

## Pump System Installation Risk Assessment

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:

4A	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.
3H	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
1L	Proceed, following standard operating procedures. Monitor and keep records.

### Consequence Scale:

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

- Eliminate**
- Substitute
- Isolate
- Engineering
- Administrative
- 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. Preparation	Slips from wet surfaces, Injury from heavy lifting	3H	<ul style="list-style-type: none"> <li>- Ensure all surfaces are dry before commencing work</li> <li>- Use mechanical lifting aids for heavy objects</li> <li>- Provide training on proper lifting technique</li> <li>- Conduct a risk assessment before beginning work</li> <li>- Ensure team members wear non-slip shoes</li> <li>- Allocate sufficient time for preparation work</li> <li>- Establish a clear communication protocol</li> <li>- Assign qualified personnel for preparation tasks</li> <li>- Set up appropriate lighting in the area</li> <li>- Arrange the work space to minimize clutter</li> </ul>	2M
2. Tool Selection	Cuts from sharp tools, Injury from improper tool usage	3H	<ul style="list-style-type: none"> <li>- Use tools only for their intended purpose</li> <li>- Provide personal protective equipment such as gloves</li> <li>- Maintain tools in good condition</li> <li>- Provide training on the use of specific tools</li> <li>- Inspect tools before each use for defects</li> <li>- Store tools safely after use</li> <li>- Keep sharp tools covered when not in use</li> <li>- Implement a tool tracking system</li> <li>- Ensure supervision by experienced personnel</li> <li>- Use guards on cutting tools where applicable</li> </ul>	1L
3. Pump System Inspection	Electric shock, Falls from height	4A	<ul style="list-style-type: none"> <li>- De-energize the electrical system before inspection</li> <li>- Use insulated tools</li> <li>- Wear rubber-soled boots</li> <li>- Use appropriate fall protection equipment</li> <li>- Conduct inspection during daylight or adequate lighting</li> <li>- Ensure inspection is carried out by qualified personnel</li> <li>- Implement a buddy system for inspections at height</li> <li>- Check for stability of work platforms</li> </ul>	2M

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			<ul style="list-style-type: none"> <li>- Use ladders correctly</li> <li>- Conduct a pre-inspection risk assessment</li> </ul>	
4. Site Access	Vehicle collision, Exposure to hazardous substances	3H	<ul style="list-style-type: none"> <li>- Establish a safe access route</li> <li>- Use high-visibility clothing</li> <li>- Wear appropriate PPE</li> <li>- Ensure all personnel are aware of the work area</li> <li>- Use barriers to restrict access</li> <li>- Conduct a pre-inspection risk assessment</li> <li>- Use designated pedestrian routes</li> <li>- Maintain clear sightlines</li> <li>- Use hand signals or communication devices</li> <li>- Avoid working in the path of moving vehicles</li> <li>- Use designated loading/unloading zones</li> </ul>	2M
5. Unloading Equipment	Crushing from falling objects, Strains from improper lifting	3H	<ul style="list-style-type: none"> <li>- Use proper lifting techniques</li> <li>- Use mechanical aids (e.g., forklifts, hoists)</li> <li>- Establish a clear drop zone</li> <li>- Wear appropriate PPE</li> <li>- Ensure all personnel are aware of the work area</li> <li>- Use barriers to restrict access</li> <li>- Conduct a pre-inspection risk assessment</li> <li>- Use designated pedestrian routes</li> <li>- Maintain clear sightlines</li> <li>- Use hand signals or communication devices</li> <li>- Avoid working in the path of moving vehicles</li> <li>- Use designated loading/unloading zones</li> </ul>	2M
6. Assembly of Pump System	Pinch points in moving parts, Injury from incorrect assembly	4A	<ul style="list-style-type: none"> <li>- Follow the manufacturer's instructions</li> <li>- Use proper assembly techniques</li> <li>- Use mechanical aids (e.g., forklifts, hoists)</li> <li>- Establish a clear drop zone</li> <li>- Wear appropriate PPE</li> <li>- Ensure all personnel are aware of the work area</li> <li>- Use barriers to restrict access</li> <li>- Conduct a pre-inspection risk assessment</li> <li>- Use designated pedestrian routes</li> <li>- Maintain clear sightlines</li> <li>- Use hand signals or communication devices</li> <li>- Avoid working in the path of moving vehicles</li> <li>- Use designated loading/unloading zones</li> </ul>	2M

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7. Connecting Electrical Supply	Electrical shock, Faulty connections leading to fire	4A		2M
8. Pipework Installation	Leaks leading to flooding, falling pipes	3H		1L
9. Testing System Functionality	Over-pressurization explosion, Unexpected system failures	4A		2M

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			<div></div> <div></div> <div></div> <div></div>	
10. Site Clean-up	Exposure to hazardous materials, Slips and trips	3H	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	2M
11. Review and Documentation	Incomplete documentation, Failure to identify lessons learned	2M	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	1L
12. Workforce Training	Information overload, Lack of engagement	3H	<div></div> <div></div> <div></div> <div></div> <div></div>	2M

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13. Emergency Procedure Establishment	Uncoordinated emergency response, Outdated emergency protocols	4A		2M
14. Safety Signage Installation	Inadequate signage visibility, Confusing sign messages	2M		1L
15. Completion Review	Failure to meet installation standards, Overlooked deficiencies	3H		1L

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			<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	

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 IF 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 2017

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) Regulations 2011

Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>

Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/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>

### 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

### 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>

### 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.