Health, Safety & Environment Management System

HSE Management Manual

Safety Risk Assessment

SMC-HSE-ML-03

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1. PURPOSE

To unify the Risk Assessment (R.A) steps for all SMC employees and the service provider to identify Health, Safety & Environment (HSE) risks and determining appropriate control measures through standardized forms and mechanisms, ensuring accurate and effective outcomes

2. RISK ASSESSMENT CONDITIONS

2.1 Initiate the Risk assessments by required parties/service provider shall be conducted in the following cases:

2.1.1 During audits and inspections by HSE officers and department/unit representatives ("Safety champions").
2.1.2 Before the start of any events that could affect safety, health, environment, assets, operations or services within SMC facilities.
2.1.3 If it's requested via the work permit.
2.1.4 When administrative changes are required that may affect the HSE system.

3.2 The departments concerned must implement corrective and preventive actions with expected completion dates:

Proactive / Corrective action	Implementation duration
Immediate	Maximum Within 48 hr.
Short-Term	Within 1 week to 1 Month Maximum
Long - Term	More than 1 Month

3.3 The NCR must be responded with Proactive /Corrective action within the specified time as shown in the following table:

Proactive / Corrective action	Responding duration
Major	4 to 8 hr.
Significant	1 Weeks
Minor	2 Weeks

3. RISK ASSESSMENT LIKELIHOOD = L:

Score	Likelihood	Details		
		Description	%	Scale
1	Rare	May occur only in exceptional circumstances	Less than < 0.1 %	1 in 1,000
2	Unlikely	Could occur within a defined timeframe	1%	1 in 100
3	Possible	Might occur within a certain timeframe	10%	1 in 10
4	Likely	Expected in most circumstances	50%	1 in 2
5	Almost Certain	Expected to occur in most circumstances	More Than > 95%	0.95 in 1

4. RISK ASSESSMENT CONSEQUENCES = C:

Score	Consequences	Consequences details
		Consequences to people
1	Minor	No injury or first aid only, near miss
2	Moderate	Requires treatment or short-term absence
3	Significant	Semi-permanent injury more than >3 days absence and must be reported to MOI.
4	Major	Serious or long-term injury, temporary disability or semi-permanent injury requiring hospitalization for more than 3 days
5	Catastrophic	Fatality or major permanent disability, multiple fatalities or disabilities.

5. RISK MATRIX:

5.1 Risk Calculation (1 to 25)

Likelihood	Consequences				
	Minor	Moderate	Significant	Major	Catastrophic
Rare	1	2	3	4	5
Unlikely	2	4	6	8	10
Possible	3	6	9	12	15
Likely	4	8	12	16	20
Almost Certain	5	10	15	20	25

5.2 Risk Classifications

Risk level	Classification	Description
12 to 25	Major	if it has a Major impact on the safety and health of **people**, the **services** provided by the organization, its **assets**, or the work **environment**
6 to 10	Significant	if it has a Significant impact on the safety and health of **people**, the **services** provided by the organization, its **assets**, or the work **environment**
1 to 4	Minor	if it has a Minor impact on the safety and health of **people**, the **services** provided by the organization, its **assets**, or the work **environment**

6. RISK WITH ALL THE REQUIRED FACTORS

Consequences	Factors				Likelihood				
	People	Working Environment	Services	Assets	1	2	3	4	5
	(P)	(E)	(S)	(A)	Rare	Unlikely	Possible	Likely	Almost Certain
1	Minor	Minor	Minor	Minor	1	2	3	4	5
2	Moderate	Significant impact on a specific site	Moderate	Moderate	2	4	6	8	10
3	Significant	Significant impact on a specific site	Local impact	Significant impact on a specific asset	3	6	9	12	15
4	Major	Major impact on a specific site	Regional impact	Major impact on a specific asset	4	8	12	16	20
5	Catastrophic	Major impact on a multiple site	Global impact	Major impact on a multiple asset	5	10	15	20	25

7. HIERARCHY OF CONTROLS (MOST TO LEAST EFFECTIVE)

Hierarchy of Controls is a systematic approach used in Health, Safety & Environment (HSE) management to minimize or eliminate exposure to hazards. Controls are ranked from the most effective to the least effective as follows:

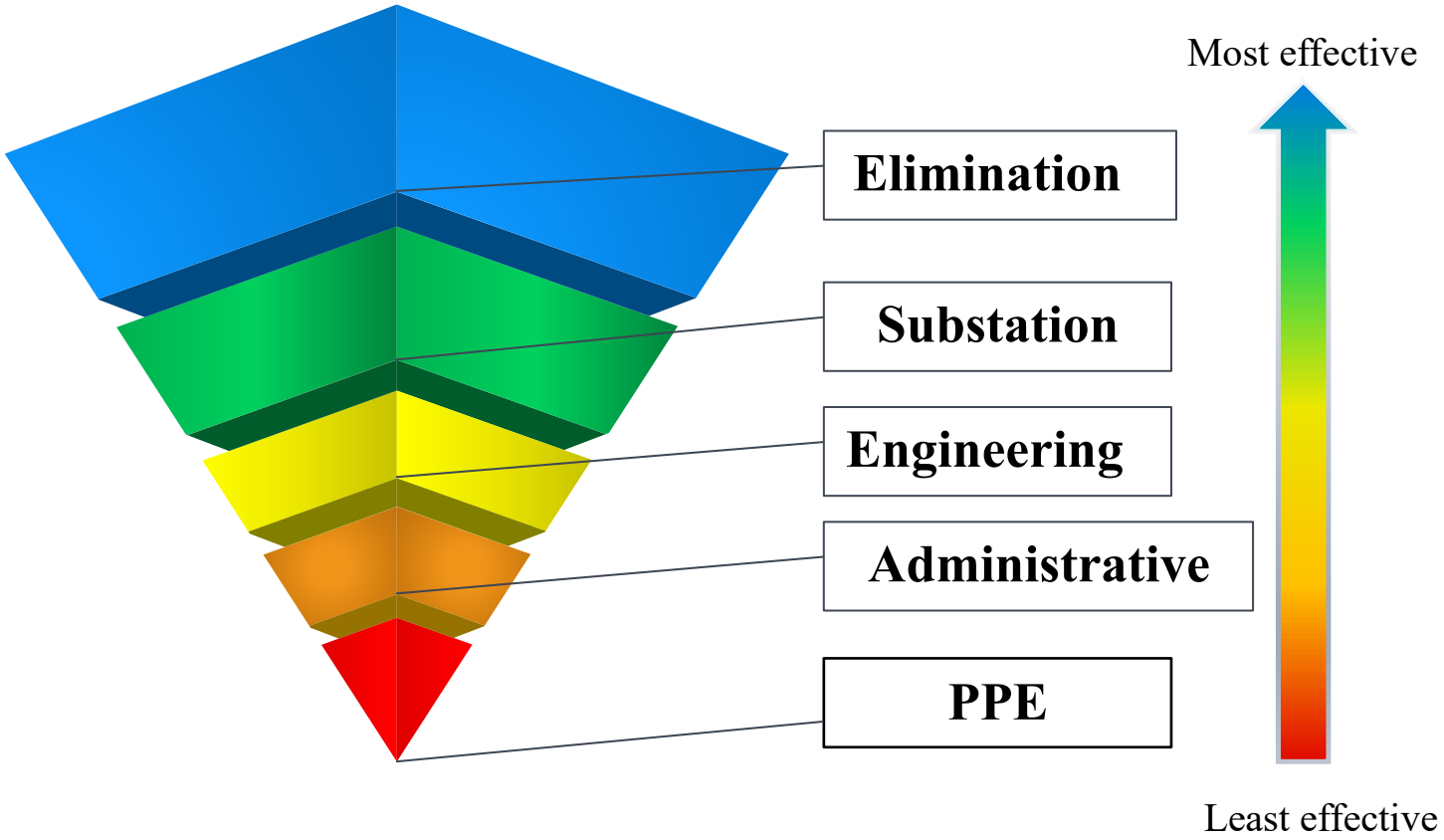
7.1 Elimination: Physically removing the hazard so it no longer exists. This is the most effective control.

7.2 Substitution: Replacing the hazard with less hazardous material, process, or activity**.**

7.3 Engineering Controls: Isolating people from the hazard through design solutions, barriers, ventilation systems, or other physical modifications.

7.4 Administrative Controls: Changing the way people work by implementing safe work procedures, training, scheduling, or signage to reduce exposure.

7.5 Personal Protective Equipment (PPE): Providing and ensuring the use of protective gear such as helmets, gloves, safety glasses, or respiratory protection. PPE is the last line of defense and the least effective when used alone.



8. APPENDIX

8.1 Risk Assessment template:

Description of the Activity or Process Subject to Risk Assessment:		
Prepared by:	**Revised by:**	**Date:**Click or tap to enter a date.

#	Activity/Steps	Hazard Description	Who or What may be affected and how? (P - E - S - A)	Current Control	Pre – Control Assessment				Additional control (By Whom and When)	Post – Control Assessment				Implementation date
					L	C	R	Risk Clas.		L	C	R	Risk Level	

***Note** : Click here to download the Risk assessment template