

Hazard Identification and Risk Assessment

Introduction: A job-site hazard poses potential for harm. In practical terms, hazards are a condition or activity that, if left uncontrolled, can result in an injury or illness. Workplace injuries and illnesses can be prevented by looking at workplace operations, establishing proper job procedures, and ensuring that all employees are trained properly. Identifying hazards and eliminating or controlling them as early as possible will prevent injuries and illnesses. A risk assessment focuses on identifying hazards before they occur. Risk Assessments focus on the relationship between the worker, the task, the tools, and the work environment.

Risk Assessments can be conducted on any area of the workplace, but you need to prioritize according to the following factors:

- Operations with the highest injury or illness rates.
- Tasks with the potential to cause severe or disabling injuries or illness.
- Procedures complex enough to require written instructions.
- Situations in which one simple human error could lead to a severe accident or injury.
- Jobs that are new to the operation or have undergone changes in processes and procedures.

Involve all employees

Workers have a unique understanding of their job, and this knowledge is invaluable for finding hazards. Involving employees helps minimize oversights, ensures a quality analysis, and gets all personnel to buy in to the solutions. Workers can complete self-inspections in the following topics:

- Processing, receiving, shipping and storage
- Building and Ground Conditions
- Housekeeping Program
- Electricity
- Lighting
- Heating and Ventilation
- Machinery
- Personnel
- Hand and Power Tools
- Chemicals
- Fire Prevention
- Maintenance including tracking and abatement of preventive and regular maintenance
- Personal Protective Equipment
- Transportation
- Review

Conduct a preliminary job review

First assess the known existing hazards in the current work surroundings. Inspect your work area and facilities thoroughly by doing a visual inspection , auditing, testing, technical or scientific evaluation, analysis of injury or things that can go wrong their consequences, how they happen and how likely that hazard will occur.

Review the worksite's history

Include the history of accidents and occupational illnesses that needed treatment, losses that required repair or replacement, and any near misses (events in which an accident or loss did not occur, but could have). These events are indicators that the existing hazard controls may not be adequate and deserve more scrutiny.

Ask the right questions

The goal of a Risk Assessment is to answer the following questions:

- What can go wrong?
- What are the consequences?
- How could it arise?
- What are the contributing factors?
- How likely is it that the hazard will occur?

Document

Document the answers, describing a hazard to ensure the efforts to implement hazard controls target the most important hazard contributors.

Some ways to answer the questions are:

- Where it is happening (environment)
- Who or what is happening (exposure)
- What precipitates the hazard (trigger)
- The outcome that would occur should it happen (consequence)
- Other contributing factors

Hazard Control Measures

You then need to take steps to eliminate or reduce the hazard to an acceptable risk level. Information obtained from a job hazard analysis is useless unless hazard control measures recommended in the assessment/analysis are incorporated into the tasks. Supervisors should recognize that not all hazard controls are equal and some are more effective than others at reducing the risk.

The order of hazard control precedence is: 1. Engineering Controls, 2. Administration Controls, 3. Personal Protective Equipment.

Control the hazard starting with the engineering and the administrative controls and then with the personal protective equipment. Engineering controls include eliminating or minimizing of the hazard; enclosure of the hazard; isolation of the hazard; and removal or redirection of the hazard. Administrative controls include written permits and operating procedures; safe work practices; ; exposure time limitations; monitoring the use of highly hazardous materials; alarms, signs and warnings; the buddy system; and of course, training. Appropriate personal protective equipment must be worn when engineering controls do not totally eliminate the hazard or when they are being developed; when safe work practices do not provide sufficient additional protection, and when they are not feasible during emergencies.

Use of one hazard control method over another higher in the control precedence may be appropriate for providing interim protection until the hazard is permanently removed. If the hazard cannot be eliminated entirely, the adopted control measures will likely be a combination of all three items instituted simultaneously.

Review – Regularly review the hazards and the control measures set in place, and when work conditions change affecting the current Risk Assessment.

Conclusion: Rarely is a hazard a simple case of one singular cause resulting in one singular effect. More frequently, many contributing factors tend to line up in a certain way to create the hazard. If there have been near-misses or actual accident cases, then the likelihood of a recurrence would be considered high. Regular weekly review of the workplace hazard assessment /job hazard analysis will ensure that it remains current and continues to help reduce workplace accident and injuries.

NOTICE: *These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.*

