



نظام الشارقة للسلامة والصحة المهنية
Occupational Safety & Health Sharjah

حكومة الشارقة
هيئة الوقاية والسلامة
Government of Sharjah
Prevention And Safety Authority



Code of Practice

Risk Management and Control

OSHJ-CoP-01

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1 Introduction

Risk management is the process of identifying, analysing, controlling and monitoring risk within a workplace to ensure the safety and health of employees and others affected by the work activities of an entity. Risk management is the end-to-end process of identifying and handling risks and it is the basis of safety and health planning. Risk assessment is the first step in risk management, and it is something that is required by the Occupational Safety and Health System in Sharjah. The process of risk assessment helps entities look at what measures are currently in place to protect employees and others, then identify if further controls are needed to reduce risks that could significantly impact employee's safety and health.

2 Purpose and Scope

This Code of Practice (CoP) has been developed to provide information to entities to assist them in complying with the requirements of the Occupational Safety and Health System in Sharjah.

This Code of Practice (CoP) defines the minimum acceptable requirements of the Occupational Safety and Health System in Sharjah, and entities can apply practices higher than, but not lower than those mentioned in this document, as they demonstrate the lowest acceptable level of compliance in the Emirate of Sharjah.

3 Definitions and Abbreviations

Entities:	Government Entities: Government departments, authorities or establishments and the like in the Emirate. Private Entities: Establishments, companies, enterprises and economic activities operating in the Emirate in general.
Risk:	Is the combination of likelihood of the hazard causing the loss and the severity of that loss (consequences).
Risk Assessment:	The systematic identification of workplace hazards and evaluation of the risks associated. This process takes existing control measures into account and identifies and recommends further control measures where required.
Risk Management:	The forecasting and evaluation of risks together with the identification of procedures to avoid or minimise their impact.
Residual Risk:	The amount of risk that remains following all the reasonable efforts to reduce the identified hazard.
Hazard:	Anything that has the potential to cause harm or loss (injury, disease, ill-health, property damage etc).
Hazard Identification:	The process of recognising that a hazard exists and including the hazard in the risk assessment process.
Competence:	The combination of training, skills, experience and knowledge that a person has and their ability to apply all of them to perform their work.
ALARP:	As low as reasonably practicable.

4 Roles and Responsibilities

4.1 Entity Responsibilities

- Identify all foreseeable risks;
- Assess all identified risks;
- Where possible, eliminate the risks, and if not possible, put measures in place to control the identified risks;
- Ensure resources are available to implement the control measures;
- Provide employees information, instruction, supervision and training on relevant risks;
- Seek competent assistance, if required, to ensure the risks are adequately identified, assessed and controlled.

4.2 Employee Responsibilities

- Not endanger themselves or others;
- Follow precautionary control measures to ensure work activities are performed safely and without risk to health;
- Cooperate with the entity and receive safety information, instruction, supervision and training;
- Report any activity or defect which they know is likely to endanger the safety of themselves or that of any other person.

5 Requirements

The entity shall ensure that during the initial planning phase of any work activity, all aspects of the work must be evaluated. This evaluation includes but is not limited to the review of internal work programmes, review of internal or external work scopes, preparation of risk assessments, determination of additional resources, etc.

The risk management process includes the following phases:

- Risk identification and assessment;
- Development of risk control;
- Implementation of risk plan;
- Monitoring of risk management performance.

5.1 Risk Identification

Managing risk is an important part in ensuring that work is undertaken safely, without loss, and completed on time. To be able to manage risk, the entity shall first identify and assess risk. Each entity shall undertake a desktop exercise identifying the main risks that could affect the safety and health of its employees and others affected by their activities. The main risks can be compiled into a live document, sometimes referred to as risk register or risk log that keeps track of all the potential problems and risks.

The main purpose of the risk register document is to serve as the record for specific risks and a reference point, which is a live document to be updated as new risks occur. Those risks will once again be assessed and then managed accordingly.

It is good practice that the risk register document is presented and discussed during top management meetings to ensure top management are involvement in managing risks.

5.2 Risk Assessment

Risk identification and assessment is usually referred to as risk assessment. Risk assessments could be undertaken for a specific task, equipment, location, operation, etc. or a combination of all of these. A risk assessment is a method used to rank the risk of safety and health issues. The entity will commonly perform risk assessments on foreseeable safety and health issues and other identified hazards.

Risk assessments use a risk matrix to create composite number/letter grade based on:

- Severity of most likely negative outcome; and
- Likelihood that most likely negative outcome actually occurs.

5.2.1 Identify the Hazards

The entity shall identify foreseeable hazards that could affect the safety and health of people, and hazards that could cause damage to property and equipment. The effect of some hazards might not be obvious, hazards that can have a long-term effect on people's health, shall also be considered.

To identify foreseeable hazards, the entity shall consider the following factors, including but not limited to:

- Type of work tasks and activities;
- Routine and non-routine activities;
- Processes or substances;
- Plant, equipment, or machinery;
- Previous incidents and near misses reported;
- Employee feedback on activities;
- Hazards known from industry experience;
- Information in manufacturer's manuals;
- Safety data sheets.

5.2.2 Identify Who and What May be Harmed

The entity shall identify people or groups of people who may be harmed from hazards identified, including but not limited to:

- Employees;
- Visitors;
- Contractors;
- Members of the community;
- New or expectant mothers;
- Persons of determination.

In some instances, hazards can affect property/equipment, these should be also identified. If a hazard that affects property is not adequately controlled it may, at some point affect people.

It is not required to list those affected by name but required to think of them in the process of risk assessment, by role, job title or generically as all employees, with exception if assessing the risk to a particular employee who has a pre-existing medical condition.

Once who and what may be harmed has been identified, take action to control these risks. Consider that some hazards affect different people differently, people with pre-existing medical conditions might be affected adversely by a particular hazard.

5.2.3 Evaluate the Risk

The entity shall ensure that once hazards have been identified, they must be evaluated to establish how likely it is that the loss will occur and if it does occur, how severe the consequences could be. This is what is referred to as risk level.

Risk assessments use a risk matrix to create a composite number/letter grade based on:

- Severity of the most likely negative outcome; and
- Likelihood that the most likely negative outcome actually occurs.

To ensure consistency and adequacy of the evaluation process, a risk matrix shall be used. A risk matrix is used during risk assessment to evaluate and determine the level of risk by considering likelihood against the consequence severity. This is a simple mechanism to increase visibility of risks and assist management decision making.

The risk level is usually defined as Low, Medium or High or is given a number or a combination of the two. Below are some examples that can be used, however the entity shall decide which matrix to use for qualitative risk assessments.

Examples of different Risk Matrices: A 3x3 matrix, which is usually used in an entity that does not have a general high risk, such as offices, administrative work, small shops, etc.

Consequence

		1	2	3
Likelihood	3	3	6	9
	2	2	4	6
	1	1	2	3

The more complex the activities within an entity, the higher the risk matrix should be to allow for the correct evaluation of different risks. For example a 5x5 risk matrix:

Consequence

		1	2	3	4	5
Likelihood	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5

There are other possible risk matrices such as 4x4, 6x6, 9x9, etc. The entity determines which matrix they will use. Each entity shall decide on the matrix it will use and develop explanations of what the numbers within the matrix mean, that will assist those evaluating the risk.

The entity shall define specific criteria for each level of consequence and likelihood in their risk matrix. This process is fairly straightforward but is vital to ensure consistency across different departments/functions throughout the entity. It will also serve as a guide for those conducting the risk assessments and those reading them and implementing the actions.

Although the entity is required to assign numbers to different levels of risk, like the 3x3 or 5x5 risk matrix, the risk assessment is still based on the judgement of the assessor assigning risk values, it is still primarily a qualitative assessment.

5.2.3.1 Determining Consequence

When determining consequence in the risk matrix, the entity is determining the severity of the most likely consequence of a particular hazard occurrence. When defining criteria for severity in the risk matrix, the entity is defining criteria for the most likely safety and health incident following a hazard occurrence.

Example of defining the consequence severity criteria:

Consequence number	Example Description	Example 1: Explanation	Example 2: Explanation
1	Insignificant	Injury which does not require any treatment or first aid	Injury requiring first aid treatment, person able to continue duty.
2	Minor	Injury which may require first aid treatment, person able to continue to perform duty.	Injury which may require first aid treatment, person unable to continue to perform duty.
3	Moderate	Injury requires treatment by a medical practitioner, potential long term absence from duty.	Injuries requiring medical treatment resulting in long term absence from duty and/or disability
4	Major	Injuries resulting in disability	Fatality
5	Catastrophic	Fatality or multiple injuries	Multiple Fatalities

Table 1: Example of defining the consequence severity criteria

Defining criteria of the severity of the consequence depends heavily on the acceptability of risk and the type of activities undertaken by the entity. Careful planning should be undertaken by the entity to ensure the defined criteria reflect the potential severity of consequences in their line of work.

Note that the severity criteria explanation can take into consideration other loss, including but not limited to: damage to property, loss of reputation and loss of production.

5.2.3.2 Determining Likelihood

Likelihood on a risk matrix represents the likelihood of the most likely consequence occurring in the event of a hazard occurrence. When defining likelihood in the risk matrix, the entity should create criteria that define the likelihood of the hazard actually causing the loss, not solely the hazard occurring.

When defining the criteria for likelihood, consider past data from within the entity and relevant industries to ascertain how common this is and consult with employees about the likelihood of occurrence.

Examples of defining likelihood criteria:

Likelihood Number	Example Description	Example 1: Explanation	Example 2: Explanation
1	Rare	Never occurred	Unlikely to occur globally within the workforce of the entity
2	Unlikely	Has occurred one time previously	May occur one time nationally within the workforce of the entity
3	Possible	Has occurred more than once	A person performing this task regularly is unlikely to experience this in his/her working life.
4	Likely	Occurred several times each year	A person performing this task might experience this once in their working life.
5	Frequent	Occurs frequently each month	A person performing this task might experience this several times during his/her working life

Table 2: Examples of defining likelihood criteria

There are no hard lines between the different likelihood descriptions. Ideally, the entity will have some more specific definitions that help to distinguish each level of likelihood for their criteria. This is not an exact science, it is extremely important to document why you chose the likelihood that you did, based on the analysis of the prevalence of the issue within the entity and relevant industries.

5.2.3.3 Defining Risk Criteria

Risks shall be assessed by determining the potential severity of the consequences of the hazards in conjunction with their respective likelihoods using the applicable ratings in the risk matrix determined by the entity.

The entity shall also define what the calculation of likelihood x consequence means. Such as if the entity is using a 5x5 risk matrix and the identified likelihood is 3 and consequence is 5, what does the combination mean? What does 15 mean? This is known as the tolerability of risk an entity is prepared to accept and what to do about it. Therefore, the entity must define the risk level and what to do with that risk level. For example:

Risk Rating	Actions
17-25	Unacceptable , stop work activities and make immediate improvements
10-16	Tolerable , look to reduce risk within a specified timeframe
5-9	Adequate , look to improve when risk assessment is next reviewed
1-4	Acceptable , no further action required, ensure controls are maintained

Table 3: Example Risk Criteria Definition and Actions

6 Development of Risk Control

Risk is a part of everyday life and entities are not expected to eliminate all risks. What the entity must do is identify the main risks and implement the control measures required to manage them responsibly. This means that an entity shall do everything that is 'reasonably

practicable' to protect people from harm. This means balancing the level of risk against the measures needed to control the real risk.

When the initial risk rating has been determined, the entity shall work systematically through the list of unacceptable risks to specify the controls needed to reduce these risks to an acceptable level and as low as reasonably practicable (ALARP). For a risk to be ALARP it must be possible to demonstrate that the effort, time, or cost involved in reducing the risk further would be grossly disproportionate to the benefit gained. This decision must be weighted in favour of safety and health, so that the process is not one of balancing the costs and benefits.

During this process, it is important to consider the combined effects from the interaction of several different hazards, not just each hazard in isolation. The entity must also consider the existing control measures already in place. Any additional controls specified must be based on good, safe working practice in order to reduce the risk.

6.1 Hierarchy of Control

A control hierarchy guideline is useful to aid and structure the process of deciding and planning for control measures. The purpose of using the hierarchy of control when planning control measures is to utilise the most effective control measure. The control measures commonly fall into six categories, as explained in 6.1.1. to 6.1.6.

6.1.1 Eliminate the Hazard

Elimination is the most effective control measure for reducing risk, however it tends to be the most difficult to implement. For a process that is still at the design or development stage, elimination of hazards may be inexpensive and simple to implement. The decision to use a less hazardous equipment or process can be made without the need to change. Whereas, for an existing process, major changes in equipment and processes may be required to eliminate a hazard.

6.1.2 Substitute the Hazard

Where elimination of the hazard is not possible, the entity should consider substituting the hazard for a safer one. This hierarchy of control can be used in all settings; however, it is most useful when working with hazardous substances. It is important when substituting hazards to ensure that the proposed alternative is less hazardous and is adequately assessed.

6.1.3 Engineering Controls

Engineering controls are designed to remove the hazard at the source before it comes into contact with employees. Well-designed engineering controls can be highly effective in protecting employees and will typically be independent of employee's interactions to provide this high level of protection.

6.1.4 Segregation

Segregation is when the hazards are segregated from people/employees, this could be via providing barriers. Segregation can also be the distance between the hazard and the people that can be affected.

6.1.5 Administrative Controls

Administrative controls are frequently used with existing processes where hazards are not particularly well controlled. These measures for protecting employees are also proven to be

less effective than other measures, requiring significant effort by the affected employees and by those planning and monitoring the work.

6.1.6 Personal Protective Equipment

Personal protective equipment is a control measure that provides protection only for the individual that is wearing the equipment and depends heavily on the following, including but not limited to:

- Adequate identification of what the personal protective equipment is intended to protect;
- Adequate selection of the type and quality of the personal protective equipment;
- The person wearing it correctly.

Personal protective equipment is the least effective method of control in the risk management planning process and shall only be used as a last resource and only after all other control measures have been taken into consideration or as an addition to other control measures.


Elimination	Remove the hazard, wherever possible.	
Substitution	Replace with a less hazardous material, substance, equipment, or process. For example: <ul style="list-style-type: none"> • Use of water-based paints instead of solvent based. • Substances in pellet/liquid form instead of powder. 	
Engineering Controls	Is it possible to engineer the risk out? For example: <ul style="list-style-type: none"> • Installation of local exhaust ventilation. • Isolations (mechanical/electrical/other). • Automated shut down of equipment. 	
Segregation	Can distance/barriers be used to prevent personnel exposure to hazard? <ul style="list-style-type: none"> • Access Controls. • Distance. 	
Administrative Controls:	Change the way the work is performed. For example: <ul style="list-style-type: none"> • Update safe work methods and procedures. • Limit the number of personnel exposed to the risk and control the time they are exposed (job /shift rotation). • Limit the exposure time. • Plan work carried out at low activity periods e.g. nights and weekends. 	
Personal protective equipment:	Provision of suitable and sufficient personal protective equipment, appropriate to the task. For example: <ul style="list-style-type: none"> • Provision of thermal gloves (hot or cold depending on the hazard). • Provision of dust masks where there is a risk is of dust generation. 	

Table 4: Examples of Control Measures within the Hierarchy of Control

Further information on personal protective equipment can be found in OSHJ-GL-07: Personal Protective Equipment

6.2 Residual Risk

The Residual Risk Rating is determined in much the same manner as the Initial Risk Ratings described in section 5.2.3. However, in the case of Residual Risk, the assessment is made based on the assumption that the controls determined in the previous step are fully and effectively implemented.

6.3 Record and Communicate the Findings

The entity must record and then communicate the significant findings of the different risk assessments conducted to the following, including but not limited to:

- Employees implementing the control measures;
- Employees who can influence and assist with the implementation of control measures;
- The entity must record and maintain risk assessment of all the related work activities in the entity.

6.4 Review

The entity must conduct periodic reviews of risk assessments to ensure control measures are working as intended to reduce risks and ensure no new hazards have been introduced. Risk assessments must be reviewed when something changes in the workplace, including but not limited to:

- Following an incident;
- Changes to work patterns and personnel;
- Changes to machinery or equipment;
- Changes in the processes;
- Changes in the location;
- Changes of materials or substances;
- Investigation by a relevant authority;
- Updates to legislation and requirements.

6.5 Implementation of Risk Management Plan

The entity must implement a risk management plan, this is the process of putting a strategic plan for managing identified risks into action. Such a process may take many forms depending on the business culture of the entity, history of previous efforts, available resources, number of employees and other factors. The most important part of a risk management plan is that it is based on the specific risks relevant to the entity and its business. The plan includes the implementation of the control measures identified but also the planning for any changes to ensure that the risk is controlled further in the future.

The details of the risk management plan shall be communicated to those involved as well as to top management.

6.6 Monitoring of Risk Management

The entity must monitor their risk management processes, including but not limited to:

- Checking that the control measures identified in the risk assessments are actioned and implemented;
- Checking that the employees responsible for conducting risk assessments are competent in the risk assessment process and the topic being assessed;
- Checking employees undertaking the work have been informed of the risks and control measures.

7 Training

Conducting and documenting risk assessments can be a daunting task for employees who have never been involved in the process before. It is crucial to recognise that the competency of personnel conducting risk assessments directly affects the outcomes and consistency of the process.

To ensure consistency of the risk assessment process, training on risk assessment shall be provided to those responsible for undertaking risk assessment.

As a minimum the entity shall provide training in languages and in a format that employees understand on the following, including but not limited to:

- How to identify hazards;
- Evaluate risk;
- How to determine effective control measures utilising the hierarchy of control;
- How to document and record risk assessments.

Periodic refresher training shall be conducted to ensure employees competency is maintained, including but not limited to:

- Where training certification has expired;
- Where identified as part of a training needs analysis;
- Where risk assessment findings identify training as a measure to control risks;
- Where there is a change in legal requirements;
- Where incident investigation findings recommend refresher training.

The entity must record and maintain accurate training records of OSH training provided to employees.

Further information on training can be found in OSHJ-GL-26: Training and Competence.

8 References

OSHJ-GL-07: Personal Protective Equipment
OSHJ-GL-26: Training and Competence
Law No 8 of 1980 – UAE Labor Law

9 Document Amendment Record

TITLE	Risk Management and Control		
DOCUMENT AMENDMENT RECORD			
Version	Revision Date	Amendment Details	Pages Affected
1	15 SEP 2021	New Document	N/A

APPENDIX 1. Sample Risk Assessment Form

Appendix 1: Sample Risk Assessment Form

Assessment of:

Location:

Name of Assessor:

**Position of
assessor:**

Date of Assessment:

Review Date:

Hazard	Consequences	Existing Control Measures	Risk			Additional Control Measures	Residual Risk			Person to Implement	By when
			L	C	R		L	C	RR		

Abbreviations

L – Likelihood	C – Consequence	R – Risk	RR – Residual Risk
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