

Generator Operation And Safety 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			Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	Substitution 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.	Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								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	
								4. Engineering	
								5. Administrative	
								6. PPE	
Consequence Scale:								Always document why a lower-order control is accepted if elimination or substitution is not reasonably practicable.	
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				
								<i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i>	

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	Electrical shock, Fuel leakage	4A	<ul style="list-style-type: none"> - Inspect generator for visible damage before operation - Ensure all power connections are properly grounded - Use non-slip, protective footwear - Check fuel levels and top up in a well-ventilated area - Keep a fire extinguisher nearby when handling fuel - Wear appropriate PPE such as gloves and eye protection - Confirm all safety signs and warnings are intact and visible - Ensure the operating area is clear of obstructions - Train operators on emergency shutdown procedures - Install and test electrical isolators 	3H
2. Transporting Generator	Manual handling injuries from lifting	4M	<ul style="list-style-type: none"> - Use mechanical aids such as trolleys or forklifts for transportation - Follow safe lifting techniques if manual lifting is necessary - Ensure the path is clear before transporting the generator - Use appropriate PPE such as gloves and steel-toed boots - Maintain good posture to prevent strain - Break down the load where possible to reduce weight - Secure generator properly on transport trolley - Identify team lift requirements for heavy equipment - Assess the wind and weather conditions - Train personnel on manual handling techniques 	2M
3. Setting Up Generator	Inadequate ventilation, Carbon monoxide exposure	4A	<ul style="list-style-type: none"> - Position generator outdoors or in a well-ventilated area - Use carbon monoxide detectors in areas adjacent to generator - Keep generator away from building intakes or windows - Post warning signs regarding carbon monoxide risks - Use fans or ventilation systems to disperse fumes - Monitor air quality regularly during operation - Educate workers on signs of carbon monoxide poisoning - Ensure strict compliance with environmental regulations 	1L

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			<ul style="list-style-type: none"> - Equip nearby personnel with CO personal monitors - Plan generator position to minimise gas build-up risk 	
4. Starting Generator	Operational failure, Electrical shock	3H	<ul style="list-style-type: none"> - Ensure generator is properly grounded - Verify all electrical connections are secure - Use insulated tools and equipment - Wear appropriate PPE (gloves, safety glasses) - Establish a safe work area and barriers - Follow manufacturer's instructions for starting - Monitor generator operation closely - Have a fire extinguisher nearby - Ensure adequate ventilation - Test for gas leaks before starting - Use lockout/tagout procedures 	2M
5. Running Generator	Overheating, Noise, Pollution	4A	<ul style="list-style-type: none"> - Monitor temperature and oil levels - Use noise barriers or earmuffs - Ensure proper exhaust system operation - Maintain safe distance from generator - Use proper fuel storage and handling - Regularly inspect for leaks and damage - Follow local regulations for emissions - Keep work area clean and organized - Use proper lifting techniques - Avoid overloading the generator - Perform regular maintenance 	2M
6. Stopping Generator	Residual fuel vapours, Electrical backfeed	3H	<ul style="list-style-type: none"> - Shut off fuel supply - Disconnect electrical connections - Ventilate the area - Wait for residual fuel to evaporate - Lock out/tag out the generator - Verify no backfeed is present - Clean up any spills - Store fuel properly - Dispose of waste materials - Follow proper shutdown procedures 	2M

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7. Refuelling	Fire outbreak, Inhalation of fuel fumes	4A		1L
8. Maintenance	Contact with moving parts, exposure	4A		1L
9. Emergency Procedures	Injury during panic, Equipment failure	4A		1L

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10. Decommissioning	Chemical residue, Structural instability	3H		2M
11. Handling Spillage	Environmental contamination, Slip hazard	4A		1L
12. Electrical Inspections	Electrical shock, Short circuits	4A		1L

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13. Site Security	Theft, Vandalism	3H		2M
14. Continuous Monitoring	Undetected faults, Remote monitoring	3H		1L
15. Storage	Corrosion, Fuel degradation	3H		1L

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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.