

Occupational Health and Safety

Training Manual

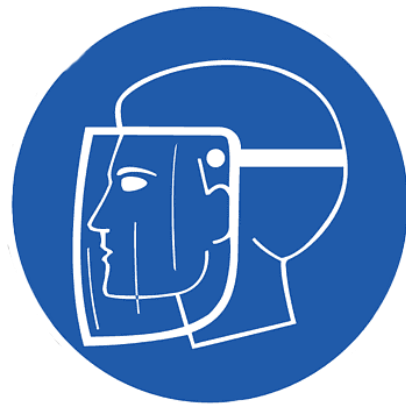


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How to use this training manual

The following is a list of symbols that is used throughout this training manual and their respective meaning or purpose:



Is used to indicate URL's where the learner may find additional information.

Learning outcomes

After the going through and learning this manual, the user will be able to:

- Understand what it is required of him/her to keep the workplace healthy and safe.
- Understand and identify dangerous actions in the workplace.
- Understand and identify dangerous conditions in the workplace.
- Understand basic housekeeping in terms of tools and equipment in the workplace.
- Have a basic understanding of tool and equipment care.
- Understand how to report accidents/incidents.

1. Introduction to occupational health and safety

This training manual on occupational health and safety shall provide you with the necessary guidelines, rules, and regulations when it comes to working with tools (electrical and non-electrical), people, e-waste, and the workplace in general. It is important that you adhere to and obey these guidelines, rules, and regulations at all times because they are intended to protect you and those around you.

Safety and first aid should always be given the highest priority in the workplace because safety helps prevent accidents from occurring and knowing some basic first aid can help prevent loss of life. As humans, we all have this basic instinct to survive, it is part of our biological programming, and safety is what helps us to survive. It is extremely important to remember that safety is the responsibility of every individual in the workplace. The following section discusses why occupational health and safety is so important in the workplace.

2. The importance of occupational health and safety

You may be asking yourself why occupational health and safety is important and why we should try to avoid accidents in the workplace. When an individual is careless and/or does not take the necessary precautions, an accident may occur. **Error! Reference source not found.** is a mind map showing what may happen as a result of an accident occurring in the workplace.

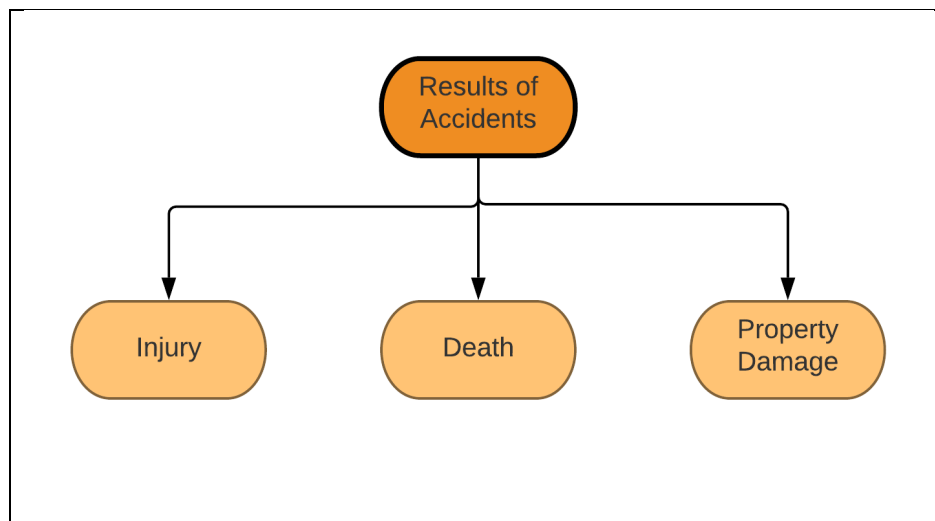


Figure 1: Result of an accident occurring

We can see that the outcomes of an accident occurring in the workplace can be quite severe. Injury, death, and property damage impact the workplace and individuals in the workplace in several ways. For example, if an individual is injured at the workplace, the individual may be unable to work and will require time off to recover, and the work schedule of the workplace will be disrupted. When an employee passes away, it has a severe impact on his/her family and dependants. Furthermore, a new employee will have to be trained which costs time and money,

not to mention a decrease in productivity and employee morale. When property is damaged at the workplace, it either has to be replaced or repaired which also costs time and money.

We are now going to look at an important piece of legislation, called the Occupational Health and Safety Act.

2.1 The Occupational Health and Safety Act

In South Africa, health and safety in the workplace is regulated by the Occupational Health and Safety Act (85 of 1993), also known as the OHS Act. The aim of the OHS Act (as stipulated in the act) is as follows:

“To provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.”

The OHS Act applies to all workplaces and to all individuals in the workplace in South Africa. The link below will take you to the OHS Act.



https://www.gov.za/sites/default/files/gcis_document/201409/act85of1993.pdf

2.2 Responsibilities of the employer

The employer is obliged to have a health and safety policy and it is the responsibility of employers to ensure that employees are not injured in the workplace. Therefore, employers have a number of specific responsibilities, duties and obligations in terms of the OHS Act, Section 8. Figure 2 outlines these responsibilities.

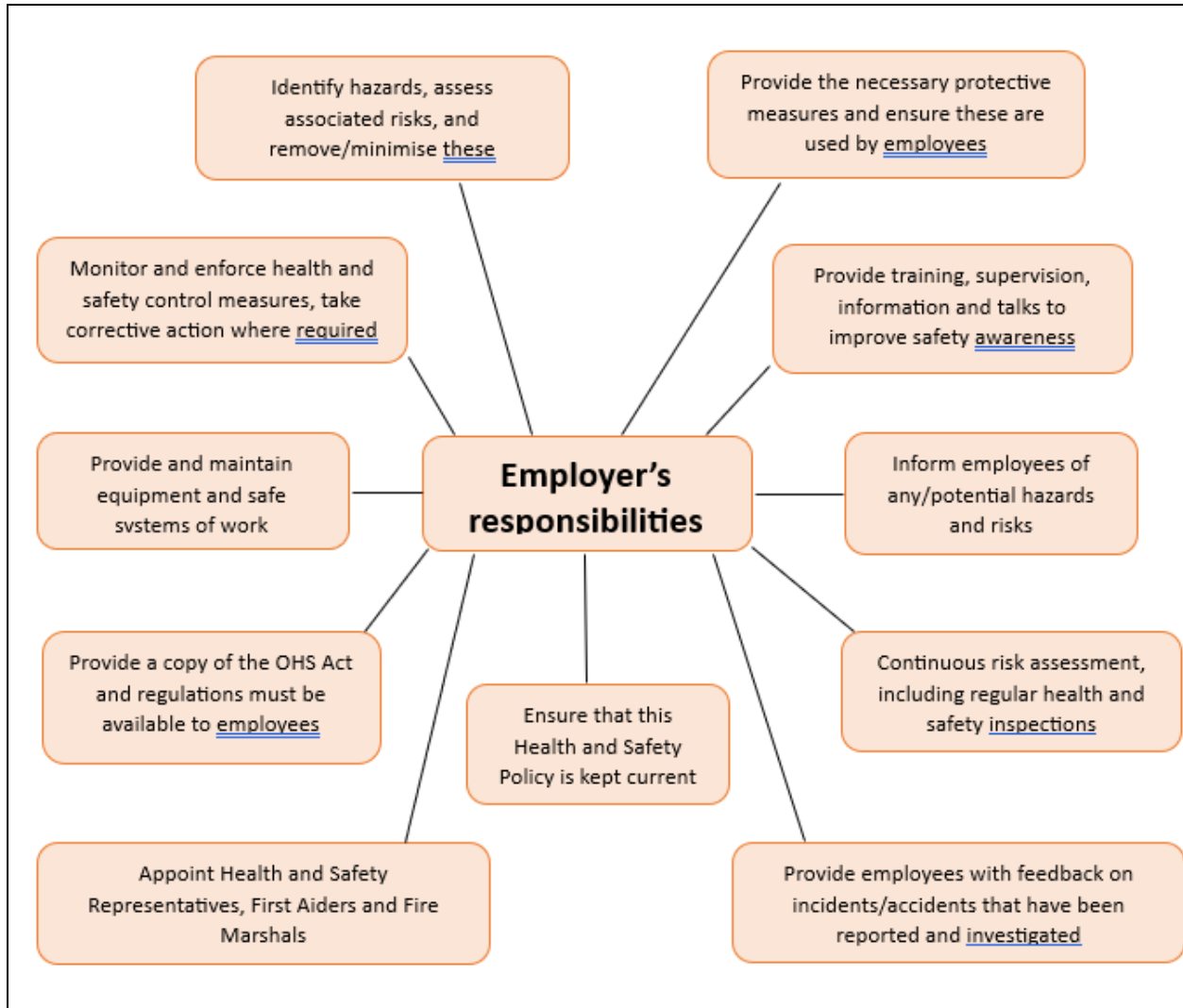


Figure 2: Responsibilities of the employer

2.3 Responsibilities of the employee

Employees do not only have rights, but they also have responsibilities. According to the OHS Act, employees do not only have rights, but they also have the responsibility to be careful and not to put other workers and themselves in any danger. Figure 3 shows the responsibilities of employees.

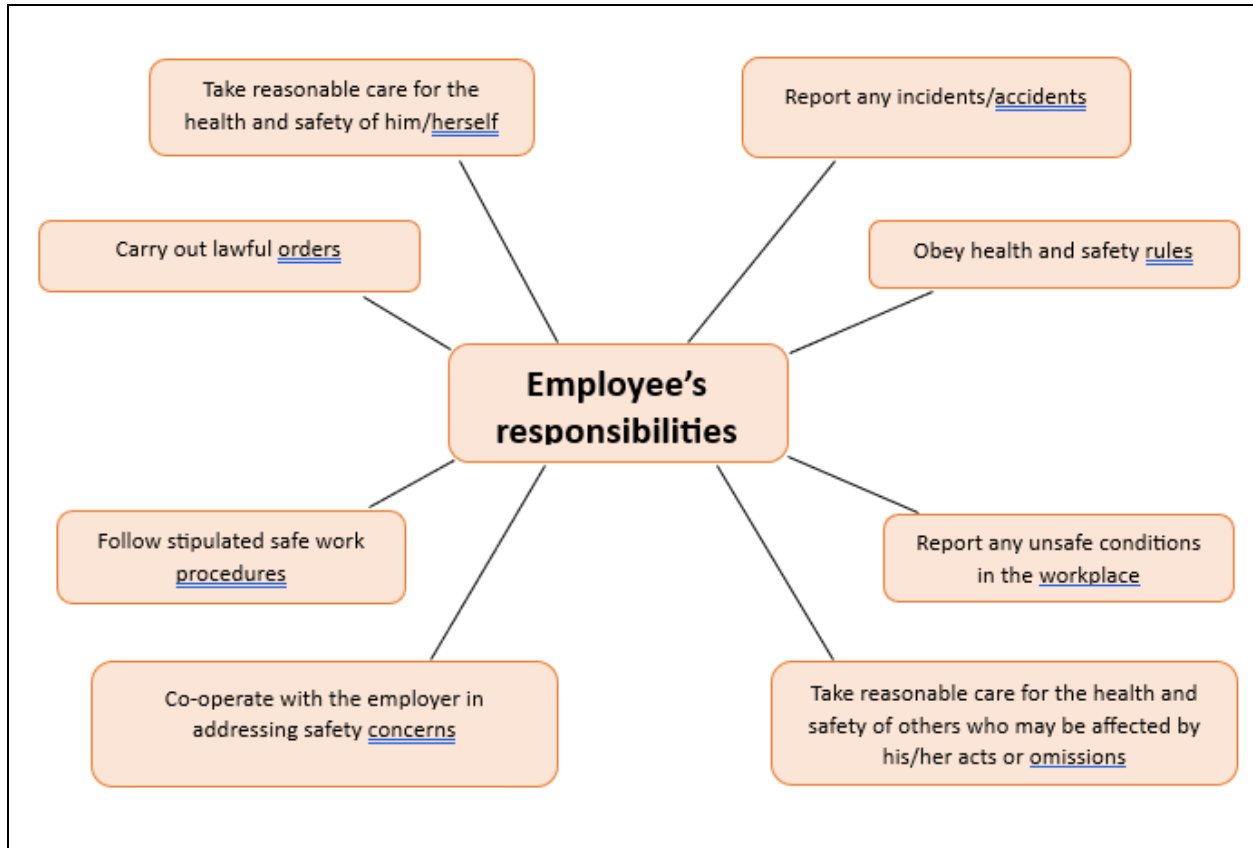


Figure 3: Responsibilities of the employee

3. Unsafe actions and conditions

It is important to identify any hazards in the workplace, assess the associated risks, and take appropriate steps to remove or minimise them. A hazard is defined as a source of or exposure to danger, that can cause injury, illness or death. Hazards are generally considered to be unsafe conditions or unsafe actions. We are now going to go over what is considered unsafe actions and unsafe conditions in the workplace.

3.1 Unsafe actions

There are several actions in the workplace which are regarded as unsafe. These actions are unsafe because they may result in an accident occurring. We shall now go through some of these unsafe actions.

Unsafe actions include, but is not limited to, the following:

1. Failure to use personal protective equipment (PPE).
2. Improper use of PPE.
3. Unsafe placement of tools.
4. Incorrect use of tools and equipment.
5. Unsafe use of tools and equipment.
6. Working on moving equipment.
7. Using defective equipment.
8. Removal of safety devices.
9. Failure to use safety devices.
10. Working too quickly.
11. Operation of equipment without authorization, training and/or qualifications.
12. Using PPE that has been damaged (e.g., safety gloves that have been cut exposing the skin).
13. Eating and drinking in the workplace where the work on e-waste is being done as well as where heavy machinery, tools (electrical and non-electrical) and equipment are being used.



3.2 Unsafe Conditions

Unsafe conditions also play a key role in accidents in the workplace. Unsafe conditions refer to an environment that is hazardous or dangerous and, which, may cause an accident.

Unsafe conditions include, but is not limited to, the following:

1. Insufficient or inadequate guarding of machines.
2. No ventilation or poor ventilation.
3. Wet or slippery floors.
4. Rough floors.
5. No PPE.
6. Disorganised workspace.
7. Overcrowded workspace.
8. Badly planned workspace.
9. Loose hanging clothing, jewellery, and long hair.
10. No lighting or insufficient lighting in the workspace.



4. Safety Rules and Guidelines

We are now going to go over some general safety, basic housekeeping and tool care rules and guidelines. Always follow these rules as they will help protect you and those around you from injury. These rules and guidelines will help you keep the workplace healthy and safe.

4.1 General safety

Here are some general safety rules:

1. Always wear your PPE in the workplace.
2. Always tie up loose hair.
3. Tuck away loose jewellery or do not wear loose jewellery.
4. Tuck away loose hanging clothes.
5. Always wear long pants.
6. Always wear closed shoes.
7. Always wear long sleeves shirts.
8. Never handle the soldering tip with your bare hands. If the soldering tip needs to be replaced, ensure that the soldering iron is unplugged and that the soldering iron tip has cooled down.

4.2 Housekeeping

It is important to keep your workspace clean-clear and without obstructions, because it will help prevent accidents, such as slips and electric shock, from occurring.

The following is a list of some housekeeping rules which you should always obey:

1. Keep the floor clean at all times.
2. Pack away all tools not being used.
3. Pack away tools in their proper place before you go home each day.
4. Clean and do a visual inspection on all tools before returning them to the toolbox.
5. Ensure that a first aid kit is always easily available.
6. Always ensure that you are working in a well-lit area.
7. Always ensure that the area where you are working is well ventilated.
8. Always dry areas and surfaces that are wet or moist.
9. Only use electrical equipment when the surrounding area is completely dry.
10. Always pack away materials that can burn.
11. Always ensure that a fire extinguisher is available.

4.3 Tool and Equipment Care

It is important that you always look after your tools and equipment. A clean tool is a happy tool.

Here are some steps for looking after your tools and equipment:

1. Before and after using your tools and equipment, check that the tools and equipment is not damaged.

2. Use a soldering iron tip cleaner to clean the tip of your soldering iron before and after using it. A clean soldering iron is a happy soldering iron.
3. Check the cables of your equipment regularly for breaks and damages (e.g., check that the cables of the multimeter are not damaged or broken and that the wires inside are not exposed).
4. Always use the correct tool for their intended purpose (e.g., use a Philips screwdriver and not a knife to screw or unscrew a Philips screw).
5. Make sure that every tool and piece of equipment has its own storage place in the workplace and that it is stored in its place when it is not being used.
6. Pack your tools and equipment in a careful manner (e.g., do not throw or drop your tools into a toolbox).
7. When packing away tools that have cables (or extension cords), always loosely coil the cables, and ensure that there are no knots in the cables.
8. When unplugging a tool, always switch the power off at the wall first.
9. Always unplug and store electrical tools that are not being used.
10. Always clean and wipe down your tools and equipment using a dry cloth.
11. Always ensure that your safety goggles are clean and clear before you use them.
12. Always check that your PPE is not compromised before use (e.g., check that your goggles are clean, clear, and not cracked and check that your gloves are not torn).
13. The cartridges in your respirator must be replaced when necessary. If you can smell the soldering fumes while wearing the respirator, replace the filter cartridges.
14. Always check that your hand tools are insulated to prevent electric shock.

5. Reporting accidents and incidents

An accident is an event that results in injury or ill-health, whilst an incident is a near miss event or an undesired circumstance which has the potential to cause injury, ill-health, damage or other loss. Incidents or accidents have unpredictable and harmful results. In accordance with the OHS Act the employer must investigate the cause of an accident/incident and take corrective action to prevent it from happening again.

5.1 Minor accidents/incidents

A minor injury incident involves personal injury that requires some form of treatment but does not result in disability (temporary or permanent), and no workdays are lost. The affected person may need to stop working for a short time, e.g., to receive first aid.

These can be used to report minor injuries in the workplace:

1. **First aid register:** include date, name of injured employee, nature of injury, first aid items used, and name of first aider, when recording details of first aid given for minor injuries.
2. **Recording & investigating of incidents form:** Annexure 1 of the OHS Act is recommended for reporting on incidents.

5.2 Serious accidents/incidents

Section 24 (a) and (b) of the OHS Act addresses serious incidents/accidents. Serious incidents/accidents result in injuries where the affected person required medical treatment other than first aid, and certain types of near miss incidents.

Serious incidents/accidents include:

1. When a person dies.
2. When a person becomes unconscious.
3. When a person loses a limb or part of a limb.
4. When a person is injured/becomes ill or is likely to die or suffer permanent physical defect.
5. When a person is unable to work for 14 days or longer
6. When a 'major incident'/disaster occurs.

A 'major incident' is defined by the OHS Act as: "an occurrence of catastrophic proportions, resulting from the use of plant or machinery, or from activities at a workplace". This would result in the activation of emergency procedures. Major incidents are less likely to occur when repairing and refurbishing e-waste as the activities do not require large machinery.

Section 24 incidents must be reported by the employer to the Department of Employment and Labour (DoEL) Provincial Director within seven (7) days. If not, the employer will be guilty of a criminal offence and will have to pay a penalty. Records for such incidents include the:

1. **Recording & investigating of incidents form:** Annexure 1 of the OHS Act is recommended for reporting on incidents.
2. **Medical records:** where medical treatment was given by a professional medical practitioner.

Records for serious injuries must be kept on file for at least three years.

Remember to always record of minor injuries as they can serve as important evidence in case a minor injury develops later into an unexpected and serious illness or permanent physical defect.

Reference list

Köhly, N. (2018). Health and Safety Guide. Available from: [https://www.ru.ac.za/media/rhodesuniversity/content/safety/documents/training/RU Health and Safety Guide dd 2018-11-12.pdf](https://www.ru.ac.za/media/rhodesuniversity/content/safety/documents/training/RU_Health_and_Safety_Guide_dd_2018-11-12.pdf). Accessed: 25/07/2023.

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Annexure 1: Recording & investigating of incidents form

ANNEXURE 1 OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 OF 1993) REGULATION 9 OF THE GENERAL ADMINISTRATIVE REGULATIONS RECORDING AND INVESTIGATION OF INCIDENTS							
A. RECORDING OF INCIDENT							
1. Name of employer							
4. Date of the incident 5. Time of incident		6. Part of body affected		Head or Neck	Eye	Trunk	
		Hand	Arm		Foot	Leg Internal	
7. Effect on person				Sprains or strains	Contusion or wounds	Fractures	
Amputation		Electric shock				Asphyxiation	
Poisoning Occpat. Disease	8. Expected period	of disablement 0-13 days	2-4 weeks	>4-16 weeks	>16-52 weeks	> 52 weeks or permanent disablement	
Killed							
9. Description of Occupational Disease**							
10. Machine / process involved / type of work performed / exposure							
11. Was incident reported to the Compensation Commissioner and the Provincial Director?							
NO							
* Make a cross in the appropriate square							
12. Was incident reported to the SAPS? (In case of fatality)							
** In case of a hazardous chemical substance, indicate substance exposed to							
B. INVESTIGATION OF THE ABOVE INCIDENT BY A PERSON DESIGNATED THERETO							
1. Name of investigator 2. Date of investigation							
3. Designation of investigation							
4. Short description of incident							
5. Suspected cause of incident							
6. Recommended steps to prevent a recurrence							
..... Signature of the investigator Date							
C. ACTION TAKEN BY THE EMPLOYER TO PREVENT THE RECURRENCE OF A SIMILAR INCIDENT							
..... Signature of the Employer Date							
D. REMARKS BY THE HEALTH AND SAFETY COMMITTEE							
Remarks							