international association of ports and harbors

The Clean Marine Fuels working group

Bunker Checklist

Liquefied Gas Series

Ship to Ship bunker operations

Version B

Operations at a “Bunker Ready Terminal”

The different versions of the IAPH bunker checklists are based upon the site operator involvement as per the table below:

Bunker operation type	Site operator involvement			Checklist to be used
	Site preparations	Bunker operation	Simultaneous operations	
Ship to Ship Project-based bunker operations	√	√	√	IAPH STS version A
Ship to Ship at a "Bunker Ready Terminal"	√		√	IAPH STS version B
Ship to Ship bunker operations at sea				IAPH STS version C

This document is the STS bunker checklist version B

Content

Who is this checklist for?

This document is **version B** of IAPH's Ship to Ship bunker checklist for liquefied gasses. Among others, this checklist is suitable for Liquid Hydrogen (LH) and Liquefied Methane (LM), e.g. Liquefied Natural Gas (LNG) and Liquefied Biogas (LBG). This version has been developed specific for the bunkering of vessels alongside a "Bunker Ready Terminal".

To minimize the risks of the bunkering of alternative fuels, a "Bunker Ready Terminal" has incorporated risk mitigation for the operational handling in procedures of its safety management system. Such a terminal is able to act safe and compliant with the Joint Plan of Bunker Operations, based on the information in the "Terminal Information Sheet" which it receives onforehand from the parties that perform the bunker operation. This includes risk mitigation for simultaneous operations (SIMOPS), without being engaged in the preparation of the bunkering and without a (shared) responsible for the safety of the bunker operation itself.

Safe bunker operations depend on good, closed-loop communication between all parties involved in the bunker operation, and on compliance with the agreed safety procedures at all stages. This bunker checklist helps to ensure that all appropiate checks are formally agreed, carried out and recorded.

The checklist has been developed in cooperation with maritime industry partners that have expertise in Ship-To-Ship bunkering of vessels with liquefied gas which can evaporate into a flammable gas. The checklist mitigates the risk related to the cryogenic nature of the liquid fuel, as well as the risk of the release of flammable gas.

The bunker process is devided into six phases and the checklist has therefore six main parts:

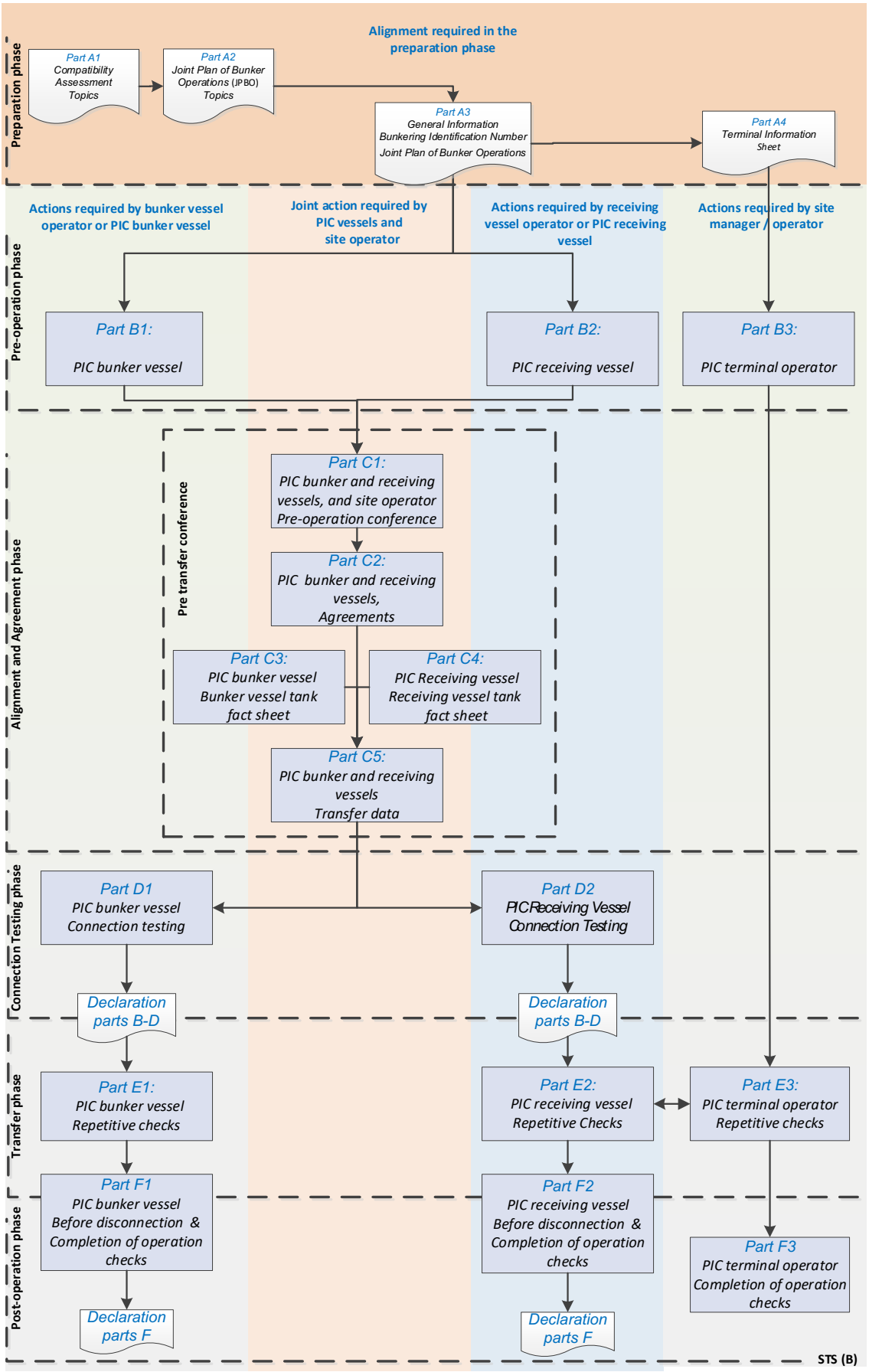
Part A – Preparation phase
Part B – Pre-operation phase
Part C – Alignment and agreement phase
Part D – Connection testing phase
Part E – Transfer phase
Part F – Post-operation phase

Used abbreviations

BIN	Bunker Identification Number
BMP	Bunkering Management Plan
ESD	Emergency Shutdown Device
JPBO	Joint Plan of Bunker Operations
LBG	Liquefied Biogas
LH	Liquid Hydrogen
LM	Liquefied Methane
LNG	Liquefied Natural Gas
(P)ERS	(Powered) Emergency Release System
PIC	Person in Charge
PPE	Personal Protective Equipment
QCDC	Quick Connect Disconnect Coupler
SIMOPS	Simultaneous operations
STS	Ship to Ship
TIS	Terminal Information Sheet

Schematic overview of the bunker process

Below is an overview of the specific STS bunker process at a Bunker Ready Terminal:



Instructions for completing the ship-to-ship bunker checklist

The checklist consists of six main parts, A - F. The main parts are divided into multiple sub-parts for individual completion by either the bunker vessel, the receiving vessel, or the terminal operator. In Part C the sub-parts are completed together during the pre-transfer conference.

Part A: Preparation phase

In the preparation phase the bunker vessel operator together with the receiving vessel operator shall start a compatibility assessment. **Part A1** with topics for the compatibility check can be used to check if all issues are addressed.
Both vessel operators will agree on who will take the lead in drafting the Joint Plan of Bunker Operations (JPBO). The agreed party will draft the JPBO based on the bunker management plans of both vessels, the exchanged information and local specific information of the terminal and the agreements made during the compatibility check. **Part A2** with topics for the Joint Plan of Bunker Operations can be used to check if all items are addressed. The agreed party will, based on the JPBO, complete **part A3** (the Terminal Information Sheet) and send this document to the Terminal.

If there are any outstanding items, this should be explained in the communication for pre-arrival review by the representatives.

Upon receipt of the JPBO, parties involved shall complete **part A3** with the general bunker information and an agreed unique 'Bunker Identification Number' (BIN). This BIN shall be entered in the top right corner on each sub-part throughout the checklist.

Part B: Pre-operation phase

The person in charge (PIC) of the bunker vessel shall complete **part B1**. The PIC of the receiving vessel shall complete **part B2.** Both vessel operators will review and finalize the JPBO. Copies of **part B1 and B2** shall be exchanged with the parties as soon as possible, but not later than the pre-transfer conference. The terminal operator shall complete **part B3**.

Part C: Alignment and agreement phase

Before the transfer of fuel starts, the PIC of the bunker vessel and the PIC of the receiving vessel shall meet to conduct a pre-transfer conference. They shall jointly complete **part C1** and the agreement sheet in **part C2.** The PIC of the receiving vessel will supply the terminal operator with operational information. The PIC of the bunker vessel shall complete **part C3** and share it with the PIC of the receiving vessel. The PIC of the receiving vessel shall complete **part C4** and share it with the PIC of the bunker vessel. To finalize the pre-bunkering phase, the PICs shall jointly complete **part C5.**

Part D: Connection testing phase

Before the operation starts the PIC of the bunker vessel completes **part D1,** the PIC of the receiving vessel completes **part D2.**

Pre-transfer declaration

Before transfer, the PICs of the bunker vessel and receiving vessel shall undersign the items checked in **parts B - D**.

Part E: Transfer phase

The PIC of the bunker vessel shall complete the repetitive checks in **part E1** at the agreed intervals. The PIC of the receiving vessel shall complete the repetitive checks in **part E2** at the agreed intervals. The terminal operator PIC shall complete the repetitive checks in **part E3** at the agreed intervals. All involved parties shall have their record available for review by the other involved parties.

Part F: Post-operation phase

At the end of the transfer, before disconnection, the PIC of the bunker vessel shall complete the checks "Before disconnection" of **part F1**, and the PIC of the receiving vessel shall complete the checks "Before disconnection" of **part F2**. When they have confirmed to each other that their pre-disconnection checks are satisfactory, they may disconnect.
After disconnection the PIC of the bunker vessel shall complete the **part F1** checks "Completion of operation", the PIC of the receiving vessel shall complete the **part F2** checks "Completion of operation"**, and** the terminal operator PIC shall complete **part F3.**

Post-operation declaration

After transfer the PICs of the bunker vessel and receiving vessel shall undersign the items checked in **part F**.

Special notes

Checklist code

The codes that are used in the checklist columns indicate:

A	To be entered in the agreement sheet: Part C2
R	Subject to a repetitive check: Part E1, E2, E3
JPBO	See the Joint Bunker Management Plan for details

When unable to check the Yes box

If during the use of the checklists in phase B – F it isn't possible to satisfactorily tick a "Yes" box while the check is applicable, then the issue shall be brought to the immediate attention of the other parties and corrected before the start of the operation. If it is not possible to correct the issue, then a further joint review should be undertaken to confirm whether the bunkering can safely proceed and whether additional mitigations are required to be agreed.

Agreed Physical Quantity

To avoid any confusion during the operation, in Part C5 an agreed decision shall be made on the physical quantity unit:

Agreed Physical Quantity Unit (PQU)
Note the agreed Physical Quantity Unit (PQU): ☐ m^3 or ☐ tonnes or _____

In this block the agreement is noted on the unit for quantity or volume that will be used during the exchange of information on the quantity or volume.

Part A1
Preparation - Compatibility assessment topics

The list of topics is an unlimited open guidance and can be expanded with other topics.

Local and terminal requirements:
- Local regulations and approvals
- Terminal electrical equipment in the Hazardous zone
- Control zones and safety measures
- Controlled acces to safety- and hazardous zone
- Approved safety distance to public (external safety)
-

Mooring:
- Mooring analyses
- Mooring points
- Mooring loads
- Mooring lines
- Mooring gear load limits (bollards, chocks, rollers etc.)
- Fendering
- Hull form flat side
- Overall dimensions
- Bridge wings
- Freeboard

Equipment:
- Approved transfer equipment
- Electrical insulation
- International shore connection
- Crane and crane reach
- Loading arm and arm reach
- Boom
- Hoses
- Hose support equipment
- Manifold
- Deluge System
- Drip trays, gutters

Manifold:
- Distancing
- Spacing, orientation
- Height and strength
- Layout
- Instrumentation
- Connections size and design
- Cryogenic protection
- Spill containment

Connection:
- Lifting arrangements
- Bunker hose configuration
- Distancing (between manifold and bunkerstation - height and length)
- ESD / (P)ERC, BSL, ERS, TRV

Bunkering and safety measures:
- Freebooard differences during bunkering
- Draft and tidal changes
- Weather and Wave conditions
- Vessel separation detection with ESD function
- Bunkering procedures including cooling down, purging and tests
- Transfer data
- Maximum allowable parameters
- BOG / vapour management
- Hazardous area classification and control
- Exposure distances conform Industrial standards (IGC/EIGA), SIMOPS
- Responsibilities PIC and manifold crew in charge
- Supervision

People:
- Personnel Instruction
- Incident response instruction and training
- Familiarity of personnel with safety areas and safety measures during bunkering
- Emergency stop signal and shutdown procedures
- Organisation
- Roles and Responsibilities
- PIC appointment

Incident response:
- Fire control plan
- Emergency Response procedures
- Contingency planning

Communication:
- Joint Plan of Bunker Operations (JPBO)
- Means of communication
- Communication procedures and contact
- Details involved parties
- Language
- Communication PIC's
- Data communication between safety- and ESD systems

Part A2
Preparation - Joint Plan of Bunker Operations topics

The list of topics is an unlimited open guidance and can be expanded with other topics.

General - Unique Bunker Identification Number (BIN) - Purpose and scope of the JPBO - Report of the Compatibility check **Transfer system** - ERS - ESD link - ESD test - Spill /gas detection and control systems **Roles and Responsibilities** - Organization - Responsibilities PIC vessels and manifold crew in charge - Mandatory permissions **Bunker operation** - Approach - Mooring - Checklist to be used, latest version - Handling and connection of bunker hose and vapor return hose - Hose Saddle, Deluge System, Manifold Connection, Drip trays, gutters. - Connection, pressure test, purging, cooling down, gassing up - Environmental Operating Limits - Sequence of actions in case of a spill - PPE, personal safety - Draining, purging disconnecting, inerting - Post transfer procedures - Un-mooring	**Vessels details** - Description of the involved vessels - Specification of the ships - Access to the vessel and access control of safety zones (including supervision) **Bunker preparation** - Mooring analyses report, mooringplan - Description of location, bunkering zones - Description of safety zones - Fendering / mooring - Safety meeting - Bunker transfer: equipment and procedures - Energy carrier supply specification - Volumes (Quantities and characteristics) - Communication (e.g. language), contact details - SIMOPS - Control zones, safeguards **Emergencies** - Emergency preparedness and response - Hull protection, water screens. - Emergency shutdown system

Part A3
General information and bunkering identification number

Bunker Identification Number (BIN): _____

JPBO version number: _____

Planned date and time: _____

Port and Berth: _____

Applicable fuel: Liquefied Methane / Liquid Hydrogen / _____

Bunker vessel: _____

Receiving vessel: _____

Terminal: _____

BIN: _____

Terminal Information Sheet

Planned date and time bunkering: _____

Terminal: _____

Port and Berth: _____

Energy carrier: Liquefied Methane / Liquid Hydrogen / _____

Liquefied gas bunker vessel: _____

Liquefied gas receiving vessel: _____

- Competent authorities have granted permission for liquefied gas transfer operations for the specific location and time.
- The terminal will be notified of the start and completion time of liquefied gas bunker operations.
- The ship-to-ship liquefied gas bunkering will not affect the mooring or fendering of the primary ship moored at the terminal.
- The restricted areas on board of the ships are marked and appropriated signed. Unauthorized persons, objects and ignition sources are not allowed within the restricted areas without authorization of a responsible ship officer.
- Planned simultaneous cargo operations during liquefied gas bunkering will be in accordance with the ship's approved operational documentation.
- The terminal should comply with the requirements in the ship's approved operational documentation for risk mitigation during liquefied gas bunkering as specified on page two of the Terminal Information Sheet.
- Precautions should be made to prevent falling objects or any other impact on the liquefied gas bunkering due to terminal activities.
- The ships engaged in the liquefied gas bunkering are provided with an International Shore Connection.

Agreed control zones

Control zones
Hazardous zone:
Safety zone:
Monitoring and Security Area:
Marine Exclusion Zone:
Drawing added: ☐ Yes

Agreed simultaneous liquefied gas bunker / oil bunker operations

Oil bunker activities

Agreed simultaneous liquefied gas bunker / cargo operations

Cargo activities

Restricted activities

Restricted activities

Terminal Information Sheet handed over to the Terminal

Date and time: _____

Agreed party that drafted the JPBO: _____

Name: _____

Terminal Information Sheet received by the Terminal

Date and time: _____

Terminal representative: _____

Name: _____

BIN: _____

Part B1
Pre-operation - PIC bunker vessel

B1	Check	Status	Code	Remarks
1	Mooring arrangement is effective	☐ Yes	R	
2	Firefighting equipment is ready for use	☐ Yes		
3	Sufficient area illumination	☐ Yes	A - R	
4	The bunker vessel can sail under its own power in a safe and non-obstructed direction	☐ Yes	R	
5	The restricted area is free of other ships, unauthorized persons, objects, and ignition sources	☐ Yes	R	
6	Safety measures within the safety area are observed	☐ Yes		
7	External doors, portholes and accommodation ventilation inlets are closed as per operations manual	☐ Yes	R	
8	Appropriate personal protective equipment is identified and available	☐ Yes		
9	Emergency water spray system is ready for use	☐ Yes		
10	Spill arrangements are effective and suitable for the applicable fuel	☐ Yes		
11	The hull and deck protection against low temperature is in place	☐ Yes		
12	Bunker pumps and compressors are in good working order	☐ Yes		
13	Control valves are well maintained and in good working order	☐ Yes		
14	Unused bunker connections are blanked and fully secured	☐ Yes		
15	Fire control plans are readily available	☐ Yes		
16	An International Shore Connection has been provided	☐ Yes		

BIN: _____

Part B2
Pre-operation - PIC receiving vessel

B2	Check	Status	Code	Remarks
1	Mooring arrangement is effective	☐ Yes	R	
2	Firefighting equipment is ready for use	☐ Yes		
3	Sufficient area illumination	☐ Yes	A - R	
4	The receiving vessel can sail under its own power in a safe and non-obstructed direction.	☐ Yes	R	
5	The restricted area is free of other ships, unauthorized persons, objects, and ignition sources.	☐ Yes	R	
6	Vessel entrance is controlled, and proper safety information is provided at the gangway	☐ Yes	R	
7	Safety measures within the safety area are observed	☐ Yes		
8	Measures for the prevention of falling objects onto the bunker vessel are observed	☐ Yes		
9	External doors, portholes and accommodation ventilation inlets are closed as per operations manual	☐ Yes	R	
10	Appropriate personal protective equipment is identified and available	☐ Yes		
11	Emergency water spray system is ready for use	☐ Yes		
12	Spill arrangements are effective and suitable for the applicable fuel	☐ Yes		
13	Hull and deck protection against low temperature is in place	☐ Yes		
14	Bunker pumps and compressors are in good working order	☐ Yes		
15	All control valves are well maintained and in good working order	☐ Yes		
16	Unused bunker connections are blanked and fully secured	☐ Yes		
17	Fire control plans are readily available	☐ Yes		

18	An International Shore Connection has been provided	☐ Yes		
19	Planned SIMOPS are in accordance with the safety procedures and risk mitigation in ship's operational documentation and JPBO	☐ Yes	JPBO	
20	SIMOPS will be compliant with local regulations and restrictions	☐ Yes		

BIN: _____

Part B3
Pre-operation - PIC terminal operator

B3	Check	Status	Code	Remarks
1	Terminal is a 'Bunker Ready Terminal' as per the IAPH / CMF Port and Terminal guidance	☐ Yes		
2	Terminal Information Sheet received from the receiving vessel	☐ Yes		
3	Relevant terminal information exchanged with the receiving vessel	☐ Yes		
4	Terminal Information Sheet information shared with relevant terminal personnel	☐ Yes		
5	In case of a safety zone on the shore: Activities in the safety zone are restricted and controlled	☐ Yes	R	☐ *Not applicable*
6	Instructions provided to effectuate the monitoring and security area on the shore during bunkering	☐ Yes		
7	Restrictions related to the bunker operation are clear to relevant terminal personnel	☐ Yes		
8	Allowed SIMOPS and their conditions as per Terminal Information Sheet are clear for relevant operational personnel	☐ Yes		
9	Crane operators are instructed to ensure the crane does not remain above the vent riser for long periods	☐ Yes		
10	Crane operators are instructed on the restrictions to reduce the risk of objects falling on the bunker vessel and its equipment	☐ Yes		☐ *Not applicable*
11	Vessels have confirmed that fuel installation monitoring systems remain in operation during the entire stay alongside	☐ Yes		
12	Communication procedures are established and clear to all involved	☐ Yes	R	
13	Relevant operational personnel informed on start and expected completion time of the bunker operation	☐ Yes		

14	Terminal incident responders are informed about the start and expected completion time of the bunker operation	☐ Yes		
15	Third-party visitors and contractors are informed at the gate about the ongoing bunker operation	☐ Yes		

BIN: _____

Part C1
Alignment and Agreement -
PIC bunker vessel and PIC receiving vessel

C1	Check	Bunker vessel	Receiving vessel	Status	Remarks
1	Present weather and wave conditions are within the agreed limits	☐ Yes	☐ Yes	A - R	☐ *Not applicable*
2	Access between the ships is safe	☐ Yes	☐ Yes	R	☐ *Not applicable*
3	Access between the ship and shore is safe		☐ Yes	R	
4	Operation supervision and watchkeeping are adequate	☐ Yes	☐ Yes		
5	Effective communications are established	☐ Yes	☐ Yes	A - R	
6	Emergency stop signals and shutdown procedures are agreed upon, tested, and explained to all personnel involved	☐ Yes	☐ Yes	A	
7	Emergency procedures and plans, including the contact details are known to the persons in charge	☐ Yes	☐ Yes		
8	Predetermined restricted areas are established and appropriate signs marking these areas are in place	☐ Yes	☐ Yes		
9	Agreed safety measures within the safety area are in place including the use of proper PPE	☐ Yes	☐ Yes		
10	Measures for the prevention of falling objects are observed	☐ Yes	☐ Yes		☐ *Not applicable*
11	Safety data sheets are available	☐ Yes	☐ Yes		
12	Requirements concerning ignition sources are observed	☐ Yes	☐ Yes	R	
13	Bunker system gauges, high level alarms and high-pressure alarms are operational	☐ Yes	☐ Yes	R	
14	Boil-off pressure control systems and/or re-liquefaction equipment are operational	☐ Yes	☐ Yes		☐ *Not applicable*
15	Vapour connections are properly connected	☐ Yes	☐ Yes		☐ *Not applicable*
16	Emergency release coupling is in place and ready for activation	☐ Yes	☐ Yes		

17	ESD arrangements including automatic valves, both on the ship and at the bunker vessel, are ready for activation	☐ Yes	☐ Yes	A	
18	Bunker connection between the ship and the bunker vessel is sufficiently supported	☐ Yes	☐ Yes		
19	Adequate electrical insulation for the bunker transfer equipment is in place	☐ Yes	☐ Yes	A	
20	Competent authorities are notified of the start of bunker operations as per local regulations	☐ Yes	☐ Yes		☐ *Not applicable*
21	Safety procedures and risk mitigation for SIMOPS conform to the ship's operational documentation and the JPBO	☐ Yes	☐ Yes	JPBO	☐ *Not applicable*

BIN: _____

Part C2
Alignment and Agreement - PICs bunker and receiving vessel

C2	Reference to check	Description	Agreement
1	A3	Latest version of the JPBO	Reference: Date / version:
2	C1-19	Electrical insulation	Method:
3	B1-5 B2-5 C1-8	Control zones	Reference: Agreed signs:
4	C1-1	Weather and wave limitations	Limits:
5	B1-3 B2-3	Bunker area illumination	Method:
6	C1-5	Communication	VHF / UHF Channel: _____ Language: _____ Primary System: _____ Backup System: _____
7	C1-6	Emergency stop signal and shutdown procedure	Reference: Alarm signal:
8	C1-17	ESD system	System: Link: Closing time ESD valve receiving ship: _____ seconds Closing time ESD valve bunker vessel: _____ seconds (P)ERC ☐ Yes Dry Break Coupling ☐ Yes

BIN: _____

Part C3
Alignment and Agreement - PIC bunker vessel

Tank factsheet bunker vessel

C3		Status prior to bunker operations				
		Tank:	**Tank:**	**Tank:**	**Tank:**	
1	Quantity per tank:					m^3
2	Temperature:					°C / °F [1)]
3	Pressure:					bar / psi [1)] (rel)

[1)] delete as appropriate

BIN: _____

Part C4
Alignment and Agreement - PIC receiving vessel

Tank factsheet receiving vessel

C4		Status prior to bunker operations				
		Tank:	**Tank:**	**Tank:**	**Tank:**	
1	Present fuel quantity bunker tank(s):					m^3
2	Remaining capacity for bunkering:					m^3
3	Temperature:					°C / °F [1)]
4	Pressure:					bar / psi [1)] (rel)

[1)] delete as appropriate

BIN: _____

Part C5
Alignment and Agreement - PICs bunker and receiving vessel

Transfer Data

C5	Agreed Physical Quantity Unit (PQU)
1	The agreed Physical Quantity Unit (PQU): ☐ m^3 or ☐ tonnes or _____

C5	Agreed transfer data	Bunker vessel	Receiving vessel	
2	Temperature of the fuel during bunkering:			°C / °F [1]
3	Volume of fuel to be bunkered:			m^3
4	Filling limit bunker tanks:			%
5	Available tank capacity is sufficient for bunker volume:	☐ Yes	☐ Yes	
6	Starting rate:			PQU per hour
7	Max transfer rate:			PQU per hour
8	Topping up rate:			PQU per hour
9	Work pressure at manifold:			bar / psi [1] (rel)
10	Max pressure at manifold:			bar / psi [1] (rel)
11	Bunker line work pressure:			bar / psi [1] (rel)
12	Max pressure bunker line:			bar / psi [1] (rel)
13	Max pressure bunker tank			bar / psi [1] (rel)

[1] delete as appropriate

BIN: _____

Simultaneous operations

C5-15	Agreed simultaneous bunker operations (SIMBOPS) [1]	Bunker vessel	Receiving vessel
		☐ Agreed	☐ Agreed

[1] To be shared in the TIS to inform the terminal. Note that for oil bunker operations a separate bunker checklist should be completed

C5-16	Agreed simultaneous operations during bunkering (SIMOPS) [2]	Bunker vessel	Receiving vessel
		☐ Agreed	☐ Agreed

[2] To be shared in the TIS to inform the terminal

C5-17	Restrictions in Bunker / Cargo operations due to SIMBOPS or SIMOPS [3]	Bunker vessel	Receiving vessel
		☐ Agreed	☐ Agreed

[3] To be shared in the TIS to inform the terminal

C5	Check	Bunker vessel	Receiving vessel
18	The information in C5 15/16/17 is shared with the terminal in the Terminal Information Sheet (TIS)	☐ Yes	☐ Yes

BIN: _____

Part D1
Connection Testing - PIC bunker vessel

D1	Check	Status	Code	Remarks
1	Transfer systems are tested, operational and ready for use	☐ Yes		
2	Gas detection systems are tested and operational	☐ Yes		
3	All means of communication are tested	☐ Yes	R	
4	Emergency stop signals and shutdown procedures are tested	☐ Yes		
5	Bunker system gauges, high level alarms and high-pressure alarms are operational	☐ Yes		
6	Safety and control devices on fuel installations are checked and working properly	☐ Yes		
7	Ship's ESD arrangements, including automatic valves, are tested and ready for activation	☐ Yes		
8	ESD inter-linked connections are established and tested conform the JPBO	☐ Yes	JPBO	
9	ESD's manual activation is tested	☐ Yes		☐ *Not applicable*
10	Bunker transfer equipment is confirmed: - in good condition - of the appropriate type - sufficiently supported - properly fitted with gaskets/seals - lined-up correctly - properly rigged - secured to the manifolds - fully secured	☐ Yes		

BIN: _____

Part D2
Connection Testing - PIC receiving vessel

D2	Check	Status	Code	Remarks
1	Transfer systems are tested, operational and ready for use	☐ Yes		
2	Gas detection systems are tested and operational	☐ Yes		
3	All means of communication are tested	☐ Yes	R	
4	Emergency stop signals and shutdown procedures are tested	☐ Yes		
5	Bunker system gauges, high level alarms and high-pressure alarms are operational	☐ Yes		
6	Safety and control devices on fuel installations are checked and working properly	☐ Yes		
7	Ship's ESD arrangements, including automatic valves, are tested and ready for activation	☐ Yes		
8	ESD inter-linked connections are established and tested conform the JPBO	☐ Yes	JPBO	
9	ESD's manual activation is tested	☐ Yes		
10	Bunker transfer equipment is confirmed: - in good condition - of the appropriate type - sufficiently supported - properly fitted with gaskets/seals - lined-up correctly - properly rigged - secured to the manifolds - fully secured	☐ Yes		

BIN: _____

Declaration on parts B - D

We the undersigned have checked the items in the applicable parts B – D as marked and signed below:

	Bunker vessel	Receiving vessel
JPBO received	☐	☐
Part B - Pre-operation	☐	☐
Part C - Alignment and agreement	☐	☐
Part D - Connection testing	☐	☐

We have satisfied ourselves that the entries we have made are correct to the best of our knowledge and that the parties involved agree to undertake the bunker operation.

We have also made arrangements to carry out repetitive checks as necessary and agreed that those items coded 'R' in the checklist, and noted in part E, which should occur at intervals not more than _____ hours.

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

Bunker vessel	Receiving vessel
Name	Name
Position	Position
Signature	Signature
Date and time	Date and time

BIN: _____

Part E1
Transfer - PIC bunker vessel

Repetitive checks

Note interval: _____ hrs.

E1	Check	Time	Time	Time	Time	Time	Time	Remarks
-	Time of check							
1	Weather / wave conditions within limits	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
2	Mooring arrangement is effective	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
3	Access between the ships is safe	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
4	Communication is functioning	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
5	Illumination is sufficient	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
6	Bunker vessel can sail under its own power	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
7	Accommodation's external doors and ports are closed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
8	The restricted area and safety zone requirements are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
9	Ignition source restrictions are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
10	Back filling protection is operational	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
11	SIMOPS restrictions are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ *Not applicable*
-	Initials							

BIN: _____

Part E2
Transfer - PIC receiving vessel

Repetitive checks

Note interval: _____ hrs.

E2	Check	Time	Time	Time	Time	Time	Time	Remarks
-	Time of check							
1	Weather / wave conditions within limits	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
2	Mooring arrangement is effective	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
3	Access between the ships is safe	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
4	Access ship shore is safe	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
5	Communication is functioning	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
6	Illumination is sufficient	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
7	Receiving ship can sail under its own power	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
8	Accommodation's external doors and ports are closed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
9	The restricted area and safety zone requirements are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
10	Vessel entrance is controlled, and proper safety information is provided at the gangway	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
11	Ignition source restrictions are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
12	SIMOPS restrictions are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ *Not applicable*
13	Fuel level in the tanks	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
-	Initials							

BIN: _____

Part E3
Transfer - PIC terminal operator

Repetitive checks

Note interval: _____ hrs.

E3	Check	Time	Time	Time	Time	Time	Time	Remarks
-	Time of check							
1	Communication is functioning	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
2	In case the safety zone reached out to shore: The safety zone requirements are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ *Not applicable*
3	Monitoring and security area requirements are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
4	Access ship shore is safe and controlled	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
5	Third party visitors are informed at the terminal entrance about the bunker operation	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
6	Ignition source restrictions are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	
7	SIMOPS restrictions are observed	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ *Not applicable*
-	Initials							

BIN: _____

Part F1
Post-operation - PIC bunker vessel

Post-transfer - Before disconnection

F1	Check	Status	Code	Remarks
1	Relevant bunker hoses, fixed pipelines and manifolds are purged, de-iced, inerted and ready for disconnection	☐ Yes		
2	All remotely and manually operated valves are closed as required for safe disconnection	☐ Yes		
3	Receiving vessel is notified on “ready to disconnect”	☐ Yes		

Post-disconnection - Completion of operation

F1	Check	Status	Code	Remarks
4	Bunker area on the vessel is cleared and restored to standard condition	☐ Yes		
5	Relevant documents are signed and exchanged	☐ Yes		
6	Near misses and incidents are reported to competent authorities	☐ Yes		☐ *Not applicable*

BIN: _____

Part F2
Post-operation - PIC receiving vessel

Post-transfer - Before disconnection

F2	Check	Status	Code	Remarks
1	Relevant bunker hoses, fixed pipelines and manifolds are purged, inerted and ready for disconnection	☐ Yes		
2	All remotely and manually operated valves are closed as required for safe disconnection	☐ Yes		
3	Bunker vessel is notified on “ready to disconnect”	☐ Yes		

Post-disconnection - Completion of operation

F2	Check	Status	Code	Remarks
4	Bunker area on the vessel is cleared and restored to standard condition	☐ Yes		
5	Relevant documents are signed and exchanged	☐ Yes		
6	Near misses and incidents are reported to competent authorities	☐ Yes		☐ *Not applicable*
7	Terminal operator is notified on the completion of bunkering	☐ Yes		
8	Competent authorities are notified on the completion of the bunker operation	☐ Yes		

BIN: _____

Part F3
Post-operation - PIC terminal operator

Post-disconnection – Completion of operation

F3	Check	Status	Code	Remarks
1	After departure of bunker vessel: Restricted area is deactivated	☐ Yes		
2	Relevant personnel informed of the completion	☐ Yes		
3	Competent authorities are notified on the completion of bunker operation	☐ Yes		☐ *Not applicable*
4	Near misses and incidents are reported to competent authorities	☐ Yes		☐ *Not applicable*

BIN: _____

Declaration on part F

We the undersigned have checked the items in parts F as marked and signed below:

	Bunker vessel	Receiving vessel
Part F - Post-operation	☐	☐

We have satisfied ourselves that the entries we have made are correct to the best of our knowledge and that the parties involved agree to have completed the bunker operation.

Bunker vessel	Receiving vessel
Name	Name
Position	Position
Signature	Signature
Date and time	Date and time