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# Safety Bulletin

# Hazard Assessments

One of the most common causes of workplace injuries or incidents is the failure to identify or recognize hazards that are present, or that could have been anticipated. A critical element of any effective HSE program is a proactive, ongoing process to identify and assess such hazards.

To identify and assess hazards, employers, and workers:

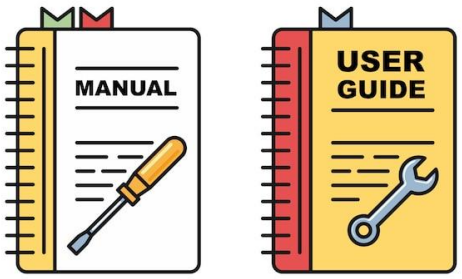
- Collect and review information about the hazards that are present, or that are likely to be present in the workplace.
- Conduct initial and periodic workplace inspections to identify new or recurring hazards.
- Investigate incident reports and near misses to determine the underlying hazards, their causes, and HSE Management System shortcomings.
- Group similar incidents and identify trends in incidents and hazards reported.
- Consider hazards associated with emergency or non-routine situations.
- Determine the severity and likelihood of incidents that could result for each hazard identified and use this information to prioritize corrective actions.

*Some hazards, such as housekeeping and tripping hazards, can and should be fixed as they are found. Fixing hazards on the spot emphasizes the importance of safety and takes advantage of an opportunity to display safety leadership.*

## Collect Existing Information on the Workplace

Collect, organize, and review information with workers to determine what types of hazards may be present and which workers may be exposed or potentially exposed. Information available in the workplace may include:

- Equipment and machinery operating manuals
- Safety Data Sheets
- Inspection reports
- Records of previous incidents and near misses
- Patterns of frequently occurring incidents
- Existing health and safety programs
- Input from workers



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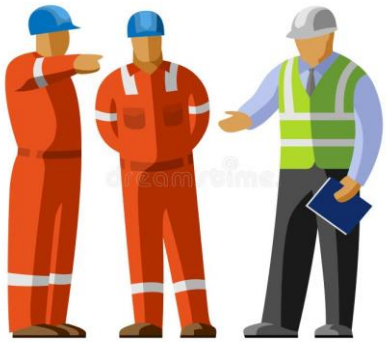
## Inspect the Workplace for Hazards

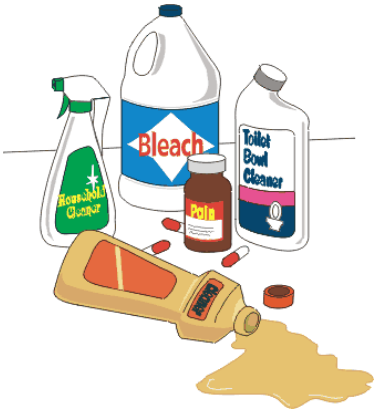


Hazards can be introduced overtime as work environments and processes change, equipment or tools become worn, maintenance is neglected, or housekeeping practices decline. Setting aside time to regularly inspect the workplace for hazards can help identify shortcomings so they can be addressed before an incident occurs.

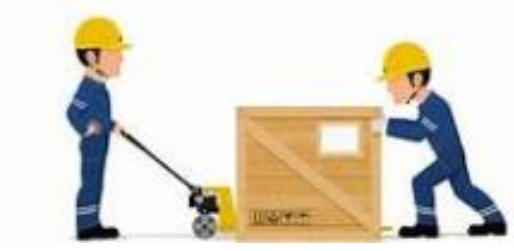
- Conduct and document regular inspections of all operations, equipment, work areas and facilities.
- Regularly inspect vehicles.
- Seek input from workers.

## Identify Health Hazards

Identifying workers' exposure to health hazards is typically more complex than identifying a physical safety hazard. For example, gases and vapors may be invisible, often have no odour, and may not have an immediately noticeable harmful effect.




- **Identify chemical hazards** – Review SDS and product labels to identify chemicals in the workplace that have low exposure limits, are highly volatile, or are used in large quantities or in unventilated spaces. Identify activities that may result in skin exposure to chemicals.
- **Identify physical hazards** – Identify any exposures to excessive noise, elevated heat, extreme cold, or sources of radiation.
- **Identify biological hazards** – Determine whether workers may be exposed to sources of infectious diseases, molds, toxic or poisonous plants, or animal materials capable of causing allergic reactions.
- **Identify ergonomic hazards** – Examine work activities that require heavy lifting, work above shoulder height, repetitive motions, or tasks with significant vibration.
- Whenever possible, use quantitative exposure assessments such as air sampling or direct reading instruments.



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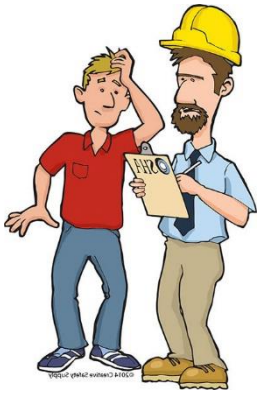
## Conduct Incident Investigations

By thoroughly investigating incidents and reports, you will identify hazards that are likely to cause future harm. The purpose of an investigation must always be to identify root causes (and there is often more than one) of the incident or concern, to prevent future occurrences.

- Develop a clear plan and procedure for conducting incident investigations so that an investigation can begin immediately when an incident occurs. The plan should include:
  - Who will be involved in the investigation.
  - Lines of communication.
  - Materials, equipment, and supplies needed.
  - Data collection templates.
- Train investigation teams on incident investigation techniques, emphasizing objectivity and open-mindedness throughout the investigation process.
- Include representation from both management and workers.
- Investigate high potential near misses.
- Identify and analyze root causes to address underlying program shortcomings that allowed the incidents to occur.
- Communicate the results of the investigation to managers, supervisors, and workers to prevent recurrence.



## Identify Hazards Associated with Emergency and Non-Routine Work

Emergencies present hazards that need to be recognized and understood. Nonroutine or infrequent tasks, including maintenance also present potential hazards. Plans and procedures need to be developed for responding appropriately and safely to hazards associated with foreseeable emergency scenarios and non-routine work.

- Identify foreseeable emergency scenarios and nonroutine tasks, considering the types of material and equipment in use and the location of work.
- Scenarios that may be foreseeable include, but are not limited to:
  - Fires and explosions
  - Chemical releases
  - Hazardous material spills
  - Nonroutine tasks such as infrequently performed maintenance activities.
  - Weather emergencies.
  - Workplace violence or harassment.

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## Characterize the Nature of Identified Hazards, Identify Interim Control Measures, and Prioritize the Hazards for Control

Assess and understand the hazards identified and the types of incidents that could result from worker exposure to those hazards. This information can be used to develop interim controls and to prioritize hazards for permanent control.

- Evaluate each hazard by considering the severity of potential outcomes, the likelihood that an event of exposure will occur, and the number of workers who may be exposed (or the frequency in which a single worker would be exposed).
- Use interim control measures to protect workers until more permanent solutions can be implemented.
- Prioritize hazards so that those presenting the greatest risk are addressed first. (However, employers have an ongoing obligation to control all serious recognized hazards to protect workers).