

ANALYTICAL RISK ASSESSMENT

Practical fire extinguisher and hose reel training using gas fuelled fire simulators

Department Name:	Training Team
Risk Assessment For:	Practical fire extinguisher and hose reel training using road trailer and vehicle mounted gas fire training simulators
User Department:	Training Team
Created By:	Jamie Green
Approved By:	Jamie Green

Version	Date of Issue	Authors	Reason for Issue
2.1	05/04/2025	J Green	New document format – new issue.

Term	Definition	Term	Definition
Accident	An unplanned and uncontrolled event which gives rise to harm.	Likelihood (L)	The number of occasions on which a given event is expected to occur over a given time.
Consequence or impact	The outcome of an accident.	Mitigation	Reduction in risk due to the introduction of risk controls.
Controls	Measures that may be introduced with the intention of reducing risk.		The rate given to the control measures associated with the hazard and risk; either High, Medium or Low
Harm	Any kind of safety loss, including fatalities and injuries		The result based on the existing control measures or prior to implementing further control measures, in order to reclassify the rating to achieve the desired result. Being either: • 'H' High Risk • 'M' Medium Risk • 'L' Low Risk
Hazard	Anything with the potential to cause harm (or loss).		A combination of the likelihood of the harm occurring and the severity of the consequences.
Incident/ Near miss	An unplanned and uncontrolled event that does not give rise to harm, but which under different circumstances could have resulted in an accident.		A measure of the significance of consequences

Ranking risks is necessary in order to identify their relative importance. The degree of risk associated with a particular hazard depends on the likelihood of it causing an accident and the probable severity of the consequence of such an accident.

This ranking system involves classifying likelihood (in terms of frequency) and severity each on a five-point scale and then multiplying them both together to give the risk ranking as follows:

RISK = SEVERITY x LIKELIHOOD

The ranking values can then be grouped into four broad classes of risk:

RISK RATING KEY		LOW	MEDIUM	HIGH	EXTREME
		0 – ACCEPTABLE OK TO PROCEED	1 – ALARP (as low as reasonably practicable) TAKE MITIGATION EFFORTS	2 – GENERALLY UNACCEPTABLE SEEK SUPPORT	3 – INTOLERABLE PLACE EVENT ON HOLD
LIKELIHOOD	SEVERITY				
		ACCEPTABLE	TOLERABLE	UNDESIRABLE	INTOLERABLE
		LITTLE TO NO EFFECT ON EVENT	EFFECTS ARE FELT, BUT NOT CRITICAL TO OUTCOME	SERIOUS IMPACT TO THE COURSE OF ACTION AND OUTCOME	COULD RESULT IN DISASTER
	IMPROBABLE RISK IS UNLIKELY TO OCCUR	LOW – 1 –	MEDIUM – 4 –	MEDIUM – 6 –	HIGH – 10 –
	POSSIBLE RISK WILL LIKELY OCCUR	LOW – 2 –	MEDIUM – 5 –	HIGH – 8 –	EXTREME – 11 –
	PROBABLE RISK WILL OCCUR	MEDIUM – 3 –	HIGH – 7 –	HIGH – 9 –	EXTREME – 12 –

		Initial Risk Rating No Controls				Risk Scores >6 Are Intolerable For This Undertaking				Risk Rating Additional Controls				Additional Controls Should Be Considered For Risk Scores >4 For This Undertaking				Final Risk Rating			
Hazard:	Person(s) at Risk:	Severity	Likelihood	Risk Score	Tolerable?	Control Measures:				Severity	Likelihood	Risk Score	Tolerable?	Additional Control Measures:				Severity	Likelihood	Risk Score	Tolerable?
Non-flammable compressed gas. Size X nitrogen cylinder stored in load space.	Instructors Students Public/Onlookers	High	Improbable	6	No	Only trained instructor to access load space. Use of pressure reducers, and all equipment testing and properly maintained. PPE during use of gas systems by trained instructors only.				Medium	Improbable	4	Yes	Use of nitrogen for purpose of charging extinguishers will not take place during training.				Low	Improbable	2	Yes
Flammable compressed gas. 16kg LPG cylinder stored in load space.	Instructors Students Public/Onlookers	High	Improbable	6	No	Only trained instructor to access load space. Use of pressure reducers, and all equipment testing and properly maintained. PPE during use of gas systems by trained instructors only.				Medium	Improbable	4	Yes					-	-	-	-

Fire / Explosion. Training with live fire resulting in burns.	Instructors Students	Medium	Probable	9	No	Segregation of students from simulators. 1 student at a time under close supervision and instruction whilst using simulators. PPE for instructors always positioned between simulators and student. Equipment failsafe to off (gas isolated). Only trained instructors to operate training equipment. Max 12 students per 1 instructor.	Medium	Possible	5	Yes	Max 12 students per 1 instructor to allow close supervision and prevent overloading of responsible person.	Medium	Improbable	4	Yes
Electricity. Working with simulators.	Instructors Students	Medium	Possible	5	Yes	PAT tested equipment supplied by premises and/or Servatus Solutions as required. Instructors trained and peer reviewed in use of simulators. Simulator equipment operated by low voltage 12v max.	Low	Improbable	2	Yes		-	-	-	-
Low light levels. Training in low light and/or winter months.	Instructors Students	Low	Possible	6	No	Working in floodlit areas where possible. Consideration given to daylight hours when scheduling. Work lighting on vehicles/trailers utilised.	Low	Possible	2	Yes		-	-	-	-

Moving Vehicles. Vehicle striking person. Or, Vehicle striking vehicle.	Instructors Students Public/Onlookers	Extreme	Probable	12	No	Training areas segregated by physical barriers and/or locations remote from vehicle movements. Training areas segregated from vehicle movements by visual barriers as required. Minimum PPE as required by premises and instructors to risk assess whether additional PPE is required prior to starting sessions. Practical sessions taking place on/around/under plant to take place once all attachments are grounded and vehicle is switched off. For practical sessions taking place using plant: - Physical separation of pedestrians and plant to be maintained as per premises risk assessments. - Using Servatus Solutions handheld radios, communications will be established and tested between instructor and plant operator prior to start of exercises.	High	Possible	8	No	Additional training in 'safety around plant' to be provided to instructors included peer reviewed instructional sessions. Premises inductions for situational awareness and premises/operational familiarisation. Where appropriate, an on-premises risk assessment will be completed and recorded via software utilised by Servatus Solutions. If on-premises hazard findings cannot be mitigated the instructor will postpone sessions for further review or replace sessions with alternative safer exercises.	Medium	Improbable	4	Yes
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Weather and environment. Uneven ground, slips trips & falls, heat injury.	Instructors Students	Medium	Possible	5	Yes	Joining instructions sent to premises include notification of sessions taking place outside; students to dress accordingly for the climate. Practical training sessions to be undertaken on even made ground or dry unmade ground. Instructors to monitor weather forecasts and where appropriate alter syllabus timings to maximise weather windows. Lighting to be utilised where appropriate. PPE as required by the premises.	Low	Possible	2	Yes		-	-	-	-
Slips trips & falls. Moving around training area and/or during evacuation.	Instructors Students	Medium	Probable	5	No	Adequate lighting as identified. Minimal equipment removed from simulator to prevent trip hazards. Briefing of emergency actions during 'housekeeping' introductions.	Medium	Possible	2	Yes		Medium	Improbable	4	Yes
Use of fire extinguishers	Instructors Students	Medium	Possible	5	Yes	Fire extinguishers serviced and tested within 1 year of use. Close supervision and instruction including testing unit operation and suitability of extinguishment prior to immediate use. Instructors to complete a dynamic risk assessment of training location to consider extinguishant runoff mitigating ice, slips, and environmental impact.	Low	Improbable	2	Yes		-	-	-	-

Use of hose reels	Instructors Students	Medium	Possible	5	Yes	Hose reels tested by instructors for suitability prior to start of sessions. Close supervision and instruction including testing unit operation and suitability of extinguishment prior to immediate use. Instructors to complete a dynamic risk assessment of training location to consider extinguishant runoff mitigating ice, slips, and environmental impact.	Low	Improbable	2	Yes				
Manual Handling.	Instructors Students	Medium	Possible	5	Yes	Instructors and students to have undertaken manual handling training. No equipment greater than 20kgs (1 person lift). Instructors to consider abilities of students and tasks being asked to be carried out. Appropriate and tested equipment for the task. For example, evacuation chairs shall be CE marked.	Low	Improbable	2	Yes				

Assessor Comments:	All instructors representing Servatus Solutions Ltd, and any other contributors to training delivery reserve the right to halt, delay or refuse to carry out any element of training on the grounds of legitimate health and safety concerns. All participants in training (instructors, students, onlookers) are actively encouraged to highlight any issues or concerns immediately so that they may be addressed at the time. Or the session(s) can be halted until adequate steps have been taken to eliminate the hazards and/or reduce the risks. Servatus Solutions Ltd reserve the right to refuse issue of any training records until all parts of the syllabus in question has been delivered.
Sign Off Date:	04 th April 2025
Signed:	
Print:	J Green GFireE