



BULK LIQUID TRANSFER PROCEDURE – PORT OF PORT HEDLAND

A311883



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1. DOCUMENT AMENDMENT TABLE

VERSION	PREPARED BY	DATE	AMENDMENT
2	Landside Admin Officer	22/09/2015	PILBARA PORTS re-formatting of document in line with updated document control procedure.
3	Landside Admin Officer	28/10/2015	Several minor changes to wording and formatting throughout the document
4	Landside Superintendent	17/01/2018	Updating minor changes and formatting document.
5	Landside Superintendent	10/07/2018	Updated environmental spillage berth set up requirements and minor wording.
6	Landside Superintendent	1/11/2018	Minor wording changes to section 8
7	Landside Superintendent	12/5/2020	Minor wording changes to section 3,4,5,6 & 11
8	Landside Admin Officer	22/10/2021	Update to Appendix 7
9	A/g Landside Superintendent	21/12/2021	Update to Appendix 7 – ship loader line marks
10	Landside Supervisor	18/07/2024	Update to capture excavation risks and legislation
11	Landside Supervisor	24/02/2025	Update to fire extinguisher requirements and minor wording changes

2. DISTRIBUTION LIST

RECIPIENT	ORGANISATION
Maintenance Supervisor	TAMS
Operations Superintendent	QUBE Bulk
Port Superintendent	Rio Tinto/Dampier Salt
Terminal Manager	ATOM
Port Safety Advisor	BHP Iron Ore
Security Officers	ERS
Port Manager East	Pilbara Ports
Vessel Traffic Service Officers	Pilbara Ports
Health & Safety Superintendent	Pilbara Ports
Ship Scheduler	Pilbara Ports
Landside Operations Coordinators	Pilbara Ports
Landside Operations Supervisor	Pilbara Ports
Shipping Superintendent	Pilbara Ports
Harbour Master	Pilbara Ports
Deputy Harbour Masters	Pilbara Ports
General Manager Terminal Operations	Pilbara Ports
Health and Safety Manager	Pilbara Ports
Terminal Manager	Ampol

3. SCOPE

To define responsibilities and requirements of establishing the berth setup and pack up for:

- the discharge of Fuel Tankers,
- bunkering of ships and small craft via road tanker and via pipeline;
- removal of oily sludge from ships and small craft.

4. PPE

Mandatory PPE standards apply to all persons undertaking the establishment of a fuel berth as well as the discharge and pack up operation. These requirements are in place to enhance the safety of personnel.

The following minimum PPE standards must be adhered to:

- Long Sleeve Hi-Visibility cotton shirt (sleeves to remain rolled down)
- Full Leg Cotton pants, alternatively Hi-Visibility Cotton Overalls
- Hard Hat
- Safety Glasses
- Steel Cap Boots
- PFD when working within 2m of the wharf face

5. BERTH POWER DISCONNECTION

Prior to the berthing of fuel tankers, the berth shall have the non-intrinsic power disconnected in accordance with the requirements contained in this document. The specific terminal operator shall have access to the berth at least three hours prior to the arrival of the fuel tanker to undertake the works required to prepare the berth for the discharge operation.

Wharf side power disconnection is not required when bunkering via road tanker or from pipeline.

6. SAFETY AND FIRE FIGHTING EQUIPMENT

The following safety and firefighting equipment must be present and operational for the setup, discharge and pack up of fuel lines and manifolds in support of bulk fuel transfer from a tanker vessel:

- Emergency eye wash station and/or shower.
- Two 50kg dry powder fire extinguishers (to be mounted on a wheeled cradle).
- Foam skids or foam producing branch, hose and concentrator.
- Ship to shore fire hose with international connection.
- Signage prohibiting mobile phones, ignition sources.
- Pilbara Ports spill kit station.
- Spill bins provided by receiver, containing absorbent pads and booms. The spill bins should contain:
 - absorbent pads,
 - 1.2m socks,
 - 3.6m socks,
 - pillows,
 - pair of coveralls,
 - pair of gloves,
 - pair of goggles,
 - disposal bags,
 - spill response guide.

Prior to the connection of fuel hoses to the manifold, the equipment listed above must be in place and operational. Connecting of hoses to the vessel's manifolds will only commence once the equipment has been inspected and approved by Landside Operations staff as part of the berth tanker safety checks, and a wharf watch person is in place.

7. SETUP OF THE BERTH TO RECEIVE FUEL PRODUCTS

The following steps outline the chronological order for the establishment of a berth in preparation for the arrival of a fuel tanker:

- Safety Shower is clean, tested and working.
- Power is disconnected to ship loader – Pilbara Ports will disconnect power to berth 1 and berth 1 ship loader. ~~PILBARA PORTS~~ Pilbara Ports will disconnect L/V power to berth 3 and DSL will disconnect HV power to berth 3 shiploader and CV800. Power to the sea water pumps can remain connected with the remainder of services disconnected.

- Firefighting equipment is setup as per specifications and made ready – completed by Pilbara Ports maintenance.
- Ship to shore fire hose is placed at water connection – completed by the Pilbara Ports maintenance.
- Fire extinguishers are placed on either side of the manifold. Completed by product receiver/terminal operators.
- Spill bins are in place on the wharf central to the set-up area – Product receiver to provide comprehensive spill response bin, Pilbara Ports spill bin remains in situ as backup.
- Spill bins provided by receiver, containing absorbent pads and booms. The spill bins should contain;
 - absorbent pads,
 - 1.2m socks,
 - 3.6m socks,
 - pillows,
 - pair of coveralls,
 - pair of gloves,
 - pair of goggles,
 - disposal bags,
 - Spill response guide.

7.1 For Berth 1

- Power is disconnected on the berth – see Berth one tanker disconnection WI (A317579). The Pilbara Ports lock box and documentation will also be placed at the wharf watchperson position.
- Northern ramp gate is closed, signage placed – Completed by Pilbara Ports maintenance team.
- Wharf watchperson station is setup and manned, mobile phone/ignition signage is placed – Completed by stevedores/terminal operator's representative.
- Signage and temporary fencing installed at southern end of wharf – Completed by Pilbara Ports maintenance team.
- A flow chart is located at Appendix 6 that is an aid to identifying the actions and order to be undertaken when setting up Berth 1
- Setup of manifolds and fuel hoses commences – Receivers contractors/terminal operators to complete.
- Absorbent 8" sausage/socks are to be linked and placed either side of the fuel hoses. Socks must run from the bund wall at the rear of the berth and continue to the bund wall at the water side of the berth. Please see Appendix 1 for location diagram.
- Once complete, all vehicles removed or isolated; physical barriers and signage installed on southern end of wharf – Undertaken by crew working on the manifold and hoses/terminal operator's representatives.
- Landside operations to complete checklist and place cable ties on Northern gates. A handover checklist will be completed, and a copy provided to the terminal operators/receiver.

7.2 For Berth 3

- Pilbara Ports electrician to disconnect low voltage power to berth 3.
- DSL electrician is to disconnect/isolate all HV power to berth 3 with the exception of the sea water pumps which can remain connected. Once the DSL isolation is complete, the isolation board will be positioned at the wharf watchperson position behind the berth 3 manifolds. The Pilbara Ports lock box and documentation will also be placed at the wharf watchperson position.
- Southern and Northern ramp gates closed, signage placed – Completed by Pilbara Ports maintenance.
- Wharf watchpersons station is setup and manned, mobile phone/ignition signage is placed – Receiver/terminal operator's representatives coordinates/undertakes manning of the station.
- Setup of fuel manifolds and hoses commences – Receivers Contractors/terminal operators to complete.
- Absorbent 8" sausage/socks are to be linked and placed either side of the fuel hoses. Socks must run from the bund wall at the rear of the berth (either side of the manifolds) and continue to the bund wall at the water side of the berth. Please see Appendix 2 for location diagram.
- Once complete all vehicles isolated or removed from the wharf, gates shut and ensure signage is correctly placed – Undertaken by terminal operator's representatives/crew working on the manifold and hoses.
- Prior to the discharge of fuel commencing the wharf shall be inspected by a representative of the Pilbara Ports, cable ties used to prevent access, a handover checklist will be completed, and a copy provided to the terminal operators/receiver.

7.3 Set up Complete

The berth is expected to be completely set up including hose connected to manifold, prior to the vessel coming alongside.

Any exception to this needs to be prior arranged and approved by Pilbara Ports and the terminal.

8. BUNKER DELIVERY BY ROAD/PIPELINE

Delivery of bunkers via a road tanker can occur on Berth 1,2 or 3. Delivery of bunkers via a fixed line via terminal pump and hose can be undertaken on berths 1, & 3 only. Vessels will request, through their agent, that bunkers are required. Actions to be taken include;

- Agent to co-ordinate the most appropriate time for the bunkers to be delivered, consideration must be given to the cargo being loaded/discharged.
- N.B. Bunkering at any of the public berths will not be undertaken during Ammonium Nitrate loading or discharge operations at berth No.2,
- Co-ordination will involve liaison with Landside Operations, Shipping, and the Stevedores for available berth time and space.
- Please note that only those companies that hold a Pilbara Ports licence to bunker fuels are permitted to undertake bunker operations within the port.

The procedure for safe operation of transferring bunkers is:

- Prior to commencing,
 - Notify the Pilbara Ports Tower (91739030 or VHF Ch 12) of the intention to commence bunkering a vessel,
 - Safe access on/off the vessel is in place,
 - Shipboard scuppers are plugged
 - Ship to shore communications undertaken,
 - Firefighting hoses and equipment on board and ashore (Fuel Trans) are ready for immediate use,
 - Oil spill protection equipment is readily available, via the Fuel Trans response vehicle. Contents are; oil sorbent land booms, oil sorbent pillows, oil sorbent pads, absorbent bags, first aid kit, chemical resistant glove sets, barrier tape, goggles, respirators, particulate respirators, fire blankets, PVC spill mats, overalls, hi-vis vests, rope, witches hats, eye wash bottles, safety torch (intrinsically safe), 9kg extinguisher (dry chemical), danger signs, ER plans, air compressor and Jerry can and fuel.
 - No smoking signs to be in place,
 - 8m exclusion zone established,
 - Naked light restrictions observed,
 - Static control measures implemented,
 - Deck watch in place

Pipeline Bunkering Operations

For vessels receiving bunkers via pipeline, the following controls are to be in place:

- Customer/Terminal/agent to request approval from Landside operations to conduct pipeline bunkering
- Landside Operations representative to be on site for the duration of bunkering
- A bunkering checklist/Safe work method statement is agreed to between the vessel and bunker master/shore officer, and reviewed by the Pilbara Ports landside and marine team
- Communications between the terminal/supplier and the vessel is maintained via VHF contact throughout the transfer.
- Bunker master/Shore officer to confirm the vessel has a spill prevention policy in place for receiving bunkers as highlighted in their procedures/SWMS.
- Prior to commencement, physical controls are to be in place via the appropriate equipment to prevent spillage at the filler valve and hose connections from entering the environment. The marine department may require certain controls are also in place for a particular vessel. Prior to acceptance of bunkering, marine and landside will discuss the operation to ensure the necessary spill prevention procedure are in place and any other specific requirements.
- For vessels that don't have overfilling protection systems installed, a reduction in flow rate at 80% completion with incremental physical ullage checks in between, will be required. These are to be captured on the bunkering checklist and reviewed in the JHA/SWMS.

Upon completion notify the Pilbara Ports VTS of the completion of bunkering operations, and

- Return all equipment to its normal stowage,
- Remove any rubbish from the wharf.

9. EMERGENCY RESPONSE

Pilbara Ports does not have an emergency response team and relies exclusively on the Department of Fire and Emergency Services (DFES) to react to fire incidents at the port.

Handheld firefighting equipment is located at the manifolds and is augmented by two fire skids fitted with monitors and a booster pump that can deliver foam/water at 28lts per second. Additionally, two break glass alarm activation systems are located next to the fire water standpipe.

In the event of a fire, Shore officers undertake an assessment of the fire, its location, size and then evaluate their ability to safely attack the fire with the available equipment. If their assessment is that the fire is beyond their capabilities, and they believe that it is unsafe to remain on the wharf, then an evacuation is to be undertaken.

Appendices 4, 5 and 6 consist of flow charts that are designed to assist in decision making when confronted with;

- A fire on-board the tanker,
- A fire on the wharf deck with a tanker alongside and discharging fuel products, and
- A fire on a vessel berthed at PH No.2 when a tanker is alongside PH No.1 and is discharging fuel products.

10. BERTH ACCESS DURING TANKER OPERATIONS

In accordance with the provisions of AS 3846 – 2005 article 8.3.6 and 8.3.7, when vessels engaged in the discharge of flammable liquids are alongside, an exclusion zone will be implemented.

The perpendicular exclusion zone for Berth 1 extends from the berth face up to the eastern rail of CV05 and 25m to seaward of the ship.

Please refer to the map at Appendix 2 for more specific information.

Once the berth has been established, all personnel (except for Authorised Officers, as listed below), regardless of purpose or duration of stay must sign in through the terminal operator's watchperson station, providing the following information:

- Name
- Company they represent
- Full MSIC number
- Purpose of visit
- Time in
- Time out
- Checked for ignition sources

The watchperson will then conduct a check of ignition sources and PPE and when he/she is satisfied that all requirements have been met, admit access to the wharf.

Ship's crew are to identify themselves to the watchperson, who will check their details against the crew list as provided by the ship's agent.

Should a person who is not the holder of a current, valid MSIC requires access to the berth that person must provide his/her Pilbara Ports induction card number and also the name of the person (Must hold a valid MSIC) who will be accompanying him/her at all times while on the berth (Land-side Restricted Zone).

Authorised Officers such as Border Force (B.F.) and WA Police may carry a firearm in accordance with their operational requirements and are not required to surrender any firearm.

Authorised Officers such as Biosecurity, WA Police and B.F. are not required to provide MSIC details, however they must comply with PPE requirements:

- They must switch phone off prior to boarding the vessel.
- They are informed that they cannot switch their phone on until they arrive at the safe area within in the vessel superstructure.
- They are informed that they must switch their phone off prior to leaving the safe area.

B.F. Officers carry intrinsically safe radios and are permitted to retain these on their person, the radios can be identified by:

- All intrinsically safe radios held by customs are painted yellow.
- Only yellow Motorola XTS5000R radios are intrinsically safe.

11. GENERAL SAFETY PROVISIONS DURING DISCHARGE

As pipelines reside outside of the wharf area and in close proximity to operational areas, considerations to safety need to be considered and factored in during the planning stages, and through ongoing monitoring once the vessel is alongside.

Coordination between the fuel company, landside operations and maintenance/engineering should occur in the planning phases, and any activities agreed upon to ensure external operations do not interact with any live pipelines or within the proximity of the berth during discharge, that could compromise the safety and security of the discharge operation.

Any party conducting excavation works within close proximity to live fuel pipelines must have written approval from the relevant fuel terminal, Landside Operations, and comply with the Pilbara Ports Excavation and Penetration Procedure (A466609).

The watchperson has the right and responsibility to refuse entry to any person not wearing the correct PPE and/or not complying with the sign in process.

Should the ship require the delivery of provisions while the fuel manifold and hoses are still on the berth, the delivery must be conducted via a launch service. Under no circumstances is lifting of any cargo or provisions to occur over or near the fuel hoses which are on the wharf. If the ship has a crane mounted behind the super structure this may be used for stores retrieval from the wharf, provided the delivery vehicle does not encroach within the exclusion zone outlined in point 4.

Third party access (people not directly involved in the operation) to the berth during the operation must be through consultation with Pilbara Ports and the receivers. Pilbara Ports staff and security personnel maintain access in accordance with their duties.

Hot works or any work involving electrical equipment, or which may pose a risk of creating a spark is not permitted within the exclusion zone/controlled area at any time while they are on the berth (see controlled area diagram at appendix 2 and 3).

Should fuel ships be scheduled in succession the berth may remain in readiness provided that a trained watchperson attends all times.

In circumstances where the control of the wharf concerned has not been allocated to another port user prior to the three-hour preparation window, the fuel hoses may be connected into standard operational lengths without the provision of a watchperson or the installation of safety and firefighting equipment, provided the area is delineated using cones, tape and information tags.

Under no circumstances is the manifold to be installed, connected or placed on the wharf prior to the installation of the safety and firefighting equipment outlined in Section 4, and a watchperson must also be in attendance.

In the event that mooring lines need to be re-run whilst alongside, Landside Operations will coordinate this in conjunction with the VTS, fuel terminal and stevedore representative. Fuel discharge must be ceased at both the vessel and terminal points during the operation of re-running mooring lines.

If the vessel position needs to be warped, then fuel lines will need to be disconnected from the vessel and standard VTS procedures apply.

12. PACK UP OF FUEL TANKER BERTH

Following the sailing of a fuel ship the following sequence is to be observed when packing the equipment away:

- **Step 1:** Once it has been confirmed that hoses are empty and fully drained. Fuel hoses and manifold to be disconnected and removed from the port – Receiver/terminal operator’s representatives to complete.
- **Step 2:** All remaining equipment associated with discharge to be removed from the port – Receiver/terminal operator’s representatives to complete.
- **Step 3:** Pack up watchperson station, manning no longer required – Stevedores/terminal operator’s representatives to return all equipment (including bins) to the correct storage locations. Absorbent socks are to be returned to the storage cradle.
- **Step 4:** Firefighting equipment to be checked for damage and returned to designated storage – Pilbara Ports maintenance.
- **Step 5:** Southern and northern gates to be opened and have signage removed – Pilbara Ports maintenance.
- **Step 6:** Power to be reconnected to wharf and ship loaders – Pilbara Ports to arrange Wharf 1, Pilbara Ports will reconnect power to Berth 3, Rio Tinto Dampier Salt will reconnect power to Berth 3 Ship loader as their operations require. All locks and tags must be removed.

Following the completion of steps 1 and 2 the succeeding actions may be conducted concurrently.

13. PROCESS OWNER

Date approved: 07/04/2022

Review date: 07/04/2023

Version: 17.2

Approved by: GM Terminal Operations

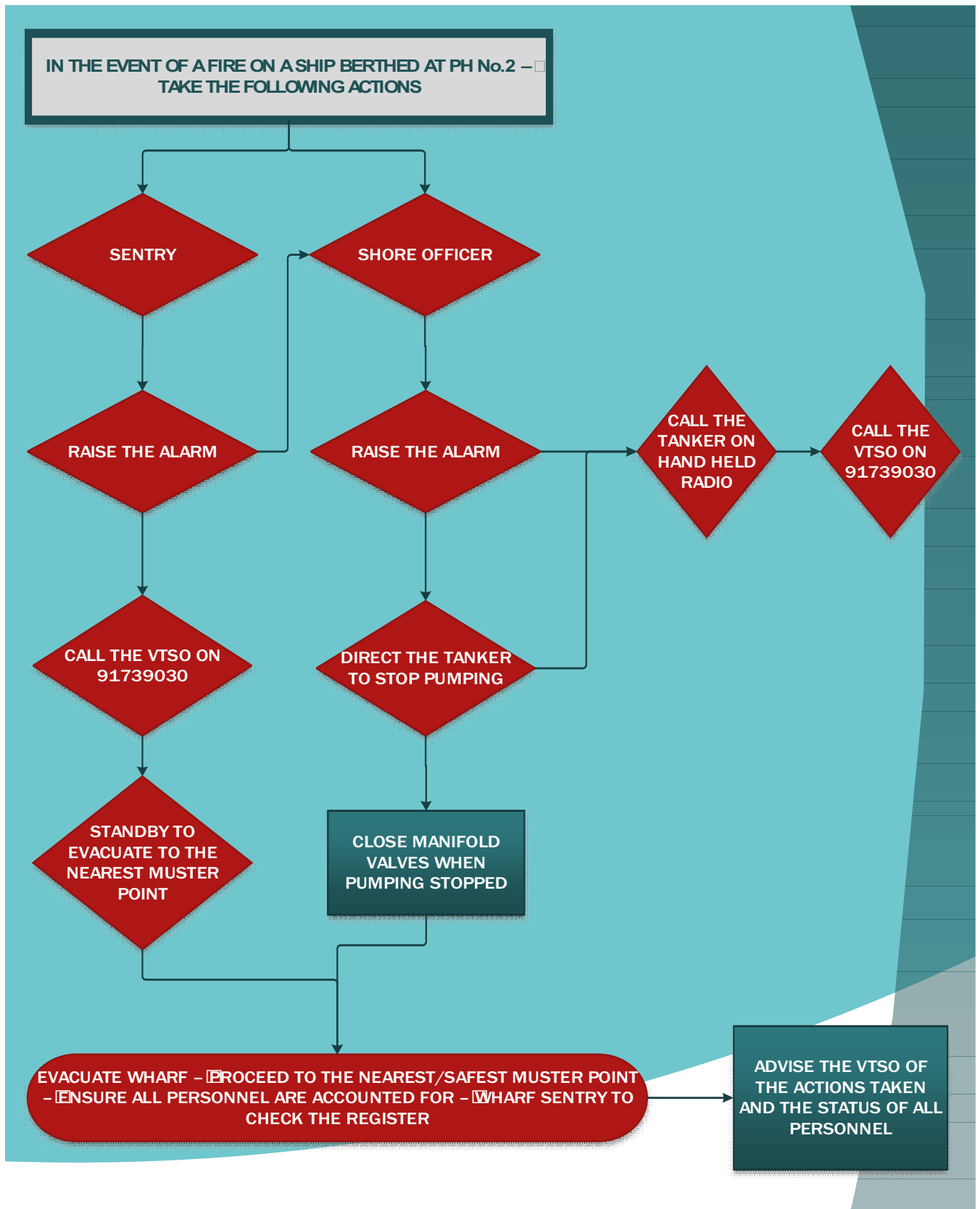
14. APPENDIX 1 – HAZARDOUS AREAS CLASSIFICATION BERTH



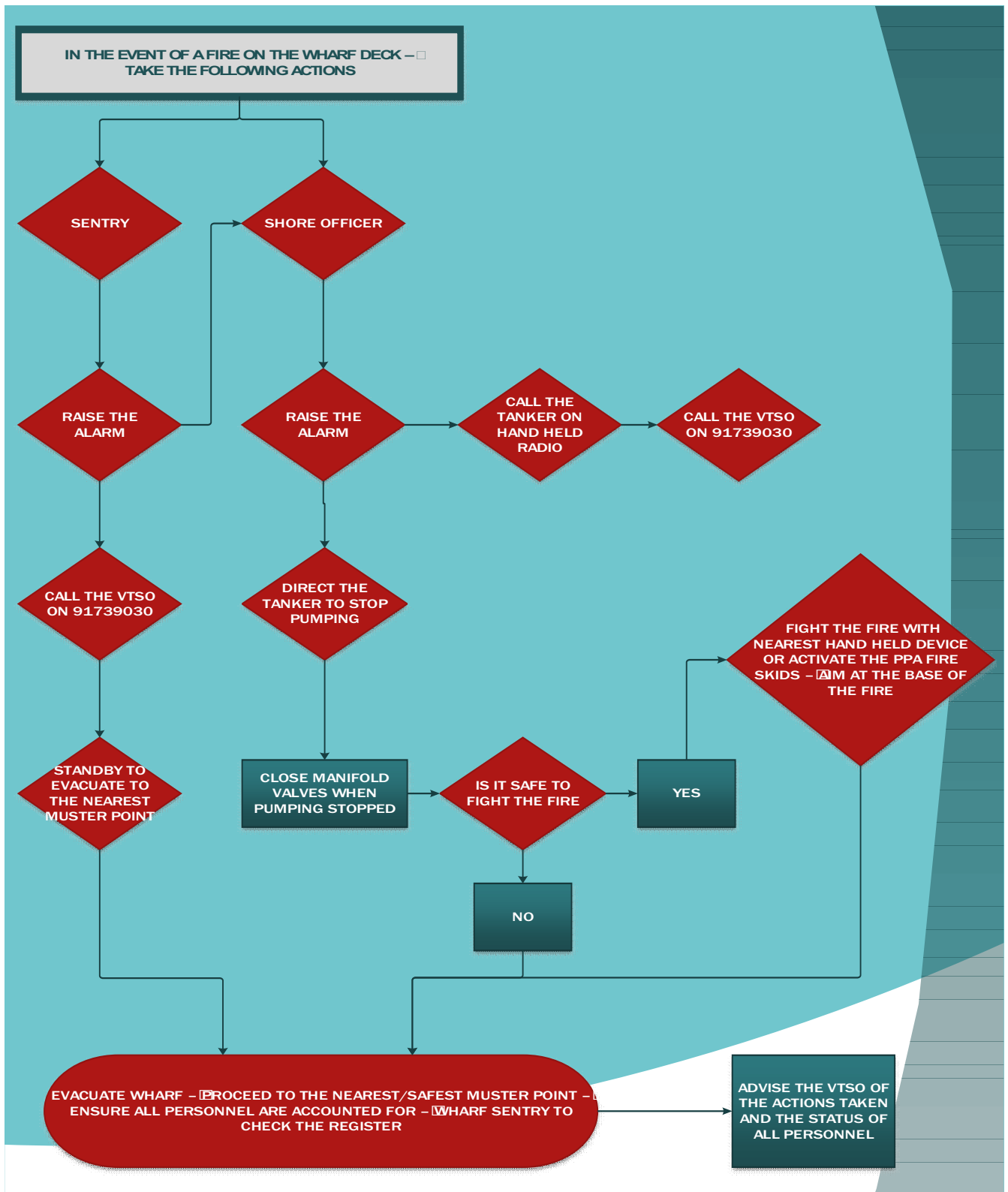
15. APPENDIX 2 - HAZARDOUS AREAS CLASSIFICATION BERTH



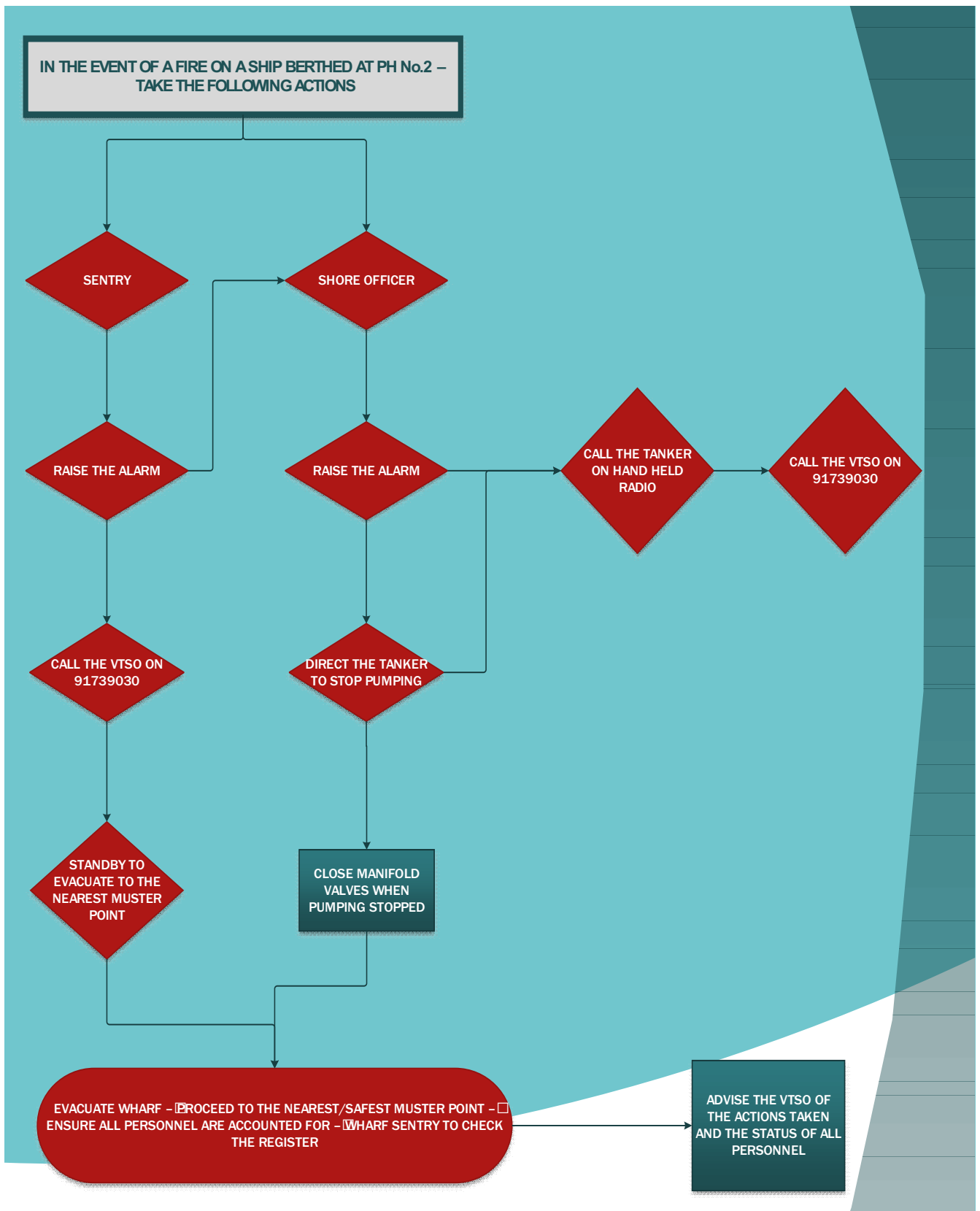
16. APPENDIX 3 – A FIRE ON BOARD A TANKER



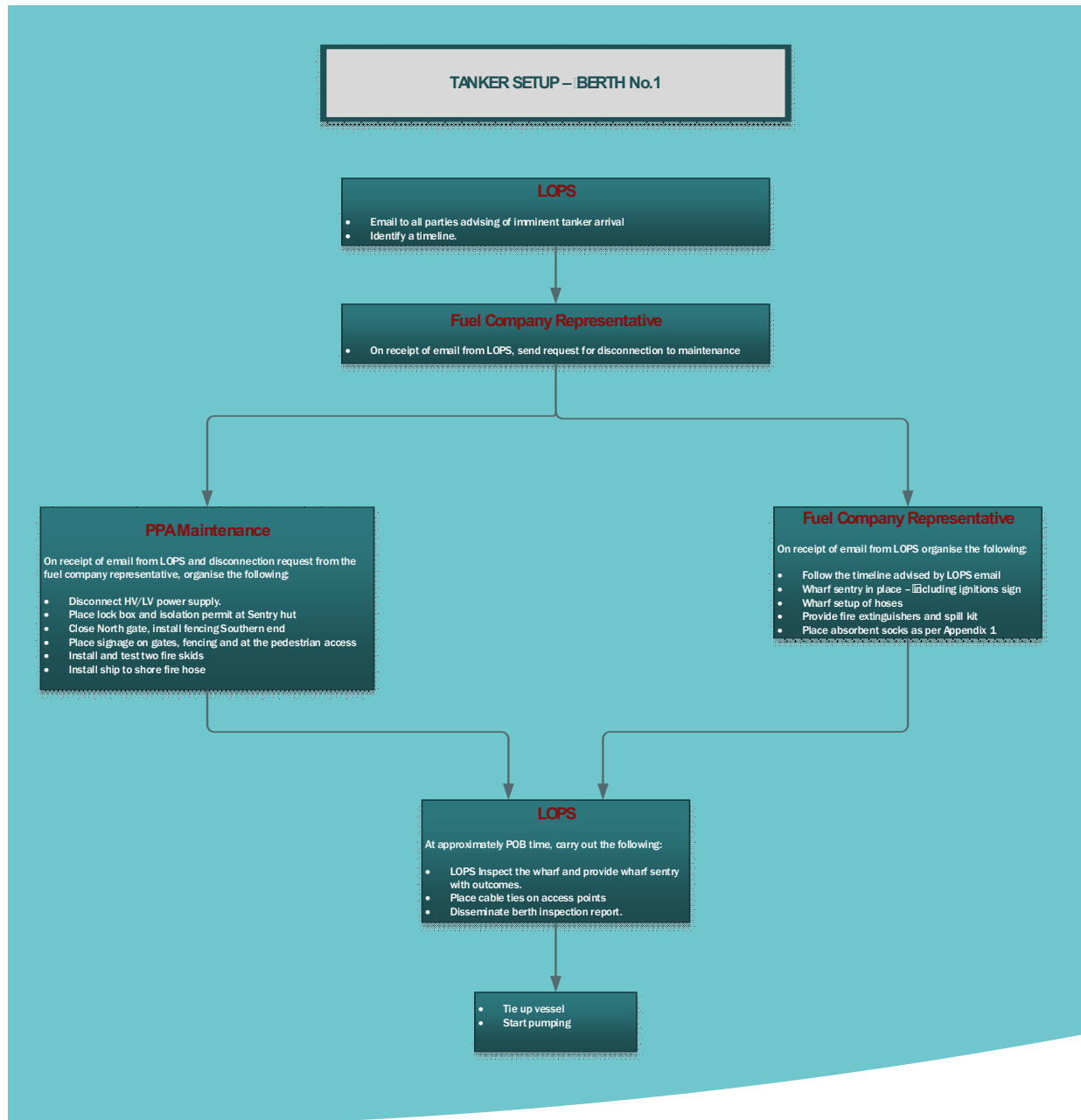
17. APPENDIX 4 - A FIRE ON THE WHARF DECK WITH A TANKER ALONGSIDE AND DISCHARGING FUEL PRODUCTS



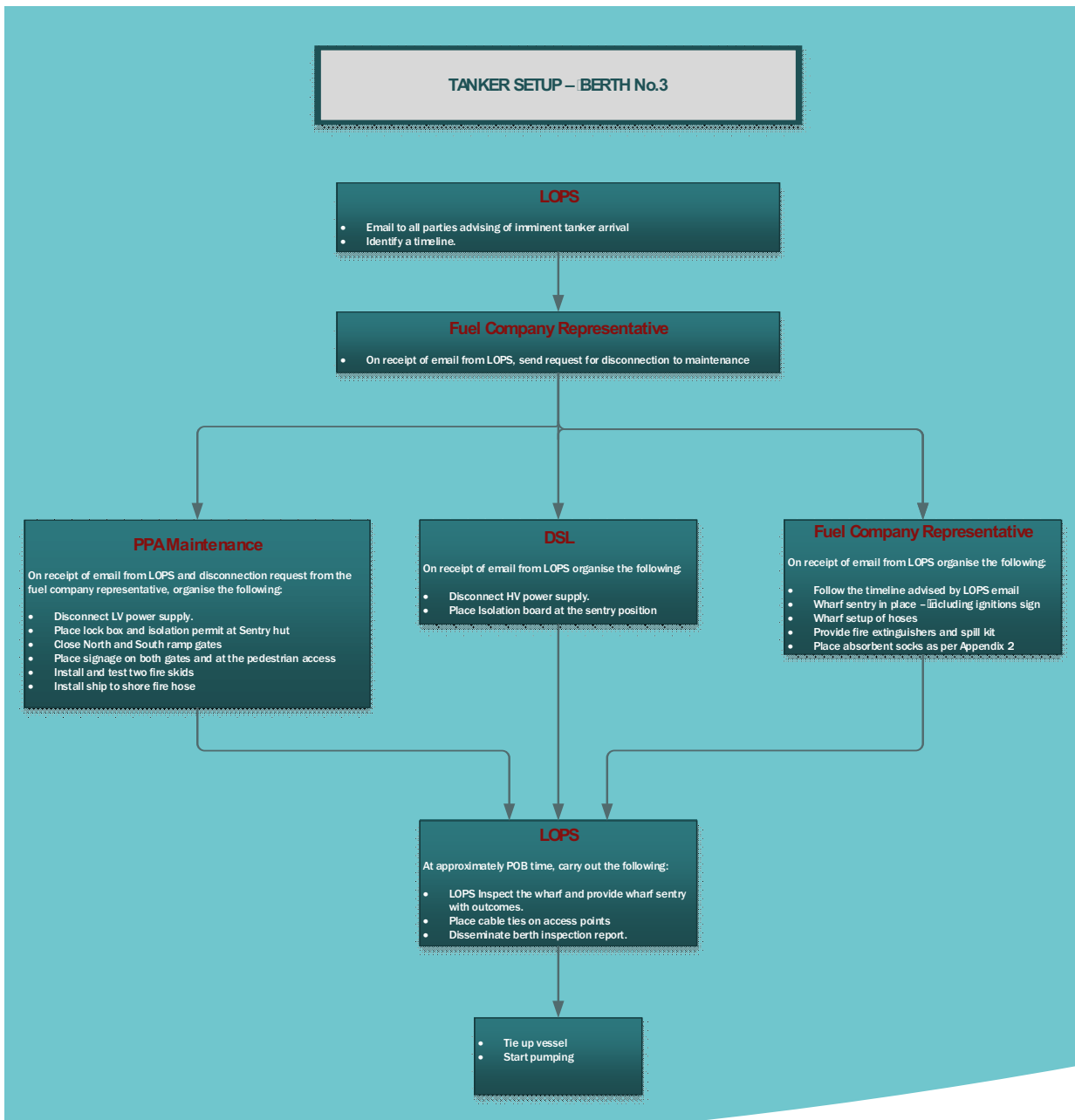
18. APPENDIX 5 - A FIRE ON A VESSEL BERTHED AT PH NO.2 WHEN A TANKER IS ALONGSIDE PH NO.1 AND IS DISCHARGING FUEL PRODUCTS.



19. APPENDIX 6 – TANKER ON BERTH NO.1 SETUP FLOW CHART



20. APPENDIX 7 – TANKER ON BERTH NO.3 SETUP FLOW CHART



21. APPENDIX 8 – TANKER SAFETY SECURITY BERTH INSPECTION FORM

**PORT OF PORT HEDLAND - TANKER SAFETY &
SECURITY BERTH INSPECTION FORM**



BERTH 1	BERTH 3
ELECTRICAL ISOLATION	
<input type="checkbox"/> High Voltage disconnection completed. <input type="checkbox"/> Lock box at sentry <input type="checkbox"/> Check paper work	<input type="checkbox"/> High Voltage disconnection completed. <input type="checkbox"/> DSL lock box at sentry <input type="checkbox"/> PPA lock box at sentry <input type="checkbox"/> Check PPA paper work
SPILL MANAGEMENT	
<input type="checkbox"/> PPA spill bins at least ¾ full & on site <input type="checkbox"/> Fuel company has at least 1 x spill kit	
GENERAL	
<input type="checkbox"/> Personnel present are wearing mandatory PPE – safety glasses, hard hat, high visibility clothing (long sleeves, long pants), safety footwear	
NOTES / OBSERVATIONS	
PPA REPRESENTATIVE	RECEIVERS REPRESENTATIVE
Name:	Name:
Signature:	Signature:

When completed, this form is to be emailed by Landside Operations to Atom or Ampol (or both) and Qube. A copy is also to be saved in Objective.

Atom: porthedlandshipping@australianterminals.com

Ampol: AMPOLPorthedlandshipping@ampol.com.au

Qube: port-hedland.operations@qube.com.au