

HAZARD IDENTIFICATION & CONTROL

QUICK REFERENCE CARD

WHAT IS A HAZARD?

A hazard is any work-related condition or behavior that has the potential to cause injury, illness, property or environmental damage.

WHAT IS HAZARD IDENTIFICATION & CONTROL?

It is a continuous, systematic process of identifying hazards, analyzing the risks, and eliminating or controlling the hazards.

TYPES OF INJURIES

A review of WorkSafeBC statistics shows that typical injuries suffered in the manufacturing, and food processing sector are related to:

- Musculoskeletal injuries (MSI)
- Struck by objects
- Fall on same level
- Caught in equipment

HAZARD CATEGORIES

Hazards may be categorized into four general types.

1. Physical (*includes ergonomics*)
2. Chemical
3. Biological
4. Psychological

7 STAGES OF MANUFACTURING AND FOOD PROCESSING

1. Receiving
2. Preparing/Sorting
3. Processing/Assembly
4. Cleaning/Maintenance
5. Packaging
6. Storage
7. Shipping

STAGE 1-RECEIVING HAZARD FACTORS

- Country of Origin
- Rodents and Other Pests
- Temperature
- Time
- Physical Dimensions
- Method of Transport
- Mobile Equipment:
- Loading Bay Characteristics

STAGE 2-PREPARING / SORTING HAZARD FACTORS

- Ergonomics
- Hand Tools
- Radiation
- Product Movement
- Piping Systems
- Manual Material Handling
- Temperature

STAGE 3-PROCESSING/ASSEMBLY HAZARD FACTORS

- Toxic Process Gases
- Formaldehyde
- Fungus
- Temperature
- High Pressure Vessels
- Chemicals
- Lab Safety
- Time

STAGE 4-CLEANING AND MAINTENANCE HAZARD FACTORS

- Equipment Lockout
- Working from Heights
- Guarding
- Confined Spaces
- Chemicals

STAGE 5-PACKAGING HAZARD FACTORS

- Equipment Guarding
- Ergonomics
- Noise
- Heat
- Worker Complacency

STAGE 6-STORAGE

- Racking
- Pest control
- Off-Gassing

STAGE 7-SHIPPING

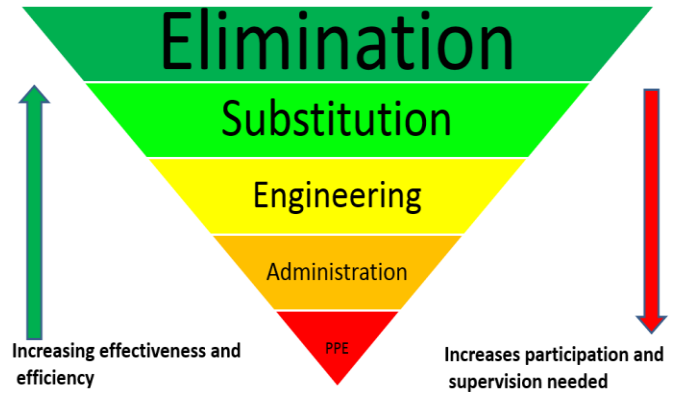
- Vehicle safety
- Driver qualifications
- TDG
- WHMIS

APPLICATION OF HAZARD CONTROL

When reasonably possible, an employer should first eliminate or control a hazard using the following sequence of controls.

- At the source: elimination (of the hazard, where practical); substitution (with a less hazardous alternative, where practical); engineering controls
- Along the path: screens, barriers, good housekeeping; administrative controls
- At the worker: as a last resort; personal protective equipment

HIERARCHY OF CONTROLS



THE RISK ASSESSMENT METHODOLOGY

Hazard Risk Analysis is an evaluation of risk factors associated with each identified hazard to determine the level of danger or risk the hazard poses to workers. Risk analysis helps the organization determine the amount of control needed to eliminate, reduce or minimize the risk.

ENGINEERING CONTROLS

The ultimate goal is to design the work environment, work processes and equipment to either eliminate or control hazards. Engineering controls consist of measures such as elimination, substitution, isolation, ventilation systems and safeguards.

HAZARD CONTROL PROGRAM

A Hazard Control Program should include the following:

- A formal process of assigning control measures to identified hazards
- Identification and implementation of engineering controls
- Identification and implementation of administrative controls including Safe Work Procedures
- A system to ensure that procedures are accurate
- Identification of critical tasks within the procedures
- Follow-up job task observations to ensure compliance and identification of procedural error
- Enforcement protocols
- Report analysis
- Identification and implementation of Personal Protective Equipment (PPE) controls
 - Equipment (PPE) controls
- A process to ensure that the controls (engineering, administrative, and PPE) are being used as designed
- A preventative maintenance component

ADMINISTRATIVE CONTROLS

If a hazard cannot be eliminated or controlled by engineering controls, the employer must use administrative controls to control the hazard to a level as low as reasonably achievable. Administrative controls are process, procedure and best practice focused.

SAFE WORK PRACTICES

These are general descriptions of how work-related activities (usually those associated with medium/low risk hazards) are performed safely.

SAFE OPERATING PROCEDURES

These are detailed step-by-step descriptions of how specific work-related activities (usually ones with associated high risk hazards) are safely performed from start to finish.

PERSONAL PROTECTIVE EQUIPMENT

PPE is used as “the last resort” when a hazard cannot be eliminated or controlled by engineering or administrative controls; however, a combination of controls can also be used when the hazard cannot be eliminated or controlled by any one of the three means of control.

RISK MATRIX RATING SYSTEM

15 - 25	A	Stop work and implement immediate corrective actions
8 - 14	B	Corrective actions apply as soon as reasonable, but work may continue
1 - 7	C	Continued operation is permissible with minimal controls

RISK MATRIX				CONSEQUENCE				
				Insignificant First Aid	Minor Medical Aid	Moderate STD	High LTD	Extreme Fatality
LIKELIHOOD	Rare	Heard of It	Multiplier 1	1	2	3	4	5
	Unlikely	Yearly	2	2	4	6	8	10
	Possible	Monthly	3	3	6	9	12	15
	Likely	Weekly	4	4	8	12	16	20
	Certain	Daily	5	5	10	15	20	25
Likelihood The chance that the employee will come in contact with the hazard while completing the task				Consequence The most likely outcome of the employee coming in contact with the hazard				
Certain = Does it happen at least daily?				Extreme = Possible Fatality / Extensive property damage				
Likely = Does it happen weekly?				High = Long-term Disability / Significant property damage				
Possible = Does it happen monthly?				Moderate = Short-term Disability / Considerable property damage				
Unlikely = Does it happen yearly?				Minor = Incident requires Medical Aid / Minor property damage				
Rare = Have you heard of it happening anywhere?				Insignificant = Incident requires First Aid / Limited property damage				