

Plant Commissioning Activities Risk Assessment

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

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THE 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	4A ACUTE	DO NOT PROCEED	Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE			Substitution Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE			Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE			Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH			Administrative Change	
						1L LOW	Monitor and keep records.	PPE	
Risk Rating & Required Action:								Notes on Hierarchy of Controls:	
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.						Remember to apply controls in the preferred order shown by the coloured pyramid:	
3H		Review and approve additional controls before task starts. Senior supervisor sign-off needed.						1. Eliminate	
2M		Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.						2. Substitute	
1L		Proceed, following standard operating procedures. Monitor and keep records.						3. Isolate	
Consequence Scale:								4. Engineering	
Consequence		People (injury/illness)		Project / Assets		Compliance / Reputation		5. Administrative	
Catastrophic		Fatality or permanent total disability		project shutdown		Significant regulator intervention; criminal prosecution		6. PPE	
Major		Serious injury/illness (hospital > 5 days)		critical delay		Improvement notice; major media coverage		Always document why a lower-order control is accepted if elimination or substitution is not reasonably practicable.	
Moderate		Medical-treatment injury; lost-time > 1 day		moderate delay		Minor breach; adverse client comment		<i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i>	
Minor		First-aid only, no lost time		negligible delay		Isolated non-conformance			
Insignificant		No injury		no schedule impact		Deviation caught and corrected on site			

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	inadequate briefing, faulty equipment	3H	<ul style="list-style-type: none"> - Conduct a detailed briefing before commencing - Use a checklist to ensure all equipment is in good condition - Verify qualifications of all personnel - Set up communication protocols - Ensure PPE is available and used - Calibrate instruments before use - Validate the commissioning plan with engineers - Maintain clear access routes - Inspect tools for defects - Establish emergency procedures 	2M
2. Equipment Inspection	unsecured components, sharp edges	2H	<ul style="list-style-type: none"> - Inspect all components prior to commissioning - Secure all loose components - Use gloves to handle sharp objects - Provide task-specific training - Conduct visual checks for damage - Lock out unsafe equipment - Assign inspection roles - Employ buddy system for verification - Record inspection results - Address discrepancies immediately 	1L
3. Installation Verification	incorrect connections, pressure build-up	3H	<ul style="list-style-type: none"> - Follow installation manual diligently - Use appropriate tools for connections - Double-check all connections with a checklist - Monitor pressure gauges closely - Conduct pressure tests with precautionary measures - Communicate with team members during tests - Use correct PPE for the task - Document findings and corrective actions 	2M

Incident		Findings	Recommendations
<p>Incident 1</p> <p>Insufficient training</p>	3H	<p>1. Insufficient training</p> <p>2. Poor communication</p> <p>3. Lack of coordination</p> <p>4. Inadequate resources</p> <p>5. Poor decision making</p> <p>6. Lack of situational awareness</p> <p>7. Poor time management</p> <p>8. Inadequate planning</p> <p>9. Poor risk assessment</p> <p>10. Lack of contingency plans</p>	<p>- Train staff on pressure management</p> <p>- Improve communication</p> <p>- Enhance coordination</p> <p>- Increase resources</p> <p>- Improve decision making</p> <p>- Enhance situational awareness</p> <p>- Improve time management</p> <p>- Increase planning</p> <p>- Improve risk assessment</p> <p>- Develop contingency plans</p>
	4A	<p>1. Human factors</p> <p>2. Data error</p> <p>3. Poor communication</p> <p>4. Lack of coordination</p> <p>5. Inadequate resources</p> <p>6. Poor decision making</p> <p>7. Lack of situational awareness</p> <p>8. Poor time management</p> <p>9. Inadequate planning</p> <p>10. Poor risk assessment</p>	<p>- Train staff on pressure management</p> <p>- Improve communication</p> <p>- Enhance coordination</p> <p>- Increase resources</p> <p>- Improve decision making</p> <p>- Enhance situational awareness</p> <p>- Improve time management</p> <p>- Increase planning</p> <p>- Improve risk assessment</p> <p>- Develop contingency plans</p>

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7. Documentation and Record Keeping	loss of data, incomplete records	2M		1L
8. Emergency Response Planning	delayed response, inadequate resources	4A		3H
9. Implementation of Safety Measures	failure of safety systems, inadequate safety signs	3H		2M

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10. Quality Control	product failures, unidentified defects	3H		2M
11. Performance Monitoring	performance drift, unreliable metrics	2M		1L
12. Maintenance Scheduling	unexpected downtime, inadequate maintenance	3H		2M

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13. Communication Protocols	information misinterpretation, lack of coordination	3H		2M
14. Environmental Considerations	pollution, resource waste	3H		1L
15. Stakeholder Engagement	disengagement, conflicting interests	3H		2M

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16. Decommissioning Procedures	unmanaged waste, unsafe dismantling	3H		1L
17. Commissioning Debrief	lost knowledge, unresolved issues	3H		1L
18. Continuous Improvement	stagnant processes, resistance to change	2M		1L

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19. Risk Management Review	unidentified risks, ineffective controls	3H		2M
20. Final Handover	handover errors, uncompleted tasks	3H		2M

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.