

# **Mauritius Ports Authority Port Louis Harbour**

## **Republic of Mauritius**



Amended Bunkering Code of Practice

**09 September 2022**

## TABLE OF CONTENTS

<b>Index</b>	<b>Description</b>	<b>Page No</b>
	Introduction	1
Section 1	Definitions	2
Section 2	Bunker Barge Operator	3
	Requirement	
	Dedicated Areas	
Section 3	Operational Parameters	5
	Weather	
Section 4	Reporting/Daily Operational Schedule	6
Section 5	Communication	7
Section 6	Equipment	7
	Fenders	
Section 7	Hoses and Mooring equipment	8
Section 8	Safety, Health and the Environment	9
	Safe Working Practice	
Section 9	Emergency Preparedness/Response	10
Section 10	Bunkering Operational Procedures	11
	Pre Bunker Delivery	
Section 11	During Bunker Delivery	12
Section 12	Post Bunker Delivery Activities	13
Section 13	Bunkering by Road Bowser	14
Section 14	Bunkering Operations at night	15
Section 15	Appendices	
Appendix 1	ISGOTT Bunkering safety checklist	16-26
Appendix 2	Contact List Mauritius Ports Authority - Port Louis Harbour	27
Appendix 3	The Inner and Outer Ports of Port Louis Harbour	28



## Introduction

The Mauritius Ports Authority, MPA as a regulator of port and bunkering activities has prepared a Bunkering Code of Practice to assist in the safe conduct of bunkering operations at Port Louis. The safety, environmental and operational risks involved in the supply of marine bunker requires preventive measures to be adopted to ensure that the level of risk is within acceptable limits.

This bunkering code of practice, hereafter called 'The Code' provides guidance for the safe transfer of bunkers and was developed for the benefit of the ship bunkering industry comprising of ship owners, bunker suppliers and bunker barge operators.

Bunker suppliers, bunker barge operators, chief engineer, chief officer and Master of vessels shall comply with all safe work practices as mentioned in the code during the bunker delivery operations by acting responsibly and professionally. This code does not alter any obligations of ship owners/buyers and bunker suppliers under other relevant international safety standards and applicable laws and regulations.

The standards set out in this Code are subject to periodic review to reflect technological changes and new developments in the bunkering sector. Changes to the Code of Practice will be made through the issue of amendments or revised editions.

The purpose of the procedures found in this Code is:

- To provide guidance on the delivery of bunker fuels by bunker barge to ship and road bowser to ship.
- To specify the requirements, roles and responsibilities of parties concerned, equipment standards and verification processes during a bunkering operations.
- To ensure the transfer of bunkers in the Port is completed in a manner that is safe and does not cause pollution.
- To ensure compliance with the following requirements namely, The Ports (Operations and Safety) Regulations 2005, recommendations of the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping ; conditions of the Ministry of Environment, Solid Waste Management and Climate Change and International guidelines such as the International Safety Guide for Oil Tankers and Terminals (ISGOTT), as well as the relevant International Maritime Organisation (IMO) and International Labour Organisation (ILO) Maritime Conventions.

## Section 1: Definitions

For the purpose of this Code, the following definitions shall apply:

- **Bunker barge:** An authorised mini tanker supplying bunker fuel to the receiving vessel.
- **Bunker barge operator:** The company which operates the bunker barge.
- **Bunker:** In shipping industry, the word bunker is used for fuel and lubricating oil which are stored on ships and used for operational purposes such as propulsion of the ship.
- **Bunkering operation:** The transfer between ships, of a substance consisting wholly or mainly of oil for consumption by the engines of the ship receiving the substance. In other words, bunkering can be described as a ship refueling process.
- **Bunker supplier:** The registered bunker supplier or representative responsible for the delivery and documentation hereafter referred to as the **Supplier**. The supplier contractually agrees with the buyer to deliver the product.
- **Bunker delivery note (BDN):** A document of the bunker supplier providing details of the quality and quantity of the bunker(s) delivered by the bunker barge to the receiving vessel.
- **Bunker safety check list:** The bunker safety check list published in ISGOTT from time to time.
- **Chief engineer:** The chief engineer of the vessel who is responsible for receiving bunkers and documentation of the bunkering operation.
- **Chief officer:** The chief officer of the bunker barge who is responsible for the bunkering operations and documentation. The chief officer represents the bunker supplier.
- **ISGOTT:** International Safety Guide for Oil Tankers and Terminals.
- **ISM:** International Safety Management.
- **MARPOL:** The International Convention for Prevention of Marine Pollution for Ships.
- **MACCS:** Mauritius Cargo Community Services Ltd
- **OCIMF:** Oil Companies International Maritime Forum
- **P&I club:** Protection and indemnity is a form of mutual maritime insurance.
- **Receiving vessel:** The vessel receiving marine fuel from the bunker barge.
- **SOPEP:** Ship Oil Pollution Emergency Plan.
- **STS:** Bulk transfer of cargo from one vessel to another.
- **The Authority:** Mauritius Ports Authority.

## Section 2: Bunker Barge Operator

### ▪ Requirements To Operate as Bunker Barge Operator at Port Louis

**2.1** All bunker barges that operate within Port Louis Harbour must be holder of a Port Licence with the Mauritius Ports Authority before providing bunkering services.

**2.2** Each bunker barge operator must be a holder of an Environment Impact Assessment (EIA) licence from the Ministry of Environment, Solid Waste Management and Climate Change.

**2.3** Each bunker barge operator must be the holder of any international certificate that may be required by the bunker barge under various conventions, in particular;

- International Oil Pollution Prevention Certificate (IOPPC)
- ISM Safety Management Certificate (SMC)
- Civil Liability Convention (CLC) 1992 Certificate
- Civil Liability for Bunker Oil Pollution Damage Convention (CLBC) Certificate
- International Sewage Pollution Prevention Certificate (ISPPC)
- International Ship Security Certificate (ISSC)

**2.4** Upon application or renewal of Port Licence, Bunker barge operators shall provide to the Mauritius Ports Authority the following:

- A copy of the Protection and Indemnity (P & I) cover.
- Standard operating procedures (SOP) of bunkering operations carried out by bunker barges.
- A contingency plan setting out the steps to be taken in the event of:
  - a. Deteriorating weather.
  - b. Mooring rope failure.
  - c. Pollution following damage such as collision.
  - d. Fire.
- An Oil Spill Contingency Plan for up to Tier 3 level that shall include pollution control measures based on risk assessment of probable oil spill scenarios during bunkering operations at sea.
- Any oil spill shall be immediately attended to by the bunker barge operator.
- The latest version of Intertanko Chartering Questionnaire 88 (Q88) of the bunker barge to be deployed comprising of all statutory and classification certifications. Amended version to be submitted as and when required.
- A Ship Inspection Report (SIRE) as recommended by the Oil Companies International Marine Forum (OCIMF).
- Bunker barge particulars including tank sizes, carrying capacities and pumping rates.
- Ship oil pollution emergency plan (SOPEP) manual.
- Bank guarantee of Rs 5M.

**2.5** The propulsion types and manoeuvring requirements for bunker barges are set as follows:

<b>SN</b>	<b>Size of Bunker Barge (GT)</b>	<b>Requirements</b>
1	250 up to 500	Twin-Screw
2	500 up to 1,500	Twin Screw or Single Screw with Bow Thruster(s)
3	Above 1,500	Twin Screw with Bow Thruster(s)

**Any bunker barge operator holding a Port Licence or Letter of Intent prior to the coming into operation of the Code 2021 may be granted a moratorium for compliance with the above provisions of the Code. The MPA will look at all the circumstances of the case to decide upon the duration of the moratorium.  
[amended w.e.f 09 September 2022]**

**2.6** Bunker Barge operators shall comply at all times with the provisions of ISGOTT guidelines and when applicable with MARPOL 73/78 Annex 1 Chapter 8 entitled 'Prevention of Pollution during transfer of oil cargo between oil tanker at sea' and the International Safety Management (ISM) Code, as amended.

**2.7** Bunker suppliers and the Master of bunker barge shall ensure that all approvals from the Mauritius Revenue Authority and the Mauritius Ports Authority (Marine Department, Operations Department and Port Emergency Services) have been obtained using the MACCS E-bunkering platform before proceeding for any bunkering operations (Ex Pipeline, Ex Bowser and Ex Barge

**2.8** Final clearance to proceed for the bunker transfer operation shall be obtained from Port Louis Harbour Radio subject to all approvals have been obtained from the authorities mentioned above and compliance with conditions mentioned at section 4.0.

▪ **Dedicated Areas for Bunkering by barge**

**2.9** Bunkering operations shall be allowed at both Inner and Outer Port but with the following restrictions:

1. No bunkering operations is allowed on the Entrance Channel and English Channel of the Port Louis Harbour.
2. Bunker supply to vessels berthed at Quays within Inner Port is allowed.
3. Bunker supply to vessels at anchorage shall be allowed at Outer Port in the Northern and Southern regions.
4. Ship to Ship (STS) in term of bulk transfer of oil cargoes shall be allowed only in the Southern Region of the Outer Port.

**2.10** The Port Master may give other such directions to bunker barges and vessels as may be necessary for the safe conduct of bunkering and STS operations within the Port Limits.

Note: The Inner and Outer Ports of Port Louis Harbour are shown as Appendix 3.

## **Section 3: Operational Parameters**

### **Weather**

**3.1** Bunkering operations will not commence or will be stopped should the local weather conditions exceed Beaufort Force 6, swell heights in excess of 2 m, and wind exceeding 27 knots, or at any time the Masters of both vessels deem it prudent to do so due to the local sea and weather conditions. (This shall be confirmed after consultation with the Mauritius Meteorological Services)

**3.2** Whenever wind gusts greater than 27 knots and waves in excess of 2 metres are encountered, the following actions shall be taken by Masters of both vessels:

1. Bunkering operations must immediately be suspended.
2. Hoses must be disconnected and handled with necessary precautions.
3. Bunker barge shall cast off and leave the receiving vessel.

**3.3** Bunker barge and receiving vessel should record the weather state (e.g. wind speed, swell height, tide conditions) on an hourly basis in the ship's log.

**3.4** Both vessels must suspend bunkering operations during approach of lightning in accordance with recommendations outlined in ISGOTT.

**3.5** The Master of both vessels are responsible for constantly monitoring the mooring situation in the event of deteriorating weather conditions to ensure that the vessels have sufficient lines or wires and proper fendering to prevent any damage occurring to the vessels.

**3.6** The Port Master may order the bunkering operations to stop at any time if he believes that there is a risk of pollution or if the weather is forecasted to deteriorate to unsafe operational levels.



## Section 4: Reporting/Daily Operations Schedule

**4.1** Every bunker barge shall keep and maintain a daily supply report. The report shall contain the following information:

1. Name of Vessel to be supplied.
2. Shipping agent in Mauritius representing vessel to be bunkered
3. Name of bunker barge assigned to supply the vessel.
4. Latest ETA of vessel at Port Louis Harbour.
5. Grade and quantity of fuel(s) in metric ton to be delivered to vessel.
6. Expected duration of entire bunkering operations.

In case of more than one supply for that day, order in which these vessels will be supplied shall be communicated together with the estimated start and finish times.

**4.2** The report mentioned in section 4.1 shall be sent by the bunker barge operator to the Mauritius Ports Authority for the attention of the **Office of the Port Master, Bunkering Unit, Port Emergency Services, Operations Department and Harbour Radio on a daily basis, every morning and any changes must be notified accordingly.**

**4.3** This report shall be forwarded to: [bunkeringoperations@mauport.com](mailto:bunkeringoperations@mauport.com)

**4.4** Clearance shall be obtained from Port Louis Harbour Radio on VHF Channel 12 & 14 prior to bunker barge proceeding alongside receiving vessel.

**4.5** Bunker Barge Operators and bunker suppliers shall ensure that the bunkering safety checklists are properly filled and signed prior to start of operations.

A copy of the checklists shall be sent by email to: [bunkeringoperations@mauport.com](mailto:bunkeringoperations@mauport.com) prior to the start of bunkering operations.

**4.6** Bunker transfer operations shall be allowed by Port Louis Harbour radio only after receipt of the bunkering safety checklists.

**4.7** The overall supervisory control of bunkering operations in Port Louis Harbour lies with the Masters of both vessels (bunker barge and receiving vessel).

## **Section 5: Communications**

**5.1** Good communication between the bunker barge and the receiving vessel shall be established for a successful and safe bunkering operations.

**5.2** To avoid any misunderstanding, a common language for communication should be agreed between both vessels before bunkering operations begins.

**5.3** During bunkering operations key personnel on both vessels should have a reliable, clear and common means of communication at all times. VHF hand held radios which are intrinsically safe can be used and it is recommended spare batteries are available on the bunker barge and the receiving vessel.

**5.4** Bunker barges conducting bunkering operations must monitor VHF Channel 12,14 and 16 at all times.

## **Section 6: Equipment**

### **Fenders**

**6.1** Bunker barge should be provided with sufficient and appropriate fender system which minimizes damage to the receiving vessel during bunkering.

**6.2** All fenders shall be maintained in accordance with International Standard (ISO 17357) that specifies the material, performance and dimensions of floating pneumatic fenders which are intended to be used for the berthing and mooring of a bunker barge to a receiving vessel.

Fenders shall be tested and inspected as specified in the International Standard ISO 17357.

**6.2** All maintenance and repairs work carried out on fenders must be to manufacturer's guidelines and details shall be recorded in the format of a logbook provided by manufacturer's maintenance manual.

## Section 7: Hoses and Mooring equipment

**7.1** Bunkering hoses should comply with EN 1765 (or latest equivalent) with regards to specification for the assemblies and with BS 1435-2 (or latest equivalent) and ISGOTT guidelines for the Inspection, Testing and Maintenance of Hoses.

**7.2** A visual inspection of each of the hose assemblies should be carried out before they are connected to the manifolds to determine if any damage has been caused when taking them on board the receiving vessel.

**7.3** Bunker barge operators shall submit valid **hydrostatic** pressure test certificates on a yearly basis for all set of connecting hoses on board. Bunkering hoses shall be tested in accordance with the International Safety Guide for Tankers and Terminals (ISGOTT). The hydrostatic pressure test shall be carried out by a competent person (Registered Machinery Inspector), in the presence of a representative of the Port Master. The Bunker Barge operator shall give the Authority advance notice of such test.

**7.4** In consultation with the hose manufacturer, the retirement age for the hoses should be defined to determine when they should be removed from service. The retirement age defined **shall be** independent of the hose meeting inspection and testing criteria.

**7.5** During connection of hoses, both hose to hose and hose to ship, new gaskets are recommended and all bolts holes must be used. It is necessary to stress that bolts should be tightened sequentially and opposite (12-6-3-9).

**7.6** It is recommended that hoses are properly supported using the vessels crane to avoid kinking and excessive weight on the receiving manifold. Tools used for connection must not be capable of producing an incendiary spark.

**7.7** Bunker barge should be fitted with good quality mooring lines, efficient winches, well placed and sufficiently strong closed fairleads, bollards and other associated mooring equipment which are fit for purpose.

**7.8** The chief officer of the bunker barge must ensure there are no hose joins/connections in the gap between the receiving vessel and bunker barge.

## **Section 8: Safety, Health and the Environment**

### **8. Safe Working practice**

**8.1** A responsible officer in charge (normally the chief engineer of the receiving vessel and the chief officer of the bunker barge) has been duly appointed and will be responsible for the safety of the bunkering operations.

**8.2** Regulations regarding smoking and naked lights shall be strictly enforced. Warning notices should be clearly and appropriately displayed on both vessels.

**8.3** No hot work, gas freeing or tank cleaning operations shall be carried out during bunkering operations without notifying the berth operator and a special permission obtained from the Port Master.

**8.4** Bunkering operations during cargo operations shall be allowed subject to a risk assessment has been carried out by the Master of the receiving vessel, the Master of the bunker barge and the cargo terminal operator (Cargo Handling Corporation Ltd). The risk assessment shall be made available to the Port Master upon demand for inspection.

**8.5** The risk assessment mentioned at paragraph 8.4 shall take into consideration the nature of the cargo operations being carried out, movement of the receiving vessel arising from such operations and other hazardous operations taking place on the cargo terminal during the bunker transfer.

**8.6** Firefighting equipment shall be ready for immediate use on the bunker barge and receiving vessel at all times. Appropriate drills should be held in accordance with the bunker barge approved contingency plans, such drills when carried out should be documented.

**8.7** The master of the bunker barge and receiving vessel should make sure that all crew members involved in the bunkering operations are properly rested and are not in any way under the influence of alcohol or any controlled drugs.

**8.8** All personnel on both ships taking part in the bunkering operations shall wear at least the following protective clothing:

- i. Safety goggles (where applicable);
- ii. Safety footwear;
- iii. Hard hat;
- iv. Gloves (where applicable);
- v. Any other relevant personnel protective equipment.

**8.9** All scuppers and drains on board bunker barge should be properly plugged during bunkering operations. Any accumulation of water should be drained off periodically.

**8.10** The save-all around the bunker connection is empty and oil-tight. Portable drip trays are positioned near delivery and receipt manifold of both vessels.

**8.11** Bunker barge operators should ensure that oil containment booms are placed between vessels (fore and aft) during STS bulk cargo transfer operations for persistent oil cargoes (fuel oil).

## Section 9: Emergency Preparedness and Response

**9.1** Any crew member on the bunker barge and receiving vessel shall be empowered to initiate an emergency shut down of the bunkering operations in an emergency or suspicious situation. All operations shall be immediately stopped in case of an oil spill or other accident.

**9.2** Personnel assigned at the manifold on both vessels shall remain vigilant and alert whilst bunkering is in progress and be provided with a hand-held radio. It must be clearly understood with all persons involved in the operations when and what signals are to be given to **STOP** bunkering operations.

**9.3** Oil spill equipment shall be readily available for immediate use on the bunker barge and the receiving vessel at all times. Any oil spillage or pollution must be immediately notified to the Port Master through Port Louis Harbour Radio (Channel 12, 14 and 16) and both vessels must take its own action in accordance with Ship Oil Pollution Emergency Plan (SOPEP) and Oil Spill Contingency Plan as may be applicable.

**9.4** The Director of Environment shall be immediately notified in case of an oil spill during bunkering operations.

**9.5** At an initial stage, the bunker barge operator and/or oil spill responder appointed by the latter shall attend the spill site with adequate equipment, trained manpower and logistics to mitigate the effect of the spill on the marine environment.

**9.6** The oil spill equipment should cater for at least a Tier 2 level spill and should be kept on board of the bunker barge and/or at a dedicated location nearby the site of operations.

**9.7** Any incident or accident arising out of the bunkering operations that may impact in any way on the environment shall be reported immediately to the Port Louis Harbour Radio VHF Channel 12, 14 and 16 by the Master of the bunker barge. The following information must be provided as a minimum:

- i. The location of the incident.
- ii. Details of vessels involved.
- iii. The type and the estimated quantity of bunker fuel spilled in the sea.
- iv. The immediate action initiated to contain and recover the spill.

**9.8** All incidents shall be fully investigated by the bunker barge operators and a written report shall be submitted to the Port Master **at the earliest but within 24 hours** of the incident taking place.

## **Section 10: Bunkering Operational Procedures**

The bunker delivery process comprises of three stages.

- i. Pre-bunker delivery
- ii. During bunker delivery
- iii. Post-bunker delivery activities

### **10. Pre-Bunker Delivery**

**10.1** Prior to commencement of the bunker delivery, a pre-delivery meeting shall be conducted between the representatives of the bunker barge and the receiving vessel who will take part in the complete bunkering process. Preparation, planning and checks shall be conducted by the chief engineer of the receiving vessel and the chief officer of the bunker barge.

**10.2** Both bunker barge and receiving vessel are to be securely moored taking into consideration the prevailing and expected sea/weather conditions.

**10.3** The chief engineer shall nominate which tanks to be used for the receipt of bunker fuels and the sequence for change of tanks during the complete process. The chief engineer shall inform duty deck officers the bunker tanks loading sequence.

**10.4** The chief engineer and chief officer shall discuss and agree on the pre-loading plan, grade of product, pumping rate (initial, maximum and topping) and maximum pressure during the operations.

**10.5** Good and reliable means of communication between the bunker barge and the receiving vessel shall be maintained throughout the entire bunkering operations.

**10.6** There is sufficient ullage on the receiving vessel's tanks to accommodate the fuel to be delivered.

**10.7** All valves and blanks are closed except those immediately required to be opened. Neither the hose nor the ship's system can be over pressurized.

**10.8** The tanks on the receiving vessel should not be filled to the maximum of their normal volumetric capacity; the loading rate should be slowed appropriately if 90% is to be exceeded, and necessary precautions taken.

**10.9** The bunkering safety checklist shall be properly filled and signed by the chief engineer and chief officer with their names clearly printed. The checklist shall be endorsed with the bunker barge's stamp and the receiving vessel's stamp.

## **Section 11. During Bunker Delivery**

**11.1** Once the pre-bunker delivery requirements have been completed and bunker hoses have been properly connected, bunkering operations shall commence after confirmation by the chief engineer of the receiving vessel.

**11.2** At the start of the bunkering operations, the pumping rate should be kept low to ensure product is flowing in selected tank. Ship staffs on the receiving vessel must check the level of product in the filling tank and other tanks which are not involved in the transfer operations. This is to make sure that oil is continuously going in the nominated tank.

**11.3** After confirming product is flowing in the desired tank, the pumping rate can be increased. The chief engineer shall ensure that the agreed rate is not exceeded by the bunker barge.

**11.4** The chief officer of the bunker barge must ensure that a responsible person maintains a constant manifold watch in particular near the delivery valve at all times during the supply.

**11.5** The chief engineer of the receiving vessel must ensure that a responsible person maintains a constant manifold watch in particular near the receipt valve at all times during the supply.

**11.6** Communication between the receiving vessel and bunker barge shall be maintained during the entire bunkering operations.

**11.7** When an order to stop pumping is given by the receiving vessel, the bunker barge shall stop the pump immediately and reasons shall be recorded in the bunker barge logbook.

**11.8** When a nominated tank is about to be filled to its maximum level, the chief engineer of the receiving vessel should instruct the chief officer of the bunker barge to decrease the pumping rate. After that, the valve of the next designated tank can be opened while topping up the previous tank carefully with all necessary precautions taken.

**11.9** During the whole process, sounding of tanks on the receiving vessel should be taken regularly and the frequency of sounding to be increased when the tank is near full its capacity to avoid overflow of tanks.

**11.10** After delivery is completed, the content of the hoses shall be drained into the receiving vessel. This is done by the bunker barge and air is blown to flush the hoses. Once the air blowing process is completed, final gauging is taken for the preparation of the bunker delivery note.

**11.11** All precautions and recommendations found on the International Safety Guide for Oil Tanker and Terminals (ISGOTT) should be followed throughout the bunkering operations.

**11.12** During the entire bunkering process, no other bunker barge shall be allowed to come alongside the bunker barge delivering bunker fuel to the receiving vessel.

**11.13** Particular precautions are to be taken when nearing completion of the bunkering operations.

## **Section 12: Post-bunker delivery activities**

**12.1** On completion of the bunkering operations, the chief officer of the bunker barge shall notify the chief engineer of the receiving vessel to witness the closing gauge of all tanks of the barge.

**12.2** The delivered quantity shall be based on the bunker barge tank gauging as witnessed by both the chief officer and the chief engineer.

**12.3** Where flow meters are used, the opening meter before start of operations and the closing meter at the end of operations shall be recorded on the bunker delivery note (BDN).

**12.4** The chief officer of the bunker barge shall prepare the BDN for the chief engineer to sign. All relevant and applicable sections of the BDN shall be correctly filled in. Any cancellation or amendment on the BDN shall be endorsed and stamped by both the chief officer and chief engineer.

**12.5** Hoses are properly drained/flushed prior disconnecting from receiving vessel's manifold. Any minor deck spillages are immediately cleaned up.

**12.6** The Bunker Barge shall inform Port Louis Harbour Radio by VHF Channel (12 & 14) on completion of each bunker transfer.



## **Section 13: Bunkering by Road Bowser**

**13.1** Road bowsers delivering bunker fuel to vessel berthing on shore should ensure the following preparations are completed prior start of operations:

- Hoses are in good condition and tested in accordance to ISGOTT and the test certificate is available on request.
- The bunker hoses are well supported and are of sufficient length to allow movement of the vessel.
- Any hose spanning the water must be of continuous length containing no joints or connections.
- Bunker safety check list has been completed between the chief engineer of the vessel and the bunkering supervisor of the supplier.
- Effective communications have been established and maintained between the vessel and bunkering supervisor or the driver of the road bowser to enable immediate shutdown if required.
- The operational area has been cordoned and warning signs such as 'No smoking', 'No naked flame' and 'No mobile phones' are well displayed.
- Portable dripping trays should be used to prevent minor oil spill from hoses before and after connections to delivery valves. The oil collected during operations should be disposed in a manner as not to cause pollution.
- Emergency oil spill equipment is readily available to contain and clean up any accident spill.
- Fire extinguishers should be well positioned to cater for any emergency arising out during the entire bunkering operations.

**13.2** Once bunker transfer has commenced, the chief engineer of the receiving vessel and the bunkering supervisor must ensure that:

- A constant visual watch is maintained throughout the entire transfer operation, especially during start up and topping off.
- Weather and sea conditions must be constantly monitored and mooring appropriately tended.
- Visual check of waters around the vessel and quay to identify any spills.
- If a spillage does occur all efforts must be made to stop or limit the spillage and the Mauritius Ports Authority must be immediately notified.

## **Section 14: Bunkering operations at night**

- 14.0** Every bunker barge operator must ensure that all risks pertaining to delivery of bunker fuels to vessels at night have been assessed and adequate precautionary measures are in place which shall include the following:
  - 14.1** Sufficient lighting shall be available on both the bunker delivery barge and receiving vessel so as to allow clear visibility of bunkering operations, especially at the hose connection and transfer areas.
  - 14.2** The receiving vessel must confirm its readiness to receive bunker at night prior to going alongside.
  - 14.3** The bunker barge operator must ensure that there is availability of the receiving vessel's crew for duty during night time.
  - 14.4** Crew of bunker barge must have adequate rest time during day so as to be in a state of alertness at all times during night bunkering.
  - 14.5** The sea state and weather conditions shall be constantly monitored during the bunkering operations by both vessels.
  - 14.6** Constant watch should also be exercised by both the bunker barge and receiving vessel on marine traffic density around the bunker delivery zone.
  - 14.7** Extra mooring shall be provided during night time deliveries.
  - 14.8** An emergency cast off procedure applicable for night time bunkering shall be put in place.
  - 14.9** The chief officer of the bunker barge shall report on the status of the bunkering operations to Port Louis Harbour Radio at least every three hours from sunset to sunrise.

## Section 15: Appendices

### Appendix 1 - ISGOTT Bunkering safety checklist

## ISGOTT Bunker checklist: pre-arrival

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

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

Receiving ship: \_\_\_\_\_

Bunker facility: \_\_\_\_\_

Part A. Checks at the planning stage for the receiving ship			
Item	Check	Status	Remarks
1	Necessary permissions are granted (12.9.1, 21.2.2)	... Yes	
2	Local requirements are observed (12.9, 21.2.3, 21.3.1)	... Yes	
3	All personnel are aware of operations (23.5.3, 24.1)	... Yes	
4	Bunker plan is exchanged (21.2.3, 21.5, 21.6)	... Yes	
5	Mooring and fendering arrangement is agreed (22.3.1)	... Yes	

Part B. Checks at the planning stage for the bunker facility			
Item	Check	Status	Remarks
6	Necessary permissions are granted (21.2.2)	... Yes	
7	Local requirements are observed (12.9, 21.2.2, 21.3.2)	... Yes	
8	All personnel are aware of operations (23.5.3)	... Yes	
9	Bunker plan is exchanged (21.5, 21.6, 24.1.1)	... Yes	
10	Mooring and fendering arrangement is agreed (22.3.2)	... Yes	



## ISGOTT Bunker checklist: checks after mooring

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

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

Receiving ship: \_\_\_\_\_

Bunker facility: \_\_\_\_\_

Part C. Checks after mooring for the receiving ship			
Item	Check	Status	Remarks
11	Fenders are effective (22.4.1)	... Yes	
12	Mooring is effective (22.2, 22.4.3)	... Yes	
13	Access between ship and facility is safe (16.4)	... Yes	

Part D. Checks after mooring for the bunker facility			
Item	Check	Status	Remarks
14	Fenders are effective (22.4.1)	... Yes	
15	Mooring is effective (22.2, 22.4.3)	... Yes	
16	Access between ship and facility is safe (16.4)	... Yes	



## ISGOTT Bunker checklist: pre-transfer conference

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

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

Receiving ship: \_\_\_\_\_

Bunker facility: \_\_\_\_\_

Part E. Pre-transfer conference				
Item	Check	Receiving ship status	Bunker facility status	Remarks
17	Effective communications are established (21.1.1, 21.4, 24.1.3)	... Yes	... Yes	
18	Bunker watch is established (12.1.6.4, 21.4, 23.11)	... Yes	... Yes	
19	Smoking restrictions and designated smoking areas are established (4.10, 23.10)	... Yes	... Yes	
20	Naked light restrictions are established (4.10.1, 24.2.1)	... Yes	... Yes	
21	Safety data sheets are available (1.4.4, 20.1, 21.4)	... Yes	... Yes	
22	Hazardous properties of the product to be transferred identified in the safety data sheet are discussed (1.2, 1.4, 24.1.2)	... Yes	... Yes	

AS1. Agreement sheet part 1					
Bunkers to be transferred (21.4, 21.5, 21.6)					
Product and grade	Tonnes	Volume (in m <sub>3</sub> ) at loading temperature	Loading temperature	Maximum transfer rate	Maximum line pressure





**AS2. Agreement sheet part 2**

<b>Bunker tanks to be loaded (volume in m<sup>3</sup>) (21.4, 21.5, 21.6)</b>						
<b>Tank number</b>	<b>Product and grade</b>	<b>Capacity of tank (volume in m<sup>3</sup>)</b>	<b>Volume of oil in the tank before bunkering</b>	<b>Free capacity of tank (volume in m<sup>3</sup>)</b>	<b>Volume (in m<sup>3</sup>) to be loaded</b>	<b>Final volume (in m<sup>3</sup>)</b>

**AS3. Agreement sheet part 3**

<b>Operational management controls</b>				
<b>Item ref</b>	<b>Agreement</b>	<b>Details</b>	<b>Receiving ship initials</b>	<b>Bunker facility initials</b>
17	Process for starting transfer	Initial flow rate:  Increase of flow to full rate:  Quantity transferred check intervals:		
18	Process for completing transfer	Slowdown of flow:  Transfer stop:		

## ISGOTT Bunker checklist: pre-bunkering

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

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

Receiving ship: \_\_\_\_\_

Bunker facility: \_\_\_\_\_

Part F. Receiving ship: technical checks before bunkering			
Item	Check	Status	Remarks
23	Electrical insulation is effective (12.9.5, 17.4.2, 17.4.5, 18.2.14)	... Yes	
24	Bunker transfer equipment: (18) <ul style="list-style-type: none"> <li>• is in good condition</li> <li>• is appropriate</li> <li>• line up is checked</li> <li>• is properly rigged</li> <li>• is secured to manifolds</li> <li>• is fully bolted</li> </ul>	... Yes	
25	Firefighting equipment is ready for use (5, 23.8)	... Yes	
26	Scuppers and savealls are plugged (23.7.4, 23.7.5, 24.2)	... Yes	
27	Portable drip trays are correctly positioned and empty (23.7.5)	... Yes	
28	Unused bunker connections are blanked and fully bolted (23.7.1, 23.7.6)	... Yes	
29	High level and overfill alarm units are operational (12.1.6.6.1, 24.1.3)	... Yes	
30	Bunker operation emergency stop is operational (18.5)	... Yes	
31	Bunker tank openings are closed (23.3)	... Yes	
32	Oil spill clean-up material is available (20.4, 24.2)	... Yes	
33	Medium frequency/high frequency radio antennae are isolated (4.11.4, 4.13.2.1)	... Yes	
34	Very high frequency and ultra high frequency transceivers are set to low power mode (4.11.6, 4.13.2.2)	... Yes	



# ISGOTT Bunker checklist: pre-bunkering

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

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

Receiving ship: \_\_\_\_\_

Bunker facility: \_\_\_\_\_

Part G. Bunker facility: technical checks before bunkering			
Item	Check	Status	Remarks
35	Electrical insulation is effective (12.9.5, 17.4.2, 17.4.5, 18.2.14)	... Yes	
36	Bunker transfer equipment: (18) <ul style="list-style-type: none"> <li>• is in good condition</li> <li>• is appropriate</li> <li>• line up is checked</li> <li>• is properly rigged</li> <li>• is secured to manifolds</li> <li>• is fully bolted</li> </ul>	... Yes	
37	Firefighting equipment is ready for use (5, 19.4, 23.8)	... Yes	
38	Scuppers and savealls are plugged (23.7.4)	... Yes	
39	Portable drip trays are correctly positioned and empty (23.7.5)	... Yes	
40	Unused bunker connections are blanked and fully bolted (23.7.1, 23.7.6)	... Yes	
41	High level and overfill alarm units are operational (12.1.6.6.1, 24.1.3)	... Yes	
42	Bunker operation emergency stop is operational (18.5)	... Yes	
43	Bunker tank openings are closed (23.3)	... Yes	
44	Oil spill clean-up material is available (20.4, 24.2)	... Yes	
45	Medium frequency/high frequency radio antennae are isolated (4.11.4, 4.13.2.1)	... Yes	
46	Very high frequency and ultra high frequency transceivers are in low power mode (4.11.6, 4.13.2.2)	... Yes	



## ISGOTT Bunker checklist: repetitive checks

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

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

Receiving ship: \_\_\_\_\_

Bunker facility: \_\_\_\_\_

Part H. Receiving ship: repetitive checks during bunkering								
Item ref	Check	Time	Time	Time	Time	Time	Time	Remarks
Interval time .....hrs								
11	Fendering is effective	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
12	Mooring arrangement is effective	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
13	Access between ship and bunker facility is safe	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
17	Communications are effective	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
19	Smoking restrictions and designated smoking areas are complied with	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
20	Naked light restrictions are complied with	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
26	Scuppers and savealls are plugged	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
AS3	Bunker tank contents are monitored	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
<b>Initials</b>								



# ISGOTT Bunker checklist: repetitive checks

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

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

Receiving ship: \_\_\_\_\_

Bunker facility:

Part I. Bunker facility: repetitive checks during bunkering								
Item ref	Check	Time	Time	Time	Time	Time	Time	Observation
Interval time.....hrs								
14	Fendering is effective	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
15	Mooring arrangement is effective	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
16	Access between ship and bunker facility is safe	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
17	Communications are effective	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
19	Smoking restrictions and designated smoking areas are complied with	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
20	Naked light restrictions are complied with	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
38	Scuppers and savealls are plugged	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
AS3	Tank contents are monitored	... Yes	... Yes	... Yes	... Yes	... Yes	... Yes	
<b>Initials</b>								





## ISGOTT Bunker checklist: post-bunkering

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

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

Receiving ship: \_\_\_\_\_

Bunker facility: \_\_\_\_\_

Part J. Receiving ship: checks before disconnecting			
Item	Check	Status	Remarks
47	Bunker hoses, fixed pipelines and manifolds are drained (12.1.14, 18.4, 24.2)	... Yes	
48	Remote and manually controlled valves are closed (12.1.6.17, 12.1.14.3, 23.7.6)	... Yes	

Part K. Bunkering facility: checks before disconnecting			
Item	Check	Status	Remarks
49	Bunker hoses, fixed pipelines and manifolds are drained (12.1.14, 18.4, 24.2)	... Yes	
50	Remote and manually controlled valves are closed (12.1.6.17, 12.1.14.3, 23.7.6)	... Yes	



**Declaration**

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

	Receiving ship	Bunker facility
Part A. Checks at the planning stage for the receiving ship	...	...
Part B. Checks at the planning stage for the bunker facility	...	...
Part C. Checks after mooring for the receiving ship	...	...
Part D. Checks after mooring for the bunker facility	...	...
Part E. Pre-transfer conference	...	...
Part F. Receiving ship: technical checks before bunkering	...	...
Part G. Bunker facility: technical checks before bunkering	...	...

In accordance with the guidance noted in chapter 24 of *ISGOTT*, we are satisfied that the entries we have made are correct to the best of our knowledge and that the receiving ship and bunker facility are in agreement to undertake the transfer operation.

We have also agreed to carry out the repetitive checks noted in parts H and I of the *ISGOTT* bunker checklist, which should occur at intervals of not more than \_\_\_\_ hours for the receiving ship and not more than \_\_\_\_ hours for the bunker facility.

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

Receiving ship	Bunker facility
Name	Name
Rank	Position
Signature	Signature
Date	Date
Time	Time

**To be completed after any transfer operation:**

	Receiving ship	Bunker facility
Part J. Receiving ship: checks before disconnecting	...	...
Part K. Bunkering facility: checks before disconnecting	...	...

Receiving ship	Bunker facility
Name	Name
Rank	Position
Signature	Signature
Date	Date
Time	Time

**Appendix 2 - Contact List Mauritius Ports Authority Port Louis Harbour**

<b>Contact list – Mauritius Ports Authority PORT LOUIS HARBOUR</b>				
<b>Department</b>	<b>Contact Person</b>	<b>Phone</b>	<b>Mobile</b>	<b>Email</b>
Port Master	Capt Barbeau	206 5550		
Office of the Port Master		206 5551		<a href="mailto:marine@mauport.com">marine@mauport.com</a>
Deputy Port Master		206 5552/53		
Assistant Port Master	Capt. Dowlut	206 5552/53		
Pilot’s Office		206 5561/62		<a href="mailto:pilot@mauport.com">pilot@mauport.com</a>
Port Louis Harbour Radio VTS		206 5587/88/89		<a href="mailto:harbourradio@mauport.com">harbourradio@mauport.com</a>
Manager Port Security	Mr. Ramphul	206 5525/27/29/30		<a href="mailto:portsecurityunit@mauport.com">portsecurityunit@mauport.com</a>
Manager Port Environment Unit	Mr. Rughooputh	206 5564		
Port Emergency Services		240 3741/ 206 5465/66		<a href="mailto:pes.control@mauport.com">pes.control@mauport.com</a>
Manager Port Emergency Services	Mr. Ramrukheea	206 5508		
Port Operations Department		206 5470/71		<a href="mailto:operations@mauport.com">operations@mauport.com</a>
Director Port Operations Department		206 5470		
Bunkering Unit				<a href="mailto:bunkeringoperations@mauport.com">bunkeringoperations@mauport.com</a>
<b>Ministry of Shipping &amp; Ministry of Environment</b>				
Director of Shipping	Mr Alain Donat	260 0024/25/26/27	5798 8263	
Director of Environment	Mr Seewoobaduth	212 6080 /203 6200		
<b>National Coast Guard (VHF 18,74)</b>				
Commandant		208 0034		<a href="mailto:comdtncg@govmu.org">comdtncg@govmu.org</a>
	Mr. Virasawmy	208 7043 & 212 2747	5251 1058	<a href="mailto:vvira@govmu.org">vvira@govmu.org</a>
<b>Mauritius Police Force – Port Police</b>				
Harbour Police		208 2333 & 216 3112		
Port Police		242 6735/5546		
Mauritius Police Force	Mr. Vurdah	242 6735 & 242 5546		
Government Fire Services	Mr. Kehlary	211 3239 & 212 4726		
Mauritius Revenue Authority	Mr. Ramburrun	202 0500		

Appendix 3 - The Inner and Outer Ports of Port Louis Harbour

