

## Slurry Pipeline Operations 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>	
<b>Risk Rating &amp; Required Action:</b>								<b>Notes on Hierarchy of Controls:</b>	
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. <b>Eliminate</b>	
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	
<b>Consequence Scale:</b>								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 <b>why</b> 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		aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.		
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	Spill of hazardous materials, Eye injury from flying debris	3H	<ul style="list-style-type: none"> <li>- Conduct a thorough risk assessment prior to commencement</li> <li>- Ensure all personnel are trained in slurry management</li> <li>- Wear appropriate personal protective equipment (PPE) i.e. goggles and gloves</li> <li>- Inspect equipment for damage or leaks before use</li> <li>- Ensure proper labeling and storage of slurry materials</li> <li>- Use spill kits to contain and clean up any leaks promptly</li> <li>- Provide eyewash stations at strategic locations</li> <li>- Maintain safe distances from moving machinery</li> <li>- Ensure communication systems are in place for emergencies</li> <li>- Limit personnel access to the immediate work area</li> </ul>	2M
2. Equipment Inspection	Mechanical failure, Exposure to chemical agents	3H	<ul style="list-style-type: none"> <li>- Follow manufacturer's guidelines for maintenance and inspections</li> <li>- Implement lock out/tag out procedures during maintenance</li> <li>- Keep a detailed log of inspections and repairs</li> <li>- Train workers on identifying equipment faults</li> <li>- Ensure protective suits and masks are worn near chemicals</li> <li>- Establish clear maintenance schedules</li> <li>- Audit chemical storage for leaks or damage regularly</li> <li>- Ensure availability of maintenance tools and equipment</li> <li>- Minimise exposure times when handling chemicals</li> <li>- Keep spare parts readily available on site</li> </ul>	2M
3. Site Traffic Management	Vehicle collision, Pedestrian injury	4A	<ul style="list-style-type: none"> <li>- Designate specific areas for vehicle traffic and pedestrian walkways</li> <li>- Implement use of high-visibility vests for all personnel</li> <li>- Install clear and visible signage for traffic directions</li> <li>- Employ traffic controllers during high activity periods</li> <li>- Use barriers to segregate pedestrian and vehicle paths</li> <li>- Enforce strict speed limits within the work site</li> <li>- Conduct regular traffic flow assessments</li> <li>- Provide training on traffic management plans</li> </ul>	2M

		- Ensure all drivers hold appropriate licenses
Back strain	3H	[Redacted]
Over pressurization	4A	[Redacted]

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7. Monitoring and Control Systems	Electrical shock, System malfunction	4A		2M
8. Emergency Response	Delayed emergency response, outbreak	3H		1L
9. Shutdown Procedures	System lockup, Piping damage due to pressure build-up	4A		1L

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10. Maintenance Activities	Injury from moving parts, Chemical burns	3H		2M
11. Pipeline Integrity Monitoring	Leakage, Corrosion	3H		2M
12. Waste Management	Environmental contamination, Chemical exposure	3H		2M

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13. Communication Systems	Communication failure, Misinformation	2M		1L
14. Training and Competency	Inadequate skill, Compliance	3H		1L
15. Incident Reporting	Under-reporting incidents, Data loss	2M		1L

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			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
16. Supplier Management	Substandard materials, Delivery delays	3H	[REDACTED]	2M
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
17. Environmental Assessment	Waterway pollution, Habitat disruption	4A	[REDACTED]	2M
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	
18. Health Monitoring	Chronic health issues, Exposure to hazardous substances	3H	[REDACTED]	1L
			[REDACTED]	
			[REDACTED]	



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19. Confined Space Entry	Asphyxiation, Entrapment	4A		2M
20. Decommissioning	Release of stored energy, Structural collapse	4A		1L

## 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>

### 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>

### 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>

### 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.

### 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>

### 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>

### 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