

Canadian Centre for Occupational Health and Safety * Centre canadien d'hygiène et de sécurité au travail

Prevention and Control of Hazards

Effective Workplace Inspections

On this page

Why are workplace inspections important?	Should supervisors be on the inspection team?		
What is the purpose of inspections? How do you plan for inspections?	How long should an inspection take to do?		
What types of hazards do we look for in a workplace?	<u>How frequent should inspections be</u> <u>done?</u>		
What type of information is needed to	How are inspections actually done?		
complete an inspection?	What should the final report have in it?		
<u>Are there other types of reports that may be useful?</u>	What should I know about follow-up and monitoring?		
Who should be on the inspection team?			

Why are workplace inspections important?

Workplace inspections help prevent incidents, injuries and illnesses. Through a critical examination of the workplace, inspections help to identify and record hazards for corrective action. Health and safety committees can help plan, conduct, report and monitor inspections. Regular workplace inspections are an important part of the overall occupational health and safety program and management system, if present.

What is the purpose of inspections?

Inspections are important as they allow you to:

- · listen to the concerns of workers and supervisors
- gain further understanding of jobs and tasks
- identify existing and potential hazards
- · determine underlying causes of hazards
- recommend corrective action

- monitor the steps taken to eliminate hazards or control the risk (e.g., engineering controls, administrative controls, policies, procedures, personal protective equipment)
- meet regulatory and management system requirements

How do you plan for inspections?

Planning is essential for an effective inspection.

What to Examine

Every inspection must examine who, what, where, when and how. Pay particular attention to items that are or are most likely to develop into unsafe or unhealthy conditions because of stress, wear, impact, vibration, heat, corrosion, chemical reaction or misuse. Include areas where no work is done regularly, such as parking lots, rest areas, storage areas and locker rooms.

Workplace Elements

Look at all workplace elements – the people, the environment, the equipment, the materials, and the process.

- People include the number of workers, demographics, shift schedules, and supervision.
- Environment includes the workplace structure and setting, and the conditions that surround the workers such as noise, vibration, lighting, temperature, and ventilation.
- Equipment includes machinery, tools, and apparatus for producing a product or a service, as well as safety devices and personal protective equipment (PPE) that may be required.
- Materials include items such as parts, ingredients, chemicals, services, and wastes.
- Process involves how the worker interacts with the other elements in a series of tasks or operations.

What types of hazards do we look for in a workplace?

Hazards can occur due to unsafe workplace conditions and practices involving the workplace elements.

Types of workplace hazards include:

- Safety hazards such as those caused by inadequate machine guards, <u>hazardous energy</u> (mechanical, electrical, gravitational, pneumatic, etc.), vehicles, <u>machinery</u>, <u>tools</u>, lack of <u>fall</u> <u>protection</u>, <u>confined spaces</u>, and <u>housekeeping</u>.
- <u>Biological</u> hazards caused by organisms such as insects, viruses, bacteria, fungi, and parasites.
- <u>Chemical</u> hazards caused by a solid, liquid, vapour, gas, dust, fume. or mist.

- <u>Ergonomic</u> hazards caused by improper work methods, incorrect <u>manual material handling</u>, and poorly designed workstations, tools, and equipment. These place physiological (repetitive and forceful movements, awkward postures, overloading) and psychological (workload, time pressure) demands on the worker that can lead to <u>musculoskeletal</u> injuries.
- Physical hazards caused by <u>noise</u>, <u>vibration</u>, <u>weather</u>, <u>heat</u>, <u>cold</u>, radiation, pressure, <u>combustible dusts</u>, odours, and <u>indoor air quality</u>.
- <u>Psychosocial</u> hazards that can affect mental health or well-being such as overwork, <u>stress</u>, <u>bullying</u>, or <u>violence and harassment</u>.

What type of information is needed to complete an inspection?

Diagram of Area

Use drawings of the plant layout or floor plans to help you draw a diagram. Divide the workplace into areas based on the process. Visualize the activities in the workplace and identify the location of machinery, equipment, and materials. Show the movement of material and workers, and the location of air ducts, aisles, stairways, platforms, emergency response equipment, alarms and fire exits. Appendix A shows a sample diagram. Use several simple diagrams if the area is large. Ask workers and supervisors for their comments on the information - they know the area better than anyone else. Inspection diagrams should be reviewed periodically and updated as needed to remain accurate.

Equipment Inventory

Know what type of machinery or equipment is present. Review technical data sheets, or manufacturers' instructions and safety manuals. Read work area records to become familiar with the hazards of the equipment. Be aware of any engineering safety controls required to safely operate the equipment.

Hazardous Product or Chemical Inventory

Determine which products are used in the workplace and whether <u>safety data sheets</u> are available. Find out if all sources of exposure are properly controlled. Make sure that all workers have received education and training in how to safely use, handle and store the products they work with. Check that all hazardous products are <u>labelled</u> appropriately according to Workplace Hazardous Materials Information System (<u>WHMIS</u>) requirements.

Management Documents

These documents include workplace policies, rules and regulations, procedures, safe work practices, emergency response plans, reports, and records. Being familiar with the normal safe operating conditions for the area can help inspectors to recognize unsafe deviations.

Checklists

A checklist helps to clarify inspection responsibilities, controls inspection activities and provides a report of inspection activities. Checklists help with on-the-spot recording of findings and comments but be careful. Do not allow the inspection team to become so intent on noting the details listed in the checklist that it misses other hazardous conditions. Use checklists only as a basic tool. Refer to the related documents for sample checklists that you can use as a guide to develop a checklist that is customized for your workplace.

- Inspection Checklists General Information
- Inspection Checklists Sample Checklist for Manufacturing Facilities
- Inspection Checklists Sample Checklist for Offices
- Inspection Checklist Sample Checklist for Chemical or Product Inventory
- Inspection Checklist Sample Checklist for Outdoor Areas

Past Inspection Records

Past inspection records show what has been previously identified. They also show what an earlier inspection team concentrated on and what areas it did not inspect. Do not simply repeat or copy previous inspection results. Use the older inspection reports to help look for issues, and then determine whether recommendations were implemented. Note if the changes have been effective.

Are there other types of reports that may be useful?

Yes. Before performing a workplace inspection, inspectors should become familiar with any potential health and safety issues or trends identified through other types of reports.

The following describes other types of reports:

- Ongoing inspections
- Hazard reports
- Incident and investigation reports
- Inspection compliance orders
- Pre-operation checks
- · Pre-start engineering health and safety reviews
- Job hazard analysis (JHA)
- Periodic inspections (preventive maintenance)
- Monitoring device data (occupational hygiene)
- Internal and external audits
- Health and safety summaries

Ongoing inspections: Supervisors and workers should conduct ongoing inspections as part of their job responsibilities. Such inspections identify hazardous or unusual operating conditions as they occur during the course of work. A <u>hazard report</u> may be generated to either correct the issue immediately or to request further corrective action.

Hazard Reports about unsafe working conditions and hazards may be submitted directly or anonymously by workers, and by the health and safety committee or representative. Reports may include corrective action recommendations from the committee.

Incident and investigation reports include a detailed inspection of the work area where the incident occurred and a root cause analysis. Being aware of how and why an incident occurred can help inspectors to identify the same hazard elsewhere. Incident trends can help to prioritize specific hazards, for example, if there have been several slip-trip-fall incidents or musculoskeletal (MSD) injuries in recent months.

Inspection compliance orders and tickets (fines) may be given by inspection officers from the jurisdictional health and safety regulator, fire department, electrical authority, and other regulatory bodies. Inspection may occur at any time, for a targeted blitz, or in response to a reportable incident, fatality, or complaint. These legal orders must be complied with and receive immediate priority.

Pre-operation checks are performed by workers at the beginning of their shift, before they begin to use the machine, vehicle, equipment, or process. Daily checks by users assure that the equipment meets minimum acceptable safety requirements. The frequency of these inspections varies with the amount and conditions of equipment use. Several pre-operation checklists may be completed each day by different workers. These checks are also done after workplace shutdowns, provided no modifications have been made.

Pre-start engineering health and safety reviews involve inspections of new or modified equipment or processes. A cross-functional team of workers, managers, and safety specialists are encouraged to participate in the review. In some cases, the review and report documents must be completed and stamped by a qualified engineer before the new or modified equipment may be legally operated.

<u>Job hazard analysis (JHA)</u> is used to identify potential hazards in each step of a worker's job and tasks, and to develop safe processes for them to use. Reviewing JHAs can help observers to detect unsafe conditions or acts as workers carry out their regular job tasks.

Periodic inspections are regular, planned inspections of the critical components of equipment or systems that have a high potential for causing serious injury or illness, or are necessary for emergency response. The inspections are often part of preventive maintenance procedures or hazard control programs. Laws and regulations may specify that qualified or competent persons must inspect certain types of equipment, such as elevators, boilers, pressure vessels, hoists and cranes, scaffolding, transport docks, warehouse racking, vehicles, fire suppression systems and fire extinguishers at determined points in the work process and at regular intervals (e.g., monthly, quarterly, annually).

Monitoring devices may be used to sample and record data about potentially hazardous environmental conditions (e.g., temperature, noise, dust, carbon monoxide, radiation, chemical leaks, etc.). Sampling may be performed by automated sensors or by an occupational hygienist.

Internal audits are performed throughout the year by qualified workers, generally to support a health and safety management system, and to verify that the overall workplace inspection program is effective.

External audits are performed by accredited auditors, hired by the employer to perform scheduled health and safety management system audits. Corporate insurance providers may also request an audit. These reports are useful as the auditor may have identified new areas of concern or existing issues that should be prioritized.

A periodic summary of key items and trends from all of these reports may be prepared by the employer's health and safety specialist for presentation to the health and safety committee and operations team on a monthly, quarterly, or annual basis. They may be called 'executive summaries' or 'management reviews'. Using an existing summary report can save time during the inspection preparation phase.

Who should be on the inspection team?

Health and safety committee members and representatives are obvious choices of personnel to carry out formal inspections, especially if they have received training or certification.

Other criteria for selecting the inspection team are:

- knowledge of regulations and procedures
- knowledge of potential hazards
- experience with work procedures involved

Engineers, maintenance personnel, occupational hygienists, health and safety professionals, supervisors or managers may be a part of the inspection team or they may be called upon to help with certain aspects of the inspection, or to help explain equipment or processes.

Large workplaces may have more than one inspection team. The various teams can have separate areas to inspect or use a rotation schedule.

Should supervisors be on the inspection team?

It depends. Supervisors are responsible for taking action to prevent incident, illness and injury. Supervisors have an advantage in safety inspections because of familiarity with workers, equipment and environment. This familiarity is also a disadvantage because it can interfere with a supervisor's objectivity. If the supervisor is not on the inspection team, before inspecting a department or area, the team should contact the supervisor in charge but the supervisor should not act as a tour guide.

If the supervisor of the area does not accompany the inspection team, consult the supervisor before leaving the area. Discuss each recommendation with the supervisor. Report items that the supervisor can immediately correct. Note these on the report as corrected. This documentation keeps the records clear and serves as a reminder to check the condition during the next inspection.

Although a supervisor may interpret reporting as a criticism, the inspection team cannot fail to report hazards. Aim to be objective and maintain an attitude that is firm, friendly, and fair.

How long should an inspection take to do?

It is difficult to accurately estimate how long each inspection will take. The time required depends on what is found, how many questions are asked, and how large and complex the work area is. Inspections are ineffective when the given time allows for only a quick look. When it is impractical to inspect the entire workplace at once, consider assigning smaller inspection zones to more teams, or rotate which section of the workplace is inspected each month (if allowed by jurisdictional safety regulations).

How frequent should inspections be done?

The purpose is to keep the workplace free of hazards. The schedule should state:

- when to inspect each area or item within the workplace
- who carries out the inspection
- what degree of detail to inspect each area or item

How often inspections are performed will depend on several factors:

- legislative requirements for your jurisdiction
- past incident records
- number and size of different work operations
- type of equipment and work processes
- number of shifts the activity of every shift may vary
- new processes or machinery

High hazard or high risk areas and activities should receive extra attention.

It is often recommended to conduct inspections as often as committee meetings. Do not conduct an inspection immediately before a committee meeting but try to separate inspections and meetings by at least one week. This time allows for small items to be fixed, the inspection report to be written, and gives the committee an opportunity to focus on issues requiring further action.

How are inspections actually done?

Discuss the planned inspection route before undertaking the inspection. Review where inspection team members are going and what they are looking for. For example, during the inspection, "huddle" before going into noisy areas. This discussion eliminates the need for arm waving, shouting and other unsatisfactory methods of communication.

For inspections, wear personal protective equipment (PPE) where required. If you do not have PPE and cannot get any, do not enter the area. List this as a deficiency during the inspection. Re-inspect the area when PPE is provided.

Observation

Look for deviations from accepted work practices. Use statements such as: "a worker was observed operating a machine without a guard." Do not use information derived from inspections for disciplinary measures.

Some common hazardous work practices include:

- using machinery or tools without authority
- operating at unsafe speeds or in other violation of safe work practice
- removing guards or other safety devices, or making the devices ineffective
- repairing or adjusting equipment that is in motion, under pressure, or electrically charged
- using defective tools or equipment or using tools or equipment in unsafe ways
- using expired materials, and equipment that has not been inspected or maintained on schedule
- using hands or body instead of tools, push sticks, lift-assists, or carts
- handling materials in unsafe ways, including improper lifting, carrying, pulling, or pushing
- incorrect material storage including overloading, crowding, creating unbalanced stacks, mixing incompatible items, or failing to use secure chemical cabinets
- failing to use or maintain, or improperly using, personal protective equipment or safety devices
- creating unsafe, unsanitary, or unhealthy conditions by improper personal hygiene, poor housekeeping, and eating or smoking in unauthorized areas
- using compressed air to clean a person's skin, hair, or clothes
- standing or working under suspended loads, scaffolds, shafts, or open hatches
- psychosocial hazards, such as workers who are overloaded, fatigued, working in conflict with others, or working in isolation (<u>working alone</u>)

Inspection Principles

When conducting inspections, follow these basic principles:

- Draw attention to the presence of any immediate danger other items can await the final report.
- Shut down and "lock out" any hazardous items that cannot be brought to a safe operating standard until repaired.
- Do not operate equipment. Ask the operator for a demonstration. If the operator of any piece of equipment does not know what dangers may be present, this fact is cause for concern.
- Never ignore any item because you do not feel you have the knowledge to make an accurate judgement of safety.
- Look up, down, around, and inside. Be methodical and thorough. Do not spoil the inspection with a "once-over-lightly" approach.

- Clearly describe each hazard and its exact location in your rough notes. Allow "on-the-spot" recording of all findings before they are forgotten. Record what you have or have not examined in case the inspection is interrupted.
- Ask questions, but do not unnecessarily disrupt work activities. This interruption may interfere with efficient assessment of the job function and may also create a potentially hazardous situation.
- Consider the static (stop position) and dynamic (in motion) conditions of the item you are inspecting. If a machine is shut down, consider postponing the inspection until it is functioning again.
- Consider factors such as how the work is organized or the pace of work and how these factors impact safety.
- Discuss as a group, "Can a problem, hazard or incident be generated from this situation?". "How serious are the potential outcomes?" "Do any safety regulations apply?". Determine what corrections or controls are appropriate.
- Do not try to detect all hazards simply by relying on your senses or by looking at them during the inspection. You may have to request that equipment is monitored to measure the levels of exposure to chemicals, noise, radiation, or biological agents.
- Take a photograph if you are unable to clearly describe or sketch a particular situation.

What should the final report have in it?

Refer to Appendix - Figure 2 for an example inspection report

Introduction

On top of the page enter the department or area inspected, the date and time frame of the inspection, and the inspection team's names and titles, including any technical experts.

Observation

List the observed unsafe conditions and acts. Number each item consecutively. For traceability, it is recommended to assign a unique item identification tag or code that includes the year and month of the inspection (e.g., 2022JAN - Item 3, January-2022-Area B-Item3, 01-2022 #3, etc.).

State exactly what has been detected and accurately identify its location. Instead of stating "machine unguarded," state "guard missing on upper pulley #6 lathe in North Building." A person who was not present should be able to find the same item based on the information provided.

Include or scan any hand-written notes, checklists, and diagrams to the final report. Make sure that photographs are linked to the correct items.

Classification

Now that the observed items have been listed, they can be further classified and evaluated.

Assign a <u>hazard classification</u> to each listed item according to the chosen scheme (e.g., electrical, material handling, machine guarding, ergonomic, biological, psychosocial, etc.).

Note if the item is a recurring safety issue. Unresolved issues may indicate that previous corrective actions were not properly implemented, were not effective, or that there is a systemic root cause to address.

Assign a priority level to the hazards observed to indicate the urgency of the corrective action required. For example:

- A = Major / High requires immediate action
- B = Serious / Medium requires short-term action
- C = Minor / Low requires long-term action

Priority levels should reflect your specific workplace activities, conditions, and hazards. Perform a <u>risk</u> <u>assessment</u> to evaluate the probability of the hazard resulting in an incident, injury or illness, and the potential severity of outcomes. Hazards that score high in both will have the greatest priority.

Follow-Up

After each listed item, specify the recommended corrective action(s) (e.g., <u>control methods</u>, repair work order, items to purchase, training, etc.). Assign a responsible person and establish a definite correction due date if possible and appropriate. One listed hazard may require several corrective actions. Note the action completion status (e.g., open, on hold, closed, etc.).

Since some corrective actions may take longer to complete, consider copying all unfinished items from the previous report onto the new report (include their unique ID numbers).

Review and Distribution

The final report may be written by a single designated person who receives the inspection notes, or by the inspection team together during a post-inspection meeting. Each inspection team member should review it for accuracy, clarity, and thoroughness before it is distributed.

Report issues and recommendations in a concise, factual way. Management should be able to understand and evaluate the problems, assign priorities, and quickly reach decisions.

What should I know about follow-up and monitoring?

Review the information from regular inspections to identify where corrective action was needed. Determine if these actions have been taken. Use older reports to identify trends. Analysis of inspection reports may show the following:

- priorities for other corrective action
- need for improving safe work practices
- insight about why incidents are occurring in particular areas
- need for education and training in certain areas
- areas and equipment that require more in-depth hazard analysis

The health and safety committee can review inspections, identify trends, and monitor the progress of the recommendations. This analysis can be used as part of the continual improvement process for the occupational health and safety program or management system.

Appendix



Figure 2: Example of Workplace Inspection Report

Workplace Inspection Report						
Date (DD-MM- YYYY)						
Time (Start - End)						
Department / Area						
Inspected By (Name / Title)						

Observation		Classification			Follow-Up			
Item ID	Item Description and Location	Hazard Type	Repeat Item? Y / N	Priority A/B/C	Recommended Corrective Action(s)	Responsible Person	Due Date	Action Status
Report Review Date (DD-MM-YYYY)								
Copie (Nam	es To e / Title)							

Fact sheet last revised: 2022-10-26

Disclaimer

Although every effort is made to ensure the accuracy, currency and completeness of the information, CCOHS does not guarantee, warrant, represent or undertake that the information provided is correct, accurate or current. CCOHS is not liable for any loss, claim, or demand arising directly or indirectly from any use or reliance upon the information.