RISK LEVEL CALCULATOR (1)

The risk associated with a hazard is related to the severity of a single incident, and the frequency and duration of exposure to the hazard. In many instances, other hazards present may increase the risk of an individual hazard.

STEP 1: Consider how likely a risk is encountered, and what might happen.

STEP 2: Use the risk level calculator to determine the likely risk level (outcome) to persons who may be exposed to the hazards.

STEP 3: Identify and develop effective control measures. (Consult the hierarchy of risk control measures when carrying out this step).

LEVEL OF CONSEQUENCES	CONSEQUENCES OF EVENT OCCURRING *What is the likely outcome of an exposure to the risk?*	LIKELIHOOD OF EVENT OCCURRING Almost certain (5)	Likely (4)	Possible (3)	Unlikely (2)	Rare (1)
Catastrophic (5)	Fatality or permanent disability; toxic release of chemicals, long-term or irreversible environmental impact; loss of facilities; very high $ loss	**E (25)**	**E (24)**	**E (22)**	**E (19)**	**H (15)**
High (4)	Long-term illness or serious injury; serious but reversible environmental impact; major property damage; loss of production; high $ loss	**E (23)**	**E (21)**	**E (18)**	**H (14)**	**H (10)**
Moderate (3)	Medical treatment requiring up to several days off work; reversible environmental impact; significant property damage; med – high $ loss	**E (20)**	**H (17)**	**H (13)**	**M (9)**	**M (6)**
Low (2)	Minor injury requiring First-Aid; minor reversible environmental impact; moderate property damage; low-med. $ loss	**H (16)**	**H (12)**	**M (8)**	**L (5)**	**L (3)**
Insignificant (1)	No injuries or first aid only; minor property damage or environmental nuisance; very low $ loss	**M (11)**	**M (7)**	**L (4)**	**L (2)**	**L (1)**

LIKELIHOOD OF EVENT OCCURRING *How likely is it that an exposure will occur?*		DETERMINATION OF RISK CONTROL ACTIONS RISK LEVEL (OUTCOME) (from matrix)	ACTION REQUIRED (refer to the hierarchy of risk controls)
Almost certain	Event is expected to occur in most circumstances		
Likely	Event will probably occur in most circumstances	**E** (EXTREME)	**URGENT** - Immediate action required to control risk.
Possible	Event might occur at some time	**H** (HIGH)	Highest management decision required urgently.
Unlikely	Event could occur at some time	**M** (MEDIUM)	Follow management instructions regarding risk.
Rare	Event may occur only in exceptional circumstances	**L** (LOW)	These risks may not require immediate attention - monitor.

LIKELIHOOD OF EVENT OCCURRING – Consider the following:	**LIKELY CONSEQUENCES OF EVENT OCCURRING** – Consider the following:	**HIERARCHY OF RISK CONTROLS**
How often is the task/activity performed? How many people are exposed to the hazard? How long is the exposure? Are engineering controls preventing exposure at present? Does workplace layout and condition affect exposure? Are abnormal conditions which may result in a greater exposure reasonably foreseeable? What are the results of any biological or atmospheric monitoring? Do workers have appropriate skills and knowledge to perform tasks? Do current work practices expose workers to a hazard? Are there other contributing factors?	What are the consequences in the short term? What are the consequences in the long term? What is the history of injuries related to exposure to the hazard? How close are workers to the hazard? What is the energy level of the hazard (i.e., weight, voltage, volume, height above ground, temperature, amplitude, concentration, aggressive state)? If a substance is hazardous, what are the health effects associated with – Inhaling it Ingestion (swallowing) it Skin contact, or Eye contact?	1. **Eliminate** the risk. If it is not reasonably practicable to eliminate the risk, minimise it by (in descending order) – 2. **Substitution** 3.**Isolation** 4. **Engineering Means** 5. **Administrative Controls** 6. **Personal protective equipment (PPE)**

HIERARCHY OF RISK CONTROLS: The hierarchy of risk controls must be considered when determining the appropriate control measures required to mitigate the risks associated with the work being carried out. The WHS Regulations specify that the hierarchy of risk controls measures must be applied in descending order of preference and **only if it is not reasonably practicable to eliminate the risk**. This means that elimination of the risk must be the first control option to be considered, with preference given to higher ranked controls only if it is not reasonably practicable to eliminate the risk. (A combination of controls may be applied to manage the risk as appropriate, e.g., Engineering controls + PPE).

RISK LEVEL CALCULATOR (2)

The risk associated with a hazard is related to the severity of a single incident, and the frequency and duration of exposure to the hazard. In many instances, other hazards present may increase the risk of an individual hazard.
STEP 1: Consider how likely a risk is encountered, and what might happen.

STEP 2: Use the risk level calculator to determine the likely risk level (outcome) to persons who may be exposed to the hazards.
STEP 3: Identify and develop effective control measures. (Consult the hierarchy of risk control measures when carrying out this step).

LEVEL OF CONSEQUENCES	CONSEQUENCES OF EVENT OCCURRING *What is the likely outcome of an exposure to the risk?*	LIKELIHOOD OF EVENT OCCURRING		
		Likely	Possible	Unlikely
High **(High level of harm)**	Potential death; permanent disability; major structural failure/damage. Off-site environmental discharge/release not contained. Significant long-term environmental harm.	1	1	2
Medium **(Moderate level of harm)**	Potential temporary disability; minor structural failure/damage. On-site environmental discharge/release contained. Minor remediation required; short-term environmental harm.	1	2	3
Low **(Low level of harm)**	Incident that has the potential to cause persons to require first aid. On-site environmental discharge/release immediately contained. Minor level clean up with no short-term environmental harm.	2	3	3

LIKELIHOOD *How likely is it that an exposure will occur?*		RISK LEVEL	
		Class/ranking	Description/requirements
Likely	Could happen frequently.	1 (High)	Will require detailed pre-planning. Actions will be recorded on SWMS.
Possible	Could happen occasionally.	2 (Medium)	Will require operational planning; Actions will be recorded on SWMS.
Unlikely	May occur only in exceptional circumstances	3 (Low)	Will require localised control measures.

LIKELIHOOD OF EVENT OCCURRING – Consider the following:	**LIKELY CONSEQUENCES OF EVENT OCCURRING** – Consider the following:	**HIERARCHY OF RISK CONTROLS**
How often is the task/activity performed? How many people are exposed to the hazard? How long is the exposure? Are engineering controls preventing exposure at present? Does workplace layout and condition affect exposure? Are abnormal conditions which may result in a greater exposure reasonably foreseeable? What are the results of any biological or atmospheric monitoring? Do workers have appropriate skills and knowledge to perform tasks? Do current work practices expose workers to a hazard? Are there other contributing factors?	What are the consequences in the short term? What are the consequences in the long term? What is the history of injuries related to exposure to the hazard? How close are workers to the hazard? What is the energy level of the hazard (i.e., weight, voltage, volume, height above ground, temperature, amplitude, concentration, aggressive state)? If a substance is hazardous, what are the health effects associated with – Inhaling it Ingestion (swallowing) it Skin contact, or Eye contact?	1. **Eliminate** the risk. If it is not reasonably practicable to eliminate the risk, minimise it by (in descending order) – 2. **Substitution** 3.**Isolation** 4. **Engineering Means** 5. **Administrative Controls** 6. **Personal protective equipment (PPE)**

HIERARCHY OF RISK CONTROLS: The hierarchy of risk controls must be considered when determining the appropriate control measures required to mitigate the risks associated with the work being carried out. OHS Regulations require that the hierarchy of risk controls measures must be applied in descending order of preference and **only if it is not reasonably practicable to eliminate the risk**. This means that elimination of the risk must be the first control option to be considered, with preference given to higher ranked controls only if it is not reasonably practicable to eliminate the risk. (A combination of controls may be applied to manage the risk as appropriate, e.g., Engineering controls + PPE).