

**Marine Cargo and Deck Operations**

Business Name:		ABN:
Business Address:		
Contact Person:	Phone:	Email:

**THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS PROJECT**

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

**CLIENT OR PRINCIPAL CONTRACTOR DETAILS**

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date Risk Assessment supplied to Project Manager:	



RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	<b>Engineering</b> Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	<b>Administrative</b> Change	
								<b>PPE</b>	

  

Risk Rating & Required Action:	
<b>4A</b>	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
<b>3H</b>	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
<b>2M</b>	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
<b>1L</b>	Proceed, following standard operating procedures. Monitor and keep records.

  

Consequence Scale:			
Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
<b>Catastrophic</b>	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
<b>Major</b>	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
<b>Moderate</b>	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
<b>Minor</b>	First-aid only, no lost time	negligible delay	Isolated non-conformance
<b>Insignificant</b>	No injury	no schedule impact	Deviation caught and corrected on site

  

**Notes on Hierarchy of Controls:**  
Remember to apply controls in the preferred order shown by the coloured pyramid:

1. **Eliminate**
2. **Substitute**
3. **Isolate**
4. **Engineering**
5. **Administrative**
6. **PPE**

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

*aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.*

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Organisational WHS Governance & Safety Leadership for Marine Operations	<ul style="list-style-type: none"> <li>Absence of a documented WHS management system aligned with WHS Act 2011 and Marine Orders</li> <li>Unclear WHS responsibilities between owner, operator, master and crew leading to gaps in control of deck and cargo activities</li> <li>Inadequate resourcing for WHS (time, budget, personnel) for high-risk marine cargo and deck operations</li> <li>Failure to integrate marine-specific risks (weather, vessel motion, cargo shift) into corporate risk registers</li> <li>Lack of senior management oversight of incident trends for deck, fishing and liquid bulk activities</li> <li>Inadequate consultation arrangements with crew and shore-based staff on WHS issues</li> <li>Poor safety culture leading to normalisation of deviation from marine operating procedures</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement an integrated WHS management system (WHSMS) that explicitly covers marine cargo, industrial fishing operations, liquid bulk handling and work around open hatches, aligned with WHS Act 2011, WHS Regulations and relevant marine legislation</li> <li>Define and document WHS roles, responsibilities and accountabilities for officers, masters, engineers, deck supervisors and contractors within marine operations governance documents</li> <li>Establish a WHS leadership program for senior management and vessel masters focusing on due diligence obligations under WHS Act 2011 and safety critical decision making at sea</li> <li>Maintain a corporate marine risk register that identifies and reviews key system risks for cargo securing, deck work, fishing gear handling and liquid transfer operations</li> <li>Conduct regular WHS performance reviews (KPIs, audits, inspections, incident trends) at Board and executive level, with specific indicators for deck and cargo operations</li> <li>Implement formal WHS consultation mechanisms (HSC/HRS, toolbox forums, safety meetings) that include both ongoing crew and shore-based logistics/planning staff</li> <li>Develop and enforce a 'stop work authority' policy empowering all personnel to halt unsafe marine operations without fear of reprisal</li> <li>Ensure integration of safety management with ISM Code Safety Management System (where applicable), avoiding duplication and ensuring clear linkages to WHS obligations</li> </ul>	3H
2. Competency, Licensing & Training for Marine Deck and Cargo Personnel	<ul style="list-style-type: none"> <li>Inadequate verification of marine qualifications, licences and sea service for masters, mates and officers</li> <li>Insufficient training in deck cargo operations, liquid bulk transfer procedures and fishing gear handling</li> <li>Lack of competence in dynamic risk assessment on moving, wet or cluttered decks</li> <li>Inadequate training in confined space, work at height and work around open hatches</li> <li>Poor understanding of marine emergency response (man overboard, spill, fire, loss of containment)</li> <li>No structured competency assessment for new crew or contractors before independent work on deck</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement a competency management system for all marine roles, mapping position descriptions to required licences, marine qualifications, VOCs and WHS training requirements</li> <li>Verify and document all maritime certificates of competency, high-risk work licences (where applicable), and records of sea service prior to engagement</li> <li>Deliver role-specific training programs covering deck operations, industrial fishing techniques, cargo lashing, liquid bulk cargo transfer systems, and hatch management</li> <li>Provide mandatory training in dynamic risk assessment, including vessel motion, changing sea states and adverse weather impacts on deck work</li> <li>Ensure all deck crew receive accredited training in confined space awareness, work at height, and fall prevention specific to open hatch areas and tank tops</li> <li>Conduct scenario-based emergency response drills (man overboard, spillage, release of pressure, fire, loss of steering) at planned intervals and record outcomes</li> <li>Use structured on-the-job competency assessments and logbooks to verify skill before authorising personnel to supervise cargo, operate winches or manage bulk transfers</li> <li>Include WHS induction modules that cover WHS Act 2011 duties, hazard and near-miss reporting processes, fatigue management expectations and stop work procedures</li> </ul>	2M

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	<ul style="list-style-type: none"> <li>Failure to provide training on WHS obligations, hazard reporting and right to cease unsafe work</li> </ul>			
3. Vessel and Deck Design, Engineering Controls & Maintenance Systems	<ul style="list-style-type: none"> <li>Vessel layout that does not minimise trip, slip and crush points during deck and cargo operations</li> <li>Inadequate deck drainage causing pooling of water, fish offal, fuel or chemicals increasing slip risk</li> <li>Insufficient fixed guarding for winches, capstans, conveyors, cranes and fishing gear handling systems</li> <li>Lack of engineered fall prevention around open deck hatches, manholes and tank openings</li> <li>Poor lighting on main deck, working decks, hatch coamings and manifold areas affecting visibility</li> <li>Inadequate planned maintenance for cargo gear, hatch covers, derricks, cranes and lifting appliances</li> <li>Failure of pressure relief systems, hoses or couplings in liquid bulk cargo transfer systems</li> <li>Absence of non-slip surface or degraded deck coating in high traffic working areas</li> </ul>	4A	<ul style="list-style-type: none"> <li>Apply marine-specific safety in design principles for new builds and major refits to optimise deck layout, equipment placement, walkways and segregation of cargo and personnel movements</li> <li>Ensure effective drainage design and maintenance of all working decks, including scuppers and freeing ports, to minimise standing water and product accumulation</li> <li>Install and maintain fixed guarding and interlocks on winches, capstans, conveyors, cranes and other moving machinery in accordance with relevant Australian Standards and Marine Orders</li> <li>Provide engineered fall prevention such as guardrails, coamings, self-closing gates, hatch gratings and removable barriers around open hatches and tank openings</li> <li>Implement vessel-wide lighting design standard ensuring adequate lux levels for cargo decks, fishing work decks, hatch areas and liquid transfer manifolds, with emergency lighting backup</li> <li>Manage a planned maintenance system (PMS) for all cargo handling and deck equipment, aligned with manufacturer recommendations, survey requirements and class rules</li> <li>Specify and inspect pressure-rated hoses, couplings, valves and manifolds for liquid bulk cargoes, with a schedule for periodic pressure testing and replacement</li> <li>Apply and maintain non-slip deck coatings or anti-skid surfaces in all high-risk work areas, with documented inspection and renewal intervals</li> </ul>	2M
4. Marine Cargo Planning, Stability & Load Management Systems	<ul style="list-style-type: none"> <li>Inadequate voyage and stability planning leading to instability or excessive cargo shift</li> <li>Failure to account for liquid bulk free surface effect on vessel stability in planning tools</li> <li>Poorly controlled loading sequences causing excessive stress on structure or gear</li> <li>Lack of clear procedures for maximum deck loadings, stacking heights and lashings</li> </ul>	4A	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	<ul style="list-style-type: none"> <li>Inaccurate cargo weight data or unverified tank soundings leading to misdeclared loads</li> <li>No system to review cargo and stowage plans for high-risk or hazardous cargoes</li> <li>Failure to incorporate industrial fishing harvest volumes and hold capacity into stability calculations</li> </ul>		[REDACTED]	
5. Cargo Securing, Lifting & Industrial Fishing Gear Management Systems	<ul style="list-style-type: none"> <li>Systemic failure to apply cargo securing manuals or lifting plans for deck cargoes</li> <li>Inadequate inspection regime for lifting gear, nets, trawl doors, warps and associated equipment</li> <li>Use of non-certified or damaged sling shackles, hooks and blocks</li> <li>Poor control of load paths during crane operations and fishing gear deployment and retrieval</li> <li>Lack of formal lifting plans for repetitive or high-risk deck lifts, including net handling and catch transfer</li> <li>Inadequate procedures for isolating and tagging out defective lifting and fishing equipment</li> <li>Insufficient segregation of personnel from lifting and trawl gear snap-back zones</li> </ul>	4A	[REDACTED]	2M
6. Liquid Bulk Cargo Handling & Transfer Management	<ul style="list-style-type: none"> <li>Loss of containment of liquid bulk cargoes (fuel, chemicals, edible oils, brine) due to procedural failures</li> </ul>	4A	[REDACTED]	2M

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	<ul style="list-style-type: none"> <li>• Overfilling of tanks or lines from inadequate level monitoring or communication failures</li> <li>• Incorrect connection of hoses or manifolds leading to cross-contamination or discharge overboard</li> <li>• Static electricity or ignition sources during transfer of flammable or combustible liquids</li> <li>• Lack of coordination between ship and shore during simultaneous operations (SIMOPS)</li> <li>• Inadequate emergency shutdown (ESD) systems and drills for transfer operations</li> <li>• Failure to control pressure, temperature or flow rates within equipment design limits</li> </ul>		[REDACTED]	
7. Work at Height, Open Deck Hatches & Confined Space Entry Management	<ul style="list-style-type: none"> <li>• Unprotected open deck hatches or manholes creating fall hazards for crew and contractors</li> <li>• Inadequate systems for control hatch opening, closing and latching in varying sea states</li> <li>• Unmanaged work at height on ladders, covers, masts, derricks or outside structures</li> <li>• Entry into holds, tanks or spaces connected to cargo systems without confined space controls</li> <li>• Poor communication between deck supervisors and engineering staff regarding tank status and isolation</li> <li>• Failure to monitor atmosphere in cargo tanks or holds prior to entry or hot work</li> </ul>	4A	[REDACTED]	2M

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
			[REDACTED]	
8. Fatigue, Rostering & Remote/Offshore Work Management	<ul style="list-style-type: none"> <li>Excessive working hours for crew during intensive fishing, cargo operations or port calls</li> <li>Inadequate rostering and manning levels on deck leading to chronic fatigue</li> <li>Poor consideration of circadian rhythms and recovery time during scheduling of night operations</li> <li>Limited access to medical support and shore leave on extended sea voyages</li> <li>Under-reporting of fatigue due to cultural or commercial pressures</li> <li>Fatigue-related decision making errors during critical cargo or fishing manoeuvres</li> </ul>	4A	[REDACTED]	2M
9. Weather, Sea State, Navigation & Operational Decision-Making	<ul style="list-style-type: none"> <li>Inadequate consideration of weather and sea state when planning deck and cargo operations</li> <li>Continuing fishing or deck cargo work in conditions beyond vessel or gear design limits</li> <li>Insufficient procedures for suspending work on open decks and near open hatches in severe weather</li> <li>Poor integration of navigational risk and cargo stability considerations in routing decisions</li> <li>Inadequate communication of weather and operational limits between bridge and deck supervisors</li> <li>Failure to adjust for reduced visibility, ice, swell direction or high winds during critical operations</li> </ul>	4A	[REDACTED]	2M

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
10. Contractor, Stevedore & Third-Party Interface Management	<ul style="list-style-type: none"> <li>Lack of clarity over WHS responsibilities between vessel, stevedores, fish receivers and terminal operators</li> <li>Contractor personnel unfamiliar with vessel-specific risks, access routes and emergency procedures</li> <li>Conflicting procedures between shore-based and vessel systems during cargo or fishing support activities</li> <li>Uncontrolled access to working decks, cargo spaces and liquid manifolds by visitors or vendors</li> <li>Poor communication during simultaneous operations (loading, bunkering, maintenance and fishing support)</li> <li>Inadequate verification of contractor competencies for high-risk work (crane operation, rigging, hot work)</li> </ul>	3H	[REDACTED]	2M
11. Emergency Preparedness, Spill Response & Rescue Capability	<ul style="list-style-type: none"> <li>Inadequate emergency response planning for man overboard during deck or fishing operations</li> <li>Lack of effective spill response equipment and procedures for liquid releases on deck or overboard</li> <li>Insufficient drills for fire, collision, flooding, cargo shift or loss of containment events</li> <li>Poor crew familiarity with emergency equipment locations and operation (firefighting, rescue, containment)</li> <li>Ineffective communication and coordination with shore-based emergency services and relevant authorities</li> <li>Failure to consider open hatch and confined space emergencies in rescue planning</li> </ul>	3H	[REDACTED]	2M
12. Health, Hygiene, Hazardous Substances	<ul style="list-style-type: none"> <li>Exposure to fuel, chemicals, refrigerants, cleaning agents and fish</li> </ul>	3H	[REDACTED]	2M

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
& Biosecurity Management	<p>processing chemicals without adequate control</p> <ul style="list-style-type: none"> <li>• Biological hazards from fish handling, offal, contaminated water and waste products on deck</li> <li>• Inadequate management of fumigants or preservatives used in cargo holds or fish storage areas</li> <li>• Poor housekeeping and waste management contributing to slips, trips, vermin and disease vectors</li> <li>• Insufficient control of respiratory hazards from welding fumes, exhaust gases or cargo residues</li> <li>• Non-compliance with biosecurity requirements at Australian ports affecting health and operations</li> </ul>		[REDACTED]	
13. WHS Documentation, Communication, Reporting & Continuous Improvement	<ul style="list-style-type: none"> <li>• Outdated or inaccessible WHS procedures for marine cargo and fishing operations</li> <li>• Inconsistent communication of critical safety information between shifts, voyages and crews</li> <li>• Under-reporting of near misses, unsafe conditions and minor incidents on deck</li> <li>• Failure to analyse incident data, audits and inspections to identify systemic issues</li> <li>• Inadequate document control for permits, risk assessments, cargo plans and training records</li> <li>• Lack of feedback loop from crew to management on practicality of WHS controls</li> </ul>	3H	[REDACTED]	1L

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK

SAMPLE

**EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES**

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

**LEGISLATIVE REFERENCES**

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES FOR ANY STATE THAT ARE NOT APPLICABLE

**Queensland & Australian Capital Territory**

Work Health and Safety Act 2011  
 Work Health and Safety Regulations 2011  
 Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>  
 Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>  
 Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>  
 Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

**Victoria**

Occupational Health and Safety Act 2004  
 Occupational Health and Safety Regulations 2017  
 Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>  
 Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

**New South Wales**

Work Health and Safety Act 2011  
 Work Health and Safety Regulations 2025  
 Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>  
 Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

**Western Australia**

Work Health and Safety Act 2020  
 Work Health and Safety Regulations 2022  
 Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>  
 Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

**Northern Territory**

Work Health and Safety (National Uniform Legislation) Act 2011  
 Work Health and Safety (National Uniform Legislation) Regulation 2011  
 Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>  
 Codes of Practice NT: <https://worksafe.nt.gov.au/factsheets-and-resources/codes-of-practice>

**Safe Work Australia Links**

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>  
 Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

**South Australia**

Work Health and Safety Act 2012 (SA)  
 Work Health and Safety Regulations 2012 (SA)  
 Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>  
 Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

**Model Codes of Practice**

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

**Tasmania**

Work Health and Safety Act 2012  
 Work Health and Safety (Transitional and Consequential Provisions) Act 2012  
 Work Health and Safety Regulations 2012  
 Work Health and Safety (Transitional) Regulations 2012  
 Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>  
 Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.