# **LEARNER GUIDE**

# Conduct a continuous risk assessment in a workplace

Unit Standard 120330 Level 3 Credits 4

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# **DOCUMENT CHECKLIST**

Document		√/×
Strategy and alignment Matrix		
Learner Guides		
Learner Formative Assessment	Workbooks	
Summative assessment guide		
Facilitator Guide		
Attendance Register		
Name Tags		
Hand-outs		
Course Evaluation Forms for lea	rners	
Course/Venue Evaluation Forms	for facilitator	
Additional Material		
Other:		
Acknowledgemer	nt of receipt and preparations	
Facilitators Name and Surname		
Facilitators Signature		
Date		

# YOUR ROLE AS FACILITATOR



You, as facilitator, need to ensure that learners have a thorough understanding of the topic presented. Learners must be able to further learning independently and apply their knowledge and skill in the workplace once they have completed the program.

In order to achieve this, you need to have:

### 1. Knowledge of the subject/topic

- ✓ Understand the requirements of the unit standard
- ✓ Be a Subject Matter Expert (SME) or know more than just the basics about the topic
- $\checkmark$  Be able to give examples of how to apply the content in the workplace

#### 2. Knowledge of the workplace

 $\checkmark\,$  Be able to indicate how learners can/should apply their knowledge and skill in the workplace

#### 3. Knowledge of the course content

- ✓ Be familiar with the material, layout and content of the course.
- $\checkmark$  Understand the linkage between the different guides and how they should be used.

### 4. Knowledge and understanding of the methodology

- $\checkmark\,$  Familiarise yourself with the content of the assessment guides and documents for this unit standard.
- ✓ Follow the assessment procedure correctly.
- ✓ Familiarise yourself with the preferred methodology that should be used.
- ✓ Prepare yourself accordingly.

# Training Venue And Training Aid Compliance



### Ensure that the following is in place:

### Facilitator Is In Possession Of:

- ✓ Facilitator Guide,
- ✓ Learner Guide,
- ✓ Assessment Guide
- ✓ Attendance Register for each training day
- ✓ Handouts, if applicable

### Learners Are In Possession Of:

- ✓ Learner Guides
- ✓ Assessment Guides

### **Training Venue Contains:**

- ✓ Dictionaries, if available
- ✓ A chair for each learner
- $\checkmark$  A desk with sufficient seating space for each learner
- ✓ Paper, pens and pencils for all learners
- ✓ A flip chart stand with flip chart sheets
- ✓ A PC for the slide shows
- ✓ Prestik
- ✓ Whiteboard and permanent markers (3 different colours each)
- ✓ Sufficient ventilation or air-conditioning
- $\checkmark$  Schedule of training and relaxation times
- ✓ Name tags for each learner
- ✓ List of classroom conduct, including:
  - Smoke breaks
  - Body breaks
  - Cell phone etiquette
  - ➤ General classroom etiquette

# The Facilitator Guide



It guides you through the duration of the Learning Programme;

As a training aid it contains activities that will assist you in transferring the knowledge and skills as stipulated in the SAQA required specific outcomes and assessment criteria

### How To Use Your Facilitator Guide

The Facilitator Guide contains the essential information to cover the outcomes as stipulated for this Unit Standard. As such, the content of the Learner Guide has to be covered completely.

This learning programme is divided into sections. Each section is preceded by a description of the required outcomes and assessment criteria as contained in the unit standards specified by the South African Qualifications Authority.

These descriptions will define what the learners have to know and be able to do in order to be awarded the credits attached to this learning programme. These credits are regarded as building blocks towards achieving a National Qualification upon successful assessment.

### **Programme Introduction**

The following introductory actions are to be taken upon commencement of the programme:

- ✓ Facilitator him/herself to the learners
- ✓ Let the delegates introduce themselves individually.
- ✓ Give a brief comment after each introduction and welcome the delegate before moving to then next delegate. Give full attention to each delegate as they introduce themselves.
- ✓ Let the participants know what time the breaks are, and for how long. Don't forget lunch time. Tell them where the toilets are and what time you intend to finish.
- ✓ Ensure all administrative tasks such as completion of attendance registers, learner detail forms and the like are completed before the programme commences.

### Transition

- $\checkmark$  Begin with an appropriate activity, such as an icebreaker, a story or a statement.
- ✓ Ask learners to state their expectations of the course and write them down on a flipchart/whiteboard and put up where visible for duration of course.

### State Course Outcomes

- $\checkmark$  Go through the objectives and the content before you proceed with your programme.
- ✓ This learning programme forms a part of the National Certificate Business Administration Services Level 4 and introduces a holistic approach to written communication as an introduction to the Secretarial qualification.

# Group And Individual Activities

A certain level of collective general knowledge can be assumed in any group. Encourage lively discussion in class during group activities. Discussions can take the form of brainstorming if necessary.

Ensure that shy and quiet learners are also drawn into the discussion, as learners will have to learn to start thinking for themselves and taking control of the learning process in order to achieve all the outcomes.

All the conclusions made during group activities have to be noted down by learners in order to achieve all the outcomes. Their notes will form part of formative and summative assessments

Teamwork is important in all the unit standards. Divide the learners into groups and make it clear to them that they have to stay in these groups for the duration of the qualification. They have to learn to cope with conflict and with each other even if they do not get along together, since they will not have any say as to who they will be working with when they find themselves in a working environment.

### **Timelines**



SAQA US ID	UNIT STANDA	RD TITLE	
120330	Conduct a continuous risk assessment in a workplace		
Institutional Learning Duration	Structured Workplace Learning Duration	NQF LEVEL	CREDITS
12 Hours	28 Hours	Level 3	4

### **Course Content**

The course content covers all the basics required for learners to achieve the outcomes, however, at times there is information that learners will have to obtain by themselves.

To this end, a glossary is also not included in the course material. It is expected of learners to compile their own glossaries, which will form part of outcomes for communication unit standards. Please encourage them to start compiling glossaries as soon as possible. The glossaries can be simple: they need only quote the word and the meaning, as long as they understand what it means.

Learners are required to start thinking for themselves and take control of the learning process as soon as possible. To this end, research projects will form part of some assessments.

## **Class Activities**



During and after the initial training the learner will be required to complete a number of class activities. These activities will be both individual and group activities. The activities are numbered and are to be included in the learner's portfolio of evidence. These activities will measure the progress of the learner through the programme. For authenticity reasons these activities must be handwritten, unless indicated otherwise.

Assessment



The process of assessment of competency should be explained in detail to learners upon commencement of course. The following statements should be made:

Attending the training is not sufficient evidence of competence to award a certificate and the credits attached to this programme. Learners are required to undergo assessment in order to prove competence in order to be awarded the credits attached to this programme, eventually leading to a national qualification.

### Explain The Concept 'Competence'

Competence is the ability to perform whole work roles, to the standards expected in employment, in a real working environment.

There are three levels of competence:

- ✓ **Foundational competence**: an understanding of what you do and why
- ✓ **Practical competence**: the ability to perform a set of tasks in an authentic context
- ✓ **Reflexive competence**: the ability to adapt to changed circumstances appropriately and responsibly, and to explain the reason behind the action

Generally speaking, in the past, education and training institutions became accustomed to awarding certificates based on the amount of time spent in a classroom or training room. In addition, learners were assessed by means of an examination that tested memory as opposed to actual competence. This meant that many learners were awarded certificates and even whole qualifications without ever having to demonstrate that they were able to practically apply their knowledge and skills.

Now, based on the principles of the National Qualifications Framework, in order for the learners to receive a certificate of competence and be awarded credits, they are required to provide evidence of their competence by compiling a portfolio of evidence, which will be assessed by a Stanford Business College assessor.

## Explain The Concept 'Portfolio Of Evidence'

A portfolio of evidence is a structured collection of evidence that proves the learner's efforts, progress and achievement in a specific learning area, and demonstrates competence.

### Explain The Assessment Process

Assessment of competence is a process of making judgments about an individual's competence through matching evidence collected to the appropriate national standards. That is why the evidence in the learner's portfolio should be closely linked to the outcomes and assessment criteria of the unit standards against which the learners are being assessed.

Ideally, formative assessments should minimise the need for re-assessment as the assessor and the candidate will agree to a summative assessment only when they both feel the candidate is ready.

However, candidates who are deemed not yet competent on a summative assessment will be allowed to be re-assessed no more than two times.

When learners have to undergo re-assessment, the following conditions will apply:

- ✓ Specific feedback will be given so that candidates can concentrate on only those areas in which they were assessed as not yet competent
- ✓ Re-assessment will take place in the same situation or context and under the same conditions as the original assessment
- $\checkmark$  Only the specific outcomes that were not achieved will be re-assessed

Candidates who are repeatedly unsuccessful will be given guidance on other possible and more suitable learning avenues.

In order for the assessor to assess competence, the portfolio should provide evidence of both knowledge and skills, and of how knowledge and skills were applied in a variety of contexts.

This Candidate's Assessment Portfolio directs the learner in the activities that need to be completed so that competence can be assessed and the credits attached to the programme be awarded.

 $\checkmark$  The assessment requirements for this programme are stated at the beginning of each section.

The right of the candidate to appeal against assessment decisions or practices they regard as unfair. An Appeals and Disputes procedure is in place and communicated to all assessment candidates prior to assessment in order for them to appeal on the basis of:

- ✓ Unfair assessment
- ✓ Invalid assessment
- ✓ Unreliable assessment
- ✓ Unethical practices
- ✓ Inadequate expertise and experience of the assessor

Appeals have to be lodged in writing (Candidate Appeal Form) & submitted to the internal moderator within 48 hours, following the assessment in question. The moderator will consider the appeal & make a decision regarding the granting of a re-assessment. The learner will be informed about the appeal-outcome within 3 days of lodging the appeal. Should the learner not be satisfied with the internal appeal outcome, the learner will be advised of the rights to refer the matter to the Services SETA ETQA.

All the required forms and explanations are included in the assessment guide.

# **Upon Completion Of The Programme**



The facilitator should:

- ✓ Ensure that all learners have completed all Learner Administration documentation, including the Learner Evaluation (of the Facilitator) forms
- ✓ All attendance registers have been completed correctly
- ✓ All Learners are in possession of a:
  - ➤ Learner Guide
  - > Assessment Guide
  - $\succ$  Clear Instructions as to the subsequent activities leading to assessment, moderation and certification



# **PERSONAL INFORMATION**

NAME	
Code	
Telephone (H)	
Telephone (W)	
Cellular	
Learner Number	
Identity Number	

EMPLOYER	
EMPLOYER CONTACT ADDRESS	
Code	
Supervisor Name	
Supervisor Contact Address	
Code	
Telephone (H)	
Telephone (W)	
Cellular	

# INTRODUCTION

### Welcome To The Learning Programme

Follow along in the guide as the training practitioner takes you through the material. Make notes and sketches that will help you to understand and remember what you have learnt. Take notes and share information with your colleagues. Important and relevant information and skills are transferred by sharing!



This learning programme is divided into sections. Each section is preceded by a description of the required outcomes and assessment criteria as contained in the unit standards specified by the South African Qualifications Authority. These descriptions will define what you have to know and be able to do in order to be awarded the credits attached to this learning programme. These credits are regarded as building blocks towards achieving a National Qualification upon successful assessment and can never be taken away from you!

## Programme Methodology



The programme methodology includes facilitator presentations, readings, individual activities, group discussions and skill application exercises.

Know what you want to get out of the programme from the beginning and start applying your new skills immediately. Participate as much as possible so that the learning will be interactive and stimulating.

The following principles were applied in designing the course:

- ✓ Because the course is designed to maximise interactive learning, you are encouraged and required to participate fully during the group exercises
- ✓ As a learner you will be presented with numerous problems and will be required to fully apply your mind to finding solutions to problems before being presented with the course presenter's solutions to the problems
- ✓ Through participation and interaction the learners can learn as much from each other as they do from the course presenter
- ✓ Although learners attending the course may have varied degrees of experience in the subject matter, the course is designed to ensure that all delegates complete the course with the same level of understanding

✓ Because reflection forms an important component of adult learning, some learning resources will be followed by a self-assessment which is designed so that the learner will reflect on the material just completed.

This approach to course construction will ensure that learners first apply their minds to finding solutions to problems before the answers are provided, which will then maximise the learning process which is further strengthened by reflecting on the material covered by means of the self-assessments.

### **Different Role Players In Delivery Process**

- ✓ Learner
- ✓ Facilitator
- ✓ Assessor
- ✓ Moderator

# What Learning Material You Should Have

This learning material has also been designed to provide the learner with a comprehensive reference guide.

It is important that you take responsibility for your own learning process; this includes taking care of your learner material. You should at all times have the following material with you:

Learner Guide	This learner guide is your valuable possession:
and s	This is your textbook and reference material, which provides you with all the information you will require to meet the exit level outcomes.
The	During contact sessions, your facilitator will use this guide and will facilitate the learning process. During contact sessions a variety of activities will assist you to gain knowledge and skills.
	Follow along in the guide as the training practitioner takes you through the material. Make notes and sketches that will help you to understand and remember what you have learnt. Take and share information with your colleagues. Important and relevant information and skills are transferred by sharing!
	This learning programme is divided into sections. Each section is preceded by a description of the required outcomes and assessment criteria as contained in the unit standards specified by the South African Qualifications Authority. These descriptions will define what you have to know and be able to do in order to be awarded the credits attached to this learning programme. These credits are regarded as building blocks towards achieving a National Qualification upon successful assessment and can never be taken away from you!

Formative Assessment Workbook	The Formative Assessment Workbook supports the Learner Guide and assists you in applying what you have learnt.
	The formative assessment workbook contains classroom activities that you have to complete in the classroom, during contact sessions either in groups or individually.
	You are required to complete all activities in the Formative Assessment Workbook.
	The facilitator will assist, lead and coach you through the process.
	These activities ensure that you understand the content of the material and that you get an opportunity to test your understanding.

# **Different Types Of Activities You Can Expect**

To accommodate your learning preferences, a variety of different types of activities are included in the formative and summative assessments. They will assist you to achieve the outcomes (correct results) and should guide you through the learning process, making learning a positive and pleasant experience.



The table below provides you with more information related to the types of activities.

Types of Activities	Description	Purpose
Knowledge Activities	You are required to complete these activities on your own.	These activities normally test your understanding and ability to apply the information.
Skills Application Activities	You need to complete these activities in the workplace	These activities require you to apply the knowledge and skills gained in the workplace
Natural Occurring Evidence	You need to collect information and samples of documents from the workplace.	These activities ensure you get the opportunity to learn from experts in the industry. Collecting examples demonstrates how to implement knowledge and skills in a practical way

# Learner Administration



### Attendance Register

You are required to sign the Attendance Register every day you attend training sessions facilitated by a facilitator.

### **Programme Evaluation Form**

On completion you will be supplied with a "Learning programme Evaluation Form". You are required to evaluate your experience in attending the programme.

Please complete the form at the end of the programme, as this will assist us in improving our service and programme material. Your assistance is highly appreciated.

### **Assessments**

The only way to establish whether a learner is competent and has accomplished the specific outcomes is through the assessment process. Assessment involves collecting and interpreting evidence about the learners' ability to perform a task.

To qualify and receive credits towards your qualification, a registered Assessor will conduct an evaluation and assessment of your portfolio of evidence and competency.

This programme has been aligned to registered unit standards. You will be assessed against the outcomes as stipulated in the unit standard by completing assessments and by compiling a portfolio of evidence that provides proof of your ability to apply the learning to your work situation.



### How will Assessments commence?

### Formative Assessments

The assessment process is easy to follow. You will be guided by the Facilitator. Your responsibility is to complete all the activities in the Formative Assessment Workbook and submit it to your facilitator.

### Summative Assessments

You will be required to complete a series of summative assessments. The Summative Assessment Guide will assist you in identifying the evidence required for final assessment purposes. You will be required to complete these activities on your own time, using real life projects in your workplace or business environment in preparing evidence for your Portfolio of Evidence. Your Facilitator will provide more details in this regard.

To qualify and receive credits towards your qualification, a registered Assessor will conduct an evaluation and assessment of your portfolio of evidence and competency.

### Learner Support

The responsibility of learning rests with you, so be proactive and ask questions and seek assistance and help from your facilitator, if required.



Please remember that this Skills Programme is based on outcomes based education principles which implies the following:

- ✓ You are responsible for your own learning make sure you manage your study, research and workplace time effectively.
- ✓ Learning activities are learner driven make sure you use the Learner Guide and Formative Assessment Workbook in the manner intended, and are familiar with the workplace requirements.
- ✓ The Facilitator is there to reasonably assist you during contact, practical and workplace time for this programme – make sure that you have his/her contact details.
- ✓ You are responsible for the safekeeping of your completed Formative Assessment Workbook and Workplace Guide
- ✓ If you need assistance please contact your facilitator who will gladly assist you.
- ✓ If you have any special needs please inform the facilitator

# Learner Expectations

Please prepare the following information. You will then be asked to introduce yourself to the instructor as well as your fellow learners



Your name:
The organisation you represent:
Your position in organisation:
What do you hope to achieve by attending this course / what are your course expectations?

# **UNIT STANDARD 120330**

# Title

Conduct a continuous risk assessment in a workplace

# NQF Level

3

# Credits

4

# Purpose Of The Unit Standard

Persons credited with this unit standard will be able to

- ✓ Explain the legal and specified requirements for conducting continuous risk assessments
- $\checkmark$  Prepare to conduct a continuous risk assessment
- $\checkmark$  Conduct a continuous risk assessment
- $\checkmark$  Initiate remedial action and follow up on Continuous Risk Assessment

# Learning Assumed To Be In Place

It is assumed that the learner has the following knowledge and skills:

- ✓ Communication at NQF Level 2.
- ✓ Mathematical Literacy at NQF Level 2

## Unit Standard Range

NB: All the Specific Outcomes and Assessment Criteria are assessed in accordance with legal and specified requirements and - where applicable - consequences to health and safety.

Specified requirements include legal and site-specific requirements and are contained in one or more of the following documents:

Legal:

- ✓ Mine Health and Safety Act
- $\checkmark$  Occupational Health and Safety Act
- ✓ Chief Inspector of Mines' Directives

Site-specific:

- ✓ Health and safety agreements
- ✓ Codes of practice
- ✓ Standards
- ✓ Standards task procedures
- ✓ Risk Assessments procedures
- ✓ Occupational Health and Safety Risk Management Programme
- ✓ Managerial Instructions
- ✓ Mine Standard Procedures
- ✓ List of Recorded OH&S Risks
- ✓ Working Guides / Permits
- ✓ MSDS
- ✓ Equipment and Materials Specifications

## Specific Outcomes And Assessment Criteria

**Specific outcome 1**: Explain the legal and specified requirements for conducting continuous risk assessments

### Assessment criteria

- ✓ The continuous risk assessment process is explained
- ✓ The relevant documentation required for conducting a continuous risk assessment is named. Types of documentation include, but are not limited to:
  - Pre use checklists
  - Planned task observations forms
  - > Critical parts inspection form
  - Structured inspection checklists
  - Mine Standards
  - > Procedures
  - Task directives
  - > Analyses
- ✓ The relevant hazards and risks likely to be encountered during a specific continuous risk assessment are named
- ✓ The importance of conducting continuous risk assessment in a manner that fosters teamwork and avoids conflict is explained

**Specific outcome 2:** Prepare to conduct a continuous risk assessment

#### Assessment criteria

- ✓ Appropriate documentation appropriate is selected
- ✓ Various physical and environmental conditions which could exist are evaluated
- ✓ The persons, tools and the materials required to conduct the continuous risk assessment are verified as fit for purpose and available
- ✓ Consequences for not conforming to legal and specified requirements in preparing for risk assessment are explained

Specific outcome 3: Conduct a continuous risk assessment

#### Assessment criteria

- ✓ The prevailing conditions at the scene of the incident are determined by using accepted Hazard identification is conducted correctly. Significant hazards are systematically identified, utilising the elected hazard identification technique. Techniques include, but are not limited to:
  - Pre use checklists
  - Planned task observations
  - Critical parts inspections
  - Structured inspections
- ✓ Relevant documentation is completed

#### Specific outcome 4: Initiate remedial action and follow up on Continuous Risk Assessment

#### Assessment criteria

- ✓ Remedial action for hazards is implemented accordingly
- ✓ Follow-up action on continuous risk assessments is implemented accordingly
- ✓ The consequences of non-compliance to the procedures for initiating remedial action and follow-up on continuous risk assessment are explained

### CCFO

- ✓ Solve problems. By doing the continuous risk assessment, the individual will be required to embark on remedial action, which requires problem solving
- ✓ Work effectively with others as a member of a team / group / organization / community. The individual will have to take reasonable care of oneself and other's safety in the workplace, which shows concern for entire team and not only oneself
- ✓ Organise and manage oneself and one's activities responsibly and effectively. As part of the team, the individual will take into account the activities around him/her and ensure that his/her actions are complementary
- ✓ Collect, organize and critically evaluate information. When doing the continuous risk assessment, the individual will have to collect and organise information in such a way that he/she will be able to evaluate it and make decisions
- Communicate effectively using visual, mathematics and language skills in the modes of oral and written presentations. Remedial action resulting from doing the continuous risk assessment, must be communicated to all relevant persons
- ✓ Use science and technology effectively and critically (showing responsibility toward the environment and health of others). Science and technology are used at the appropriate level, e.g. in interpreting data
- ✓ Demonstrate an understanding of the world as a set of related systems. He/she must understand the impact of his/her or others' actions in the overall objectives of the workplace

# **MODULE 1: REQUIREMENTS**

## Specific Outcome 1

Explain the legal and specified requirements for conducting continuous risk assessments

### Assessment Criteria

- ✓ The continuous risk assessment process is explained
- ✓ The relevant documentation required for conducting a continuous risk assessment is named. Types of documentation include, but are not limited to:
  - ? Pre use checklists
  - ? Planned task observations forms
  - ? Critical parts inspection form
  - ? Structured inspection checklists
  - ? Mine Standards
  - ? Procedures
  - ? Task directives
  - ? Analyses
- ✓ The relevant hazards and risks likely to be encountered during a specific continuous risk assessment are named
- ✓ The importance of conducting continuous risk assessment in a manner that fosters teamwork and avoids conflict is explained

# The Need For Safety, Health And Environmental Protection

# **Early Days**

Since the existence of man, he has used natural objects as tools to assist him in performing tasks he alone was not capable of doing e.g. a stone to crush a hard seed or a branch of a tree to dislodge a large rock. This practice allowed man to do much more in a much shorter period of time.

At the same time, however, man also discovered that working with these tools could cause injury and even death. Some practices caused disease due to the material that was handled or the environment where the work was undertaken. In his book "River God", Wilbur Smith describes the activities of sculptors working inside a burial tomb. Many of them died as result of the clogging of their lungs, due to dust inhalation. This phenomenon was attributed to the intervention of the gods, as it could not be understood or explained.



Being the resourceful being he is, man quickly learned how to minimise or avoid injury and fatalities by devising methods for using tools more safely under safer conditions. This can be seen as the beginning of basic health- and safety management.

The invention of the wheel made man mobile and new tools and operating procedures were developed to cope with the demand created by new inventions and the use thereof.

For centuries man slowly developed new tools and machines, enabling him to achieve even more than what was ever possible. In the process he used existing tools to make and develop new ones.

Certain trades were established and standards were set to promote uniformity. Safe practices became standard practices.

In society the introduction of innovations such as running water on tap and (for the time) hygienic ablution facilities contributed substantially to the health and prosperity of man in general.

Through activities such as farming and mining, man was starting to impact on the environment.



# The "Industrial Revolution" And After

The invention of the steam engine, and the resultant "Industrial Revolution" created endless opportunities for technological advancement on all fronts. The steam engine introduced an era of demand for and advancement in the field of technology never experienced.

Many factories were established and soon industrial cities, with the infrastructure to support industry, such as harbours, railway stations, etc., were developed. Factories needed workers and thousands of people flocked to these cities in search of a better living. Unfortunately though, the working class majority of workers were subjected to the worst possible working condition for minimal wages. Extensive abuse of cheap child labour was standard practice and many children died an early death in the name of technology.

As new inventions were known about how the conditions. This resulted working conditions, often and sometimes

Together with poor working facilities with little or no public removal, etc., contributed to a

introduced to industry, little or nothing was invention would perform under working in many of them failing when submitted to causing injury or death to the operator, bystanders, in the process.

conditions and wages, overcrowded housing utilities like sewage and sanitation, refuse very sorry state of affairs.

Unhygienic living conditions allowed diseases to spread with disastrous results. Harmful byproducts from industry, like smoke, poisonous gases and toxic chemicals released back into the air and rivers, further contributed to already poor health conditions.

Technology was having a greater impact on the environment. Unfortunately the enormity of the effect that technology has on the environment was only realised much later, in some cases



 $\sim$ 

too late, as the effect on the environment is often not observed before substantial damage has been done to the environment. Worse still, in some cases these effects were, and still are, ignored and the environment is further exploited for the benefit of mankind.

Together with this technological advancement and the consequent misery, came the need for more effective measures to prevent injury and/or disease. It eventually dawned on employers that they had to treat employees humanely to get the best results from them.

Employers had to motivate the workforce to achieve higher levels of effectiveness, gaining their trust and cooperation in the process. One way to achieve this was to improve working and living conditions to mutually negotiated and acceptable standards.

This process included the improvement of health and safety standards. Through ongoing research, health and safety standards have been implemented and adapted to meet industry demands.

A lot of effort and money goes into the study of the effect advancement on the environment. Research has shown activity has in many cases had devastating effects on the Measures to protect the environment against the negative exploitation need to be devised and adapted according to changing need thereof. of technological that industrial environment. effects of human the ever

environmental

In the following sections we will discuss safety, health and protection procedures and see how they are implemented.

# Legal And Organisational Requirements

In order to discuss the requirements for investigation of workplace incidents, we first have to discuss what the law says about this.

## Standards

In terms of Section 1(1) of the Act "standard" means any provision occurring in a specification, compulsory specification, code of practice or standard method as defined in section I of the Standards Act, 1993 (Act No. 29 of 1993).

# Note Standards can also be defined as the "minimum requirement" against which performance is measured.

Most of the standards used in industry in South Africa are set by the South African Bureau of Standards (SABS) e.g. "SABS 0177: Part II" means the South African Bureau of Standards' code of practice entitled Fire Resistance Test For Building Elements, SABS 0177: Part II – 1981. This code of practice will dictate the minimum requirements in terms of fire resistance to which building elements must conform.

The following section deals with statutory rights, responsibilities and liability regarding safety, health and the environment in the workplace

# The Constitution Of The Rsa – Act 108, 1996

### Rights In The Constitution Of The Rsa – Act 108, 1996

According to the "Bill of Rights" (Chapter 2) of "The Constitution of the Republic of South Africa, Act 108 of 1996", everyone has the right to fair labour practices (which include safety procedures) and to a safe and healthy environment, protected by measures that:

- ✓ prevent pollution and ecological degradation;
- ✓ promote conservation; and
- ✓ secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

# **Occupational Health And Safety Act 85, 1993**

Where the Constitution enshrines our rights pertaining to health and safety, the Occupational Health and Safety Act 85, 1993, as amended (OHS Act), and other relevant legislation prescribes the different responsibilities and liabilities of both the employer and the employee.

### The Purpose Of The Act

✓ 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.

### Definitions

Following are some definitions from the OHS Act:

"In this Act, unless the context otherwise indicates -

- ✓ "accident" means an accident arising out of and in the course of an employee's employment and resulting in a personal injury, illness or the death of the employee.
- ✓ "chief executive officer", in relation to a body corporate or an enterprise conducted by the State, means the person who is responsible for the overall management and control of the business of such body corporate or enterprise.
- ✓ "danger" means anything which may cause injury or damage to persons or property.
- ✓ "employee" means, subject to the provisions of subsection (2), any person who is employed by or works for an employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person.
- ✓ "employer" means, subject to the provisions of subsection (2), any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him, but excludes a labour broker as defined in section I (1) of the Labour Relations Act, 1956 (Act No. 28 of 1956).
- ✓ "hazard" means a source of or exposure to danger.
- $\checkmark$  "health and safety committee" means a committee established under section 19.
- ✓ "health and safety equipment" means any article or part thereof which is manufactured, provided or installed in the interest of the health or safety of any person.
- ✓ "health and safety representative" means a person designated in terms of section 17 (1).
- ✓ "health and safety standard" means any standard, irrespective of whether or not it has the force of law, which, if applied for the purposes of this Act, will in the opinion of the Minister promote the attainment of an object of this Act.
- ✓ "healthy" means free from illness or injury attributable to occupational causes.
- $\checkmark$  "incident" means an incident as contemplated in section 24 (1).
- ✓ "inspector" means a person designated under section 28.
- ✓ "machinery" means any article or combination of articles assembled, arranged or connected and which is used or intended to be used for converting any form of energy to performing work, or which is used or intended to be used, whether incidental thereto or not, for developing, receiving, storing, containing, confining, transforming, transmitting, transferring or controlling any form of energy.
- ✓ "occupational health" includes occupational hygiene, occupational medicine and biological monitoring.
- ✓ "occupational hygiene" means the anticipation, recognition, evaluation and control of conditions arising in or from the workplace, which may cause illness or adverse health effects to persons.

- ✓ "plant" includes fixtures, fittings, implements, equipment, tools and appliances, and anything which is used for any purpose in connection with such plant.
- ✓ "premises" includes any building, vehicle, vessel, train or aircraft; "prescribed" means prescribed by regulation.
- ✓ "properly used" means used with reasonable care, and with due regard to any information, instruction or advice supplied by the designer, manufacturer, importer, seller or supplier."
- ✓ "reasonably practicable" means practicable having regard to:
  - > the severity and scope of the hazard or risk concerned;
  - the state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk;
  - the availability and suitability of means to remove or mitigate that hazard or risk; and
  - the cost of removing or mitigating that hazard or risk in relation to the benefits deriving therefrom.
- ✓ "regulation" means a regulation made under section 43.
- ✓ "risk" means the probability that injury or damage will occur.
- ✓ "safe" means free from any hazard.
- ✓ "substance" includes any solid, liquid, vapour, gas or aerosol, or combination thereof.
- ✓ "this Act" includes any regulation.
- ✓ "user", in relation to plant or machinery, means the person who uses plant or machinery for his own benefit or who has the right of control over the use of plant or machinery, but does not include a lessor of, or any person employed in connection with, that plant or machinery.
- ✓ "work" means work as an employee or as a self-employed person, and for such purpose an employee is deemed to be at work during the time that he is in the course of his employment, and a self-employed person is deemed to be at work during such time as he devotes to work as a self-employed person.
- ✓ "workplace" means any premises or place where a person performs work in the course of his employment.

# Responsibilities

### **Employer Responsibilities**

### General Duties Of Employers To Their Employees

In terms of Section 8 of the Act:

Every employer shall provide and maintain, as far as is reasonably practicable, a working environment that is **safe and without risk** to the health of his employees.

### The Matters To Which These Duties Refer Include:

- ✓ The provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, are safe and without risks to health.
- ✓ Taking steps to eliminate or minimise any hazard or potential hazard to the safety or health of employees, before resorting to personal protective equipment.
- Ensuring the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances.





- ✓ Establishing what hazards to the health or safety of persons exist, what precautionary measures should be taken with respect to such hazard and providing the necessary means to apply such precautionary measures.
- ✓ Providing information, instructions, training and supervision necessary to ensure the health and safety at work of his employees.
- ✓ Not permitting any employee to do any work unless the prescribed precautionary measures have been taken.
- ✓ Taking all necessary measures to ensure that the requirements of this Act are complied with by every person in his employment or on premises under his control where plant or machinery is used.
- $\checkmark$  Enforcing such measures in the interest of health and safety.
- ✓ Ensuring that work is performed under supervision of a person who will ensure that precautionary measures taken by the employer are implemented.
- ✓ Inform employees regarding the scope of their authority. (Refer to Section 37 of the Act.)

### Duty To Inform

In terms of Section 13 of the Act:

Employers must -

- ✓ Inform employees of the hazards to his health and safety attached to any work which he has to perform, as well as the precautionary measures which should be taken and observed with respect to those hazards.
- ✓ Inform the health and safety representatives concerned beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector.
- ✓ Inform a health and safety representative as soon as reasonably practicable of the occurrence of an incident in the workplace or section of the workplace for which such representative has been designated.

### **Employee Responsibilities**

### General Duties Of Employees At Work

In terms of Section 14 of the Act:

All employees must:

- ✓ Take reasonable care for the health and safety of himself and of other persons who may be affected by his acts or omissions.
- ✓ Cooperate with his employer with regards to any duty or requirement imposed on his employer by this Act, to enable that duty or requirement to be performed or complied with.



- ✓ Carry out any lawful order given to him, and obey the health and safety rules and procedures laid down by his in the interest of health or safety.
- ✓ Report any situation which is unsafe or unhealthy to his employer or to the health and safety representative for his workplace or section thereof, as the case may be, who shall report it to the employer.
- ✓ Report any incident which may affect his health or which has caused an injury to himself to his employer or to his health and safety representative, not later than the end of the particular shift during which the incident occurred, unless the circumstances were such that the reporting of the incident was not possible, in which case he shall report the incident as soon as practicable thereafter.

### Duty Not To Interfere With, Damage Or Misuse Things

In terms of Section 15 of the Act:

✓ No person shall intentionally or recklessly interfere with, damage or misuse anything which is provided in the interest of health or safety.

Do you as employee carry out your responsibilities as described above? Note your comment:

# Liabilities

### Employee

### Offences, Penalties And Special Orders Of Court

In terms of Section 38(1)(p) of the Act:

Any person who -

Willfully or recklessly does anything at a workplace which threatens the health or safety of any person, shall be guilty of an offence and on conviction be liable to a fine not exceeding R50000 or to imprisonment for a period not exceeding one year or to both such fine and such imprisonment.

# Employers

### Offences, Penalties And Special Orders Of Court

In terms of Section 38(2) of the Act:

"Any employer who does or omits to do an act, thereby causing any person to be injured at a workplace, or, in the case of a person employed by him, to be injured at any place in the course of his employment, or any user who does or omits to do an act in connection with the use of plant or machinery, thereby causing any person to be injured, shall be guilty of an offence if that employer or user, as the case may be, would in respect of that act or omission have been guilty of the offence of culpable homicide had that act or omission caused the death of the said person, irrespective of whether or not the injury could have led to the death of such person, and on conviction be liable to a fine not exceeding R100 000 or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment."

# **Other Legal Requirements**

### Inspectors

### Designation Of Inspectors By Minister

In terms of Section 28 of the Act:



- ✓ The Minister may designate any person as an inspector to perform the functions assigned to an inspector by this Act.
- Each designated inspector must have a certificate signed by or on behalf of the Minister, stating that he has been designated as an inspector.
- $\checkmark$  Inspectors may be required to produce such a certificate on demand during performance of their functions under this Act.

### Functions Of Inspectors

In terms of Section 29 of the Act:

An inspector may, for the purposes of this Act -

- $\checkmark$  Without previous notice, at all reasonable times enter any workplace.
- $\checkmark$  Question any person in the workplace on any matter to which this Act relates.
- ✓ Require from any person in possession or control of a book, record or other document on or in the workplace, to produce to him such book, record or other document.
- ✓ Examine any such book, record or other document or make a copy thereof or an extract therefrom.
- $\checkmark\,$  Require from such a person an explanation of any entry in such book, record or other document.

- ✓ Inspect any article, substance, plant or machinery which is used in the workplace, or any work performed, or any condition prevalent in the workplace. He may also remove for examination or analysis any article, substance, plant or machinery or a part or sample thereof.
- ✓ Seize any such book, record or other document or any such article, substance, plant or machinery or a part or sample thereof which in his opinion may serve as evidence at the trial of any person charged with an offence under this Act or the common law.
- ✓ The employer may make copies of documents before such seizure.
- ✓ Direct any employer, employee or user, including any former employer, employee or user, to appear before him on any matter to which this Act relates.
- $\checkmark$  Perform any other function as may be prescribed.

An interpreter, a member of the South African Police or any other assistant may, when required by an inspector, accompany him when he performs his functions under this Act. For the purposes of this Act an inspector's assistant shall, while he acts under the instructions of an inspector, be deemed to be an inspector.

When an inspector enters any workplace the employer and employees performing any work must at all times provide the inspector with facilities to enable him and his assistant (if any) to perform effectively and safely his or their functions under this Act.

When an inspector removes or seizes any article, substance, plant, machinery, book, record or other document he must issue a receipt to the owner or person in control thereof.

### Special Powers Of Inspectors

In terms of Section 30 of the Act:

Inspectors may serve the following documents on employers, should he feel that the measures implemented by the employer do not conform to prescribed standards:

- ✓ Prohibition notice This forbids anyone to operate certain machinery, work in a certain area or perform a task in a certain manner. The inspector may also isolate a workplace or machine(s).
- ✓ Improvement notice Notice is given in writing to the employer as to what steps are to be taken to remedy the problem.
- ✓ Non-compliance notice This directs an employer to appear at an enquiry to investigate alleged non-compliance with the requirements of the Act.

Should an employer not be happy with the actions of the inspector, he may appeal to the Chief Inspector in writing within 60 days.

### Health And Safety Representatives

In terms of Section 17 of the Act:

- ✓ Employers, who employ more than 20 employees at any workplace, must appoint health and safety representatives in writing for such workplace, or for different sections thereof.
- An employer and the employee representatives or employees, where there are no such representatives, must consult in good faith regarding the election, period of office and subsequent designation of health and safety representatives. If such consultation fails, the matter shall be referred for arbitration to a person mutually agreed upon, whose decision shall be final.
- ✓ Only full-time employees, who are acquainted with conditions and activities at that workplace, will be eligible for designation as health and safety representatives for that workplace.
- The number of health and safety representatives for a workplace or section thereof shall in the case of shops and offices be at least one health and safety representative for every 100 employees or part thereof, and in the case of all other workplaces at least one health and safety representative for every 50 employees or part thereof: Employees working another workplace than that



where they ordinarily report for duty, shall be deemed to be working at the workplace where they report for duty.

- ✓ Inspectors of the Department of Labour (DoL) may direct employers in writing to increase the number of health and safety representatives if they feel that, under certain circumstances, the prescribed number is not adequate.
- ✓ All activities in connection with the activities and training of health and safety representatives shall be performed during ordinary working hours, and any time reasonably spent by any employee in this regard shall for all purposes be deemed to be time spent by him in the carrying out of his duties as an employee.

#### Functions Of Health And Safety Representatives

In terms of Section 18 of the Act:

A health and safety representative may perform the following functions in respect of the workplace or section of the workplace for which he has been designated, namely-

- ✓ Review the effectiveness of health and safety measure.
- ✓ Identify potential hazards and major incidents at the workplace.
- ✓ Examine the causes of incidents at the workplace.
- ✓ Investigate complaints by any employee relating to that employee's health or safety at work.
- ✓ Make representations to the employer or a health and safety committee on matters arising from the above.
- ✓ Make representations to the employer on general matters affecting the health or safety of the employees at the workplace.
- ✓ Inspect the workplace with a view to the health and safety of employees, at times agreed upon with the employer, who may be present during the inspection. The employer must be given reasonable notice of such inspections.
- ✓ Participate in consultations with inspectors at the workplace and accompany inspectors on inspections of the workplace.
- ✓ Receive information from inspectors as contemplated in section 36.
- ✓ Attend meetings of the health and safety committee of which he is a member, in connection with any of the above functions.

#### Health And Safety Committees

In terms of Section 19 of the Act:

- Employers must establish one or more health and safety committees where two or more health and safety representatives have been designated, and, at every meeting of such a committee, consult with the committee on measures to ensure the health and safety of his employees at work.
- ✓ Nominees on a health and safety committee designated in writing by the employer for a Health and safety representatives must be committee for the period of their
  ✓ Health and safety committee meetings must

once every three months, at a time and



shall be specific period. members of the designation.

be held at least place

determined by the committee. Under certain circumstances a DoL inspector may in writing direct a safety committee to hold a meeting.

- ✓ A health and safety committee may appoint advisory members with particular knowledge of health or safety matters. These advisory members will have no voting rights.
- ✓ Inspectors of the DoL may direct employers in writing to increase the number of safety committees if they feel that, under certain circumstances, the prescribed number is not adequate.

#### Functions Of Health And Safety Committees

In terms of Section 20 of the Act:

- ✓ A health and safety committee may make recommendations to the employer or an inspector regarding any matter affecting the health or safety of persons at the workplace, discuss and report to an inspector on any incident causing injury or death at the workplace.
- ✓ A health and safety committee must keep record of recommendations made to an employer and of any report made to an inspector in terms of the above.

### Employers must take the prescribed steps to ensure that a health and safety committee complies with the provisions of the Act.

We have now discussed the OHS Act and what the Act prescribes. The Act prescribes what rights, responsibilities and liabilities employers and employees have in terms of the Act.

# Regulations

Note: The Act tells us WHAT to do and not to do in terms of health and safety matters. The details of HOW to do and not to do are prescribed in regulations, which form part of the Act.

In terms of Section 43 of the Act, the Minister of Manpower can make regulations as to any matter which, in the opinion of the Minister, are necessary and in the interest of the health and safety of people at work. These regulations dictate specific standard practices and procedures to specific sectors of trade and industry.

# **Other Legislation**

### Other Relevant Legislation Includes:

- ✓ Road Traffic Act 93, 1996.
- ✓ Mine Health and Safety Act 29, 1996.
- ✓ Compensation for Occupational Injuries and Diseases Act 130, 1993. (COIDA)
- ✓ Environmental Conservation Act 73, 1989.
- ✓ Water Act 54, 1956 and Water Amendment Act 1993.
- ✓ Smoking Act 12, 1999.
- ✓ National Environmental Management Act 107, 1998.
- ✓ Atmospheric Pollution Prevention Act 45, 1965.

### Directives, Codes Of Practice And Other Site Specific Requirements

- ✓ Chief Inspector of Mines' Directives
- ✓ Health and safety agreements
- ✓ Codes of practice
- ✓ Standards
- ✓ Standards task procedures
- ✓ Risk Assessments procedures
- ✓ Occupational Health and Safety Risk Management Programme
- ✓ Managerial Instructions
- ✓ Mine Standard Procedures
- ✓ List of Recorded OH&S Risks
- ✓ Working Guides / Permits
- ✓ MSDS



✓ Equipment and Materials Specifications

Note: For purposes of this training intervention, we will focus mainly on the OHS Act and refer to relevant legislation where necessary.

# Summary Of Legal Requirements

Let's start off by looking at the investigation from the law's point of view according to the Health And Safety Act:

## **Ohs Act**

### Functions Of Health And Safety Committees

In terms of Section 20 of the Act:

- ✓ A health and safety committee may make recommendations to the employer or an inspector regarding any matter affecting the health or safety of persons at the workplace, discuss and report to an inspector on any incident causing injury or death at the workplace.
- ✓ A health and safety committee must keep record of recommendations made to an employer and of any report made to an inspector in terms of the above.

### General Duties Of Employees At Work

### In terms of Section 14 of the Act:

All employees must:

✓ Report any incident which may affect his health or which has caused an injury to himself to his employer or to his health and safety representative, not later than the end of the particular shift during which the incident occurred, unless the circumstances were such that the reporting of the incident was not possible, in which case he shall report the incident as soon as practicable thereafter.

In terms of Section 13 of the Act:

Employers must -

✓ Inform a health and safety representative as soon as reasonably practicable of the occurrence of an incident in the workplace or section of the workplace for which such representative has been designated.

Employees and employers must report workplace incidents to the health and safety representative

### In terms of Section 20 of the Act:

20. Functions of health and safety committees-. (1) A health and safety committee-

(a) may make recommendations to the employer or, where the recommendations fail to resolve the matter, to an inspector regarding any matter affecting the health or safety of persons at the workplace or any section thereof for which such committee has been established;

(b) shall discuss any incident at the workplace or section thereof in which or in consequence of which any person was injured, became ill or died, and may in writing report on the incident to an inspector;

and

inspector shall submit a written report thereon, together with all relevant statements, documents and information gathered by him, to the attorney general within whose area of jurisdiction such incident occurred and he shall at the same time submit a copy of the report, statements and documents to the chief inspector.
(3) Upon receipt of a report referred to in subsection (2), the attorney-general shall deal therewith in accordance with the provisions of the Inquests Act, 1959 (Act No. 58 of 1959), or the Criminal Procedure Act, 1977 (Act No. 51 of 1977), as the case may be.

(4) An inspector holding an investigation shall not incur any civil liability by virtue of anything contained in the report referred to in subsection (2). \*.

Meaning: the inspector holding the investigation will not be held liable for any legal action against him/her for the contents of the report.

## In terms of Section 32 of the Act:

32. Formal inquiries - (1) The chief inspector may, and he shall when so requested by a person producing prima facie evidence of an offence, direct an inspector to conduct a formal inquiry into any incident which has occurred at or originated from a workplace or in connection with the use of plant or machinery which has resulted, or in the opinion of the chief inspector could have resulted, in the injury, illness or death of any person.

Prima facie means at first appearance or at first face. It is used in modern legal English to signify that on first examination, a matter appears to be self-evident from the facts. In common law jurisdictions, prima facie denotes evidence which – unless rebutted – would be sufficient to prove a particular proposition or fact. The term is used similarly in academic philosophy.

(2) For the purposes of an inquiry referred to in subsection (1) an inspector may subpoena any person to appear before him on a day and at a place specified in the subpoena and to give evidence or to produce any book, document or thing which in the opinion of the inspector has a bearing on the subject of the inquiry.

A subpoena is a writ issued by a government agency that has authority to compel testimony by a witness or production of evidence, the agency most often a court, under a penalty for failure to comply with the subpoena.

(4) Any inquiry under this section shall be held in public: Provided that the presiding inspector may exclude from the place where the inquiry is held, any person whose presence is, in his opinion, undesirable or not in the public interest.

(5) (a) The presiding inspector may designate any person to lead evidence and to examine any witness giving evidence at a formal inquiry.



(b) Any person who has an interest in the issue of the formal inquiry may personally or by representative, advocate or attorney put such questions to a witness at the inquiry to such extent as the presiding inspector may allow.

(c) The following persons shall have an interest as referred to in paragraph (b), namely-

(i) any person who was injured or suffered damage as a result of the incident forming the subject of the inquiry;

(ii) the employer or user, as the case may be, involved in the incident;

(iii) any person in respect of whom in the opinion of the presiding inspector it can reasonably be inferred from the evidence that he could be held responsible for the incident;

(iv) a trade union recognized by the employer concerned or any trade union of which a person referred to in subpargraph (i) or (iii) is a member;

(v) any owner or occupier of any premises where the said incident

occurred;

(vi) any other person who, at the discretion of the presiding inspector, can prove such interest.

(7) An affidavit made by any person in connection with the incident in respect of which the inquiry is held, shall at the discretion of the presiding inspector upon production be admissible as proof of the facts stated therein, and the presiding inspector may, at his discretion, subpoena the person who made such an affidavit to give oral evidence at the inquiry or may submit written interrogatories to him for reply, and such interrogatories and any reply thereto purporting to be a reply from such person shall likewise be admissible in evidence at the inquiry: Provided that the presiding inspector shall afford any person present at the inquiry the opportunity to refute the facts stated in such document, evidence or reply.

(9) At the conclusion of an inquiry under this section, the presiding inspector shall compile a written report thereon.

(10) The evidence given at any inquiry under this section shall be recorded and a copy thereof shall be submitted by the presiding inspector together with his report to the chief inspector, and in the case of an incident in which or as a result of which any person died or was seriously injured or became ill, the inspector shall submit a copy of the said evidence and the report to the attorney-general within whose area of jurisdiction such incident occurred.

(12) Upon receipt of a report referred to in subsection (10), the attorney-general shall deal therewith in accordance with the provisions of the Inquests Act, 1959 (Act No. 58 of 1959), or the Criminal Procedure Act, 1977 (Act No. 51 of 1977), as the case may be.

(13) An inspector presiding at any formal inquiry shall not incur any civil liability by virtue of anything contained in the report compiled in terms of subsection (9).

### In terms of Section 34 of the Act:

34. Obstruction of investigation or inquiry or presiding inspector or failure to render assistance.- No person shall, in relation to any investigation or inquiry held in terms of section 31 or 32-

(a) without reasonable justification fail to comply with any lawful direction, subpoena, request or order issued or given by the presiding inspector;

(b) refuse or fail to answer to the best of his knowledge any question lawfully put to him by or with the concurrence of the presiding inspector: Provided that no person shall be obliged to answer any question whereby he may incriminate himself;

(c) in any manner whatsoever advise, encourage, incite, order or persuade any person who has been directed, subpoenaed, requested or ordered to do something by the presiding inspector, not to comply with such direction, subpoena, request or order or in any manner prevent him from doing so;

(d) refuse or fail, when required thereto by the presiding inspector, to furnish him with the means or to render him the necessary assistance for holding such inquiry;

(e) refuse or fail, when required thereto by the presiding inspector, to attend an inquiry; or

(f) intentionally insult the presiding inspector or his assistant or intentionally interrupt the proceedings thereof.

#### In terms of Section 34 of the Act:

36. Disclosure of information.- No person shall disclose any information concerning the affairs of any other person obtained by him in carrying out his functions in terms of this Act, except -

(a) to the extent to which it may be necessary for the proper administration of a provision of this Act;

(b) for the purposes of the administration of justice; or

(c) at the request of a health and safety representative or a health and safety committee entitled thereto.

In other words, an inspector has the right to conduct his/her own investigation into the incident, the enquiry will be public and normal SA Laws, Statutes and Regulations will apply.

#### This investigation will include

- ✓ documents related to the incident such as incident reports, maintenance records of machinery and equipment and regular workplace health and safety inspections and affidavits of witnesses
- ✓ witness testimony of any person who has an interest in the case, e.g. the person who was injured, the supervisor, etc.

It is therefore important that the workplace investigation is very thorough.

# Major Hazard Installation Regulations, 1995

## **Regulation 5**

## Risk Assessment

An employer shall carry out a risk assessment at intervals not exceeding three years and submit such risk assessment to the relevant local emergency services.

The employer shall make available on the premises a copy of the risk assessment for inspection by an inspector.

An employer shall in the case of an existing installation, carry out a risk assessment within twelve (12) months of promulgation of these regulations.

An employer shall ensure that the risk assessment shall--

- ✓ be carried out by a person or persons competent to express an opinion as to the risks associated with the major hazard installation; and
- ✓ at least include--
- ✓ a description of the major incidents associated with this type of installation and the consequences of such incidents, which shall include potential incidents;
- ✓ an estimation of the probability of a major incident;
- ✓ a copy of the on site emergency plan;
- $\checkmark$  an estimation of the total result in the case of an explosion;
- ✓ an estimation of the effects of thermal radiation in the case of fire;
- $\checkmark$  in the case of toxic release, an estimation of concentration effects of such release;
- ✓ the potential effect of a major incident at one major hazard installation or part thereof on an adjacent major hazard installation or part thereof;
- ✓ the potential effect of a major incident on any other installation, members of the public, which includes all persons outside the premises of the major hazard installation and on residential areas;
  - > the suitability of existing emergency procedures, for the risks identified;
  - any requirements as laid down in terms of the Environmental Conservation Act, 1989 (Act No, 73 of 1989); and
  - > Any organizational measures that may be required.
  - > An employer shall in the case where the risk assessment has been up-dated after review submit a copy of the new up-dated risk assessment to the relevant local authorities and the local emergency services.

An employer shall ensure that risk assessments be made available for scrutiny by any interested or affected person that may be affected by the activities of a major hazard installation, at a time, place and in a manner agreed upon between the parties.

# Example Of Code Of Practice

We include one example of a Safety Code of Practice for your information. Make sure that you are aware of Codes of practice, ministerial directives and site specific requirements as they apply to your organisation and the industry in which you operate.

# Safety Code Of Practice For Freight Lifting

As you go about your daily tasks, you need to be sure that everyone, including yourself, is working to the same set of rules and standards.

If we all know and apply the same high standards, then our working environment will be a safer and better place.

To ensure that we all perform to the same standards and quality, we need a certain code of practice that stipulates what the standards are.

We must know and understand these standards, and apply them at all times.

If we see someone not abiding by the code of practice, then we must inform that person or our supervisor, before something goes wrong and someone is injured.

The following points are some of the more important code of practice aspects we need to know.

- 1. Do not engage in any practices, which will divert your attention whilst engaged in slinging tasks.
- 2. When physically or otherwise unfit, refrain from slinging tasks.
- 3. Everyone MUST respond to signals from the person appointed to direct the lift.
- 4. If the safety of any lift is in doubt, consult the Supervisor.
- 5. The slinger shall be familiar with the lifting tackle and it's proper care.
- 6. Any defects are to be reported to the appointed person.
- 7. Extreme caution shall be taken where two, or more cranes are being used for a lift.
- 8. Always stand at least 5 metres away from a suspended load. If this is not possible, ensure that you have an escape route in case the load falls
- 9. Never turn your back on a suspended load.
- 10. Avoid turning your back on the crane operator while giving hand signals.
- 11. Refrain from touching the load if the base of the load is above waist level. Use a tagline to stabilise the load.
- 12. Unused sling legs on multi-leg slings should be hooked back into the master link.
- 13. When multi-leg slings are not in use, all sling legs should be hooked back into the master link, out of harms way.
- 14. Place packing at sharp edges to protect the sling from damage.
- 15. Do not twist or knot a sling to shorten a sling. On chain slings we may use a shortening clutch.
- 16. Never tip load a hook.
- 17. Never lower a load onto a sling.
- 18. Remove or tie down any loose items in or on the load, which could fall off, or get hooked on something.

- 19. Make sure the load is free to lift and not obstructed.
- 20. Ensure a safe landing place is available for the load.
- 21. Check the path of travel of the load to ensure that it will move freely without obstructions.

## Handling The Load

## Attaching The Load

The load must be attached according to prescribed safety standards.

## Moving The Load

The appointed person shall not move the load, unless it is well secured, correctly balanced and positioned in the sling before moving.

## Before Commencing The Lift, Ensure:

- ✓ The Hoist Ropes are not kinked.
- $\checkmark$  The Ropes to the Hook are not twisted around each other.
- $\checkmark$  The Hook is brought directly over the centre of the load to minimise swing.

## Care To Be Taken During Lifting:

- $\checkmark$  No sudden acceleration or deceleration of moving load.
- ✓ Load does not contact any obstacles.
- ✓ Crane shall not be used for side pulls
- $\checkmark$  Operator shall not lift, lower or travel with passengers on the load or hook.
- ✓ Avoid carrying loads over people.

## You Should Remember These Safe Practices:

- $\checkmark$  Know the safe working load of the crane, equipment and tackle being used.
- ✓ Determine the load weight before slinging it.
- ✓ Examine all equipment, tackle and slings before using it.
- ✓ Sub-standard (defective) equipment should not be just discarded. It should be destroyed to prevent other personnel from using it.

Any person who has reasonably come to think any piece of equipment or lifting tackle supplied to him is unsafe or unsuited to the task, should not use or operate that equipment until the defect or hazard has been reported to a Supervisor, and instructions to proceed have been issued by that Supervisor, who should then be responsible for the safety of all personnel exposed to the unsafe condition.

## Alcohol

IT IS AN OFFENCE to be in a state of intoxication, or any other condition which may render, or is likely to render a person incapable of taking care of himself, or of a person under his charge, and shall not be allowed to enter a working place, or to be in the proximity of any moving machinery. No intoxicating liquor shall be taken by any person into the works, or to any place of work, unless special permission of the Manager is obtained.

# General Housekeeping For Freight Lifting

- $\checkmark~$  As with all tasks, it is always important to ensure that we clean up after the task.
- ✓ We must ensure that the load has been placed safely and that it is blocked safely and will not fall over or roll away.
- ✓ We must ensure that all the slings, eyebolts, shackles etc., are collected, cleaned and returned to the store for safekeeping.
- ✓ There is nothing more frustrating than not being able to find good working equipment when we need it in a hurry.

- ✓ To ensure that we can find what we need, when we need it, and in good clean working condition, we all need to commit to the cause and "play the game".
- ✓ If we always take everything back to the stores, then when someone else or ourselves need it again, we know exactly where to get it, and we can be sure that it will be clean and safe to use.
- Remember that if something goes wrong, and someone is trapped under a load, we will need to get other equipment and slings quickly, and not have to run around searching for these things, while someone's life is in danger.
- $\checkmark\,$  It may just be your own life that relies on others finding that shackle that you never returned to the store.

# Stacking Of Articles/General Safety Regulation 8

According to the OHS Act, the following must be adhered to when stacking articles:

No employer shall require or permit the building of stacks which consist of successive tiers, one on top of another, unless -

- a) the stacking operation is executed by or under the personal supervision of a person with specific knowledge and experience of this type of work;
- b) the base is level and capable of sustaining the weight exerted on it by the stack;
- c) all the articles which make up any single tier are consistently of the same size, shape and mass;
- d) pallets and containers are in good condition; and
- e) any support structure used for the stacking of articles is structurally sound and can support the articles to be stacked on it.

An employer shall not permit -

- f) articles to be removed from a stack except from the top most tier or part of that tier; and
- g) anybody to climb onto or from a stack, except if the stack is stable and the climbing is done with the aid of a ladder or other safe facility or means.

An employer shall take steps to ensure that -

- $h) \quad \mbox{ persons engaged in stacking operations do not come within reach of machinery which may endanger their safety;}$
- i) stacks that are in danger of collapsing are dismantled immediately in a safe manner; and
- $j) \qquad$  the stability of stacks is not endangered by vehicles or other machinery or persons moving past them.

Unless a stack is otherwise supported, an employer shall take steps to ensure that tiers of stacked material consisting of sacks, cases cartons, tins or similar containers

- $k) \quad \mbox{ are secured by laying up articles in a header and stretcher fashion and that corners are securely bonded; and$
- l) are stepped back half the depth of a single container at least every fifth tier or that, alternatively, successive tiers are stepped back by a lesser amount:
  - 1. Provided that at least the same average angle of inclination to the vertical is achieved
  - 2. Provided further that where the containers are of a regular shape and their nature and size are such that the stack will be stable, they may be stacked with the sides of the stack vertical if the total height of the stack does not exceed three times the smaller dimension of the underlying base of the stack

Notwithstanding the provisions of sub-regulation (4), freestanding stacks that are built with the aid of machinery may, with the approval of an inspector, be built to a height and in a manner permitted by the nature of the containers being stacked:

Provided that -

- m) the stacks are stable and do not overhang: and
- n) the operator of the stacking machinery is rendered safe as regards falling articles

## **Important Factors For Packing And Securing**

- 1. It is essential to make the cargo in a container or vehicle secure against any reasonably foreseeable movement. At the same time the method of securing the cargo should not itself cause damage or deterioration either to the cargo or the container or vehicle.
- 2. Where goods of regular shape and size are concerned, a tight stow from wall to wall should be sought. However, in many instances some void spaces will occur. These can be tolerated if security is obtained by the frictional effect between adjacent packages. If there is an insufficient frictional effect, or if the spaces between the packages are too large, then the stow should be completed by using dunnage, folded cardboard, air bags or other suitable means.
- 3. If air bags are used, the manufacturers instructions as to filling pressure should be scrupulously observed. Allowance should be made for the possibility of a considerable rise in the internal temperature of the container above the temperature at the time of packing which might cause the bags to expand and burst, thereby making them ineffectual as a means of securing the cargo. Air bags should not be used as a means of filling space at the doorway unless precautions are taken to ensure that they cannot cause the door to open violently when the locking bars are released.
- 4. The cargo weight should be evenly distributed over the floor of a container or vehicle. Where cargo items of a varying weight are to be packed into a container or vehicle or where a container or vehicle will not be full (either because of insufficient cargo or because the maximum weight allowed will be reached before the container or vehicle is full), the stow should be so arranged and secured that the approximate centre of the weight of the cargo is close to the mid-length of the container or vehicle. In no case should more than 60 per cent of the load be concentrated in less than half of the length of a container measured from one end.
- 5. Heavy goods should not be placed on top of lighter goods and liquids should not be placed on top of solids. The centre of gravity should be below the half-height of a container.
- 6. In order to avoid cargo damage from moisture, wet cargoes, moisture inherent cargoes or cargoes liable to leak should not be packed with goods susceptible to damage by moisture. Wet dunnage, pallets or packaging should not be used. In certain cases, damage to equipment and cargo can be prevented by the use of protective material such as polythene sheeting.
- 7. Damaged packages should not be packed into a container or vehicle unless precautions have been taken against harm from spillage or leakage.
- 8. Permanent securing equipment incorporated in the design of a container should be used wherever necessary to prevent cargo movement.
- 9. Where open-sided vehicles are concerned, particular care should be taken to secure cargo against the forces likely to arise from the rolling of the ship. In other words, a check should be made to ensure that all side battens are fitted or other adequate precautions are taken.
- 10. Special packing instructions shown on packages, or otherwise available, should be followed, e.g.:
- ✓ goods marked protect from frost should be packed away from the walls of a container;
- ✓ goods marked this way up should be packed accordingly.

# **Purpose Of Workplace Inspections**

The employer is obliged to provide employees with safe and healthy working conditions. To know how safe and healthy ,or not, working conditions are, he needs to constantly monitor performance against health and safety standards and procedures as prescribed by law and company policy.

This is achieved by conducting regular safety inspections in the workplace and recording the results thereof.

Other factors to consider:

- ✓ As tools and equipment get older they get worn out or damaged. These can be very dangerous if not repaired or replaced.
- ✓ Materials, equipment and procedures constantly change and ignoring such changes can jeopardise people's health and safety.
- ✓ Lack of the necessary skills to perform a certain job can cause injury. Regular safety inspections will help to expose possible training needs.

Safety inspections may vary in purpose from routine maintenance inspections to inspection after a major incident like a fire or aircraft crash.

## The Purpose Of Safety Inspections:

- ✓ To identify potential hazards.
- $\checkmark\,$  To establish the cause of injuries, death, occupational diseases, property damage and pollution.
- $\checkmark$  To record all of the abovementioned information and report to the appropriate authorities in the required format.
- ✓ To provide information at meetings where safety, health and environmental protection matters are discussed.
- ✓ To make information available for research purposes.
- ✓ To assist in the evaluation of the SHE policy and procedures, including the completion of all registers, records, schedules, etc., required by law.

From the information contained in reports of inspections the employer will be able to formulate corrective and/or remedial action.

## Benefits Of Regular Safety Inspections:

- ✓ Employees will feel that their safety is important to the employer. This will establish trust in and goodwill towards the employer.
- Regular inspections bring safer working conditions and practices, with less time lost due to incidents, resulting in higher productivity, which increases profits made.
- ✓ Savings to the employer by decreasing time lost due to incidents, not only the cost of the incident (property damage), but the time to complete the investigation and subsequent reporting thereon. Some cases end in Court and can cost the employer a lot of money if he is found guilty of negligence.

# **Types Of Inspections**

A truck driver will inspect his vehicle every time before making a trip to deliver goods, especially if the trip is over a long distance.



Before using slings to lift loads, a crane operator will inspect his crane as well as his lifting equipment.

On the other hand the pillars supporting a bridge might only be inspected once a year.

The type and frequency of most safety inspections are prescribed by law. When company policy and procedures require additional inspections, the nature of these inspections will be determined by the type of work done, tools and equipment used, etc.

## **Continuous Inspections**

These inspections carry on all the time. Rescue workers looking for survivors in the rubble of a collapsed building inspect their surroundings all the time. By moving a piece of debris without inspecting it first can result in further collapse if that piece of debris was supporting other pieces, resulting in further injury and damage. Pipes are inspected before being cut, as they could be under pressure and may release water, gas or hot steam if cut without cutting off the supply first.

## Frequent Inspections

As the heading states, these inspections are carried out frequently and would include inspection of machinery and tools before the start of a shift. A boilermaker working on a lathe will frequently inspect his work to ensure that the piece of work is secure in the lathe and all safety covers are in place.

## Regular Inspections

Regular inspections are usually planned and are done using a standard checklist e.g. monthly inspection of all protective clothing and equipment, first aid equipment, emergency routes and exits. It stands to reason that the more frequently a tool or piece of equipment is used the more frequently it should be inspected.

Results of these inspections must be recorded as well as the action taken, if any, to address matters arising from these results.

## Inspections Prescribed By Law

By law certain safety inspections have to be done at certain intervals and recorded in the prescribed format. As said before, the employer may increase the frequency of these inspections if he feels it necessary.

After an aircraft has flown a certain amount of hours it is grounded for a thorough inspection. It may not fly again until a clearance certificate is issued, stating that it was inspected, the necessary repairs, if any, had been done and that the aircraft is once more airworthy.

## Planned Maintenance

In certain industries such as manufacturing, transport, freight handling, etc., any inspection means a plant, vehicle, crane, etc. out of operation for the duration of the inspection and corrective action, if any, after the inspection. This ultimately results in the loss of income.

It is therefore important that a schedule is worked out to accommodate inspection of all equipment with the least impact on the effectiveness of the operation. This not only ensures the effective maintenance of equipment, but also compliance with the law.

# Persons Responsible For Inspections

In terms of Section 16 of the OHS Act the CEO of the company is responsible for the company's compliance to legislation, which makes him directly responsible for inspections prescribed by law.

Section 16(2), however, states that he may delegate his duties to any person under his control, who will act subject to the control and direction of the CEO.

Management must ensure that inspections are carried out by people adequately qualified for the task. Adequate training should be provided to develop and improve skills of inspectors. It

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is eventually to the company's benefit to use highly skilled inspectors to identify potential problem areas timely as this will prevent incidents and ultimately loss of profit.

Inspectors may include:

- ✓ health and safety reps for regular inspections in their area of responsibility,
- ✓ competent persons for legal compliance inspections, (Demand certificate of competence if necessary)
- ✓ maintenance personnel and supervisors will follow planned maintenance schedules,
- ✓ line supervisors will carry out regular and legal compliance inspections and also monitor inspections done by workers under him,
- ✓ union representatives,
- ✓ contracted specialists in their fields of expertise, e.g. engineer, health practitioner, safety or environment consultant, etc.

# Hazards And Risks

The OHS Act defines a hazard as "a source of or exposure to danger" and a risk as "the probability that injury or damage will occur." Each hazard thus has risk(s) involved. If you don't disconnect the electricity supply before working on an electrical appliance you run the risk of being electrocuted.

The degree of risk involved varies according to the situation. When using a sharp knife to peel an apple, a two year old toddler will run a much greater risk of cutting himself than an adult performing the same exercise.

For better understanding we will group hazards as follows:

# **Physical Hazards**



These hazards can harm the body and/or influence or stop the effective functioning thereof.

Examples include:

- ✓ Fire and explosion The hazard is the fire, where you are exposed to danger, while the risk is that the fire can cause severe burns and injuries.
- Extreme heat working in a steel mill or very deep underground. The hazard is the extreme heat and the risk is injury due to heat exhaustion
- ✓ Extreme cold working outdoors in winter or in a cold room. The extreme cold is the hazard while the risk is injury due to frost bite.
- ✓ Noise working with pneumatic (powered by compressed air) tools and equipment such as drills and jackhammers or being a member of *The Rolling Stones*. The hazard is the loud noise, while the risk is damage to your hearing due to the loud noise.
- ✓ Radiation from exposure to arc welding, X-rays or radioactive material. Being exposed to radiation is a hazardous condition and the risk is damage to your health due to the radiation
- $\checkmark$  Water drowning and flooding. Water is the hazard and the risk is drowning.
- ✓ Extreme physical conditions continuous vibration experienced by drivers of heavy vehicles, the effect of extreme g-forces on fighter- and aerobatic pilots, the effect of high pressure on divers, etc. The physical conditions are the hazards and the risks are injury due to the hazards.

## **Chemical Hazards**

There are many categories of chemicals, each with unique properties and potential hazards.

Examples include:

✓ Acids – sulphuric acid, "spirits of salts", pool acid, etc. are highly

corrosive and can cause severe burns. The nitrous fumes caused when nitro-glycerine based explosives like dynamite explode contain enough nitric acid to burn and cause blistering inside the lungs if inhaled, often with fatal results if not treated timely, as the blisters burst and fills the victim's lungs with liquid and he drowns. So, the hazard would be the presence of acid and the risk is injuries caused by inhaling the acid.

- ✓ Alkalis caustic soda, soda ash, etc, are also very corrosive and can cause severe burns. Caustic soda is a hazard and the risk is injury if it comes into contact with the human body.
- ✓ Air pollution harmful gases and dust is often released into the atmosphere and breathed in by living creatures or carried over great distances and deposited as acid rain, affecting life.
- ✓ Water pollution toxic chemicals are released into river systems with disastrous effect on life and the environment.

## **Biological Hazards**

Biological hazards involve living organisms, like bacteria, spores, fungi, etc.

Examples include:

- ✓ Infections caused by bacteria, fungi, parasites, etc. The bacteria is the hazard and the risk is infection when it enters the human body.
- ✓ Farm workers and animal handlers get infections from animals. The hazardous condition exists when working with farm animals and the risk is infection due to handling the animals.
- ✓ Health workers get infected through exposure to used needles, inhaling or swallowing bacteria or viruses. A used needle is a hazard that becomes a risk when it is used.



✓ Sewage or waste disposal workers are continuously exposed to bacteria and viruses. Sewage is a hazard and the risk is infection when you come into contact with it.

# **Ergonomic Hazards**



These hazards relate to how "worker friendly" the worker's working environment is. Working under unfavourable conditions can cause discomfort and injury. Factors like having to stand for long periods, working in cramped spaces, not having adequate ventilation, etc. can all cause discomfort and eventual injury. The hazard is present in the working condition and the risk is the injury that could happen as a result of

the hazard.

# **Psychosocial Hazards**

This normally goes hand in hand with stress and tension in the workplace. A disgruntled worker might be so upset that it affects his ability to concentrate properly. If he works with dangerous machinery or equipment his lack of concentration may cause him to overlook safety precautions, resulting in injury or damage to property. working with machinery is hazardous and the risk is injury or damage to property if the machine is not operated safely.

# **Tools And Techniques:**

Approaches used to identify risks include

- ✓ checklists,
- ✓ judgements based
- ✓ on experience and records,
- ✓ flow charts,
- ✓ brainstorming,
- ✓ systems analysis,
- ✓ scenario analysis and systems
- $\checkmark$  engineering techniques.

The approach used will depend on the nature of the activities under review and the types of risk.

Generate risk statements that reflect the relationship between each hazard and each element of the vulnerable community or environment.

# Accidents In The Workplace

We will start this module with a discussion of causes of accidents in the workplace, to give you some background before you investigate an incident.

This will enable you to consider all the factors when gathering information.

## What Is An Accident?

An Accident is an undesired event caused by unsafe acts or unsafe conditions that cause physical harm or has the potential for harm or the potential for loss.

The three contributing factors that result in accidents are as follows.

- ✓ Unsafe acts 88%
- ✓ Unsafe conditions 10%
- ✓ Acts of providence 2%

**98** % of all accidents can be prevented as the causes of these accidents are things people do wrong in the work place.

2 000 000 Accidents were investigated and it was found that for every one major accident that caused death or disablement there are 10 accidents that only caused minor injuries where only First Aid treatment was required, and 30 accidents that caused property damage.

We can look at minor accidents as warnings to be more careful and to adhere to safety standards

# **Basic Causes Of Accidents**

## **Personal Factors**

## Lack of knowledge/skill, by the worker

In short this means that the worker was not trained to do his/her job properly and safely.

## Improper motivation

The worker is not interested in his/her job.

## Physical and mental problems

The worker is not fit to do the job properly or he /she is not capable of doing the job safely. It cannot be expected for a code 14 drivers to perform a brain operation on a patient. The person working in a wood and coal business should be a person who is able to pick up heavy objects and therefore should be a strong person

## Attitudes

The attitudes of people often relate to the following:

- ✓ Home influence
- ✓ Education and training
- ✓ Job experience
- ✓ Personal habits
- ✓ Mentally and physically unsuited to do the job
- ✓ Work problems and grievances

## Job Factors

The following will also contribute to accidents:

- ✓ Inadequate work standards (no safe working procedures)
- ✓ Inadequate design (equipment that is not properly designed to do the job
- ✓ Normal wear and tear (no proper and regular inspection on equipment)
- ✓ Abnormal usage (substantial equipment that is used, like household equipment used for industrial purpose)

## Effects

## Unsafe Acts:

An unsafe act is that which is done, or not done by people, causing injury, disease or damage to property, e.g. operating a dangerous machine or equipment while under the influence of alcohol.

An unsafe condition, on the other hand normally exists where safety procedures have been neglected, e. g. the safety covers of a machine is removed.

We encounter unsafe conditions and unsafe acts every day in our normal lives, even at home.

Driving through an area where hijackings are common, constitute and unsafe act and an unsafe condition. The unsafe condition is the area where hijackings are common, while the unsafe act is to drive through that area. Avoid these areas if you can.

Lighting a cigarette near explosive materials also constitutes an unsafe act and an unsafe condition – the explosive materials are an unsafe condition and lighting the cigarette is an unsafe act.

A river that is in flood is an unsafe condition, while trying to cross the river while it is in flood is an unsafe act.

A heated stove plate is an unsafe condition, while putting your hand on the heated plate is an unsafe act.

A swimming pool that is not fenced off is an unsafe condition, while leaving a toddler unattended near the swimming pool is an unsafe act.

A swarm of bees in a tree outside the office is an unsafe condition that should be attended to as quickly as possible. There are many people who are allergic to bees, while anyone who is attacked by a swarm of bees runs the risk of being hospitalised or even death.

Here are some examples of unsafe acts and unsafe conditions

## **Unsafe Acts:**

- $\checkmark$  Failure to warn (not telling the worker of the dangers in the workplace)
- $\checkmark$  Failure to secure (fail to fasten a the top of a ladder while working on a roof)
- ✓ Operating at improper speed (working to fast to get the job done, chasing production)
- ✓ Making safety devices inoperative (bypassing circuit breakers that keeps on tripping)
- ✓ Removing safety devices (removing thermostats from equipment or bypassing earth leakages)
- ✓ Using defective equipment (Using electrical equipment where open wiring is visible)
- ✓ Failure to use personal protective equipment (PPE) (not using proper cloves when removing hot foods from the oven)
- ✓ Improper loading (unsafe loading of goods on a vehicle or trolley which can fall off and injure people)
- ✓ Improper placement (storing of foods stuff in the same are were cleaning materials are kept, this can result that the food stuff can be affected and become poi send.
- ✓ Improper lifting (picking up heavy objects the wrong way. See demonstration of proper lifting)
- ✓ Improper position for task (taking up a unsafe position while working)
- ✓ Horseplay (playing in the work place chasing each other or to through a fellow worker with objects or water)
- ✓ Alcohol and drugs (workers working while under the influence of alcohol or drugs can result in injuring them self or fellow workers)



## Unsafe Conditions:

- ✓ Inadequate guards and barriers (open components of machinery that can have the result that the worker's hands or clothing can be caught)
- ✓ Inadequate PPE (No or little personal protective equipment or the wrong type of PPE)
- ✓ Defective tools, equipment or materials (Using a teaspoon to remove chips from the hot oil in a pot. Working at the stove while the extractor unit is out of order)
- ✓ Congestion or restricted action (Working in the kitchen where to many workers are. This can result in workers bumping into each other)
- ✓ Inadequate warning system (No fire alarm that can be activated if a fire breaks out in the work place)
- ✓ Fire and explosion hazard (Flammable liquids stored in areas with extreme temperatures. Storing chemicals in the same area that reacts with each other)
- ✓ Bad house keeping: *Every thing in its place and a place for every thing*. Keep your work place clean, neat and free from obstruction and keep it bacteria free. This is very important in the food preparation process)
- $\checkmark$  Noise exposure (An area that exceeds a noise level more than 85 disables)
- ✓ Temperature extremes (If good ventilation in the workplace are not adequate, this can result in worker are exposed to heat exhaustion, and can become unconscious)
- ✓ Inadequate or illumination (Good lighting is very important in the work place to ensure that the worker can do his/her job properly. Where lighting is to extreme workers can also damage there eyes by not using PPE)
- ✓ Inadequate ventilation (ventilation in the work place is from utmost importance, lack of proper ventilation can cause workers to become drowsy and this will result in accidents)

# Formative Assessment SO1

# Individual Self-Assessment

Does your employer carry out his responsibilities as described above? Note your comment:

Name learner's responsibilities regarding health and safety at work and explain why you should always commit to these responsibilities

List three responsibilities of employers in terms of the OHS Act.



## **Group Discussion**

Discuss the example of a Code of Practice.

- ✓ Why do you think this is important?
- ✓ What would the consequences be if the code is not adhered to?
- ✓ Why should investigators of workplace incidents be aware of all the legal requirements as they apply to the workplace?

Present your findings to the rest of the class.

Discuss the various types of inspections and list one more example of each:

Continuous inspections:	
Frequent inspections:	
Regular inspections:	
Inspections prescribed by law:	
Planned maintenance:	
Discuss the various inspection checklists and forms that you brought to the training no	ite

Discuss the various inspection checklists and forms that you brought to the training. r similarities and differences.

# Self-Evaluation

Write down your understanding of what constitutes safety in the workplace.

Name three good practices that you apply in your work place daily.

Name three unsafe acts that you have noticed in your work environment and what you did about them.

Discuss these answers with your facilitator and peers in class.

Distinguish between unsafe acts and conditions. Tick the appropriate box:

Example	Act	Condition
Using petrol to light a fire.		
Tools and equipment in poor state.		
A tree branch overhanging a power line.		
Worn tyres on a bus.		
Driving a bus with worn tyres.		
A swarm of angry bees in a tree outside the office.		
Disturbing the bees.		
Taking medicine of which the expiry date has lapsed.		
Storing paraffin in a "Sprite" bottle.		

Having casual sex without using a condom.	
A faulty electric appliance.	

# MODULE 2: PREPARE TO CONDUCT ASSESSMENT

## Specific Outcome 2

Prepare to conduct a continuous risk assessment

## Assessment Criteria

- ✓ Appropriate documentation appropriate is selected
- ✓ Various physical and environmental conditions which could exist are evaluated
- ✓ The persons, tools and the materials required to conduct the continuous risk assessment are verified as fit for purpose and available
- ✓ Consequences for not conforming to legal and specified requirements in preparing for risk assessment are explained

# Prepare For The Inspection

## **Planning And Preparation**

Before conducting the inspection it is crucial to know all the details of the area and equipment to be inspected. Careful planning and preparation for the inspection will ensure that all aspects are covered effectively and timely.

The following should receive special attention during planning and preparation:

- ✓ Study the previous inspection reports to acquaint yourself with its contents and note any hazards or potentially dangerous conditions or practices were reported.
- ✓ Study maintenance reports to verify that routine maintenance was carried out.
- ✓ Study incident reports relating to the area to be inspected and determine whether recommendations to prevent recurrence of the incident were implemented.
- $\checkmark$  Make sure of the exact location of the area or equipment to be inspected.
- ✓ Acquaint yourself with manufacturers' and suppliers' instructions and directions for inspection of machinery or equipment as well as with special precautionary measures when handling potentially dangerous goods like chemicals or explosives.
- ✓ Use a checklist to ensure that all areas of the inspection are covered. Rather double check than not check at all.

covered.

Make the necessary logistic arrangements like transport of people and equipment, special permission to enter certain areas, protective clothing and equipment, specialist assistance, etc.

## **Documentation Needed**

- ✓ Pre use checklists
- ✓ Planned task observations forms
- ✓ Critical parts inspection form
- ✓ Structured inspection checklists
- ✓ Mine Standards
- ✓ Procedures
- ✓ Task directives

✓ Analyses

## An Example Of A Guideline To Design An Office Safety Checklist

OHS requirements mean that managing risk in the workplace is more than a priority. It is a fundamental issue of effective workplace management.

Office safety is a growing concern as the numbers of office workers increase. Occupational health and safety risks exist, even though they may not be as apparent as the obviously dangerous machines or situations that you would normally find in a warehouse or factory.

#### First aid

The requirement for a first aid kit or a trained first aid person will depend on the number of people in the workplace.

#### Ergonomics

Ergonomics is crucial in offices yet commonly overlooked. A workstation has correct ergonomics if the alignment of the computer screen, keyboard, person and chair is in a straight line, with no twisting of the head or body. The height of the screen, keyboard and chair will also be important for good ergonomics. A footrest and document holder may be required, depending on the situation.

#### Fire control

Sources of ignition and combustible materials should be separated to avoid potential fires. Fire equipment should be available and unobstructed, with some employees trained in its use. The complexity of your evacuation system will depend on the size of the business, number of floors involved and number of people to be evacuated.

Sources of ignition include heat sources (photocopiers, computers, printers, portable heaters) and electrical sources including damaged electrical cables and piggy-backed double adaptors. Cleaning cloths in cleaners' cabinets can also be sources of heat, depending on the chemicals used and how the materials are stored.

Emergency evacuation

Have a documented evacuation procedure, which has been communicated to all employees, and has been practised as an evacuation drill at least once each year. The evacuation procedure should differentiate between bomb threat and other types of emergencies, as the procedure will vary slightly. Your office area will have a different procedure to other parts of the business if you are part of a high rise office block while other areas are in an industrial estate.

Determine an assembly point, and keep a record of people's names to determine who might be left in the building. This will be useful for the emergency services if a rescue is required. Consideration should also be given to first aid provision at the assembly point and the identification of a person who is trained in first aid should anyone be injured.

Also include in your procedure the method to be used to contact the emergency services, for example whether you will contact them before or after you evacuate the building.

### Electrical hazards

All electrical cables should be periodically inspected for integrity and replaced if damaged. The practice of 'piggy backing' double adaptors should be eliminated as this can create a fire risk. If there are insufficient power points, a powerboard is a safer option. Alternatively, you could have an electrician install more power points. Electrical switchboards should be checked to ensure that neither combustible materials nor flammable liquids are stored nearby.

### Chemical safety

You have legal obligations even if your office only keeps very small quantities of dangerous chemicals. These include addressing hazardous substances requirements in the OHS Act and regulations. This requires you keep a register of hazardous substances, copies of material safety data sheets, precautions in place to prevent injury to anyone using the chemicals, and assessing whether control measures (gloves, glasses etc.) are sufficient. All containers must be

labelled with the product name, and any hazards associated with it, for example flammable, corrosive, poison etc.

#### Housekeeping

Untidy offices with materials placed in boxes or in piles on the floor create a hazardous environment - not only a trip hazard, but could indicate that there is insufficient storage space, insufficient time for storing materials, or just poor management of the work area.

Poor housekeeping can also obstruct a person's egress from the workplace, as well as leading to injury if a person is constantly moving around a cluttered work area.

#### Temperature

Many offices have difficulty finding a temperature setting that all workers find comfortable. The recommended range is 22 to 26 degrees Celsius, and an airflow rate of 0.1 metres per second. The humidity level is best between 60% and 40%.

The perceived temperature inside will also depend on the outside temperature, so that if it is 35 degrees outside and 22 degrees inside, this may seem excessively cold when a person enters the office, however, in winter 23 degrees may seem warm.

Set the temperature at 22 or 23 degrees and make adjustments from that point. Check that the air conditioning reaches all areas in the office, and that windows receiving substantial quantities of sunlight are not causing problems.

#### Manual handling

Whenever staff are required to lift, shift or move heavy items, for example moving stationery supplies in and out of cabinets and printers/photocopiers, or moving quantities of mail, computers, printers and other office furniture, there are manual handling procedures that should be used to avoid injury.

Following the identification and assessment procedure, manual handling risks must be controlled. Some suggestions could include

- ✓ redesigning how the job is done
- ✓ modifying the workplace to reduce the need to handle items
- ✓ providing mechanical lifting equipment, such as a small trolley
- ✓ training in lifting techniques team lifting
- $\checkmark\,$  reducing weights and sizes of objects, for example carry two packs of paper instead of five.

CHECKLIST
<b>8 HEALTH</b>
SAFETY &
PATIONAL
occul

HOUSEKEEPING	YES	ON
1. Are uniforms left in the institution or taken home in plastic bags and washed with bleach so infections are not spread to the house?		
<ol><li>Are clean uniforms provided if necessary during the day?</li></ol>		
<ol><li>Do employees wear different shoes on the job and leave them in the institution?</li></ol>		
<ol><li>Are there plastic liners in all garbage pails?</li></ol>		
<ol><li>Are garbage pail liners changed daily, including on weekends?</li></ol>		
6. Are all garbage pails covered?		
<ol> <li>Are liquids disposed of only in sinks or where appropriate in safety cans?</li> </ol>		
8. Are sharp objects never put in garbage pails?		
<ol><li>Are there special boxes for disposal of needles and sharps?</li></ol>		
10. Is the garbage pail in a patient's room used only for paper waste?		
11. Is garbage with blood and other specimens in it identified as such?		
12. Is contaminated garbage autoclaved or incinerated?		
13. Are employees instructed never to stand on the top two steps of a ladder?		
14. Is any equipment or furniture that is heavy or awkward to handle lifted or moved by more than one person or by mechanical devices?		
15. Do all electrical appliances such a vacuums and polishers have grounded connections?		
16. When floors are being scrubbed or polished, is the area identified as being slippery by posting or roping off the area?		
17. Is all trash handled as if hazardous items were contained in the refuse?		
18. Are all cleaning solutions clearly labelled with ingredients and warnings indicated?		
19. Are housekeeping personnel required to wear gloves and protective clothing?		
20. Is isolation garbage and laundry handled in specially marked bags?		

Another example of a checklist, this time a housekeeping checklist

# Workplace Procedures

All workplaces need procedures for doing the work safely.

Any Supervisor, Manager or Responsible Person has common areas of loss control which includes any of the following:

- ✓ Doing inspections
- ✓ Doing investigations
- ✓ Preview rules and procedures
- ✓ Give proper job instruction
- ✓ Inducting new employees

Should the responsible employees not be carrying out the abovementioned acts, the supervisor is losing control.

The Supervisor, Manager or Responsible Person who manages professionally will:

- ✓ Know the health and safety programme
- ✓ Know all health and safety programme standards
- ✓ Plan and organize health and safety work to meet these standards
- ✓ Lead his/her people to achieve standards
- ✓ Correct problems as soon as they are identified

## Procedures

A workplace procedure should include the following steps:

### Identification

Identify hazardous work practices, machinery and individuals. Do regular risk assessments.

#### Set Standards

Standards can be set as follows: The health and Safety Representatives will on a monthly basis do a full inspection and report on the following:

- ✓ Fire equipment
- ✓ Hazardous areas in his/her area of responsibility
- ✓ Ladders
- $\checkmark$  All accidents that occurred in his section etc.

Accurate job Health & Safety specifications must be written for each of the hazardous jobs or tasks. A comprehensive Health & Safety manual should evolve based on the Hazard/Job Analysis.

#### Measure the performance of those standards

Ensure that inspections are carried out to the best of the responsible person's ability. Inspections should show when health and safety specifications are adhered to as well as when they are not adhered to.

### Evaluate

Should the results not meet the standard, identify the needs which should receive attention to rectify the problem..

Suggestions by Employees and members of the Health & Safety committee regarding various ways of regulating or controlling the tasks must be considered by the Employer.

#### Correct

Problem areas where the hazard exists or non-compliance becomes evident must be remedied. This can be done by removing or reducing the hazards, repairing the faults, or rectifying the behaviour of the individual.

Address the needs via training, meetings, show videos etc. All Employees and drivers must be trained or re-trained so as to create a heightened awareness, change attitudes and behaviour and provide the skills necessary to dot the job.

#### Review the standards

The effectiveness or practicality of current methods must regularly undergo close scrutiny by the Employee and Health & Safety Committee, to ensure they are still relevant.

### Record the findings

The entire history of findings, recommendations, remedial steps and actions must be well documented. These documents must be archived until needed and should not be destroyed indiscriminately.

#### Repeat the above

Recognition of the dangers and hazards must be ongoing, and must include all the new substances and activities that have been included or introduced at work.

#### Rights of the employee / the right to be informed:

The fundamental rights of every Employee have been entrenched in the law. It clearly spells out the duties of Employers in respect of their Employees. Employees must know precisely what they are working with, how to do the job and what precautions to take.



Employees have the right -

- ✓ To be fully informed and trained
- ✓ The right to refuse work when it is unsafe. Anything, job or machinery they come into contact, or have to work with!

# How To Work Safely

- $\checkmark\,$  You should not commence work if a risk assessment has not been completed for the task
- ✓ Before work starts at every shift, your supervisor should have a crew talk explaining all the safety instructions for the job
- $\checkmark$  You have the right to refuse to work if you feel the conditions are unsafe.
- ✓ Always identify the things that can cause injury
- $\checkmark$  Apply control measures as specified in your risk assessment
- $\checkmark~$  Remember the topics discussed at the weekly Toolbox Talks
- $\checkmark~$  If you are not sure, ask your supervisor and follow instruction
- ✓ The company, your family and your colleagues need you and depend on you!

## Safety Rules

### Never:

- $\checkmark$  Enter a work area that you have not been authorised to enter.
- $\checkmark$  Operate any equipment that you have not been trained to operate

## Always wear:

- ✓ suitable protective clothing
- ✓ safety boots
- ✓ hard hats
- ✓ overalls

### General

- $\checkmark$  Use special safety equipment when required as indicated by mandatory signs.
- ✓ Report to your supervisor loss or damage immediately of any protective clothing or safety equipment, and ensure that it is replaced.
- ✓ Obey "No Smoking" signs.
- $\checkmark\,$  Know where the nearest fire extinguishers are and how to use them.
- ✓ Know where you're nearest emergency point is and it's number
- ✓ Store flammable liquids only in small amounts and in approved safety cans.
- ✓ Keep portable heating equipment and engines in buildings away from combustible materials.
- $\checkmark$  Do not interfere with electrical equipment until it has been isolated.
- $\checkmark$  Do not use electrical power tools or equipment while standing in water.
- ✓ Make sure the cords of electrical tools are in good condition



# Formative Assessment SO2

## **Group Activity**

Handout 1 contain an example of a checklist that an inspector from the Labour Department might use.

Use this and the other checklists to develop a continuous checklist for the college or your place of work. There is also an example of a checklist at the back of the learner guide and remember the checklists that you brought to the training.

Also make a list of other documents you will need, e.g. an observation sheet of people working.


# **MODULE 3: CONDUCT A RISK ASSESSMENT**

## Specific Outcome 3

Conduct a continuous risk assessment

## Assessment Criteria

- ✓ The prevailing conditions at the scene of the incident are determined by using accepted Hazard identification is conducted correctly. Significant hazards are systematically identified, utilising the elected hazard identification technique. Techniques include, but are not limited to:
  - Pre use checklists
  - Planned task observations
  - Critical parts inspections
  - Structured inspections
- ✓ Relevant documentation is completed

# **Doing The Inspection**

The first step is to identify the purpose and extent of the investigation.

The aim of an inspection is not to identify a culprit to punish for something that might be wrong. On the contrary, it is a valuable tool to identify potential hazards and prevent them from becoming real hazards. The information gathered during an inspection is analysed and recorded. It is then available for reference or research purposes.

#### When doing an inspection, keep the following in mind:

✓ Wear suitable clothing. Certain items like a tie or jewellery can get caught in



machinery. A too short dress may cause embarrassment. Wear the appropriate protective clothing, e.g. hard hat, goggles, ear muffs, etc., if required.

- ✓ Adhere to standard safety procedures when handling dangerous goods and/or equipment.
- $\checkmark$  Complete all required documentation accurately in the prescribed format.
- Have the necessary tools and accessories handy e.g. measuring instruments, flashlight, containers for samples, etc.
- ✓ Consider potential hazards during the conducting of the inspection like fire or explosion, contact with toxic materials, exposure to radiation, etc. and take the necessary precautionary measures to protect yourself.
- $\checkmark$  Do not take safety for granted a guard railing may appear to be safe and sound but on inspection prove to be loose and unstable.
- ✓ Communicate with workers without interrupting their normal activities. They can provide valuable information and suggestions to solve problems.
- ✓ Observe workers at work to monitor the level of compliance to safety and standard operating procedures.
- ✓ Allow workers to air their opinions and make suggestions in terms of health and safety matters.

## You will need the following:

- $\checkmark$  A floor plan of the workplace in order to
  - > mark areas where people work.
  - > write down the number of people working in each area.
- ✓ Work processes and machinery in each area.
- ✓ A health and safety checklist
- ✓ Materials Safety Data Sheets (MSDS) from management

## Tips

It is important to notice that there is a BIG difference between an inspection and an audit. The differences are:

- ✓ Inspection takes place more frequently (hourly, daily, weekly) whereas an audit takes place less frequently (every 3 or 6 months).
- ✓ Inspection is done by the employee and an audit is done by a senior employee.
- ✓ Inspection covers detail and everything while an audit is a sampling process to verify that inspections where done correctly.

Successful completion of health and safety representative inspections, require application of these basic principles:

- ✓ Enter full names and surnames, not nicknames.
- ✓ Enter full dates and times, in a logical sequence, such as the format dd, mm, yyyy, am/pm or 13:00.
- $\checkmark$  Fill all spaces in ink, to prevent tampering with the checklist.
- ✓ Enter words, like Yes, No, N/A (not applicable), or cross out the finding that is not applicable. Do not use tick marks, since tick marks could be changed to crosses.
- $\checkmark$  Write neatly and legibly.
- ✓ Explain 'No' in the comment column. Describe what is wrong, where the problem is, and what is required.
- ✓ Allocate sufficient time.
- ✓ Remain calm and relaxed during inspection.
- ✓ Find facts, not faults, and avoid arguments.
- ✓ Give compliments where due. Bear the importance of the inspection in mind.
- $\checkmark\,$  Vary inspection times to avoid routine window-dressing. Do not inspect during peak job times.
- ✓ Keep your cell phone off.
- ✓ Wear appropriate PPE and follow site safety rules.
- $\checkmark$  Obtain permission and support from the site manager in advance.

Checklist or inspection forms must be customised according to the requirements of the industry, the site, and the specific area to be inspected

Additional loop-holes to keep in mind are:

- ✓ Balancing "health" and "safety" requirements in the checklist and not only focusing on "safety" issues.
- ✓ Continually upgrading the checklist to reflect changes in the working environment.
- ✓ When inspecting offices an ergonomics checklist should be added to the standard checklist to include the area specific requirements.

## Customisation Of Checklists Are A Must To Ensure:

✓ That the content is applicable

- ✓ That unnecessary time is not wasted on irrelevant issues
- ✓ An oversight of critical elements are not encountered
- $\checkmark~$  The developers of the checklists must be competent and one person MUST NOT design and develop this tool on his/her own.
- $\checkmark$  To be on the look-out for patterns:
  - > Ticking exercise that was done quickly as in yesterday, but for the whole year
  - > A problem area that has not been attended to for 3 or more months in a row.
  - > Management not signing the inspection checklist (commitment).

The Health and Safety representative inspection is the first line of preventive action to pro-actively determine possible problems in the system. It MUST NOT be neglected or downplayed.

# Doing The Inspection

- $\checkmark$  Select the appropriate documents that you will use
- ✓ Evaluate the physical and environmental conditions
- $\checkmark$  If you will be using tools, make sure that they are fit for the purpose and also available

## What To Look For

- ✓ Noise
- ✓ Very cold or hot working areas.
- ✓ Dust or fumes.
- ✓ Any noticeable smells.
- ✓ Unguarded machinery.
- ✓ Ease of entry and exit from workplace.
- $\checkmark~$  Ease of movement within and around the workplace.
- ✓ Storage of articles and substances.
- ✓ Location of fire extinguishers/ first aid boxes.

## The Most Important Tools You Need For Workplace Inspections Are:

- ✓ Eyes to spot hazards
- ✓ Nose to smell bad odours as indication of hazards.
- ✓ Mouth to talk to health and safety representatives
- ✓ Brain to be always thinking and learning
- $\checkmark~$  Ears to listen to workers complaints and suggestion for improvements.
- $\checkmark$  Guts to be strong enough to fight to get the hazards corrected,
- ✓ to stop work which you see is of immediate danger.
- ✓ Feet to regularly inspect the workplace.

## **Special Inspections**

Special workplace inspections are used to concentrate in more detail on a particular aspect of the workplace or process, where a hazardous chemical substance may be used or hazardous process is carried out. A special workplace inspection might be carried because of a change in the working conditions and could be in addition to regular inspections or general inspections.

## Aims Of Special Workplace Inspection:

- $\checkmark$  To focus on specific aspects of the work environment or process.
- ✓ To investigate a problem because of workers' complaints.
- ✓ If new machines or materials have been introduced.
- $\checkmark$  If there has been a change in the work process.
- $\checkmark$  To check that correct personal protective equipment is used.
- $\checkmark$  To check warning and labelling notices.

If an accident has occurred (will be discussed in detail later)

# **Levels Of Observation**

There are two levels of observation. They comprise the obvious and the concealed hazards.

## **Obvious**

These are easily identified and would include those things that are visible to the eye, such as:

- ✓ Diesel spills,
- ✓ Oil spills,
- ✓ Handrails loose, etc.

## Concealed

These hazards are not so obvious to the Observer and require some exploration. These include:

- ✓ Brakes not working,
- ✓ Air leaks, etc.
### **Analyse And Describe Hazards**

- ✓ What is the chance of occurrence of each hazardous event?
- ✓ How often can it occur?
- ✓ What can the magnitude and length of each hazardous event be?
- ✓ How rapidly can it occur and what warning would you have?
- ✓ What areas can be affected?
- ✓ Have you considered secondary hazards that could be triggered by primary hazards?

### Identify Gaps In Knowledge And Understanding Of Hazards

- ✓ Have you identified gaps in knowledge or understanding about the hazard and its consequences?
- ✓ Must any of these gaps be filled before risk analysis and evaluation proceeds?

### **Classification Of Hazards**

In order to effectively manage risks, it is necessary to classify hazards identified during the safety inspections and allocate points to different hazards according to severity, frequency and possible exposure.

The effect of this action will be that incidents can now be prioritised and dealt with according to priority, i.e. the most serious incident will be dealt with first and then the others in order of priority. Any classification system may be used as long as it works effectively and reflects the real state of affairs.

Normally three factors are used for this classification exercise namely severity (*how serious it is*), frequency (*how often it occurs*) and exposure (*how many people will be exposed*).

### Severity

**Class A** – (Major, catastrophic, high priority, 4 points) – an incident that causes death or permanent disability or extensive damage to property or the environment.

**Class B** – (Serious, medium priority, 3 points) – such incidents may cause serious injury or disease or sufficient property damage to cause disruption, but without permanent far-reaching effects.

**Class C** – (Minor, low priority, 2 points) – these incidents normally cause minor injury or disease, if any, and minor disruption in the workplace.

Class D – (Negligible, 1 point) – no injury or loss of property involved.

### Frequency

- **A** Likely to happen immediately. (4 points)
- **B** Probably will happen in time. (3 points)
- **C** Possible to happen in time. (2 points)
- **D** Unlikely to happen. (1 point)

### Exposure

The number of people likely to be exposed to the hazard:

- A More than 50. (4 points)
- **B** 10 49. (3 points)
- **C** 5 9. (2 points)



### **D** – Fewer than 5. (1 point)

### Example:

A major hazard (4 points), which is likely to become a major incident immediately (4 points) and likely to involve more than 50 people (4 points) will score a total of 16 points, the worst case scenario.

By repeating the same exercise on other incidents the total points scored will determine the priority of the situation.

Hazards with a high score (12 - 16 points) will take high priority, demanding immediate corrective action; while hazards with a low score (1 - 5 points) will not be treated with the same urgency.

### Risks

Risks arise when a hazardous condition exists. This means that safety precautions must be undertaken:

- $\checkmark$  work according to laid down safety procedures
- ✓ wear protective clothing
- $\checkmark$  be alert to the hazard and the risk involved

The following pages contain forms that could be used during the identifying and classification of hazards and risks.

Frequen	<b>cy</b> How often are people exposed to the hazard under assessment?
25	SEVERAL EMPLOYEES SEVERAL TIMES A SHIFT
20 - 24	SEVERAL EMPLOYEES ONCE PER SHIFT
15 - 19	TWO OR THREE TIMES A WEEK
10 - 14	ONCE PER MONTH

- ONCE OR TWICE A YEAR 9 5 -
  - NEVER 0

How likely is it that these circumstances can and will lead to an accident? <u>Probability</u>

- CERTAINTY 25
- SIGNIFICANT CHANCE 15 - 24
  - POSSIBLE 10 - 14
- POSSIBLE BUT UNLIKEY 5 - 9 1 - 4
  - EXTREMELY UNLIKELY

# The total risk score for a hazard indicates the following:

0 –30	Minor Hazard	Requires minor or no corrective action
31 - 60	Moderate Hazard	Require corrective action as soon as possible
61 –100	Serious Hazard	Requires immediate action

Hazard Check List

Electric Shock (Live electrical equipment particularly above 32V AC and 115V DC, exposed conductors);

Unguarded shafts, belts or gear trains;

Trip hazards; Chemicals;

Microwave and RF Radiation

- Fuse Ratings;
- Circuit Breaker Ratings;
- Earthing;
- Current ratings of components, cables, connectors or PCB tracks;

Falling objects;

Lasers;

Sharp edges;

Fire;

 Voltage isolation ratings of assemblies, components, cables, connectors or between PCB tracks;

Blocking of walkways or fire exits;

Location.

- Explosion of batteries by exceeding ratings or misuse;
  - Compliance with Australian Standard Wiring Rules;

### **Risk Assessment Guide**

- What is the worst injury that could result from this hazard? Severity
- 50 FATALITY, PARA/QUADRIPLEGIA, BLINDNESS
- 40 49 PERMANENT DISABILITY, AMPUTATION, MUTILATION
- FRACTURE, DISLOCATION, LACERATION REQUIRING SUTURES 30 - 39
- MEDICAL TREATMENT INJURY, SEVERE SPRAINS/STRAINS, SECOND AND THIRD DEGREE BURNS 20 - 29
  - REPEATED FIRST AID TREATMENTS, DEEP ABRASIONS, FIRST DEGREE BURNS 10 - 19
- MINOR FIRST AID, SCRATCHES, BRUISING, PARTICLE IN EYE, SLIGHT ABRASIONS, SMALL FIRST DEGREE BURN 1-9
  - 0 NO INJURY

Your Ref. No.

## HAZARDOUS SUBSTANCES RISK ASSESSMENT PROFORMA

FORM D

Project Code (If any):

Project / Work / Experiment Title:

(d) A copy of the completed Proforma must be attached to your Hazard Identification and Risk Assessment Proforma (Form A). (Don't forget the review date) (c) Risk Assessments of all Hazardous Substances at a work place are a legislative requirement of the Queensland Workplace Health and Safety Act 1995. (b) Before starting insert at the top right hand corner the Ref. No. from the Hazard Identification and Risk Assessment Proforma (Form A). (a) This Proforma is to be completed by the person undertaking the work in consultation with the supervisor, then endorsed by the supervisor.

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### Hazard Identification and Risk Assessment Form

Assessed by:									
Item being assessed (prac, laboratory, plant etc)	Model or Subject No.	Serial No./ Lecturer	Department	Location	Date Assessed	Review Date			

Identified Hazards	Risk Assessment		Risk Score E x P x C	Risk Level	Risk Control Recommendations (consider hierarchy of control)	
	Exposure (E)	Probability (P)	Conseq. (C)			

Hierarchy of Control:	Definitions :							
1. Elimination	Exposure	Е	Probability	Р	Consequence	С	Risk Score	
2. Substitution	continuously	10	most likely	1.0	catastrophic	20	> 10	High
3. Isolation	frequently	6	possible	0.6	fatal	10	3-10	Medium
4. Engineering Control	occasionally	3	conceivable	0.3	serious	5	0-3	Low
5. Administrative Control	infrequently	2	remote	0.1	minor	2		
6. PPE	rarely	1	inconceivable	0.05	negligible	1		

Hazard Identification and Risk Assessment Form is to be used for the assessment of hazards when using plant and equipment, and hazardous substances; in assessing risks in work environments such as laboratories, lecture theatres and office space and when developing practicals and experiments (including research projects).

SAFETY CHECKLIST		Yes	No	N/A
General Is the tutor / demonstrator / student familia Are hazardous / restricted areas clearly re	ar with appropriate written safe work procedures ? ecognisable ?			
Emergency Procedures Is the tutor / demonstrator / student familia Is emergency equipment available if requi Are exit routes readily identified ? Are demonstrators / research students aw	ar with emergency procedures ? ired (eg eye wash, chemical spill kit) ? vare of all safety issues associated with this experiment ?			
First Aid Are there qualified first-aiders in the work Do demonstrators / research students kno Are the first aid kits clearly labelled and ea	place ? w who these first aiders are and where to contact them ? asily accessible ?			
Electrical Safety Is all electrical equipment in good condition Are power boards used instead of double Are leads secured and not creating a pote Are extension leads used for temporary p	on ? adaptors ? ential trip hazard ? ower only ?			
Personal Protective Equipment (PPE) Is PPE provided where necessary (eg glo Have demonstrators / research students b Is PPE worn when necessary ? Is the PPE is good working condition ?	ves, face shield, hearing protection) ? been trained in the use and selection of PPE ?			
Waste Disposal Are demonstrators / research students far Are waste containers correctly labelled, so Are there spill control kits for the waste st	niliar with waste disposal procedures ? egregated and stored appropriately ? orage area(s) ?			
Chemical Safety Are there written procedures for chemical Have staff been trained to safely handle of Are staff aware of the hazards associated Are material safety data sheets (MSDS) in Is the appropriate PPE worn ? Are all chemical containers properly labell Are chemicals stored properly (eg segreg. Are gas cylinders safely secured ? Are flammable chemicals stored in fire res Are fume cupboards used where necessa Is a hazardous substances manifest readi Are spill kits clearly labelled and easily ac	handling and storage ? hemicals and deal with chemical spills ? with the use of chemicals ? readily available ? led ? ation of incompatible chemicals) ? sistant cupboards ? ry ? ly accessible in the lab ? cessible ?			
Plant Safety Does the lab contain any equipment that of Has a hazard assessment been complete Are there written procedures for the use of Have staff been given training and instruc Are there lock-out switches and guards or Is there a colour coded emergency switch Is there adequate lighting to operate the e Is there PPE available for use with the pla Are pressure vessels and cylinders market	can be classified as "plant" ? d for each item of plant ? f the plant ? tion on the use of the plant ? n potentially hazardous areas of the plant ? ? quipment ? int ? ed with safe working pressures ?			
Signed :	Academic Staff Member :	[	Date :	
Signed :	Technical Staff Member / Tutor / Researcher :	[	Date :	

Hazard Identification and Risk Assessment Form is to be used for the assessment of hazards when using plant and equipment, and hazardous substances; in assessing risks in work environments such as laboratories, lecture theatres and office space and when developing practicals and experiments (including research projects).

### Formative Assessment SO3

### Group Activity

List four factors to consider during planning and preparation for a safety inspection:

List four factors to consider while doing the inspection:

Use the checklist to do an inspection of your workplace or the premises of the training provider. Add any items to the checklist that are not included and delete items that do not apply.

In a group, develop a checklist that a driver of a vehicle should complete before leaving the premises. This is an example of a frequent inspection. Then do an inspection of a delivery or passenger vehicle, using your checklist. Add and delete items to check as you do the inspection. After the inspection, discuss your findings in groups.

In your groups, develop a continuous checklist of someone working in a workshop where maintenance is done on vehicles. Think of items such as cleaning up, oily rags, tools and power equipment lying around, the way in which vehicles are raised in order to work underneath them, etc. Discuss the checklist with other groups and add or delete items as necessary.

Develop a continuous checklist for an office. Items such as overloaded electrical points, cleaning buckets and materials lying around, wet floors, files on the floor, etc. should be considered. Discuss the checklist in your groups and add items as required.

Discuss the improvements that you would recommend to reduce these hazards.

### **MODULE 4: REPORTING**

### Specific Outcome 4

Initiate remedial action and follow up on Continuous Risk Assessment

### Assessment Criteria

- ✓ Remedial action for hazards is implemented accordingly
- ✓ Follow-up action on continuous risk assessments is implemented accordingly
- ✓ The consequences of non-compliance to the procedures for initiating remedial action and follow-up on continuous risk assessment are explained

### Controlling Workplace Hazards

The purpose of controlling hazards in the workplace is to prevent workers from coming into contact with a particular hazard and thereby protecting their health and safety.

There are two basic requirements when considering the control of hazards at the workplace, these are:

- ✓ Organisation issues
- ✓ Practical measures to control the hazard

### **Organisation Issues**

### Health And Safety Programme

For any workplace to be safe and healthy, there has to be a clear health and safety programme. This programme should include at least the following issues:

### **Education And Training**

All workers must be informed of the hazardous processes with which they are working. This information must include how the processes and substances affect the body, precautions to be taken and what to do in an emergency.

### Environmental Monitoring

There must be a clear programme and schedule to monitor the hazardous processes and substances. These programmes must include workplace inspections, occupational hygiene measurements, and a careful investigation of all incidents which occur.

### Medical Monitoring

Workers must have access to a free and confidential health service provided by management. This service must carry out biological monitoring of workers for any disease which might result from the work processes or the use of hazardous substances.

### Accountable Health And Safety Structures

There must be an accountable health and safety structure at the workplace which is responsible for ensuring that the workplace is maintained in a safe and healthy condition. This structure should have an equal number of management and union representatives. The OHS Act provides for the structure and functions of a health and safety committee at the workplace.

### **Practical Measures To Control Hazards**

✓ Control at the source

- ✓ Substitution Or Replacement
- ✓ Change the Process
- ✓ Mechanise the Process
- ✓ Enclose the Operation
- ✓ Control Along The Path
- ✓ Local Exhaust Ventilation
- ✓ Barriers
- ✓ Housekeeping
- ✓ Control At The Worker
- ✓ Personal Protective Equipment
- ✓ Administrative Controls

### Implementing Risk Control Measures

Once the risk or hazard has been identified and assessed, employers must either prevent the risk arising or, alternatively, control it. Much will depend upon the magnitude of the risk in terms of the control applied. A typical hierarchy of control, from high risk to low risk, is indicated below:

- 1. Eliminate the hazard completely: e.g. prohibiting a certain practice or the use of a certain hazardous substance.
- 2. Substitution: By something less hazardous or risky.
- 3. Enclosure: Of the risk in such away that access is denied.
- 4. Guarding / safety devices: To prevent access to danger points or zones.
- 5. Safe systems of work: That can reduce the risk to an acceptable level.
- 6. Written procedures: Job safety procedures, that are known and understood by those affected.
- 7. Adequate supervision: Particularly in the case of young or inexperienced persons.
- 8. Training: Of staff to appreciate the risks and hazards.
- 9. Information: Safety signs, warning notices.
- 10. Personal protective equipment

In many cases, a combination of the above control methods may be necessary. It should be appreciated that the amount of management control necessary will increase proportionately for the controls lower down the list.

In the implementation step special emphasis must be placed on both:-

- $\checkmark$  Technical decisions to put a chosen risk control technique into practice, and
- $\checkmark$  The managerial decisions that must be made in co-operation with other managers throughout the organisation to implement the chosen technique.
- ✓ Inform employees
- ✓ Train employees
- ✓ Supervise the performance

### Maintaining Risk Control Measures

- ✓ Institute a health and safety program
- ✓ Implement preventative inspections
- ✓ Heath and Safety representative inspections
- ✓ Statutory inspections, tests and examinations
- ✓ Safety tours and inspections
- ✓ Occupational Hygiene inspections

✓ External safety and health audits

### Health And Safety Programme

For any workplace to be safe and healthy, there has to be a clear health and safety programme. This programme should include at least the following issues:

### Education And Training

All workers must be informed of the hazardous processes with which they are working. This information must include how the processes and substances affect the body, precautions to be taken and what to do in an emergency.

### Environmental Monitoring

There must be a clear programme and schedule to monitor the hazardous processes and substances. These programmes must include workplace inspections, occupational hygiene measurements, and a careful investigation of all incidents which occur.

### Medical Monitoring

Workers must have access to a free and confidential health service provided by management. This service must carry out biological monitoring of workers for any disease which might result from the work processes or the use of hazardous substances.

### Accountable Health And Safety Structures

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### Checklists

This is a prepared list of critical points which is used as a reminder of what to look for. It must be short and motivating. Tick the relevant item and provide basic information. Attach separate sheets of paper with your comments and recommendations.

### Regular Inspections Must Be Done

To ensure that inspections are conducted regularly, the Employer must assign the duty to the Employees who have a thorough knowledge of the workplace and the hazards they will encounter there.

These duties then become part of their regular daily activities and must be completed and recorded e.g. inspecting the vehicle for any defects.

An inspection is one of the most common pro-active methods used to test and control substandard conditions involving people, machinery, equipment, and the environment. Once detected, remedial action and control measures can be implemented to ensure the Health and Safety of Employees.

When the hazard has been identified you must report it to the employer or committee as soon as possible. Failure to do so could result in people being exposed to the hazard, and is also illegal.

### Implications Of Non-Compliance Cost Of Incidents

All unwanted incidents cost money. Total costs are often difficult to measure, but we do know that there are always hidden expenses that must be identified and taken into account. Even a basic incident costs a great deal. Costs must be measured in terms of the effect on the individual, the community, as well as the financial loss.

### **Social Impact**

Victims and their dependants could suffer great pain, discomfort, hardship, sorrow and even psychological effects for many years, following a disabling occupational disease or injury. The loss of earning power of someone who has contracted asbestosis or lost an arm will affect him or her in an unimaginable way.

### **Financial Impact**

The iceberg (shown on the next page) depicts the situation quite clearly, i.e.: the portion below the surface is far greater than the exposed peak. This applies to the cost of a loss-producing incident. The accumulative effects of all the incidents have a dramatic effect on the organisation's profits, as well as the national economy.

### **Cost Of Incidents**



### Formative Assessment: SO4

Discuss the inspection you conducted. Note any hazardous or unsafe conditions and make suggestions for remedial action.

Also discuss the consequences of not correcting unsafe conditions or hazards.



CHECKLIST AND INSPECTION REPORT							
Name of Company:							
Name of Health and Safety Representative / Inspector:							
Department/Section:	Date of In	spection:					
A. UNSAFE CONDITIONS	Yes	No					
1. BUILDINGS AND STRUCTURES: (Bricks missing, cracks in wa							
2. YARD, FENCES AND GATES: (Damage to roads, walkways, foliage between fences, electric fences not identified )							
3. WINDOWS AND DOORS: (Broken, dirty, window- and doorfram							
4. FLOORS, CARPETS, TILES: (Clean, tiles not broken, not slippery, no uncovered holes / obstructions, damaged steps, loose carpets, carpets tripping hazard )							
5. LIGHTING ADEQUATE: (Poorly lit areas, free from glare)							
6. LIGHT BULBS, FITTINGS, SWITCHES (Fused light bulbs / fluwires)							
7. VENTILATION ADEQUATE: (Fans and airconditioners in working order, extraction systems in working order. No smells, fumes, dust, vapours, smoke, chemicals. Sick building syndrome)							
8. HYGIENE FACILITIES: (Toilets, ablution blocks, canteen, kitchen, dining room, lockers, change rooms clean and hygienic. Toilet paper, disposable towels, hand soap, bins with lids available. Facilities with symbolic signs. No food allowed in workplaces)							
9. POLLUTION: (Oil, diesel, petrol, paint, thinners etc dumped on ground or in storm water/sewage system/rivers, adequate disposal system, effluent pollution free before discharged, no airpollution, list of hazardous waste )							
<b>10. DEMARCATION:</b> (Floor area underneath fire equipment an consistent)	nd electrical	switchgear demarcated, aisles demarcated, demarcation visible and					
11. STACKING AND STORING: (Neat, stable and safe, not too hig	gh, 3 x narro	west part, cupboards inside and on top tidy)					

12. YARD TIDY: (No unnecessary material and redundant scrap area sorted out, good housekeeping)		
13. OFFICES, WORKSHOPS, STORES TIDY: (Cupboards, offices, workshops tidy. No stacking next to walls, on the floor. Good housekeeping)		
14. WASTE BINS, REDUNDANT SCRAP AREAS: (Sufficient bins, lids in place where necessary, regular removal, no overflowing, separate bins for separate materials, demarcation)		
<b>15. COLOUR CODING:</b> (Colour coding uniform, pipes, electrical switchgear colour coded, everybody to have knowledge on the colour coding, machine guards colour coded in the inside. Colour coding boards displayed)		
B. HAZARDS	Yes	No
16. MACHINE GUARDING: (Comply with legal requirements e.g. adequate, in good state of repair, in place, all nip points guarded, all moving parts guarded effectively)		
17. LOCK OUT PROCEDURE IN PLACE AND FOLLOWED: (Procedure available and followed, locks and keys/locks/tags available)		
18. SWITCHES, CRITICAL VALVES LABELLED: (Labelling readable and uniform)		
19. EARTH LEAKAGES: (Regular tests, sufficient earth leakage. If no earth leakage, portable units)		
20. PORTABLE ELECTRICAL EQUIPMENT: (Identified, checked monthly - proof, no defects or damage to equipment as well as electrical cords, plugs and switches)		
21. GENERAL ELECTRICAL INSTALLATIONS: (No temporary wiring, earthing and polarity checked, no protruding wires, no wiring routed through doors, walls and windows)		
22. LADDERS, STAIRS, LANDINGS: (Numbered, provided with rubber at bottom, home made and other ladders not falling apart, wooden ladders not painted, free from defects/damage. Landings must have a brake, handrails and toe boards. Storage adequate)		
23. LIFTING GEAR: (Hooks pop marked, all lifting gear identified and checked 3 monthly, maximum mass load to be indicated on all lifting gear as well as all engine cranes, trestles, body stands and tow in lorries. Trestles legs not bend, pin fastened with chain to trestle)		
24. PRESSURE VESSELS: (Air tank drained daily, safety valve sealed, red line on pressure gauge, manufacturers data plate)		
25. COMPRESSED GAS CYLINDERS: (Gas cylinders stored properly, type together. Secured separately. Gas welding equipment in good condition)		
26. CHEMICALS CONTROLLED: (All chemicals labelled and properly stored. Use of correct containers)		

27. MATERIAL SAFETY DATA SHEETS: (Alphabetical list of all chemicals used, available in first aid boxes, stores, clinic and where used )	
28. MOTORISED EQUIPMENT: (Regular checks on all Company vehicles, daily checks on forklifts)	
29. HAND TOOLS: (No unsafe homemade hand tools, regular inspections, free from defects)	
30. ERGONOMICS: (Worktables not too high / too low, switches not too far, chairs not too high / too low - work comfortably)	
31. PERSONAL PROTECTIVE EQUIPMENT: (Available, in good condition, use as required. Training to employees. Proper storing)	
32. SYMBOLIC NOTICES & SIGNS: (Displayed where required and in good condition, workers know the meaning)	
33. FIRE EXTINGUISHING EQUIPMENT: (Checked montlhy, reachable, visible, full, signs available)	
34. FLAMMABLE STORAGE & FLAMEPROOFING OF ELECTRICAL LIGHTS, SWITCHES: (All flammable liquids stored in flameproof store)	
35. ALARM SYSTEM: (In working order, tested regularly, Workers know sound of alarm)	
36. EMERGENCY PLAN: (Available, workers know what to do in case of emergency - gathering points)	
37. INCIDENTS REPORTED TO EMPLOYER & INVESTIGATED: (Recorded, Annexure1 completed)	
38. FIRST AIDERS & EQUIPMENT AVAILABLE: (1 Trained first aiders for every 50 employees with a first aid box. Box packed according to legislation)	
39. SHE POSTERS & other information on SHE aspects are on noticeboards and in good condition	
40. UNSAFE ACTS that have been noticed	
41. SHE PROGRAMME: Are SHE TALKS held, do workers report home injuries, is the health and safety policy displayed, is an OHS Act 85,1993 available?	

INSPECTION REPORT							
When the checklist has been completed and it was indicated that a hazard was found, a description should be given in the Inspection report. Number the hazard/ unsafe condition and then give a description. An asterisk* next to the <b>No</b> will be an indication that this item has been reported previously - Classify the hazard and determine the action to be taken							
Кеу:	S - Severity		F - Frequency		E - Exposure		
If total more than 6, immediate action, less than 6 report to supervisor / SHE meeting	Class A 4 points (Major, high priority)		Will happen immediately - 4 points		More than 50 persons - 4 points		
	Class B 3 points (Serious, medium priority)	Hazard	Probably happen in time - 3 points		10 – 49 persons - 3points		
	Class C 2 point (Minor, low priority)	Classification	Possibly happen in time - 2 points		5 -9 persons - 2 points		
	Class D 1 point (Negligible)		Unlikely to happen - 1 points		less than 5 persons - 1 point		

No	Describe hazard / unsafe condition found	Specific spot where it was found	S	F	E	Total	Action to be taken	By whom	Follow up & date completed
No	Describe hazard / unsafe condition found	Specific spot where it was found	s	F	E	Total	Action to be taken	By whom	Follow up & date completed

### **NOTES & QUESTIONS**

Signature of Health and Safety Representative /Inspector:					
Endorsement of Health and Safety Representative Report:					
Signature of EMPLOYER/DESIGNATED PERSON	Date				
Health and Safety Committee: This Inspection book has been inspected by the Health and Safety Committee and steps to rectify all hazards were discussed and action plans drawn up. (Refer to minutes)					
Signature of Chairman:	Date:				