

Now that you have completed a **Critical Job Inventory**, the next step is creating a **Job Hazard Analysis** for each job/task listed. A template is available as a working document on the website.

A great source of information that can be used as reference for Job Hazard Analysis and Safe Work Procedures can be found:

- On the internet
- Operator's Manual

Important: you must ensure that the steps and controls found in reference documents used apply directly to the job steps completed and the controls used here at the Division.

HOW?

Start with the most hazardous activity identified and continue down the list until all activities have been completed. Be sure to add any new activities that may arise.

Select several good workers who are experienced and knowledgeable in the task. Gain cooperation by explaining that the task is being recorded, the worker is not being evaluated. If you have designated a Safe Work Procedure writer, have that person observe the workers completing the tasks.

1. Break the job down into its basic steps or tasks.

Each job or operation will consist of a set of steps or tasks. Record the initial breakdown of steps. To determine where a step begins or ends, look for a change of activity, change in direction or movement. Ensure the information being recorded is discussed with the worker to ensure accuracy.

Be sure to list **all** the steps needed to perform the job. Some steps may not be performed every time; however, if that step is generally part of the job it should be listed.

You generally should not have more than 15 steps in your job. If you do, you can combine steps, eliminate unnecessary detail, or break the job into two procedures.

Tip: A great way to ensure that steps are not missed during this activity is to record the activity being completed. This enables the writer to pause and rewind as necessary.

2. Identify the hazards that are present with each of the identified steps.

A hazard is a potential danger. The purpose of the Job Hazard Analysis is to identify **ALL** hazards – both those produced by the environment or conditions and those connected with the job procedure. Identify how someone completing the activity can get hurt or how the equipment used can become damaged.

There are *Safety Hazards* and *Health Hazards*:

- *Safety Hazard*: something that has the potential to cause an injury-physical harm or damage to a person as a result of contact between the body and an outside agent, or from exposure to environmental factors.
- Some examples are falls, pinch points, sharp points, sharp edges, moving machinery, dropping items, pressure systems and fire and explosion etc.
- *Health Hazard*: something that has the potential to cause adverse health effects. Health Hazards can be broken into five categories:
 - a) *Chemical hazards* can appear as gases, vapours, liquids, solids, dust, fume or mist.
 - b) *Biological hazards* are living organisms, such as bacteria, viruses, mould, parasites and fungi.
 - c) *Physical hazards* are forms of energy or force. They include noise, vibration, electricity, heat and cold, pressure and radiation.
 - d) *Ergonomic hazards* result from poorly designed equipment or work process which place undue strain on the body by repetitive or strenuous activity.
 - e) *Psychosocial hazards* can range from risks of crime and violence and harassment in the workplace to production pressures which can influence the pace of work.

Close observation and knowledge of the job is important. Examine each step carefully to find and identify hazards – the actions, conditions, and possibilities that could lead to an accident.

To identify hazards, ask yourself these questions about each step:

- Is there a danger of the employee striking against, being struck by, or otherwise making injurious contact with an object?
- Can the employee be caught in, by, or between objects?
- Is there a potential for slipping, tripping or falling?
- Could the employee suffer strains from pushing, pulling, lifting, bending or twisting?
- Is the environment hazardous to safety and/or health (toxic gas, vapour, mists, fumes, dust, heat, or radiation)?

Compiling an accurate and complete list of potential hazards will allow you to develop the recommended safe job procedures needed to prevent accidents.

3. Develop Controls for each of the hazards identified.

Decide what actions or procedures are necessary to eliminate or minimize the hazards identified that could lead to an accident, injury or occupational illness. How can we prevent someone from getting injured?

Options include:

- *At the Source*: elimination, substitution, redesign, isolation, automation.
- *Along the Path*: relocation, barriers, absorption, dilution
- *At the Worker's Level*: administrative controls, orientation, training and supervision, work procedures, emergency planning, housekeeping, hygiene practices, personal protective equipment.

Begin by trying to:

1. Engineer the hazard out;
2. Provide guards, safety devices, etc.
3. Provide personal protective equipment
4. Provide job instructions and training
5. Maintain good housekeeping
6. Ensure good ergonomics (positioning the person in relation to the machine or other elements in such a way to improve safety).

Next, list the recommended safe operating procedures. Begin with an action word. Say exactly what needs to be done to correct the hazard, such as, "lift using your leg muscle" Avoid general statements such as "be careful".

- Include the required or recommended personal protective equipment necessary and determine a recommended action or procedure to eliminate or lower each hazard identified.
- If serious hazards are present, they should be corrected immediately. The Job Hazard Analysis should then be changed to reflect the new conditions.

Finally, review all three columns for accuracy and completeness. Determine if the recommended actions or procedures have been put in place. Re-evaluate the Job Hazard Analysis as necessary.

Now that you have completed a **Job Hazard Analysis** of the job/task, next, complete the **Safe Work Procedure**.