring problems.
- A mooring boat is normally utilized to assist in connecting/disconnecting the heavier long lead mooring lines of deep-sea tankers.
- Mooring lines in the same service (eg. spring lines), should be of the same material and similar in length.
- Masters should ensure that, to the maximum extent possible, breast lines shall be deployed at right angles to the longitudinal axis of the vessel and spring lines shall be deployed parallel to the longitudinal axis of the vessel.
- The East dock provides an adequate breasting length but, due to its relatively short length, does not permit breast lines to be effectively deployed from the extreme ends of the vessel. Masters should prepare their mooring plan accordingly.
- Vessels that utilize the West Dock’s hard arm cargo transfer system (i.e. all deep-sea tankers and import/export barges), must deploy wire moorings or moorings constructed of similar low elasticity material. The terminal would prefer to use ropes when available. Vessels deploying mooring wires must be fitted with synthetic mooring tails and shackles that meet OCIMF Mooring Equipment Guidelines 4 (MEG 4)
- While the responsibility for the adequate mooring of a tanker rests with the Master, the terminal has an interest in ensuring that vessels are securely and safely moored. Appendix 1 Mooring Guideline Diagrams are guidelines for minimum moorings which terminal staff will expect vessels to deploy while at this facility. Masters should ensure that to the maximum

extent possible, breast lines shall be deployed at right angles to the longitudinal axis of the vessel and spring lines shall be deployed parallel to the longitudinal axis of the vessel.

### 3.5 BERTHING INFORMATION

#### 3.5.1 The West Dock

- The berth face of the dock is about parallel to the shore.
- The fendering system on the West Dock structure is a fender log, which rests against fender piles backed by a rubber fender unit. This is adequate for absorbing the berthing impact of import/export barges and deep-sea tankers. Vessels over 85 metres in length should be positioned spanning both breasting dolphins. i.e. not with their stern or bow resting against the dock fender system.
- The fendering system on the West dock breasting dolphins is wood facing, secured to fender piles backed by a rubber fender unit. This fender system is designed to absorb berthing impacts as shown below. Assumes berthing impact is at the vessels  $\frac{1}{4}$  point.
- Water depths lessen about 30 metres southwest of the West Dock berth's westerly limit and about 15 metres northeast of the West Dock berth's easterly limit. See 3.6.1.

<i>Vessel Type</i>	<i>Maximum Displacement</i>	<i>Maximum Approach Angle</i>	<i>Maximum Approach Velocity</i>
Deep-sea Tanker	From 20,000 to 66,000 tonnes	5°	0.135 m/sec
Barge	From 10,001 to 20,000 tonnes	10°	0.2 m/sec

#### 3.5.2 The East Dock

- The berth face of the dock is about parallel to the shore.
- The fendering system on the East Dock structure is a fender log, which rests against fender piles. This is an adequate system for absorbing the berthing impact of the small domestic barges during routine berthing manoeuvres.

### 3.6 BERTHING/UNBERTHING MANOEUVRES

#### 3.6.1 The West Dock

- Domestic Barge Traffic (Maximum 10,000 displacement tonnes):
  - Vessels to berth starboard side to
  - Care should be taken to control the berthing impact on the dock structure by approaching the dock at very slow speed at a maximum 15° angle of approach
  
- Larger Barge Traffic (10,001 to 20,000 displacement tonnes):
  - Vessels to berth starboard side to.
  
  - The Master should ensure that the assist tug is secured to the barge and care must be taken to ensure that the barge is landed on the breasting dolphin and not on the face of the dock. The angle of approach and the approach velocity must be controlled within the parameters shown in 3.5.1
  
  - Care must be taken to avoid contact with any mooring dolphin, as they are not designed to withstand such forces.
  
- All Deep-sea Tankers (Maximum 66,000 Displacement Tonnes):
  - Vessels to be berthed starboard side to (i.e. without turning the vessel around to approach the berth) which allows for proper gangway landing/alignment.
  
  - The Master should ensure that the assist tugs are secured to the vessel and care must be taken to avoid the vessel's bow or stern falling inside the line of the face of the dock as water depths decrease inshore of this line. Care must also be taken to have the vessel approximately in position (i.e. not too far ahead or astern of the mooring position, when the vessel is less than a ships width off the dock). This will ensure that the vessel stays clear of the shoals South-west and North-east of the berth.
  
  - The dock is well situated for a routine approach with way taken off the vessel as it nears position and the tugs assisting to achieve a generally flat landing on the dolphins. The forward spring is normally the first line run to shore. Care should be taken when running the back spring ashore as this line can occasionally foul on the after breasting dolphin fender system. Maximum tidal current at the dock is 1 to 2 knots.
  
  - When unberthing, the assist tugs should be secured to the vessel and pull it off the dock until the vessel sufficiently clears the dock. This is to guard against tugs either contacting the mooring dolphins, the fixed oil pollution boom or damaging

the boom with the tugs wash.

### **3.6.2 The East Dock**

- Vessels to be berthed starboard side to (ie. without turning the vessel around to approach the berth) which allows for proper gangway landing/alignment.
- This berth is used for small regularly trading barge traffic normally arriving empty to load. Masters are cautioned that water depth lessens inside the line of the face of the berth and that vessels arriving or departing the berth at maximum safe draft should not be manoeuvred inside this line.
- Vessels should not be turned by landing on the end of the dock.
- Care should be taken to control the berthing impact on the dock structure by approaching the dock at a very slow speed at a maximum 15° angle of approach.
- The berthing/unberthing manoeuvres are otherwise routine at this dock. Maximum tidal currents are relatively small (ie. about 1 to 2 knots).

### **3.7 TUG ASSIST**

- These requirements apply to vessels during their berthing/unberthing manoeuvre at Suncor's Port Moody Terminal. They should not be confused with the distinct and separate attendant tug requirements established by the Vancouver Port Authority Second Narrows Manoeuvring Restriction Area Standing Orders (#17, Appendix B and C) for the transit of Second Narrows.
- The safe handling of the vessel is the responsibility of the Master and his/her Pilot. Suncor does expect that effective use of tug assist will be utilized by vessel Masters in certain circumstances. The objective of tug assist is to generally aid in the safe berthing and unberthing of the vessel and in particular to minimize the risk of a hard contact with the berth and/or damage to the berth's hard arm transfer equipment.
- When tugs are required to be utilized they shall be secured to the vessel by suitable means.

- To help minimize the risk of a hard contact while berthing or unberthing, Suncor requires vessels to utilize tug assistance in accordance with the following schedule. NB. Masters shall increase these requirements at their discretion but shall not decrease these requirements without Suncor Marine Department approval.

<b><i>Vessel Parameters</i></b>	<b><i># Tugs for Berthing</i></b>	<b><i># Tugs for Unberthing</i></b>
Up to 19,999T displacement, with Bow Thruster	--	--
Up to 19,999T displacement, without Bow Thruster	1	1
Vessels over 20,000T displacement	2	2

### 3.8 LINESMEN

- An adequate number of shore linespersons will be provided to take ship and barge lines and perform dock mooring duties (i.e. vessel crew are not to be landed onto the dock to help berth the vessel).

<b><i>Guideline</i></b>	<b><i>Berthing</i></b>	<b><i>Unberthing</i></b>
Deep Sea Tanker*	4 Persons	2 to 4 Persons**
Barge over 10 000 displacement tonnes	2 Persons	2 Persons
Barge less 9,999 displacement tonnes	1 Person	1 Person
*These are in addition to the persons on the mooring boat (see 3.4)		
**Subject to agreement onsite		

### 3.9 ENVIRONMENTAL LIMITS

- Wind Limits: Berthing
  - While weather is not normally a factor at the berths, vessels will not be permitted to berth when wind forces are 35 knots or greater.
- Wind Limits: While Alongside
  - Vessels will be required to leave the berth if this can be done safely or make other arrangement acceptable to the dock supervisor when wind forces are 40 knots or greater.

Stop cargo	30kt
Disconnect arm	35kt
Take precautionary action	40Kts

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# RULES AND REGULATIONS

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## 4 RULES AND REGULATIONS

### 4.1 GENERAL FEDERAL GOVERNMENT REQUIREMENTS

- Masters are required to operate their vessels in compliance with Canadian Legislation and Regulations while in Canadian waters. Many of Canada’s marine requirements are based on IMO and ILO standards. Certain requirements are, however, unique to Canada and Masters of non-Canadian vessels should ensure that their vessel’s agent informs them of distinct Canadian requirements.

### 4.2 PORT OF VANCOUVER REGULATIONS

- Copies of the Ports “Operating Regulations” and the “Second Narrows Movement Restriction Area Standing Orders” can be obtained from the Harbour Master.
- Included among the Operating Regulations and Standing Orders are significant requirements affecting deep-sea tankers and Canadian and U.S. flag oil barges such as: pollution control; prior approval for entry to the port; navigation within the port; mandatory use of tug services; engine readiness; gangways and safety nets; incident reporting; dangerous goods permits; fire prevention and emergency response.
- Masters of deep-sea tankers and U.S. barges should ensure that they are provided with a copy of these Regulations and Procedures prior to arrival at the Port of Vancouver. Masters of any tanker or barge visiting Suncor’s Port Moody Terminal should be familiar with the VPA’s procedures and operating regulations and comply fully with their requirements.
- The Port of Vancouver has also established Standing Orders governing a ballast water exchange program that requires deep-sea vessels to carry out a mid-ocean ballast water exchange prior to arriving in Canadian waters. The Port requirements are based on *IMO Resolution A774 (18)*.

### 4.3 SUNCOR PORT MOODY TERMINAL RULES AND PROCEDURES

- Tankers and oil barges destined for the Terminal are required to have the latest edition of the “International Safety Guide for Oil Tankers and Terminals - ISGOTT” on board.
- Suncor is committed to safe operations and the protection of the environment at its Port Moody Terminal. Vessel staff are requested to immediately bring any unsafe conditions or pollution risks to the attention of terminal staff and to take appropriate action to

remedy the situation, including the suspension of cargo transfer activity.

- The following safety regulations have been developed in an effort to reduce the possibility of an incident involving fire, explosion, spills or other hazard. Nothing in these rules and procedures will relieve Masters and/or barge supervisors of their responsibilities in observing normal safety, fire prevention, pollution prevention and security precautions. Terminal staff are authorized to advise and request Masters and/or barge supervisors to take additional measures to ensure safe operations should circumstances so require. Terminal staff is also authorized to suspend oil transfer operations in the event of an infringement of terminal rules and procedures or if any other hazardous situation is encountered.
- When a Pollution and Safety Advisor (PSA) is assigned by Suncor to the transfer operation he/she will have the same authority as the terminal staff in ensuring safe operations and vessel compliance with terminal rules and procedures.

### **1. Safety Requirements**

Masters and/or barge supervisors will adhere to the following Suncor Port Moody Terminal Rules and Procedures after completion of berthing operations.

### **2. Safety Check List**

On completion of berthing and prior to the commencement of cargo transfer, the Vessel/Terminal Safety Check List - Appendix 4, will be completed following a joint inspection by the terminal operator and a responsible tanker officer / barge supervisor. This safety Check List is based on latest edition of the “International Safety Guide for Oil Tankers and Terminals” (ISGOTT).

### **3. Gangway**

When deployed, the ship’s gangway must be in good condition and of an appropriate length for safe access between ship and shore. An effective safety net must be deployed.

### **4. Vessels Decks**

Walkways required for accessing cargo systems, deck machinery and emergency equipment shall be kept clear of obstructions and, in winter, provide a safe walking surface.

## **5. Tug Readiness**

The Master of a tug that has berthed a barge at the facility must remain in general attendance in the area unless another tug will be available to attend the barge at short notice in an emergency.

Barges must not be berthed at the facility prior to the agreed arrival time or left unattended after completion of cargo transfer operations.

## **6. Engine Readiness**

The vessels main engines, steering machinery and other equipment essential for manoeuvring shall be maintained in a state of readiness for vacating the berth under full engine power at short notice.

## **7. Repairs**

No hot work is to be performed on board any vessel while alongside the terminal. The testing of radar, ship's radio equipment and other electrical equipment is prohibited unless written permission is received from the terminal supervisor. Tank cleaning and gas freeing is prohibited while alongside. Chipping and scraping on the deck or hull is prohibited.

## **8. Staffing**

Sufficient qualified crewmembers shall be provided for safe handling of cargo, for the tending of moorings, for effective firefighting and for moving the vessel in the event of an emergency on the vessel or the dock. For barges, a tanker man, (barge supervisor), shall be on duty on the vessel throughout the transfer operation and the tanker man shall be supplemented by deck hands for mooring, unmooring, adjustment of moorings or other duties, when necessary. The tanker man's duty period must not exceed 12 hours without relief in any 24-hour period for any transfer operation. NB. All barges, while alongside, and not transferring cargo, must have sufficient staff onboard to properly tend the moorings.

## **9. Vessels Moorings**

Vessel personnel must frequently monitor and carefully tend the vessels moorings to ensure that the vessel is safely secured having regard to the weather and current conditions.

## **10. Ship/Shore Communications**

Communication between the terminal and vessel will be by portable UHF radios. These shall be tested and found satisfactory before transfer operations commence. The vessel's responsible officer and the terminal supervisor (or designate) shall confirm with each other that the communication system and signals for controlling the operations are understood by all personnel involved prior to the commencement of the cargo transfer. *See Section 5.4 and Appendix 3.*

In the event of a total breakdown of radio communication between the terminal and the vessel during cargo transfer operations, then these operations shall be immediately suspended and not resumed until satisfactory communications are re-established.

### **11. Smoking**

Smoking is strictly prohibited while at the berth except in designated areas which have been jointly approved by the Master and by the terminal operator.

Smoking notices specifying the designated smoking areas shall be exhibited in conspicuous places on board the vessel.

Where smoking is approved on vessels, approval may be withdrawn by terminal operator if circumstances so warrant.

### **12. Matches and Lighters**

The carrying and use of matches and lighters is prohibited on board the vessel, on the terminal, and while alongside the terminal except under controlled circumstances in the designated smoking areas.

### **13. Portable Electrical Equipment**

Portable electric lamps and portable electric equipment for use in hazardous areas must be of an approved type.

Any other electrical or electronic equipment of non-approved type - such as radios, mobile telephones, radio pagers, calculators, photographic equipment are not to be active, switched on or used within hazardous areas.

### **14. Radio Equipment**

The use of the vessels radio transmitting equipment while alongside is prohibited and the transmitting antennae should be earthed. This does not apply to permanently and correctly installed VHF and UHF equipment provided the power output is reduced to one

watt or less.

#### **15. Galley Stoves and Other Cooking Equipment**

The use of galley stoves and other cooking equipment shall be permitted, provided the Master and terminal operator agree to their use.

#### **16. Radar - Satellite Communication Terminals - Closed Circuit Television**

The use of this equipment for any purpose is prohibited during the period that the vessel is alongside, except with the approval of the terminal operator.

#### **17. Prevention of Sparking and Excessive Smoke**

Soot blowing and excessive smoke are prohibited, and immediate steps shall be taken to eliminate any sparking from funnels/stacks.

#### **18. Inert Gas Systems**

All tankers fitted with cargo tank inerting system should arrive with cargo tanks inerted to 8% O<sub>2</sub> or less by volume and pressurized as required by the SOLAS Convention.

##### **(a) Tank Inspection, Gauging, Sampling, Water Dips and Temperatures**

Cargo tanks requiring inspection should only be opened on a tank-by tank basis on expressed permission from terminal. The IG system shall be maintained at about 200mm water gauge except for the individual tank to be opened which, if possible, is to be isolated from the system and the sighting port opened with care. On completion of inspection the tank shall be secured and re-pressurized. The next tank is not to be isolated and opened until the preceding tank is secured and open to the IG system

All gauging, sampling water dips and temperatures will be taken either through special fittings provided; or if it is necessary to open up tanks for this purpose, then this will be done one tank at a time as described above.

##### **(b) Failure of IGS**

If at any time the IGS is not maintaining the prescribed conditions, the terminal operator shall order a suspension of transfer operations. The cost of any delays and shifting shall be on the vessel's account.

#### **19. Fire Precautions**

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**Deep-Sea Tankers and Non-Self Propelled Barges When Similarly Equipped:**

The vessel's firefighting appliances, including main and emergency fire pumps, shall be kept ready for immediate use.

Before operations commence, at least two fire hoses and jet/fog nozzles shall be laid out on the tank deck, connected to the fire main and tested as required by the dock operator. The two fire monitors immediately adjacent to the manifold should be elevated, aligned towards the manifold area and made ready for immediate use. Throughout vessel stay at berth, fire line shall be pressurized, ready for immediate use. Two portable fire extinguishers, preferably of the dry chemical type, shall be available in the proximity of the manifold area.

Should fire occur on the vessel, the Master or responsible vessel's officer of such vessel shall make an immediate signal by prolonged blasts on the vessel's whistle and by sounding the fire alarm, and will also place the engine on standby. All transfer operations shall cease and cargo arm disconnected immediately.

**Other Non Self-propelled Barges:**

Every barge shall have, the firefighting equipment conveniently located for emergency use in the cargo tank area, as required under Part VIII of *Transport Canada's "Oil Barge Standards"* i.e. two 9-litre foam fire extinguishers or approved equivalent.

Should fire occur on the vessel, the barge supervisor shall immediately signal the terminal via the portable radio and by any other available means where fitted.

**20. Emergency Procedures**

As required by the Vessel/Terminal Safety Check List, the Master of the vessel and the terminal operator should discuss and agree upon the action to be taken in the event of an emergency or a fire on board either the tanker or the terminal. This should include means of communication and emergency procedures. *See Section 6.*

**21. Operating Procedures**

Procedures for cargo and/or ballast operations shall be agreed in writing between the terminal operator and the vessel's Master or Chief Officer. *See Appendix #3.*

**22. Sea and Overboard Discharge Valves**

Before any cargo or ballast transfer commences, sea and overboard discharge valves connected to the cargo or ballast system shall be closed and sealed with numbered seals. When sealing is not practicable, as with hydraulic valves, some suitable means of marking should be used to indicate that the valves are to remain closed. Seal numbers should be recorded on the Vessel/Terminal Safety Check List. Except in an emergency, these seals shall be removed only with the approval of the terminal operator. A careful watch shall also be maintained to ensure that oil is not leaking through sea and overboard discharge valves.

### **23. Conditions to be observed on Board Vessels During Transfer Operations**

- (a) De-ballasting has to be carried out on the outboard side of the vessel. In case this is not possible (due to the pipeline configuration of the vessel) alternative to be agreed during initial meeting with terminal representative
- (b) A qualified vessel's officer, able to communicate effectively in English with the terminal staff, is required to be on deck or in the control room at all times. A continuous deck watch is to be maintained to ensure moorings are carefully tended and cargo transfer arms are under observation at all times.
- (c) Towing off wires shall be made fast to bitts as far forward and aft as possible on the outboard side. The wires shall be in good condition, at least 1 1/8" (28mm) diameter, and secured with at least five turns or have the eye on the bitts. The outboard eye shall be maintained at a height of between 1 metre and 2 metres above the water at all times using a small diameter heaving line for this purpose.
- (d) All doors, portholes and openings leading from or overlooking the main deck to accommodation, machinery spaces (excluding pump room) and forecastle shall be kept closed. Cargo control room doors opening on to or above the main deck may be opened momentarily for access.
- (e) All ventilators through which gas can enter accommodation or machinery spaces shall be suitably trimmed. Air conditioning units shall be stopped or operated in a recirculation mode. Window type air conditioning units shall be electrically disconnected.
- (f) The venting of the vessel's tanks shall take place only through the vessel's fixed venting system.
- (g) All cargo, ballast and bunker tank lids and tank washing openings shall be securely

closed.

**(h)** All Sighting/ullage ports and tank lids shall be kept closed.

**(i)** All unused cargo and bunker connections shall be properly blanked, fitted with a gasket and bolted with at a bolt in every hole at the manifold. Stern cargo pipelines (if fitted) shall be isolated forward of the aft accommodation by blanking.

Any part of a slop transfer system which extends into machinery spaces shall be securely blanked and isolated on the tank deck.

**(j)** If for any reason there is poor dispersion which results in an accumulation of gas on or about the decks of the vessel, transfer shall be stopped or the transfer rate relevant to a particular tank or tanks reduced at the discretion of either the terminal operator or the responsible vessel's officer.

**(k)** The vessel shall by day fly Flag "B" of the International Code, and by night an all-round red light.

**(l)** H2S portable monitors must be worn by all personnel working on deck if the cargo contains H2S

**(m)** The person in charge of the transfer operation on the vessel shall conduct inspections of adjacent water areas around the vessel frequently and at least once each hour to ensure that no oil has spilled or leaked into the water.

#### **24. Movements of Refuelling Vessels, Garbage Barge, Tugs, Workboats and Other Craft**

During transfer operations, no craft shall be allowed alongside the vessel unless approval has been given by the terminal operator, Suncor Marine Department and as agreed to by the Master of the vessel.

#### **25. Emergency Escape**

Means for emergency escape shall be provided on the offshore side of the vessel. For security reasons such means is to be stowed at deck level in such a manner as to be ready for expeditious use in an emergency. Such means shall be of adequate length to reach the water at all times.

#### **26. Conditions Requiring Immediate Action**



Ballast or cargo transfer operations shall not be started, or if started, shall be discontinued by either the responsible officer of the vessel or the terminal operator when any of the following conditions is noted:

- (a) On the approach of and during electrical storms, heavy rainstorms or period of high winds, all tank openings and cargo valves shall be closed, and transfer arms disconnected.
- (b) If a fire occurs on the terminal, the vessel or any craft in close proximity, all tank openings and cargo valves shall be closed.
- (c) If there are insufficient competent personnel aboard the vessel to safely handle the operation in progress, and to handle any emergency situation.
- (d) If a spill or leak occurs aboard the vessel or on the terminal.
- (e) If any other emergency situation arises which, in the opinion of the vessel's responsible officer or the terminal operator constitutes a potential hazard to either the vessel or the terminal.

## **27. Avoidance of Oil Pollution**

During transfer operations all scuppers shall be effectively plugged, fixed or portable manifold oil containment shall be in place, and no leakage or spillage of oil or water which can possibly contain oil shall be allowed to escape overboard. Scupper plugs may be removed to drain off accumulations of water periodically and replaced immediately after the water has been run off. Scupper plugs while open, must be attended at all times. Plugs to be manned at all times while open for draining. Manifold containment should be drained before transfer operations commence. Any leakage or spillage must be reported immediately to the terminal operator and regulatory authorities.

A supply of absorbent material shall be available at the manifold to facilitate the immediate cleanup of minor spills.

No hazardous material shall be thrown overboard, nor shall any other objectionable material, either solid or fluid, be thrown overboard from the vessel.

## **28. List**

Excessive listing of the vessel must be avoided

# 5

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## CARGO AND BALLAST TRANSFER

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## 5 CARGO AND BALLAST TRANSFER

### 5.1 TERMINAL MANIFOLDS

#### 5.1.1 The West Dock

There are two transfer manifold areas:

- (a) The import/export cargo manifold area.
- (b) The domestic cargo manifold area

All shore manifolds are fitted with insulating flanges:

#### (a) *The Import/Export Cargo Manifold Area*

- There are two hard arm connections that can transfer cargo. The area is at the Easterly end of the dock. The larger arm is the primary transfer arm utilised with all products.

Information on this system is as follows:

Pipeline Diameter	Manifold size	Max Flow Rate**	Support leg horizontal limit	Support leg vertical limit
1X10"	8" flange	5,000 bbls/hr	40.5"	Approx. 16 to 51"
1X12"	10" flange	10,000 bbls/hr	35"	Approx. 16 to 51"

- Vessel should plan to position the support leg within their drip tray by selecting correct size of reducer
- The shore cargo system has a maximum allowable pressure of 150-lb./square inch. (NB. the typical maximum at the shore manifold is 120-lb./square inch.)

#### (b) *The Domestic Cargo Manifold Area*

- There are five manifolds that are used to load domestic product distribution barges. Barge hoses are utilized to affect the transfer. The area is just to the East of the centre of the dock.

Information on this system is as follows:

<i>Product</i>	<i>Pipeline Diameter</i>	<i>All Cam locks Shore Manifold Size*</i>	<i>Maximum Flow Rate**</i>
Gasoline	6"	2 x 3 or 4"	5500 l/min
Gasoline	6"	2 x 3 or 4"	5500 l/min
Middle Distillate	6"	2 x 3 or 4"	5500 l/min
Middle Distillate	6"	2 x 3 or 4"	5500 l/min
Jet Fuel	4"	2 x 3 or 4"	2900 l/min

\*The shore cargo system has a maximum allowable pressure of 150-lb./square inch. (NB. the typical shore manifold pressure during barge loading operations is 30-lb./square inch.)

\*\*Flowrates are approximated. May differ dependent on the meter selection, number of lines or tanks utilised

### 5.1.2 The East Dock

- There is one transfer manifold area approximately 15 metres from the West end of the dock. It is used to load domestic product distribution barges. Barge hoses are used to affect the transfer. All Shore manifolds are fitted with insulating flanges.

Information on this system is as follows:

<i>Product</i>	<i>Pipeline Diameter</i>	<i>Shore Manifold Size All Camlocks</i>	<i>Maximum Flow Rate*</i>
Gasoline	6"	2 x 3" or 4"	3700 l/min
Gasoline	6"	2 x 3" or 4"	3700 l/min
Distillate	6"	2 x 3" or 4"	3700 l/min
Distillate	6"	2 x 3" or 4"	3700 l/min

\*Flowrates are approximated. May differ dependent on the meter selection, number of lines or tanks utilised

## 5.2 VESSEL MANIFOLDS

- Deep-sea tankers and import/export barge manifolds should be fitted with 10 inch flange reducers that are made of steel and fitted with eight inch (8") or ten inch (10") flanges (gasoline/distillate transfers conforming to *BS1560*, *ANSI B16.4* or equivalent).

## 5.3 BARGE HOSES

- Barge hoses that are used to effect cargo transfers must be in good condition, adequately supported, suitable for their intended service, and have been manufactured, marked and tested in accord with the requirements of the Canada Shipping Act.

**(a)** Has a bursting pressure of not less than four times its maximum working pressure;

**(b)** Is clearly marked with its maximum working pressure;

**(c)** Has been tested hydrostatically to a pressure equal to one and one half times its maximum working pressure at least once during the year immediately preceding its use, and has successfully passed that test.

#### **5.4 CARGO OPERATING PROCEDURES**

- Before cargo transfer commences the ship's officer/barge supervisor and the dock operator should exchange information and agree on a transfer plan, which should be documented in writing. Information exchanged and the plan must include, as a minimum, the items shown in *Appendix 3*.

#### **5.5 CARGO AND BALLAST OPERATING PROCEDURES**

- Before cargo transfer commences, the ships officer or barge supervisor, the terminal staff and where applicable, the loading master will hold a pre transfer conference/safety meeting. Relevant information will be exchanged and a transfer plan agreed upon; all of which will be documented in writing. Information exchanged and the plan must include at a minimum the items shown in *Appendix 3*.

#### **5.6 ENVIRONMENTAL LIMITS - CARGO OPERATIONS**

- Refer to section 3.9

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# 6

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## EMERGENCY RESPONSE TO FIRES, SPILLS, LEAKS ETC

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## 6 EMERGENCY RESPONSE TO FIRES, SPILLS, LEAKS, ETC

### 6.1 FIRES

**The terminal does not fight fires on vessels at the berths. Vessels are expected to be capable of fighting fires which occur on board, including securing capable external support, and notifying the proper authorities.**

(Refer ISGOTT section 26.5)

#### 6.1.1 Actions in the Event of Fire at Terminal

- The terminal will raise the alarm to vessel at the berths via the portable radio communication system; and give five prolonged blasts on the terminal fire alarm system.
  - The transfer operation is to be stopped immediately
  - The terminal will respond to the fire
  - Both the terminal and the vessel will take action to mitigate the spread of the fire to the vessel
  
- Terminal will:
  - Secure shore cargo system
  - Stand by to cast off the moorings (if conditions allow)
  - Communicate with authorities
  
- Vessel will:
  - Secure vessel cargo system
  - Disconnect arm/hose
  - Ready vessel for emergency departure
  - Communicate with authorities
  - Depart berth as required

#### 6.1.2 Action in Event of Fire on Board a Vessel

- The vessel will raise the alarm to the terminal via the portable radio communication system and give five or more prolonged blasts on the vessels whistle, repeated at intervals;
  - The transfer operation is to be stopped immediately
  - The vessel will respond to the fire
  - Both the terminal and the vessel will take action to mitigate the spread of the fire to the terminal
  
- Terminal will:

- Secure shore cargo system
- Disconnect transfer arms/hoses.
- Stand by to cast off the moorings (if conditions allow)
  
- Vessel will:
  - Secure vessel cargo system.
  - Ready vessel for emergency departure
  - Communicate with authorities
  - Depart berth as required

### **6.1.3 Port Fire Fighting boat**

- One of the Ports fireboats is stationed adjacent to the terminal.

## **6.2 SPILLS OR LEAKS**

***When non-volatile cargo is to be transferred, the terminal routinely deploys a boom around the vessel to capture marine spills from the terminal or vessels at the terminal.***

### **6.2.1 Terminal Spills or Leaks**

- In the event of a spill from the terminal or a leak from the cargo arms or shore cargo piping:
  - The transfer operation is to be stopped immediately and vessel to be informed
  - The terminal's spill response plan is to be implemented as appropriate. This will include informing the proper authorities and initiating containment, recovery and clean up procedures.
  - The cause of the spill must be determined and rectified before operation is resumed.

### **6.2.2 Vessel Spill or Leaks**

- In the event of a spill or leak from the vessel or vessel's cargo hose:
  - The transfer operation is to be stopped immediately and terminal to be informed
  - Suncor Marine Department to be informed
  - The vessel spill response plan is to be implemented as appropriate. This will include informing the proper authorities and initiating containment, recovery, and clean up procedures.
  - The cause of the spill must be determined and rectified and confirmed with the Suncor Marine Department prior resumption of transfer operations.



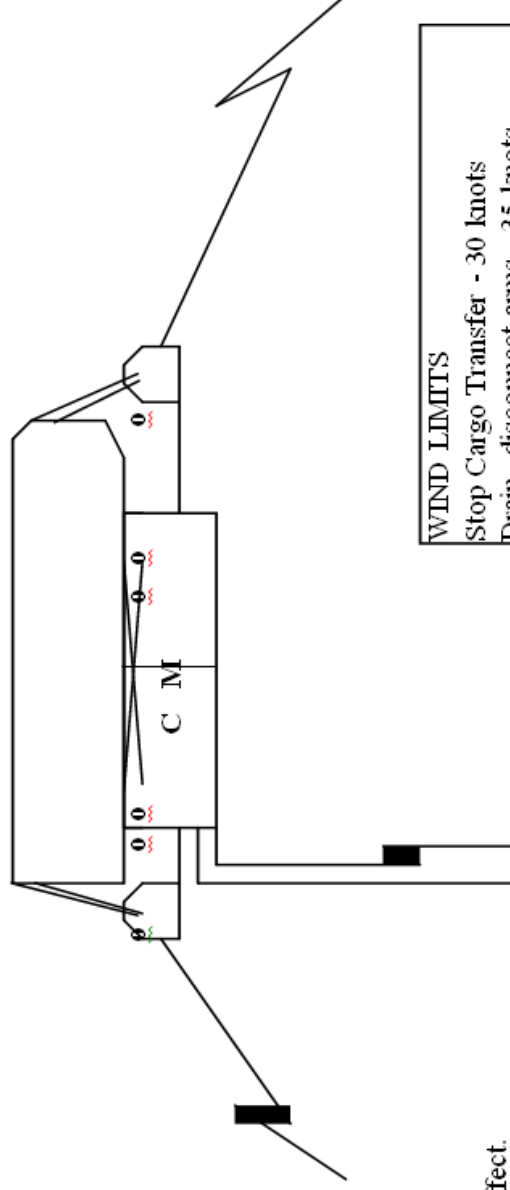
### **6.3 RESTARTING TRANSFER OPERATIONS AFTER A MARINE POLLUTION INCIDENT**

- Transfer operations may only resume once the cause of the spill has been determined and remedied and after it has been clearly determined that restarting transfer operations will not interfere with the immediate, effective and sustained response to the marine pollution incident and after both the terminal supervisor and the vessel supervisor have authorized a resumption of the transfer operation.

7 APPENDIX 1A (MOORING GUIDELINES)

SUNCOR PORT MOODY TERMINAL	MOORING GUIDELINES Minimum mooring requirements for Barges with LOA up to 84 metres	WEST BERTH
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\* CM = Centre of Manifold  
o = Shore mooring bollard.



**WIND LIMITS**  
 Stop Cargo Transfer - 30 knots  
 Dram, disconnect arms - 35 knots  
 Take precautionary action - 40 knots

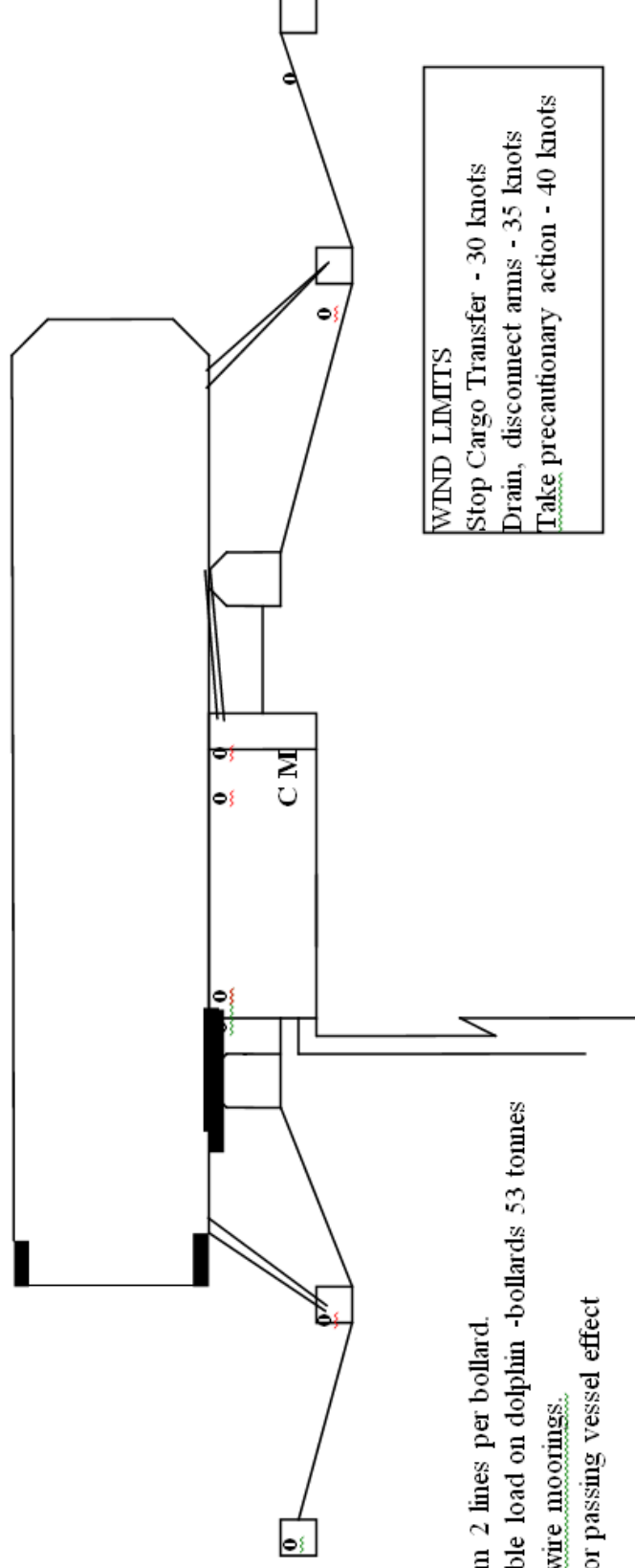
- Avoid mixed moorings.
- Watch for passing vessel effect.

2 Breasts	1 Back Spring	1 Fore Spring	2 Breasts	Number of Lines Location
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8 APPENDIX 1B (MOORING GUIDELINES)

<p>SUNCOR PORT MOODY TERMINAL</p>	<p>MOORING GUIDELINES Minimum mooring requirements for Barges and Tankers with LOA from 85 to 130 metres</p>	<p>WEST BERTH</p>
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\*CM = Centre of Manifold  
 o = dock bollards



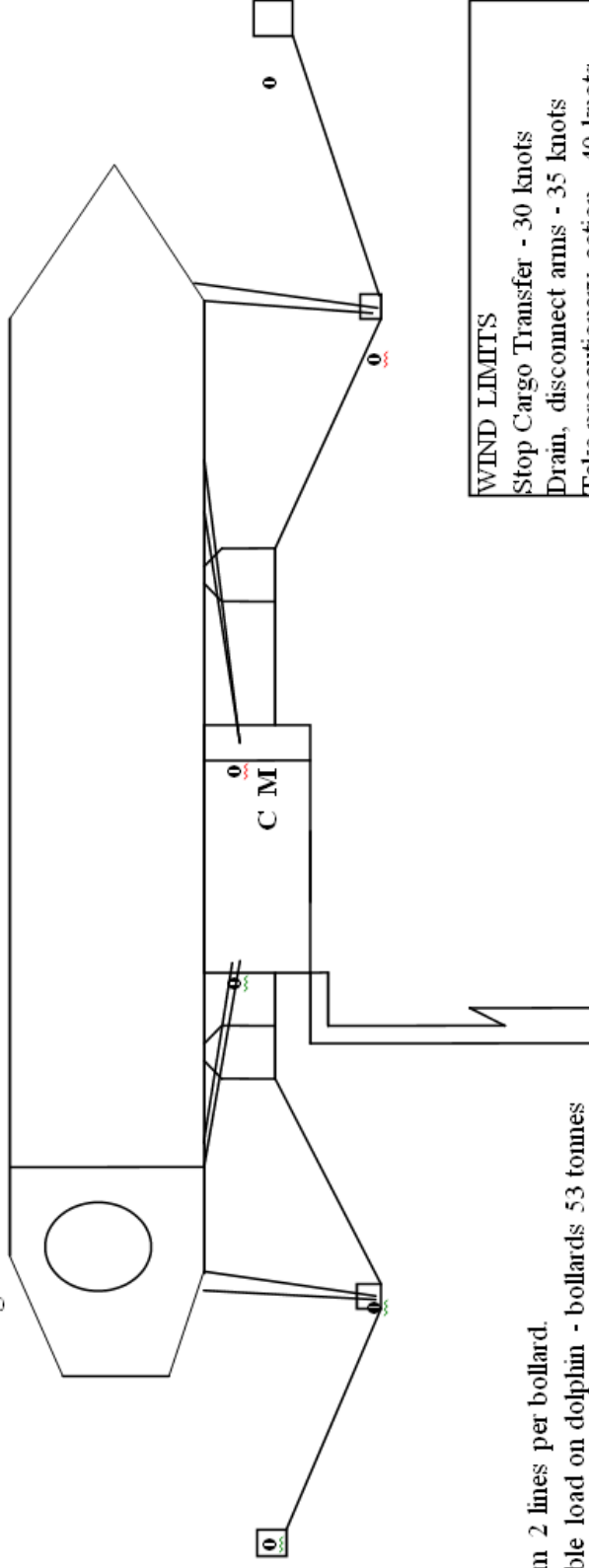
- Maximum 2 lines per bollard.
- Admissible load on dolphin -bollards 53 tonnes
- Deploy wire moorings.
- Watch for passing vessel effect

2	2	2	2	Number of Lines
Breasts	Back Spring	Fore Spring	Breasts	Location

9 APPENDIX 1C (MOORING GUIDELINES)

<p>SUNCOR PORT MOODY TERMINAL</p>	<p>MOORING GUIDELINES Minimum mooring requirements for vessels with LOA from 130 - 225 metres</p>	<p>WEST BERTH</p>
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\* CM = Centre of Manifold  
o = Shore mooring bollard



**WIND LIMITS**  
 Stop Cargo Transfer - 30 knots  
 Drain, disconnect arms - 35 knots  
 Take precautionary action - 40 knots

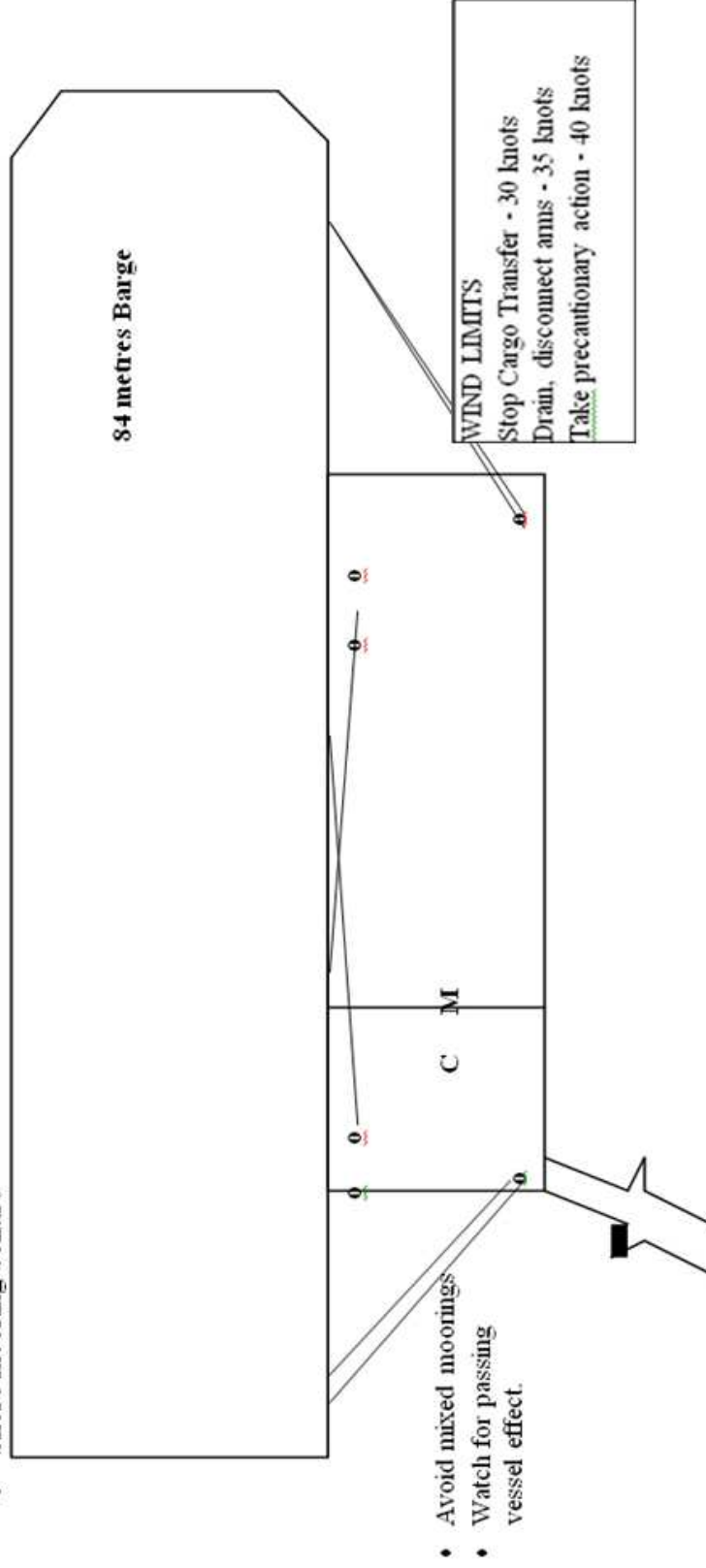
- Maximum 2 lines per bollard.
- Admissible load on dolphin - bollards 53 tonnes
- Deploy wire moorings or equivalent.
- Watch for passing vessel effect.

2	2	2	2	Number of Lines
Breasts	Back Spring	Fore Spring	Breasts	Location

10 APPENDIX 1D (MOORING GUIDELINES)

<p>SUNCOR PORT MOODY TERMINAL</p>	<p>MOORING GUIDELINES Minimum mooring requirements for Barges with LOA to 84 metres</p>	<p>EAST BERTH</p>
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\* CMI = Centre of Manifold  
o = Shore mooring bollard



2		1		1		2		Number of Lines	
Breast	Back Spring	Back Spring	Fore Spring	Breast	Breast	Location	Location	Location	Location

## 11 APPENDIX 2 - CARGO BALLAST TRANSFER PLANNING

### Information Exchange

- Volume and grade of cargo/ballast to be transferred.
- Cargo location on vessel.
- Maximum acceptable pressure and flow rates.
- Preferred/mandatory transfer sequence.
- Communication process.
- Terminal rules and procedures.
- Notification required to slow down and stop flow.
- Emergency stops.
- Weather outlook.

### Documented Operational Plan

- Volume and grade of cargo and ballast to be transferred.
- Agreed sequence of multi-grade cargo transfers.
- Communication signals for: standby to transfer; start transfer; slow down transfer; stand by to stop transfer; stop transfer; emergency stop of transfer; emergency shutdown of transfer.
- The maximum pressure at: the vessels manifold; the terminal manifold.
- The start-up flow rate, the maximum transfer flow rate, the tank topping (slowdown) rate.
- The notification time for slowing and stopping transfer.
- The emergency shutdown procedure and time required to implement.
- Cargo temperature limits.
- System of venting.
- Times of staff's duty change on vessel and in terminal.

## 12 Appendix 3 - Safety Letter

### Suncor Energy Products Partnership

Terminal \_\_\_\_\_

Date \_\_\_\_\_

The Master MT \_\_\_\_\_

Port \_\_\_\_\_

Dear Sir,

Responsibility for the safe conduct of operations while your ship is at this terminal rests jointly with you, as Master of the ship, and with the responsible Terminal Representative. We wish, therefore, before operations start, to seek your full co-operation and understanding on the safety requirements set out in the Ship/Shore Safety Check-List, which are based on safe practices that are widely accepted by the oil and tanker industries.

We expect you, and all under your command, to adhere strictly to these requirements throughout your ship's stay alongside this terminal and 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 operations.

Before the start of operations, and from time to time thereafter, for our mutual safety, a member of the terminal staff, where appropriate together with a Responsible Officer, will make a routine inspection of your ship to ensure that elements addressed within the scope of the Ship/Shore Safety Check-List are being managed in an acceptable manner. Where corrective action is needed, we will not agree to operations commencing or, should they have been started, we will require them to be stopped.

Similarly, if you consider that safety is being endangered by any action on the part of our staff or by any equipment under our control, you should demand immediate cessation of operations.

There can be no compromise with safety.

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

Signed (Terminal Representative) \_\_\_\_\_

Terminal Representative on duty is: \_\_\_\_\_

Position or Title: \_\_\_\_\_

Contact Details: \_\_\_\_\_

Signed (Master) \_\_\_\_\_

SS/MV \_\_\_\_\_ Date/Time \_\_\_\_\_

### 13 APPENDIX 4 – SHIP SHORE SAFETY CHECKLIST (ISGOTT)

**Refer to page 49 ISGOTT Checklist.**



## ISGOTT Checks pre-arrival Ship/Shore Safety Checklist

Date and time: \_\_\_\_\_

Port and berth: \_\_\_\_\_

Tanker: \_\_\_\_\_

Terminal: \_\_\_\_\_

Product to be transferred: \_\_\_\_\_

Part 1A. Tanker: checks pre-arrival			
Item	Check	Status	Remarks
1	Pre-arrival information is exchanged (6.5, 21.2)	<input type="checkbox"/> Yes	
2	International shore fire connection is available (5.5, 19.4.3.1)	<input type="checkbox"/> Yes	
3	Transfer hoses are of suitable construction (18.2)	<input type="checkbox"/> Yes	
4	Terminal information booklet reviewed (15.2.2)	<input type="checkbox"/> Yes	
5	Pre-berthing information is exchanged (21.3, 22.3)	<input type="checkbox"/> Yes	
6	Pressure/vacuum valves and/or high velocity vents are operational (11.1.8)	<input type="checkbox"/> Yes	
7	Fixed and portable oxygen analysers are operational (2.4)	<input type="checkbox"/> Yes	

Part 1B. Tanker: checks pre-arrival if using an inert gas system			
Item	Check	Status	Remarks
8	Inert gas system pressure and oxygen recorders are operational (11.1.5.2, 11.1.11)	<input type="checkbox"/> Yes	
9	Inert gas system and associated equipment are operational (11.1.5.2, 11.1.11)	<input type="checkbox"/> Yes	
10	Cargo tank atmospheres' oxygen content is less than 8% (11.1.3)	<input type="checkbox"/> Yes	
11	Cargo tank atmospheres are at positive pressure (11.1.3)	<input type="checkbox"/> Yes	

Part 2. Terminal: checks pre-arrival			
Item	Check	Status	Remarks
12	Pre-arrival information is exchanged (6.5, 21.2)	<input type="checkbox"/> Yes	
13	International shore fire connection is available (5.5, 19.4.3.1, 19.4.3.5)	<input type="checkbox"/> Yes	
14	Transfer equipment is of suitable construction (18.1, 18.2)	<input type="checkbox"/> Yes	
15	Terminal information booklet transmitted to tanker (15.2.2)	<input type="checkbox"/> Yes	
16	Pre-berthing information is exchanged (21.3, 22.3)	<input type="checkbox"/> Yes	

## ISGOTT Checks after mooring Ship/Shore Safety Checklist

Part 3. Tanker: checks after mooring			
Item	Check	Status	Remarks
17	Fendering is effective (22.4.1)	<input type="checkbox"/> Yes	
18	Mooring arrangement is effective (22.2, 22.4.3)	<input type="checkbox"/> Yes	
19	Access to and from the tanker is safe (16.4)	<input type="checkbox"/> Yes	
20	Scuppers and savealls are plugged (23.7.4, 23.7.5)	<input type="checkbox"/> Yes	
21	Cargo system sea connections and overboard discharges are secured (23.7.3)	<input type="checkbox"/> Yes	
22	Very high frequency and ultra high frequency transceivers are set to low power mode (4.11.6, 4.13.2.2)	<input type="checkbox"/> Yes	
23	External openings in superstructures are controlled (23.1)	<input type="checkbox"/> Yes	
24	Pumproom ventilation is effective (10.12.2)	<input type="checkbox"/> Yes	
25	Medium frequency/high frequency radio antennae are isolated (4.11.4, 4.13.2.1)	<input type="checkbox"/> Yes	
26	Accommodation spaces are at positive pressure (23.2)	<input type="checkbox"/> Yes	
27	Fire control plans are readily available (9.11.2.5)	<input type="checkbox"/> Yes	

Part 4. Terminal: checks after mooring			
Item	Check	Status	Remarks
28	Fendering is effective (22.4.1)	<input type="checkbox"/> Yes	
29	Tanker is moored according to the terminal mooring plan (22.2, 22.4.3)	<input type="checkbox"/> Yes	
30	Access to and from the terminal is safe (16.4)	<input type="checkbox"/> Yes	
31	Spill containment and sumps are secure (18.4.2, 18.4.3, 23.7.4, 23.7.5)	<input type="checkbox"/> Yes	

## ISGOTT Checks pre-transfer Ship/Shore Safety Checklist

Date and time: \_\_\_\_\_

Port and berth: \_\_\_\_\_

Tanker: \_\_\_\_\_

Terminal: \_\_\_\_\_

Product to be transferred: \_\_\_\_\_

Part 5A. Tanker and terminal: pre-transfer conference				
Item	Check	Tanker status	Terminal status	Remarks
32	Tanker is ready to move at agreed notice period (9.11, 21.7.1.1, 22.5.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
33	Effective tanker and terminal communications are established (21.1.1, 21.1.2)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
34	Transfer equipment is in safe condition (isolated, drained and de-pressurised) (18.4.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
35	Operation supervision and watchkeeping is adequate (7.9, 23.11)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
36	There are sufficient personnel to deal with an emergency (9.11.2.2, 23.11)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
37	Smoking restrictions and designated smoking areas are established (4.10, 23.10)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
38	Naked light restrictions are established (4.10.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
39	Control of electrical and electronic devices is agreed (4.11, 4.12)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
40	Means of emergency escape from both tanker and terminal are established (20.5)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
41	Firefighting equipment is ready for use (5, 19.4, 23.8)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
42	Oil spill clean-up material is available (20.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
43	Manifolds are properly connected (23.6.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
44	Sampling and gauging protocols are agreed (23.5.3.2, 23.7.7.5)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
45	Procedures for cargo, bunkers and ballast handling operations are agreed (21.4, 21.5, 21.6)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
46	Cargo transfer management controls are agreed (12.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
47	Cargo tank cleaning requirements, including crude oil washing, are agreed (12.3, 12.5, 21.4.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	See also parts 7B/7C as applicable

Part 5A. Tanker and terminal: pre-transfer conference (cont.)				
Item	Check	Tanker status	Terminal status	Remarks
48	Cargo tank gas freeing arrangements agreed (12.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	See also part 7C
49	Cargo and bunker slop handling requirements agreed (12.1, 21.2, 21.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	See also part 7C
50	Routine for regular checks on cargo transferred are agreed (23.7.2)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
51	Emergency signals and shutdown procedures are agreed (12.1.6.3, 18.5, 21.1.2)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
52	Safety data sheets are available (1.4.4, 20.1, 21.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
53	Hazardous properties of the products to be transferred are discussed (1.2, 1.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
54	Electrical insulation of the tanker/terminal interface is effective (12.9.5, 17.4, 18.2.14)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
55	Tank venting system and closed operation procedures are agreed (11.3.3.1, 21.4, 21.5, 23.3.3)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
56	Vapour return line operational parameters are agreed (11.5, 18.3, 23.7.7)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
57	Measures to avoid back-filling are agreed (12.1.13.7)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
58	Status of unused cargo and bunker connections is satisfactory (23.7.1, 23.7.6)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
59	Portable very high frequency and ultra high frequency radios are intrinsically safe (4.12.4, 21.1.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
60	Procedures for receiving nitrogen from terminal to cargo tank are agreed (12.1.14.8)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	

Additional for chemical tankers      Checks pre-transfer

Part 5B. Tanker and terminal: bulk liquid chemicals. Checks pre-transfer				
Item	Check	Tanker status	Terminal status	Remarks
61	Inhibition certificate received (if required) from manufacturer	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
62	Appropriate personal protective equipment identified and available (4.8.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
63	Countermeasures against personal contact with cargo are agreed (1.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
64	Cargo handling rate and relationship with valve closure times and automatic shutdown systems is agreed (16.8, 21.4, 21.5, 21.6)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
65	Cargo system gauge operation and alarm set points are confirmed (12.1.6.6.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	

Part 5B. Tanker and terminal: bulk liquid chemicals. Checks pre-transfer (cont.)				
Item	Check	Tanker status	Terminal status	Remarks
66	Adequate portable vapour detection instruments are in use (2.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
67	Information on firefighting media and procedures is exchanged (5, 19)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
68	Transfer hoses confirmed suitable for the product being handled (18.2)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
69	Confirm cargo handling is only by a permanent installed pipeline system	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
70	Procedures are in place to receive nitrogen from the terminal for inerting or purging (12.1.14.8)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	

Additional for gas tankers      Checks pre-transfer

Part 5C. Tanker and terminal: liquefied gas. Checks pre-transfer				
Item	Check	Tanker status	Terminal status	Remarks
71	Inhibition certificate received (if required) from manufacturer	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
72	Water spray system is operational (5.3.1, 19.4.3)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
73	Appropriate personal protective equipment is identified and available (4.8.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
74	Remote control valves are operational	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
75	Cargo pumps and compressors are operational	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
76	Maximum working pressures are agreed between tanker and terminal (21.4, 21.5, 21.6)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
77	Reliquefaction or boil-off control equipment is operational	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
78	Gas detection equipment is appropriately set for the cargo (2.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
79	Cargo system gauge operation and alarm set points are confirmed (12.1.6.6.1)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
80	Emergency shutdown systems are tested and operational (18.5)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
81	Cargo handling rate and relationship with valve closure times and automatic shutdown systems is agreed (16.8, 21.4, 21.5, 21.6)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
82	Maximum/minimum temperatures/pressures of the cargo to be transferred are agreed (21.4, 21.5, 21.6)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
83	Cargo tank relief valve settings are confirmed (12.11, 21.2, 21.4)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	

Part 6. Tanker and terminal: agreements pre-transfer				
Part 5 item	Agreement	Details	Tanker initials	Terminal initials
32	Tanker manoeuvring readiness	Notice period (maximum) for full readiness to manoeuvre:  Period of disablement (if permitted):		
33	Security protocols	Security level:  Local requirements:		
33	Effective tanker/terminal communications	Primary system:  Backup system:		
35	Operational supervision and watchkeeping	Tanker:  Terminal:		
37 38	Dedicated smoking areas and naked lights restrictions	Tanker:  Terminal:		
45	Maximum wind, current and sea/swell criteria or other environmental factors	Stop cargo transfer:  Disconnect:  Unberth:		
45 46	Limits for cargo, bunkers and ballast handling	Maximum transfer rates:  Topping-off rates:  Maximum manifold pressure:  Cargo temperature:  Other limitations:		

Part 6. Tanker and terminal: agreements pre-transfer (cont.)				
Part 5 item	Agreement	Details	Tanker initials	Terminal initials
45 46	Pressure surge control	Minimum number of cargo tanks open:  Tank switching protocols:  Minimum number of cargo tanks open:  Tank switching protocols:  Full load rate:  Topping-off rate:  Closing time of automatic valves:		
46	Cargo transfer management procedures	Action notice periods:  Transfer stop protocols:		
50	Routine for regular checks on cargo transferred are agreed	Routine transferred quantity checks:		
51	Emergency signals	Tanker:  Terminal:		
55	Tank venting system	Procedure:		
55	Closed operations	Requirements:		
56	Vapour return line	Operational parameters:  Maximum flow rate:		
60	Nitrogen supply from terminal	Procedures to receive:  Maximum pressure:  Flow rate:		



Part 6. Tanker and terminal: agreements pre-transfer (cont.)				
Part 5 num ref	Agreement	Details	Tanker initials	Terminal initials
83	For gas tanker only: cargo tank relief valve settings	Tank 1: Tank 2: Tank 3: Tank 4: Tank 5: Tank 6: Tank 7: Tank 8: Tank 9: Tank 10:		
XX	Exceptions and additions	Special issues that both parties should be aware of:		

Date and time: \_\_\_\_\_

Port and berth: \_\_\_\_\_

Tanker: \_\_\_\_\_

Terminal: \_\_\_\_\_

Product to be transferred: \_\_\_\_\_

Part 7A. General tanker: checks pre-transfer			
Item	Check	Status	Remarks
84	Portable drip trays are correctly positioned and empty (23.7.5)	<input type="checkbox"/> Yes	
85	Individual cargo tank inert gas supply valves are secured for cargo plan (12.1.13.4)	<input type="checkbox"/> Yes	
86	Inert gas system delivering inert gas with oxygen content not more than 5% (11.1.3)	<input type="checkbox"/> Yes	
87	Cargo tank high level alarms are operational (12.1.6.6.1)	<input type="checkbox"/> Yes	
88	All cargo, ballast and bunker tanks openings are secured (23.3)	<input type="checkbox"/> Yes	

Part 7B. Tanker: checks pre-transfer if crude oil washing is planned			
Item	Check	Status	Remarks
89	The completed pre-arrival crude oil washing checklist, as contained in the approved crude oil washing manual, is copied to terminal (12.5.2, 21.2.3)	<input type="checkbox"/> Yes	
90	Crude oil washing checklists for use before, during and after crude oil washing are in place ready to complete, as contained in the approved crude oil washing manual (12.5.2, 21.6)	<input type="checkbox"/> Yes	

## ISGOTT Checks after pre-transfer conference Ship/Shore Safety Checklist

For tankers that will perform tank cleaning alongside and/or gas freeing alongside

Part 7C. Tanker: checks prior to tank cleaning and/or gas freeing			
Item	Check	Status	Remarks
91	Permission for tank cleaning operations is confirmed (21.2.3, 21.4, 25.4.3)	<input type="checkbox"/> Yes	
92	Permission for gas freeing operations is confirmed (12.4.3)	<input type="checkbox"/> Yes	
93	Tank cleaning procedures are agreed (12.3.2, 21.4, 21.6)	<input type="checkbox"/> Yes	
94	If cargo tank entry is required, procedures for entry have been agreed with the terminal (10.5)	<input type="checkbox"/> Yes	
95	Slop reception facilities and requirements are confirmed (12.1, 21.2, 21.4)	<input type="checkbox"/> Yes	

Declaration

We the undersigned have checked the items in the applicable parts 1 to 7 as marked and signed below:

	Tanker	Terminal
Part 1A. Tanker: checks pre-arrival	<input type="checkbox"/>	<input type="checkbox"/>
Part 1B. Tanker: checks pre-arrival if using an inert gas system	<input type="checkbox"/>	<input type="checkbox"/>
Part 2. Terminal: checks pre-arrival	<input type="checkbox"/>	<input type="checkbox"/>
Part 3. Tanker: checks after mooring	<input type="checkbox"/>	<input type="checkbox"/>
Part 4. Terminal: checks after mooring	<input type="checkbox"/>	<input type="checkbox"/>
Part 5A. Tanker and terminal: pre-transfer conference	<input type="checkbox"/>	<input type="checkbox"/>
Part 5B. Tanker and terminal: bulk liquid chemicals. Checks pre-transfer	<input type="checkbox"/>	<input type="checkbox"/>
Part 5C. Tanker and terminal: liquefied gas. Checks pre-transfer	<input type="checkbox"/>	<input type="checkbox"/>
Part 6. Tanker and terminal: agreements pre-transfer	<input type="checkbox"/>	<input type="checkbox"/>
Part 7A. General tanker: checks pre-transfer	<input type="checkbox"/>	<input type="checkbox"/>
Part 7B. Tanker: checks pre-transfer if crude oil washing is planned	<input type="checkbox"/>	<input type="checkbox"/>
Part 7C. Tanker: checks prior to tank cleaning and/or gas freeing	<input type="checkbox"/>	<input type="checkbox"/>

In accordance with the guidance in chapter 25 of *ISGOTT*, we have satisfied ourselves that the entries we have made are correct to the best of our knowledge and that the tanker and terminal are in agreement to undertake the transfer operation.

We have also agreed to carry out the repetitive checks noted in parts 8 and 9 of the *ISGOTT* SSSCL, which should occur at intervals of not more than \_\_\_\_ hours for the tanker and not more than \_\_\_\_ hours for the terminal.

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

Tanker	Terminal
Name	Name
Rank	Position
Signature	Signature
Date	Date
Time	Time

## ISGOTT Checks during transfer Ship/Shore Safety Checklist

### Repetitive checks

Part 8. Tanker: repetitive checks during and after transfer								
Item ref	Check	Time	Time	Time	Time	Time	Time	Remarks
Interval time:..... hrs								
8	Inert gas system pressure and oxygen recording operational	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
9	Inert gas system and all associated equipment are operational	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
11	Cargo tank atmospheres are at positive pressure	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
18	Mooring arrangement is effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
19	Access to and from the tanker is safe	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
20	Scuppers and savealls are plugged	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
23	External openings in superstructures are controlled	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
24	Pumproom ventilation is effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
28	Tanker is ready to move at agreed notice period	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
29	Fendering is effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
33	Communications are effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
35	Supervision and watchkeeping is adequate	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
36	Sufficient personnel are available to deal with an emergency	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
37	Smoking restrictions and designated smoking areas are complied with	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
38	Naked light restrictions are complied with	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	

Part 8. Tanker: repetitive checks during and after transfer (cont.)								
39	Control of electrical devices and equipment in hazardous zones is complied with	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
40 41 42 51	Emergency response preparedness is satisfactory	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
54	Electrical insulation of the tanker/terminal interface is effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
55	Tank venting system and closed operation procedures are as agreed	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
85	Individual cargo tank inert gas valves settings are as agreed	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
86	Inert gas delivery maintained at not more than 5% oxygen	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
87	Cargo tank high level alarms are operational	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
Initials								

Part 9. Terminal: repetitive checks during and after transfer								
Item ref	Check	Time	Time	Time	Time	Time	Time	Remarks
Interval time:..... hrs								
18	Mooring arrangement is effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
19	Access to and from the terminal is safe	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
29	Fendering is effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
32	Spill containment and sumps are secure	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
33	Communications are effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
35	Supervision and watchkeeping is adequate	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
36	Sufficient personnel are available to deal with an emergency	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
37	Smoking restrictions and designated smoking areas are complied with	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
38	Naked light restrictions are complied with	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
39	Control of electrical devices and equipment in hazardous zones is complied with	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
40 41 47 51	Emergency response preparedness is satisfactory	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
54	Electrical insulation of the tanker/terminal interface is effective	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
55	Tank venting system and closed operation procedures are as agreed	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	
Initials								