

GUIDELINE for Element 4.1 (a), (b), (c) Hazard Identification

Management needs to identify and eliminate workplace hazards. This includes knowing how to do a health and safety analysis, what to do after completion of the analysis, and how to implement and communicate safety information.

The purpose of the Hazard Analysis is to ensure all employees are protected against Health and Safety hazards, and work in a healthy and safe environment. Results can include:

- Increased knowledge of the dangers inherent in the tasks of employees.
- Enhanced safety awareness and improved safety dialogue and communication amongst employees.
- Improved focus for workplace safety inspections.
- Improved risk management leading to increased accident prevention.
- Compliance with the Occupational Health and Safety Act.

Recognizing and assessing hazards is the first step to controlling or eliminating risk. Methods of doing this include observation and reporting, inspection, task analysis, and trend identification.

Factors that contribute to making a job hazardous are identified as (also known as PEMEP):

- People (training),
- Equipment,
- Materials,
- Environment and
- Process (the way the work is done).

The degree of hazard or risk can be estimated using knowledge of the potential for a major injury (severity) and knowledge of probability of occurrence (For example: an inexperienced worker or a new job).

Note: To comply with all requirements of this element ensures that:

Step 1: Identify hazards (see Element 4.1(a))

Step 2: Rate for loss potential (see Element 4.1(b))

Step 3: Develop documents for those hazards that have a major loss potential. The documentation must include:

- Safe Operating procedure
- Training key health and safety points (controls) to remember following each step (see Element 4.1(c))

How to do a Hazard Assessment

1. Select a job or occupation or common hazard. Ideally, you should start with an item that has been identified as a health and safety problem. For instance, jobs where accidents occur frequently or result in serious injuries should be a priority. Jobs in high hazard areas, such as where people work alone, where consequences of an accident are severe such as major injury or fatality, jobs where workers have voiced concerns or had work refusals or newly established jobs as due to lack of experience in these jobs, hazards may not be evident or anticipated.

2. Break each task down into steps. Describe and list each step in sequence.
3. Identify the risk factors at each step. Beside each task, write down the materials, equipment, processes and environmental factors involved that could cause an accident or health effects. People factors may also be relevant.
4. Identify the hazards associated with each task/factor combination. Systematically go through every risk factor for every task, and consider what specific hazards might be involved. Make a list of both health and safety hazards.
5. Assess the hazard. Evaluate the degree of risk, that is the extent to which the hazard is likely to cause loss of life, permanent disability or serious injury as well as the probability of occurrence. When considering health hazards, you can consider the number of persons exposed and the duration of exposure. Where there is exposure to hazardous chemical, biological or physical agents, you will need to include workplace and personal exposure monitoring to ensure that exposures do not exceed regulated or recommended limits.
6. Identify controls. Identify procedures or modifications needed to eliminate or control the hazards. This may require changes to people factors, equipment, materials, procedures, tools, systems or processes.
7. Validate the analysis. Implement the needed controls, and then validate the analysis by observing the task in operation. Make sure that new hazards have not been introduced. Get feedback from the employees performing the job to see how the hazard controls work.
8. Evaluation. Assess the need to repeat the analysis. Continuous improvement should be implemented with Hazard Analysis reviewed every three years or sooner if necessary. For example if injuries occur, the job changes in any way, or new equipment is instituted, then you should consider conducting a Hazard Analysis.

WHAT DO YOU DO ONCE YOU HAVE COMPLETED YOUR HAZARD ANALYSIS?

Once you have validated your hazard controls, you need to develop safe work procedures. These procedures must be communicated to all employees who are or will be performing the job or task.

Below is an example of how to fill in the worksheet.

WORKSHEET – Hazard Analysis			
Job title /occupation / common hazards in a work environment		Order Picker	
Analyzed by: John Idnc		Date: 5 Feb 05	
Reviewed by: JHSC and 3 of 5 Order pickers		Date: 28 Feb 05	
Approved by: Joe Safety, President		Date: 15 Apr 05	
Job Steps	Identified Hazards	Risk Level	Controls
1. Fold cardboard into box.	Cuts	C (Low)	Cut resistant gloves
2. Place box on table.	Heavy lifting	B(Medium)	Use mechanical lifting devices or ask for assistance
3. Take 4 books from shelf.	Reaching	B (Medium)	Use an appropriate step stool for the height.
4. Place books in box.	No hazard identified	N/A	N / A
5. Taping boxes shut.	Repetitive wrist action	C (Low)	Job rotation Take breaks, do different task(s)
6. Place box on automated conveyor	Entanglement	A (High)	Guard placed on automated conveyor or change rollers to belt format

Filling in this column meets 4.1(a)

Filling in these 2 columns meets 4.1(b)

Some controls can include:

- Preventative maintenance
- Procedures
- Training
- Personal Protective equipment
- Job rotation
- Engineering
- Pre-shift inspection

Important Reminder

Element 4.1 (c) requires the company develop safe operating procedures for the activities that involve a major (A category) hazard. See the audit document under guidelines for more details.
Inform and instruct workers performing the activities that include the major (A category) hazard.

Hazard Analysis Worksheet


A Hazard Analysis worksheet will be completed for each job / occupational / common hazards in a work environment.

WORKSHEET – Hazard Analysis			
Job title /occupation / common hazards in a work environment			
Analyzed by:		Date:	
Reviewed by:		Date:	
Approved by:		Date:	
Job Steps	Identified Hazards	Risk Level	Controls
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			

For all hazards rated A (Major) a Safe Operating procedure must be developed and all staff exposed to the hazard must be trained.

The original copy will be filed with the Health and Safety Co-ordinator. A copy will be kept with the Shift Supervisor.

These forms must be available for the JHSC to review during inspections.

 Important Reminder

A hazard analysis should involve the workers who perform the job as well as their supervisors. Health and safety specialists may also participate. People familiar with the job should be asked about events that may affect normal operations. Equipment breakdowns, shift changes, or other intermittent events may lead to a sequence of steps different from the one being analyzed. By including their feedback, you are demonstrating that the workers have a say in their job and more likely to get buy-in to the safe work procedures that are implemented.

Explain the purpose of the hazard analysis to ensure full co-operation and participation of the employee. Assure the employee that the purpose is to make the job safer and not an evaluation of their work performance.

Observe jobs during normal working hours and situations. For example, if the job is normally done on the night shift, perform the analysis at night.

The following steps are required to conduct a Hazard Assessment, leading ultimately to the determination of level of risk for all hazards:

Identify Hazards

Identify activities/processes that have potential for injury/illness and identify specific hazards that exist in these processes/activities. **All** areas and facets of the workplace are required to be reviewed for the identification of hazards.

Hazard Types:

Chemical	compressed gases, flammables
Physical	noise, weather, heat, cold
Biological	blood, insect bites, plants
Ergonomic	computer work stations incorrectly adjusted, repetitive motions
Safety	housekeeping, inadequate machine guarding, material handling and energy

Hazard Sources:

People	actions
Equipment	tools, production equipment
Material	raw materials, chemicals
Environment	noise, aire quality
Processes	combination of the above.

Resources that could be used in conducting a hazard assessment:

- Legislation
- Existing practices and procedures
- Industry best practices
- Normal and abnormal operations
- Previous accident reports
- Physical inspection of the workplace
- Brainstorming – “ask what if...”
- Employee knowledge – unsafe conditions, known hazards

Rate the risk of the hazard as if the controls were not in place.

The following classification system could be used to assess the level of risk for all hazards:

Class A (major)	= high risk (immediately dangerous to life and health).
Class B (moderate)	= medium risk (medium term potential for non-life threatening injury or illness)
Class C (minor)	= low risk (long term potential for slight injury or illness).

Timeframes for implementation of hazard controls:

Class A (major)	= immediately
Class B (moderate)	= as soon as possible (example within 2 weeks)
Class C (minor)	= timetable to be determined by management, in consultation with health and safety representative or committee.

Workwell requires that all Class A risks /hazards have safe operating procedures and training is completed for workers exposed to these hazards [element 4.1(c)].

The hierarchy in which controls should be considered are:

- Elimination (stop what’s creating the hazard)
- Substitution (replace with something less likely to harm/damage)
- Isolation (separate what can be harmed/damaged from the hazard)
- Engineering (change the way of doing what is creating the hazard)
- Administrative (reduce exposure to the hazard)