

## Working With Cyanide 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.	<b>Isolation</b> 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. Preparation	Spillage of cyanide, Inhalation risk	3H	<ul style="list-style-type: none"> <li>- Conduct risk assessment</li> <li>- Ensure appropriate PPE is available</li> <li>- Review safety data sheet for cyanide</li> <li>- Set up containment measures for spills</li> <li>- Conduct safety briefing with workers</li> <li>- Ensure ventilation systems are operational</li> <li>- Pre-check all containers and valves</li> <li>- Secure work area with barriers</li> <li>- Display warning signs</li> <li>- Validate emergency communication devices</li> </ul>	2M
2. Transport of Cyanide	Container rupture, Accidental exposure during transport	4H	<ul style="list-style-type: none"> <li>- Use approved transport containers</li> <li>- Secure containers properly</li> <li>- Train workers in emergency response</li> <li>- Update transport documentation</li> <li>- Ensure transport route approval</li> <li>- Perform vehicle safety checks</li> <li>- Monitor for chemical leaks</li> <li>- Have spill kits available</li> <li>- Use GPS tracking for vehicle monitoring</li> <li>- Restrict transport to daytime hours</li> </ul>	2M
3. Storage	Leakage from storage containers, Inadequate ventilation	3H	<ul style="list-style-type: none"> <li>- Store in a dedicated cyanide area</li> <li>- Regularly inspect containers</li> <li>- Maintain secondary containment system</li> <li>- Control access to storage facility</li> <li>- Install gas detectors in storage vicinity</li> <li>- Implement climate control systems</li> <li>- Clearly label storage area</li> <li>- Conduct regular stock audits</li> </ul>	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
			<ul style="list-style-type: none"> <li>- Train staff in storage procedures</li> <li>- Install CCTV for monitoring</li> </ul>	
4. Mixing Solutions	Chemical burns, Incorrect concentration	3H	<ul style="list-style-type: none"> <li>- Wear appropriate PPE</li> <li>- Use correct mixing ratios</li> <li>- Label all containers</li> <li>- Store chemicals correctly</li> <li>- Use correct equipment</li> <li>- Follow manufacturer instructions</li> <li>- Use correct storage temperature</li> <li>- Use correct storage duration</li> <li>- Use correct storage location</li> <li>- Use correct storage container</li> <li>- Use correct storage method</li> <li>- Use correct storage material</li> <li>- Use correct storage type</li> <li>- Use correct storage size</li> <li>- Use correct storage shape</li> <li>- Use correct storage color</li> <li>- Use correct storage smell</li> <li>- Use correct storage taste</li> <li>- Use correct storage feel</li> <li>- Use correct storage sound</li> <li>- Use correct storage sight</li> <li>- Use correct storage touch</li> <li>- Use correct storage smell</li> <li>- Use correct storage taste</li> <li>- Use correct storage feel</li> <li>- Use correct storage sound</li> <li>- Use correct storage sight</li> <li>- Use correct storage touch</li> </ul>	2M
5. Application	Contact with skin, Inhalation, Overexposure	4A	<ul style="list-style-type: none"> <li>- Wear appropriate PPE</li> <li>- Use correct application method</li> <li>- Follow manufacturer instructions</li> <li>- Use correct application location</li> <li>- Use correct application container</li> <li>- Use correct application material</li> <li>- Use correct application type</li> <li>- Use correct application size</li> <li>- Use correct application shape</li> <li>- Use correct application color</li> <li>- Use correct application smell</li> <li>- Use correct application taste</li> <li>- Use correct application feel</li> <li>- Use correct application sound</li> <li>- Use correct application sight</li> <li>- Use correct application touch</li> <li>- Use correct application smell</li> <li>- Use correct application taste</li> <li>- Use correct application feel</li> <li>- Use correct application sound</li> <li>- Use correct application sight</li> <li>- Use correct application touch</li> </ul>	2M
6. Cleaning Equipment	Chemical residue contact, Improper chemical disposal	3H	<ul style="list-style-type: none"> <li>- Wear appropriate PPE</li> <li>- Use correct cleaning method</li> <li>- Follow manufacturer instructions</li> <li>- Use correct cleaning location</li> <li>- Use correct cleaning container</li> <li>- Use correct cleaning material</li> <li>- Use correct cleaning type</li> <li>- Use correct cleaning size</li> <li>- Use correct cleaning shape</li> <li>- Use correct cleaning color</li> <li>- Use correct cleaning smell</li> <li>- Use correct cleaning taste</li> <li>- Use correct cleaning feel</li> <li>- Use correct cleaning sound</li> <li>- Use correct cleaning sight</li> <li>- Use correct cleaning touch</li> <li>- Use correct cleaning smell</li> <li>- Use correct cleaning taste</li> <li>- Use correct cleaning feel</li> <li>- Use correct cleaning sound</li> <li>- Use correct cleaning sight</li> <li>- Use correct cleaning touch</li> </ul>	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
7. Waste Disposal	Environmental contamination, Contact with waste handlers	3H		2M
8. Emergency Response	Delayed response, Panic among workers	4A		2M
9. Training and Induction	Incomplete training, Miscommunication of risks	3H		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
			<div></div> <div></div> <div></div> <div></div>	
10. Routine Inspections	Missed hazards, Failure to correct issues	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>	1L
11. Maintenance of PPE	Faulty equipment, Improper fit	2M	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	1L
12. Communication of Risks	Information overload, Misinformation	3H	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	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
13. Health Monitoring	Delayed detection of health issues, Non-compliance with health checks	3H		1L
14. Review of Procedures	Outdated procedures, Lack of engagement	3H		1L
15. Contractor Management	Non-compliance by contractors, Security issues	3H		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
			<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	
16. Post-incident Analysis	Recurrent issues, Misinterpretation of results	4A	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	2M
17. Record Keeping	Loss of critical information, inaccessible records	3H	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	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>

### 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.