

Occupational health and safety risk assessment

Hazard identification and elimination process

STECON employs multiple approaches to hazard identification to ensure thoroughness, coverage, and completeness, in alignment with the requirements of ISO 45001:2018. The key approaches are as follows.

- 1) Site safety audit:
 - Conduct regular inspections of the work environment, equipment, tools, and operational processes.
 - Use a checklist to ensure comprehensive coverage of potential risk areas.
 - Analyze factors that may cause harm, such as slippery floors, equipment malfunctions, or improper chemical storage
- 2) Job Safety Analysis - JSA:
 - Analyze each type of task to identify potential risks.
 - Break the work process into smaller steps and assess the risks associated with each step.
 - Develop appropriate risk prevention measures.
- 3) Accident and near miss reporting:
 - Encourage employees to report actual accidents or near-miss incidents.
 - Analyze the causes of incidents to prevent recurrence.
 - Use alert and recording systems to track accident trends.
- 4) Hazard Observation & Improvement Request - HOR:
 - Observe employee behavior during work activities to identify unsafe actions or risk-prone practices.
 - Provide guidance or training on safe work practices.
- 5) External safety inspection:
 - Invite external safety experts to conduct inspections and provide advice on hazard prevention measures.
 - Ensure compliance with safety laws and standards.
- 6) Accident data analysis:
 - Analyze historical accident data to identify patterns and underlying causes of hazards.
 - Utilize such information to establish preventive measures.
- 7) Safety documentation review:
 - Review safety manuals, emergency plans, and procedures to ensure their relevance and adequacy under current conditions.
 - Regular update safety policies to align with the latest laws and standards.

Hierarchy of controls

STEC has a sequential five-step process for the hierarchy of controls to effectively eliminate and control hazards arising from operations, as follows.

No.	Process	Description
1.	Elimination	Elimination is the first step in the hierarchy of controls and is considered the most effective method of hazard control. It involves completely removing the hazard from the workplace. Eliminating all hazards prevents potential harm or injuries. For example, if a machine is too noisy, it can be eliminated by replacing it with a quieter model.
2.	Substitutions	Substitution is the second most effective method of hazard control. It involves replacing hazardous materials, substances, or equipment with less hazardous alternatives. This method reduces or eliminates risk by using something safer.
3.	Engineering controls	Engineering controls are the third level of hazard control. They involve isolating the hazard or modifying the way work is performed to reduce exposure to hazards. This often includes installing safety features to make work safer and easier, such as machine guards.
4.	Administrative controls	Administrative controls are the fourth level of hazard control. These involve changing work procedures or schedules to reduce exposure to hazards. This may include revising work processes, adjusting work hours, or introducing signs and warnings in the workplace.
5.	Personal protections equipment (PPE)	PPE is the fifth and least effective level of hazard control. It serves as the last line of defense and should only be used when other control methods are not feasible or effective.

All information and insights gathered from these processes are analyzed to continuously develop and improve preventive measures. This information is also used as a guideline for planning safety strategies for new projects that may be undertaken in the future.

