

Effective Risk Control and Management

The core of an occupational health and safety management program is hazard identification and risk assessment. The overall purpose of the risk assessment process is to evaluate the hazards that arise or might arise in the course of the organization's activities, and ensure that the risks to people arising from these hazards are assessed, prioritized and controlled to eliminate hazards or reduce risks to acceptable levels.

The following steps describe the process to develop an effective risk control and management program meeting the applicable clauses in ISO 45001:2018.

Step	Activity	ISO 45001:2018 Reference	Notes
1	Training	<ul style="list-style-type: none"> • Clause 7.2 (b) – ensure workers are competent (including the ability to identify hazards) on the basis of appropriate education, training or experience; 	<ul style="list-style-type: none"> • Train managers, supervisors, workers and representative of the Joint Health and Safety Committee (JHSC)
2	Consultation & Participation	<ul style="list-style-type: none"> • Clause 5.4 (e)(2) – identifying hazards and assessing risks and opportunities; • Clause 5.4 (e)(3) – determining actions to eliminate hazards and reduce OH&S risks; • Clause 5.4 (e)(6) – determining control measures and their effective implementation and use; • Clause 5.4 (e)(7) – investigating incidents and nonconformities and determining corrective actions; 	<ul style="list-style-type: none"> • Form a team of trained employees. • Involve affected workers, supervisor, manager and representative of the JHSC in the process of identifying and assessing risks, determining actions to eliminate risks and reduce risk(s), and ensuring control measures are effective.
3	Review Task(s) / Identify Hazards	<ul style="list-style-type: none"> • Clause 6.1.2.1 (a) – how work is organized, social factors (including workload, work hours, victimization, harassment and bullying), leadership and the culture in the organization; • Clause 6.1.2.1 (b) – routine and non-routine activities and situations; • Clause 6.1.2.1 (c) – past relevant incidents, internal or external to the organization, including emergencies, and their causes; • Clause 6.1.2.1 (d) – potential emergency situations; • Clause 6.1.2.1 (f) – design of work areas, processes, installations, machinery/equipment, operating procedures and work organization, etc. • Clause 6.1.2.1 (g) – actual or proposed changes in organization, processes, activities and the OH&S 	<ul style="list-style-type: none"> • Involve affected employees, members of the JHSC, supervisors and managers. • Consider physical, chemical, biological & psychosocial hazards. • Review routine and non-routine activities. • Review manufacturer / operator manuals. • Observe activities & tasks performed. • Identify critical tasks – those where frequent accidents or injuries occur; where severe accidents and injuries occur; with potential for severe injuries; new or modified jobs; infrequently performed jobs (e.g. maintenance) • Examine workplace/process/machinery layouts. • Consider hazards and risks arising from planned changes – designing facilities, new technology, processes, plant, equipment, materials, etc.

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		<ul style="list-style-type: none"> • Clause 6.1.2.1 (h) – changes in knowledge of, and information about, hazards; • Clause 6.1.2.3 (a) (2) – opportunities to eliminate hazards and reduce OH&S risks; • Clause 8.1.4.2 (a) (c) – Identify hazards and assess and control the OH&S risks arising from contractor’s activities and operations that impact the organization and other interested parties in the workplace; 	<ul style="list-style-type: none"> • Review applicable legal requirements and other requirements. • Review incident investigation reports. • Review potential hazards identified during workplace inspections. • Prepare emergency response plans to address potential emergency situations. • Identify hazards and risks introduced by the contractors when on-site.
4	Identify Affected Person(s)	<ul style="list-style-type: none"> • Clause 6.1.2.1 (e) – affected people with access to the workplace and their activities, other workers, contractors, visitors and other persons; 	<ul style="list-style-type: none"> • Identify the person(s) involved in the activity/task and affected by the hazard(s) – e.g. equipment / machine operator, maintenance crew, contractor, visitors, etc.
5	Determine Risk(s) and Existing Controls	<ul style="list-style-type: none"> • Clause 6.1.2.2 (a) – assess OH&S risks from the identified hazards, while taking into account the effectiveness of existing controls; 	<ul style="list-style-type: none"> • List the risk(s) from the hazard(s) identified in step 4.
6	Assess Existing Risk Levels	<ul style="list-style-type: none"> • Clause 6.1.2.2 – Assessment of OH&S risks and other risks to the OH&S management system; The organization’s methodology and criteria for the assessment of OH&S risks shall be defined; 	<ul style="list-style-type: none"> • Use risk matrix to determine risk level. • Risk assessment should be conducted by personnel with competence in risk assessment methodologies and techniques and the assistance of person(s) with appropriate knowledge of the work activities.
7	Determine Additional Risk Controls	<ul style="list-style-type: none"> • Clause 8.1.2 – Eliminating hazards and reducing OH&S risks using the hierarchy of controls; 	<ul style="list-style-type: none"> • Use hierarchy of controls to determine appropriate control measure(s) to eliminate hazards or reduce risk(s)
8	Re-Assess Risk Levels	<ul style="list-style-type: none"> • Clause 6.1.2.2 – Assessment of OH&S risks and other risks to the OH&S management system; The organization’s methodology and criteria for the assessment of OH&S risks shall be defined; 	<ul style="list-style-type: none"> • Use risk matrix to determine risk level
9	Set Timeline to Implement Additional Controls	<ul style="list-style-type: none"> • Clause 6.2.1 (c)(2) – OH&S objectives shall take into account the results of the assessment of risks and opportunities; • Clause 6.2.2 – Planning to achieve OH&S objectives; 	<ul style="list-style-type: none"> • Assign responsibilities and timelines to implement additional controls. • The progress of implementation may be tracked at the monthly JHSC meetings and planned management reviews (see Step 12)

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10	Prepare Safe Work Procedures	<ul style="list-style-type: none"> • Clause 8.1.1 – The organization shall plan, implement, control and maintain the processes needed to meet requirements of the OH&S management system and to implement the actions; 	<ul style="list-style-type: none"> • Prepare safe work procedures. • Identify critical tasks in the safe work procedures using appropriate safety sign headers (Danger, Warning, Caution, Notice)
11	Awareness / Communication	<ul style="list-style-type: none"> • Clause 7.3 (e) – Workers shall be made aware of hazards, OH&S risks and actions determined that are relevant to them 	<ul style="list-style-type: none"> • Include in new and young worker orientation program. • Review of Safe Work Procedures – highlight critical tasks
12	Review	<ul style="list-style-type: none"> • Clause 8.1.3 (c) – The organization shall establish a process(es) for the implementation and control of planned temporary and permanent changes that impact OH&S performance including changes in knowledge or information about hazards and OH&S risks; • Clause 9.1.1 (a) (2) & (3) – The organization shall determine what needs to be monitored and measured including its activities and operations related to identified hazards, risks, and opportunities, and progress towards achievement of the organization's OH&S objectives; • Clause 9.3 (c) – The management review shall include consideration of the extent to which the OH&S policy and the OH&S objectives have been met. • Clause 10.2 (c), (d), (e) – When an incident or a non-conformity occurs, the organization shall review existing assessment of OH&S risks and other risks, as appropriate; determine and implement an action needed, including corrective action in accordance with the hierarchy of controls and the management of change; assess OH&S risks that relate to new or changed hazards; 	<ul style="list-style-type: none"> • Review of hazard & risks arising from results of incident investigations and workplace inspections. • Review progress of implementation of additional control measures (ref. Step 9) • Review and update orientation and training program. • Review and update affected safe work procedures. • Review and update workplace inspection checklist, where applicable. • Communicate changes to all affected parties.

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Here is an example of a Hazard Identification and Risk Assessment Form to address the 12 steps described above.

HAZARD IDENTIFICATION & RISK ASSESSMENT FORM											
Approved By (Name)		Conducted By: (Names)									
Signature & Date		Signatures:									
Section		Risk Assessment No.									
Task		Next Review Date:									
No	Hazard Identification		Evaluation of Risk			Risk Controls	Re-Evaluation of Risk			Responsibility	Reference
	Job / Task Procedures	Hazards	Existing Control Measures	L	S	Risk Level	Additional Control Measures	L	S		

Abbreviations: L – Likelihood; S - Severity