HIERARCHY OF CONTROLS INFORMATION GUIDE

The Hierarchy of Controls (Figure 1) is a method of identifying and ranking safeguards to protect workers from hazards in the workplace. They are arranged from the most to least effective and often need to be combined to be effective. When assessing risks at your workplace, choose control methods from the top down on the inverted pyramid. Each workplace should assess the feasibility of the first layer of controls before moving on to the next. Implementing this process will assist in identifying as many controls as needed to adequately protect workers from hazards.

The next section breaks down each control and provides examples.

Elimination

This is the process of removing the hazard from the job or workplace entirely. It's the most effective way to control a risk as the hazard itself will no longer be present. Elimination is the preferred way to control a hazard and should be used whenever possible.

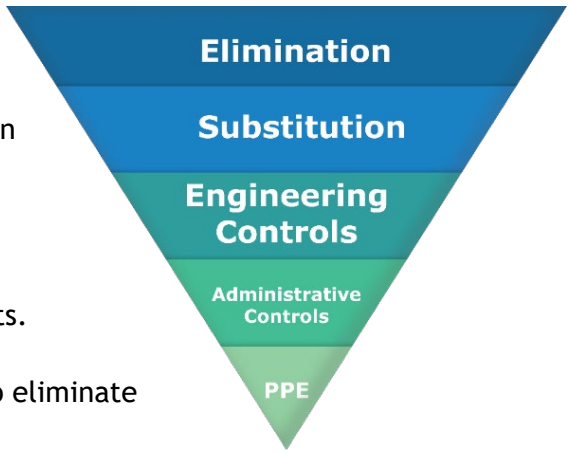

Figure 1-Hierarchy of Controls

Examples of Elimination:

- Using extendable tools to eliminate working at heights.
- Cordless equipment to remove cables and cords.
- Procuring production material in ready to use sizes to eliminate cutting.
- Using noncombustible or nonflammable material instead of combustible or flammable.

Substitution

When eliminating a hazard is not possible, the next control considered should be substitution. It is the act of replacing a hazard with a less hazardous option. The risks associated with an alternative option must still be thoroughly assessed to determine if it's an appropriate replacement.

Examples of Substitution:

- Replacing solvent-based solutions with a water-based alternative.
- Using a larger granule form of a product instead of a fine powder to reduce dust generation.
- Using man powered equipment instead of diesel generators to reduce exposure to fumes.

Engineering Controls

This type of control is something built into the design of a plant, equipment, or process to minimize a hazard. Engineering controls are a reliable way to control worker exposure. This type of control must be designed, used, and maintained properly in order for it to be an effective barrier.

Examples of Engineering Controls:

- A ventilation system like fume hoods, snorkels, or spray booths.
- Vibration stabilizing pads.
- Noise absorbing barriers such as sound baffles.
- Machine guards to prevent contact with moving machinery or equipment.

Administrative Controls

This type of control works by establishing work practices that reduce the duration, frequency, or intensity of potential exposure to hazards. It aims to ensure work is conducted in a way that minimizes the risk. Administrative controls are ranked lower than elimination, substitution, and engineering controls because this method does not physically reduce or remove or reduce the hazard.

Examples of Administrative Controls:

- Rotating job duties to help reduce the risk of repetitive strain injuries.
- Safe work procedure training on specific job tasks.
- De-escalation training.

Personal Protective Equipment

Personal Protective Equipment (PPE) refers to anything that workers wear to help protect them from a workplace hazard. Using PPE as the main method to control exposures should be limited to situations where elimination, substitution, engineering, and administrative controls are not practicable or possible.

Examples of Personal Protective Equipment:

- Self-Contained Breathing Apparatus (SCBA) to prevent inhalation of H2S gas.
- Hard hat (appropriate classification) to protect against impact.
- Earplugs or Earmuffs to lessen exposure to excessive noise.

For more information on the Hierarchy of controls visit CCOHS: Hazard and Risk - Hierarchy of Controls.