



# Employee Induction

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# Information

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1. Read each slide
2. Click the slide to go to the next slide
3. **Note** - you can't go back to the previous slide, you will need to reload the page and go through the each slide again to find the slide number your after.
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# HSE Management System Model & Methodology

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The system has been designed with continuous improvement process in mind.

**The system is based on the methodology known as 'Plan-Do-Check-Act', briefly described below:**

- a. **Plan** – establish the objectives and processes necessary to deliver results in accordance with the organisation's OHS policy.
- b. **Do** – Implement the processes.
- c. **Check** – monitor and measure processes against OHS policy, objectives and other requirements.
- d. **Act** – take actions to continually improve OHS performance.

# Responsibilities

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### **The Director responsibilities are:**

Administration, interpretation and maintenance of this document to keep it current with business conditions.

### **Supervisor's responsibilities are:**

- Creating a culture where SWA is exercised freely.
- Providing SWA training to employees.
- Resolve stop work concerns immediately or in a concise and timely manner.
- Reviewing and analysing reports.

### **Employees are responsible for:**

- Utilising SWA to prevent a potential incident.

# Stop Work Authority Guidance

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- 1) Everyone on site, regardless of position, seniority or discipline has the authority to stop a job where concerns or questions regarding the control of a HSE risk or hazard exists.
- 2) NO form of retribution, intimidation or negative repercussions shall be directed at any individual or company exercising SWA.
- 3) No work will resume until all stop work issues have been adequately addressed by the Director or Supervisor.
- 4) Stop work events that are immediately resolved shall be documented.
- 5) Stop work events that require additional investigation shall be documented in accordance with the incident reporting processes where responsible person (s) shall be assigned.
- 6) Stop work reports shall be reviewed by the Director to determine / measure:
  - ✓ Participation
  - ✓ Quality of intervention and follow up
  - ✓ Trend common issues
  - ✓ Opportunities for improvement, and
  - ✓ Lessons learned

# Responsibilities - Director

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### The HSE responsibilities of the Director are to:

- Provide HSE leadership within the company.
- Formally approve the company's HSE policies and procedures.
- Provide required resources to actively pursue ongoing HSE activities.
- Review company HSE performance.

# Responsibilities - Supervisor

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## The HSE responsibilities of the Supervisor are to:

- Provide leadership in implementing the HSE Management System
- Ensure all workers carry out their duties in accordance with safe work practices without risk or harm to themselves or others.
- Ensure workers fully understand the various plans for upcoming tasks and their responsibilities within those plans.
- Lead critical job planning meetings and JSAs.
- Actively mentor workers.

# Responsibilities - Supervisor

- Continued

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- Provide advice and guidance to workers as well as serving as a positive role model.
- Lead by positive example.
- Ensure appropriate information, instructions and other resources are provided.
- Consult with employees on any workplace changes which have a health and safety component / implication.
- Initiate actions to improve health and safety within their area of responsibility.
- Actively monitor via the inspection process to determine presence of hazards and take appropriate action to rectify these.



# Responsibilities All Employees

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**The HSE responsibilities of all personnel are to:**

- Hold safety as a core value integral to all operations and activities.
- Demonstrate a personal commitment to safety.
- Assure work is conducted in accordance to the HSE Management System.
- Develop a working knowledge of HSE requirements.
- Stop a job if it is unsafe.
- Participate in safety observation processes.
- Integrate a plan for safety in all activities.

# Responsibilities All Employees - Continued

## Employee Induction



### The HSE responsibilities of all personnel are to:

- Address promptly safety issues in their operation.
- Carry out all actions in a manner that protects their health and safety and that of their fellow workers and anyone who may be affected by their acts or omissions.
- Ensure proper reporting and notification of all incidents, injuries and illnesses, including near misses, unsafe acts and conditions and if injured actively participate in the development and implementation of return to work plans.
- Actively participate in safety meetings.
- Cooperate with management in achieving a healthy and safe workplace.
- Use equipment and substances in accordance with the manufacturer's instructions including safety instructions.
- Whilst at work, not intentionally or recklessly interfere with or misuse anything provided at the workplace in the interest of health, safety or welfare.

# Communication

## Employee Induction



**Good communication is more than just being able to talk to people and tell them things. It means:**

- Being understood
- That everyone knows your meaning and intentions
- Listening to other people
- Knowing what the respondent means and their intentions
- Good communication is important and this in conjunction with co-operation and co-ordination builds 'teamwork'.
- Teamwork will help prevent accidents, as each team member will know what to expect from the people he/she is working with. The team members cannot only look out for their own safety but also for the safety of others.

# Hazard management

## Employee Induction



**ALARP** is an acronym standing for 'as low as reasonably practicable' and is an industry defined terminology used to describe the process of balancing cost versus benefit of reducing risk through control measures.

**Environmental Aspect** means an element of an organisation's activities, products, or services that can interact with the environment.

**Environmental Impact** means any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.

A **Hazard** is any source of potential damage, harm or adverse effects on something or someone under certain conditions at work

# Hazard Management

## Employee Induction



## Examples of hazards in workplaces includes:

- Items: Ladders, equipment, tools, etc.
- Activities: Handling chemicals, working at heights etc.
- Substances: Fuel, paint etc.
- Atmospheres: Oxygen deficient, explosive, hydrogen sulphide etc.

**Likelihood** is a measure derived from the combination of frequency and probability for an incident to occur.

**Risk** is the measure of the likelihood of occurrence of an incident and of the severity of the consequences. Risk is the outcome of the combination of activities when performed in the presence of hazards.

# Hazard management

- continued

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**Risk Assessment** is the qualitative and / or quantitative evaluation of the chance that a hazard will cause harm.

**Risk Reduction** is the process following the identification of the hazard(s), assessment of the risk to reduce the risk to an acceptable level – As Low As Reasonably Practicable (ALARP).

**Severity** is a measure of the loss consequences resulting from an incident.

**Hazards can be broadly divided into three (3) main groups:**

- Health Hazards – Examples: Exposure to radioactive material, high noise, chemicals etc.
- Safety Hazards – Examples: Slip, trip and fall due to poor housekeeping.
- Environmental Aspects – Examples: Waste generation, wastewater discharges, air emissions.

# Hazard management methods

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The company utilises various hazard management methods to ensure the safety of its personnel, including:

- Pre-start meetings when applicable
- Hazard hunts
- Inspections
- Step Back 5 x 5
- JSA

# Hazard management methods

- continued

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**Planning a safe approach to a job can help identify the hazards of working with machinery.**

**The hazard management process includes:**

- Hazard identification
- Hazard assessment – decide if the identified hazards are significant
- Hazard control – either by eliminating, isolating or minimising the hazard
- A safety plan or hazard register documenting this information
- Hazard monitoring, including workplace exposure monitoring or health monitoring of workers
- A schedule to update the safety plan.



# Risk & Legal Register

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**At a minimum, a Risk & Legal Register should be maintained with the following details:**

- A description of each process / task that have actual or potential hazards
- A description of the hazards associated with the process / task
- Equipment and / or chemicals used
- Reference to the impacts/consequences or potential impacts/consequences of the hazard
- Regulatory and / or company procedures or requirements associated with the hazards
- A reference to applicable control procedures or requirements associated with the hazards
- A reference to applicable control procedures

# Risk rating table

## Employee Induction

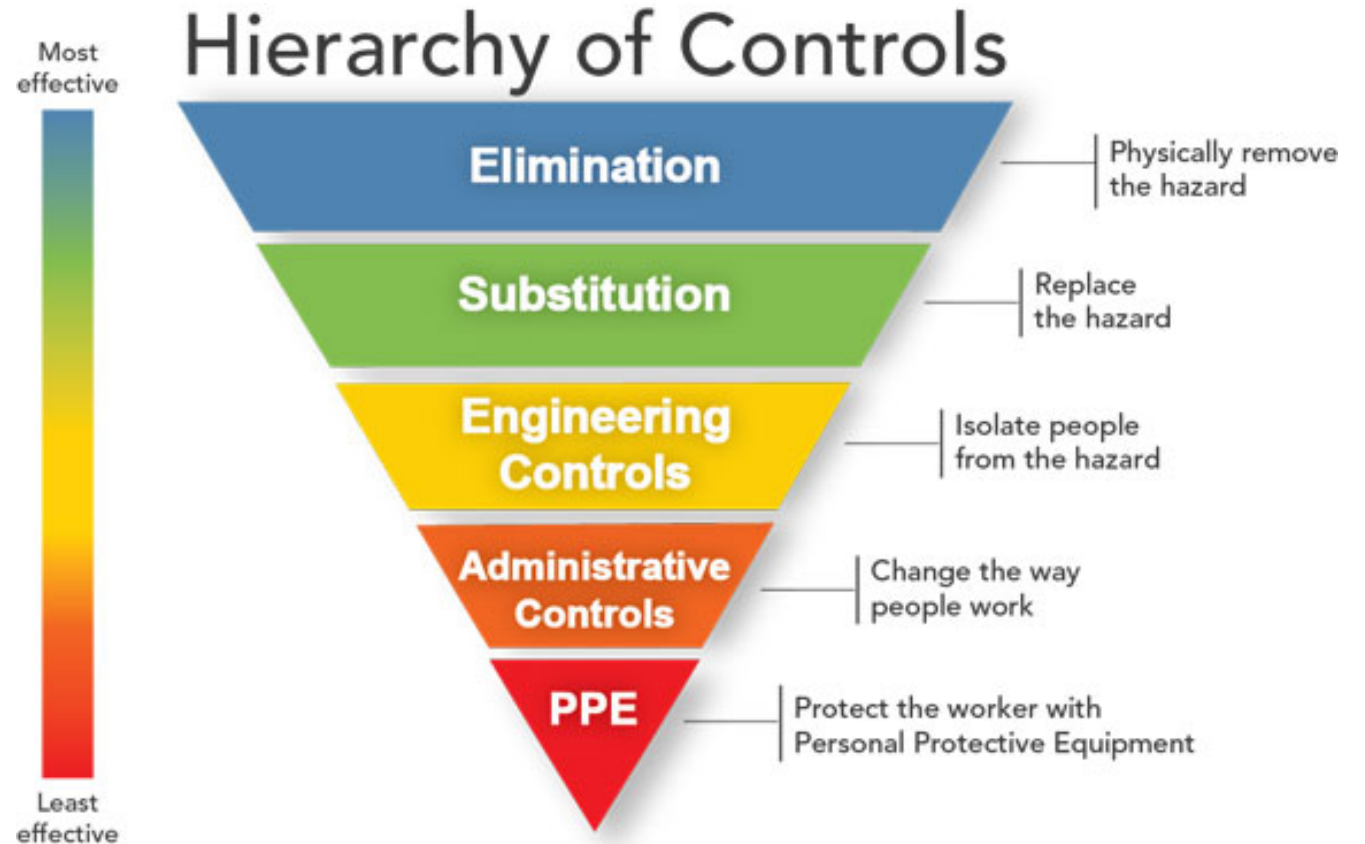


RISK RATING TABLE				
Likelihood of injury or harm to health	Consequences of injury or harm to health			
	Insignificant <i>no injuries</i>	Moderate <i>first aid and/or medical treatment</i>	Major <i>extensive injuries</i>	Catastrophic <i>fatalities</i>
Very likely	High	Extreme	Extreme	Extreme
Likely	Moderate	High	Extreme	Extreme
Moderate	Low	High	Extreme	Extreme
Unlikely	Low	Moderate	High	Extreme
Highly unlikely (rare)	Low	Moderate	High	High

Extreme = immediate action

# Hazard control

## Employee Induction



# Hazard control

- continued

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- Elimination; design to eliminate hazards such as falls, hazardous materials, confined spaces, manual material handling
- Substitution; substitute for less hazardous material, reduce energy
- Engineering controls. Warning, signs, labels.
- Administrative Controls:
  - Safe work procedures, supervision and training, job rotations, housekeeping, maintenance & hygiene
  - Personal Protective Equipment (PPE)

# JSA Methodology & Supervision

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JSA are the company's primary hazard management tool which is used to analyse and record the processes to be used to perform a task

Their purpose is to ensure that sufficiently skilled manpower, equipment and material and / or resources are allocated for a task and all persons involved in the task are aware of the activity being performed, the controls applied and acceptance that they will abide by them to ensure the presence of a safe system of work.

It is important to note that a JSA is only a written record. Therefore, it is essential to ensure that the workers have the skills to complete the job and that there is supervision to ensure that tasks are completed as documented.

# JSA Triggers

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**JSA's shall be completed for the following:**

- All new work sites / activities
- Designated high risk activities – i.e. work at height, electrical, complex, non-routine tasks
- If directed by the client

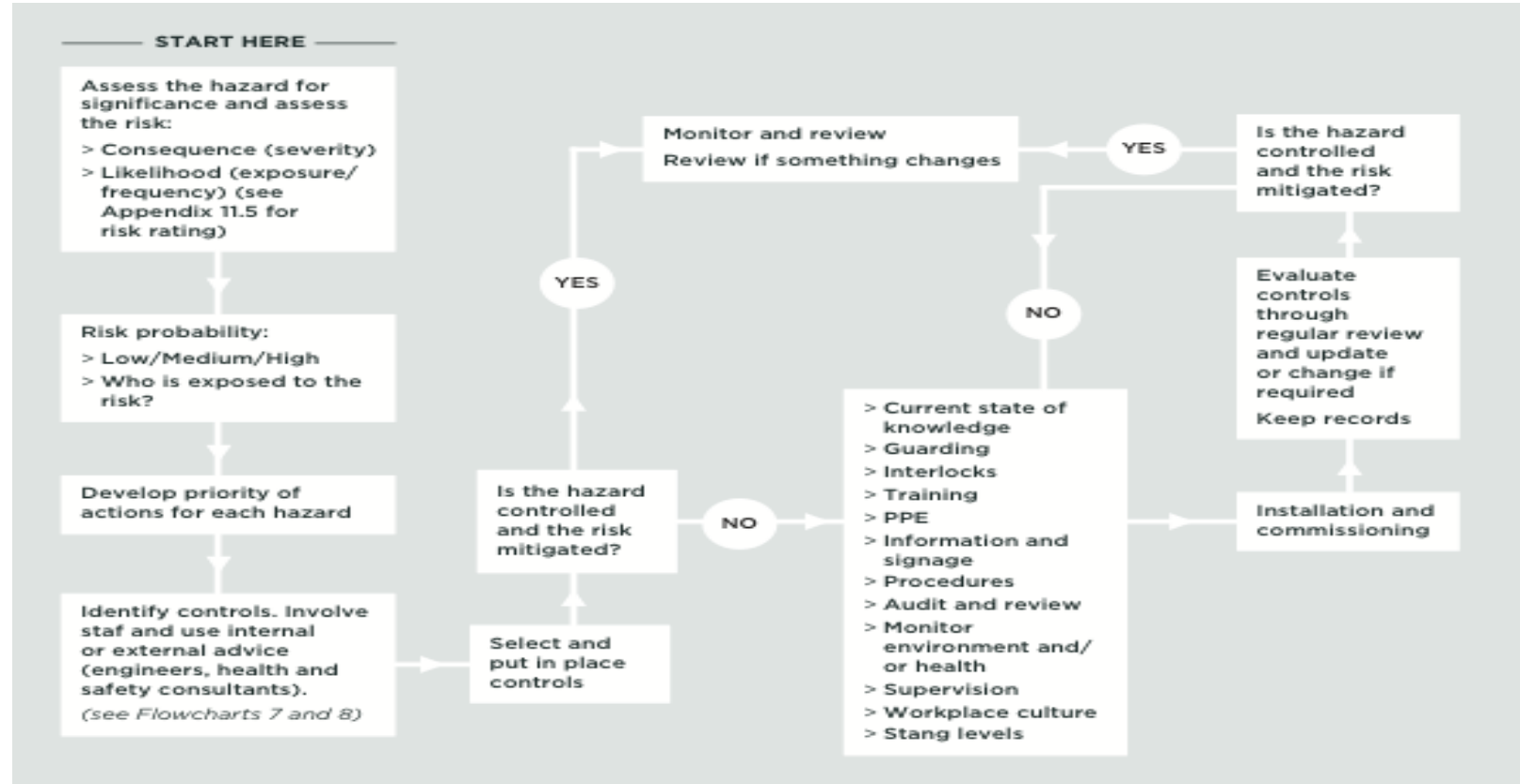
**If an activity is not captured by a mandatory trigger, a JSA may still be required; if the hazards; risks and controls of the activity are not adequately documented in any of the following:**

- Risk Assessment
- Work Procedure / Instruction

If any doubt exists as to whether a JSA shall be conducted, the document shall be completed.

# Risk Assessment

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# Stepback 5x5

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**Step back 5x5 is a personal planning tool to assist people to identify and control immediate hazards as they go about their day-to-day work.**

**Examples of immediate hazards may include:**

- Worn tools or incorrect tool for the job
- Worn, damaged or out of date PPE
- Potential for slips, trips or falls
- Poor housekeeping
- Protruding, sharp or dropped objects
- Worn, damaged electrical leads / cables
- Out of test equipment

Personnel performing work are responsible for conducting Step back 5x5 and supervisors are responsible for encouraging and communicating this process.

Step back 5x5 is used before, during and after jobs, including those covered by JSA's and / or written procedures. It should also be used when conditions or circumstances change during a job.



# Job Hazard Analysis & 5 x 5

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## WHAT IS “STEPBACK 5 x 5” ?

STEPBACK 5 x 5 is a process that encourages workers to identify hazards associated with ALL tasks before starting a job. It helps to promote a hazard management culture through continual self evaluation.

It is based on the principle of ‘ENGAGING THE MIND BEFORE THE HANDS’ by:

- Stepping back 5 paces from the job
- Investing 5 minutes (nominal) to step through the job in your mind and identify plans to control hazards before starting the job
- STEPBACk 5 x 5 is an informal personal planning process. It is essentially a mental JHA applied before starting ALL jobs.

The process encourages sharing of information and experiences with others.



# Where Can We Improve?

## Employee Induction



## OHS Policy

- “no work starts without confirmation that essential safety systems are in place”
- “all work-related injuries, diseases and property losses are preventable”.

## Analysis of accidents indicates that

- A large number are caused by poor control of hazards, particularly routine work.
- Personal planning to identify and control hazards could be improved.

Existing hazard management tools (e.g. QRA, Hazop, JSA) do not address personal planning or planning for routine activities.

# How Is Stepback 5 X 5 Done

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## BEFORE THE JOB

- Stop and think
- Observe the work area and surroundings
- Step through your mind what you are going to do
- Think about what else is happening in the area or nearby
- Identify what else could go wrong
- Satisfy yourself that the hazards are controlled before starting the work

# How Is Stepback 5 X 5 Done

- continued

Employee Induction



## DURING THE JOB

- Be aware that when performing a routine task, it is possible to
- get into an automatic mode of operation.
- If it is a long routine task, take short regular breaks to re-focus on the job, work environment and related hazards
- When a job is; coming to a conclusion; or a natural break  
e.g. (Meal Break) re-focus your effort on what is required to complete the task safely.

# How Is Stepback 5 X 5 Done

- continued

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## AFTER THE JOB

- Observe the work area
- Take action to control any hazards that may have been created by the work
- Reflect on how well the job went and the mental planning process you used
- Did you feel safe doing the job?
- Were others around you working safely?
- Can any improvements be made next time?

# Work Review/ Preview Checklist

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- Did everyone have a safe day yesterday ?
- If YES, what made it safe ?
- If NO, what made it unsafe ?
- What can/could be done to improve on it ?

✓ SO, lets have a SAFE DAY !

✓ THINK SAFE ! ACT SAFE ! BE SAFE !

# Keeping The Culture Alive

## Employee Induction



## START OF SHIFT MEETING

- Raise awareness of hazards that may be encountered during shift
- Encourage investment of time to think through the job
- Promote the identification and taking action to control hazards
- Share information with others in the workgroup

## COMPLETION OF MEETING

- Share information on hazards and other problems encountered during the shift
- Discuss any unexpected events that occurred during the shift
- Discuss solutions to problems encountered
- Discuss incomplete activities so they can be noted in hand-overs

# Incident Reporting

## Employee Induction



- As a means of eliminating or reducing the risk of injury to employees and others in the workplace, the company employs a 'positive 'no blame' reporting culture'. This ensures that the company is aware of all issues as they occur and enables prompt attention (investigation) to address the issue and implement control strategies to prevent reoccurrence.
- All personnel have responsibility for the timely, accurate and complete reporting of near miss incidents, incidents resulting in injury, work related illnesses, or equipment or property damage.
- The ultimate aim of incident reporting & investigation is to encourage learning and prevent recurrence of the same or similar incident. To prevent recurrence, the following points must be actioned:



# Incident Reporting

- continued

Employee Induction



- All incidents are to be reported promptly
- Investigations, in accordance with these guidelines, are to be carried out to discover the underlying root causes of the incident
- The results of the investigation, including lessons learned, are to be communicated to relevant employees.

# Responsibilities

## Employee Induction



### All personnel are responsible for:

- Reporting all potential and actual incidents no matter how minor they may be perceived; and
- Assisting in investigations when needed.

# Basic questions to be asked

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**During any incident investigation there are six basic questions that need to be asked by an investigator.**

**They are:**

**Who** - was hurt or what was damaged? (profile of the victim, including training & experience)

**When** - Did the incident occur? (exact time and date)

**Where** - Did the incident occur? (exact location, diagram, photos)

**What** - Were the causes leading to the incident? (essential factors, e.g. unsafe acts / conditions)

**Why** - Were the hazardous conditions allowed to exist? (analysis of conditions)

**How** - Can similar incidents be prevented? (recommendation & implementation)

# Prevention of working bullying and harassment

## Employee Induction



Get Cleaned Pty Ltd has a **zero tolerance** approach to workplace bullying and harassment.

The following procedure informs personnel of the type of behaviour that is unacceptable and provides those who are the victims of harassment with a means of redress. All personnel are to abide by this approach.

Workplace bullying and harassment at work is unlawful, and both the organisation and the harasser may be held liable for such unlawful actions, and may be required to pay damages.

Bullying and harassment can reduce the effectiveness of the organisation by creating a threatening environment and increasing sickness absence and labour turnover.

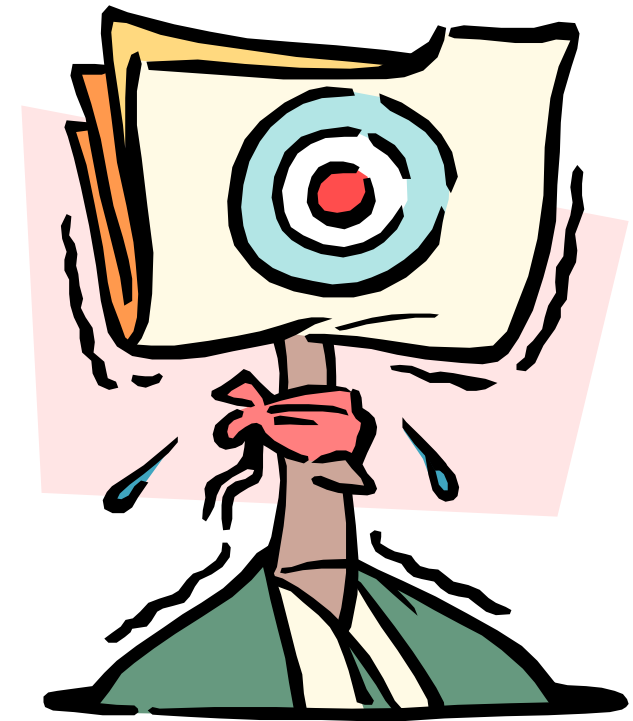
# What Is Workplace Violence?

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Last Updated 12/5/21 Version 7.0

1. Physical Assault
2. Threatening Behavior
3. Verbal Abuse
4. Harassment



# Four Categories of Workplace Violence

- Violence by Strangers Committing Robbery
- Violence by Customers, Clients, or Patients
- Violence by Employees and Supervisors
- Violence by Domestic Partners or Relatives of Employees (new category)

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# Workplace Bullying

## Employee Induction



- Workplace bullying is defined as repeated, unreasonable behaviour directed toward an employee, or group of employees, that creates a risk to health and safety.
- Examples may include, but are not limited to; verbal abuse, intimidation and/or excluding or isolating employees.

# Harassment

## Employee Induction



Harassment takes many forms, from relatively minor abuse to actual physical violence and examples may include, but are not limited:

- Insensitive jokes and pranks related to race or sex
- Lewd comments
- Unnecessary bodily comment
- Deliberate exclusion from conversations
- Displays of sexually offensive material
- Speculation about a person's private life and sexual activities
- Abusive, threatening or insulting words and/or behaviour



# Complaints & Investigations Process

## Employee Induction



- If any person believes they have been subjected to any form of workplace bullying or inappropriate behaviour, they are to report the matter to management.
- Immediately on receipt of a complaint, management is to take action including investigation of the issue.
- Additional supporting information is available from the WorkSafe Western Australia website.

# Disciplinary Processes

## Employee Induction



Disciplinary Action may be considered if an employee does not comply with this policy or if the investigation proves the complaint.

The severity of the discipline will depend on the incident, however can include dismissal.

# Manual Handling

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Manual handling is termed as any activity requiring the use of force exerted by a person to lift, push, pull, carry or otherwise move or restrain any animate or inanimate object.

**Manual handling is hazardous when it involves:**

- The repetitive or sustained application of force
- Repetitive or sustained movements or awkward postures
- The application of high force
- Handling of live persons or animals
- Handling of unstable or unbalanced loads or loads which are difficult to grasp or hold

# Manual Handling

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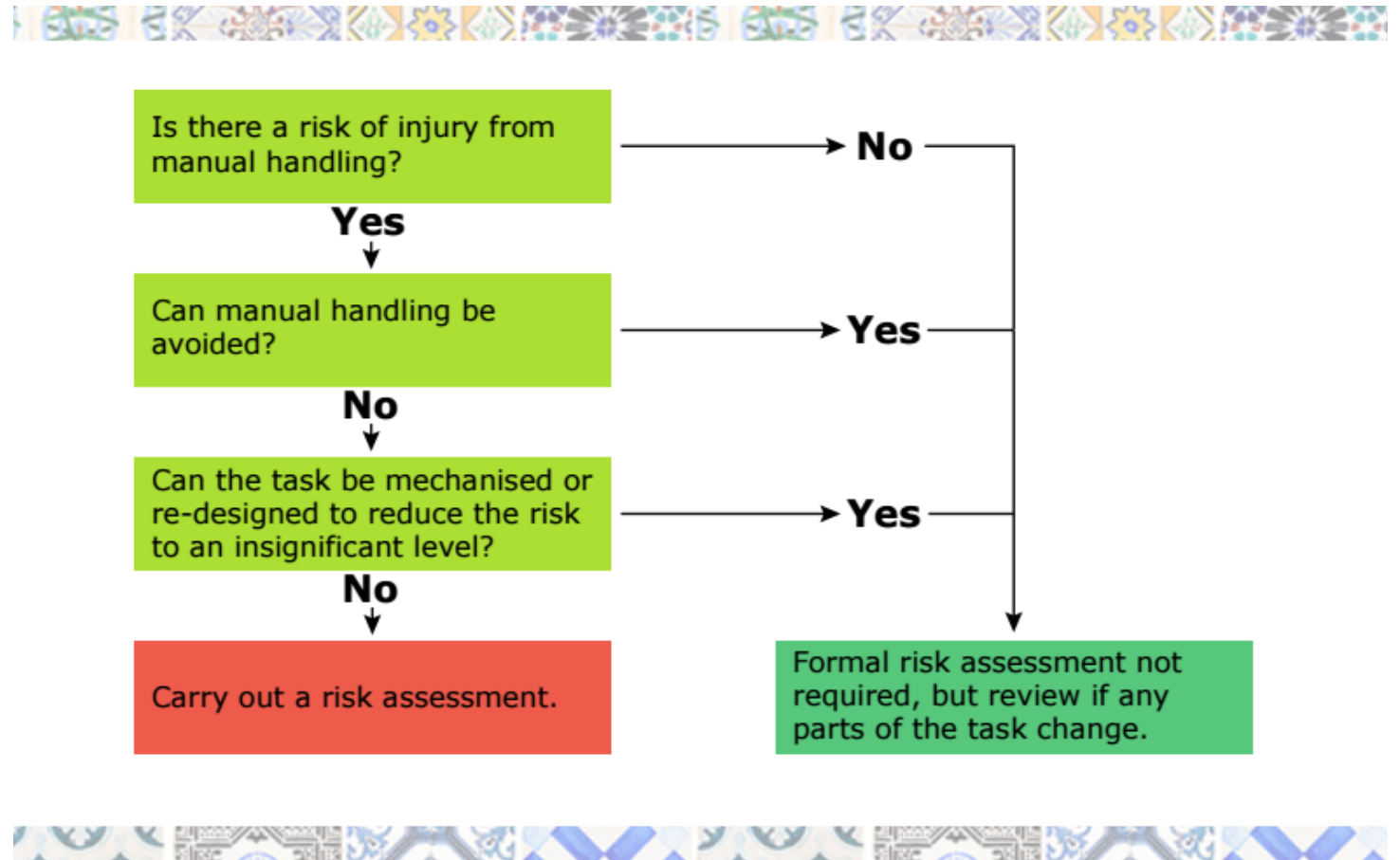
In relation to manual handling, the application of high force means the use of such force that it would be reasonably expected that either most persons in the workforce, or the person likely to undertake the activity, would have difficulty undertaking the activity.

**It also includes the force required:**

- To lift or otherwise handle heavy weights
- To push or pull objects which are hard to move
- To operate tools designed for one hand if two hands are required; or
- To operate tools, which require the squeezing grips that are wide apart.

# Manual Handling Identification & Control Flow Diagram

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# Manual Handling Identification & Control Flow Diagram

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# Safe Lifting Information

- Continue to next slide

Employee Induction



## Step 1 – Size up the Load

- Take into account the physical limits imposed by the gender, physical size, age and general fitness of the person.

Note: pregnant females must never be allowed to carry out any many handling activity at the workplace.

# Safe Lifting Information

- continued

Employee Induction



## Step 2 – Think & Plan the Lift

- Are there good hand holds?
- Is it wrapped in plastic or wet and therefore possibly slippery to get a good grip?
- Remove any obstructions that may be in the way. Are there any obstructions which cannot be removed?
- How do you get around them?
- Will it be carried for some distance?
- Consider a suitable place to take a rest.
- Will vision ahead be obscured; how will this be managed?



# Safe Lifting Information

- continued

Employee Induction



## Step 3 – Position the Feet

- Have feet slightly apart with one leg being a 'leading leg'; slightly forward of the other, but comfortable. If possible, face the direction to be travelled.

## Step 4 – Adopt a Good Posture

- Bend the knees, but do not kneel. Keep the back straight as it would be naturally; this is very important. Lean slightly forward over the load to get a good grip but keep the shoulders level.

## Step 5 – Take a Firm Grip

- Keep the arms within the boundary formed by the legs. A hook grip under the lift is more secure than a flat hand hold on the sides. The weight of the lift should be taken by straightening the legs NOT by bending the back. Do not jerk. Do not twist.

# Safe Lifting Information

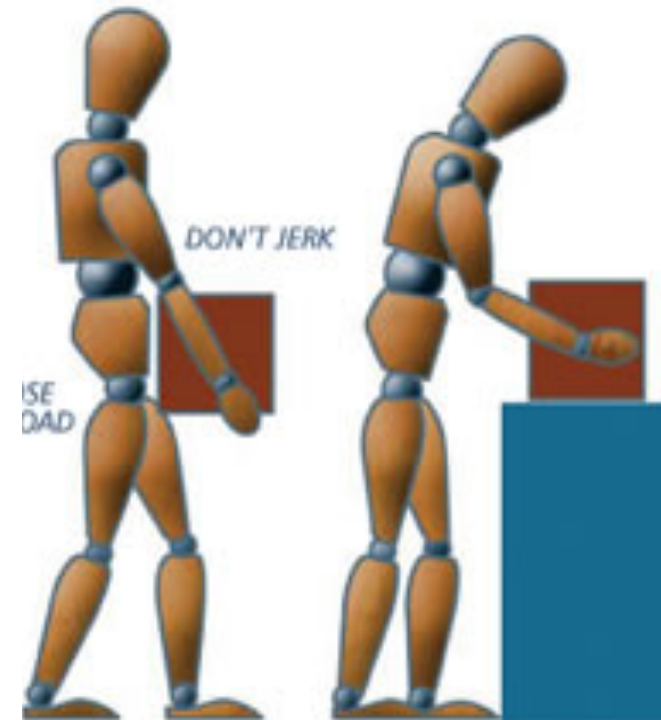
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## Step 6 – Lift, Set Down and Adjust

- Keep the lift close to the body during transfer. Place the load where it is required. Do not try to place accurately if this difficult; it is better to set the load down and then slide it into the position required.



# Waste Materials

## Employee Induction



- Waste materials should be removed from the work site at the end of each working day / shift.
- In addition, hazardous waste is not to be disposed of with general waste and all combustible waste materials are to be disposed of regularly to prevent the build-up of fire risk.
- Where there are recycling facilities, waste materials should be sorted into their recycling categories.

# Floors & Walkways

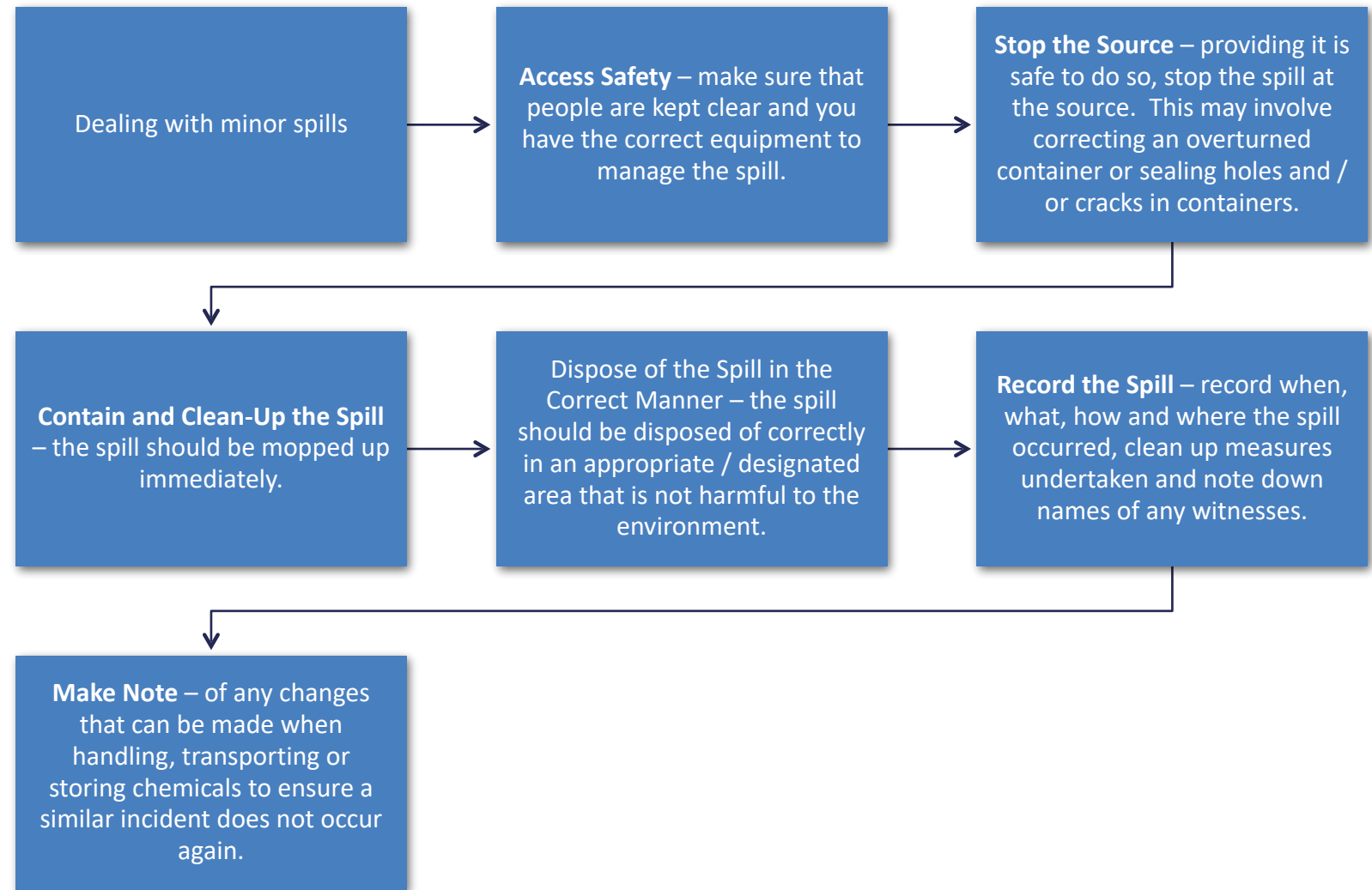
## Employee Induction



- Floors and walkways should be kept clear and free from debris. Substances which may give rise to slip hazards, should be cleaned up at the earliest opportunity with warning signs until that time.
- Walkways should be clearly marked and kept clear of all obstructions. Any obstructions which cannot be removed should be clearly marked.

# Spill Management

## Employee Induction



# Spill Management

- Continue to next slide

Employee Induction



## Dealing with Large Spills

**Access Safety** – make sure that people are kept clear and that you have the correct equipment to deal with the spill.

**Protective Clothing** – ensure you have the correct protective clothing to manage the spill, i.e. gloves, goggles, apron.

**Stop the Source** – providing it is safe to do so, stop the spill at the source.

This may involve correcting an overturned container or sealing holes and / or cracks in containers.

# Spill Management

- continued

Employee Induction



**Contain & Control the Flow** – the spill should be prevented from filtering into the ground or entering a stormwater system. The outer edge of the spill should be dammed with rags, blankets, sand, sand bags, mops and / or absorbent brooms.

**Clean up the Spill** – promptly cover the spill using absorbent materials such as the correct absorbent granules for the product in accordance with safety practices (note that some strong acids will react with some types of granules and sawdust), sand and rags, being mindful not to splash the spill.

Use a dust pan or spade, the absorbent granules or sand must then be scooped and placed into a container. This waste material is NOT to be buried or thrown into the environment. The method of disposing this waste will depend on the amount and the type of chemical that was spilt.

# Spill Management

- continued

Employee Induction



**Notify the Correct Authority** – ensure the correct organisation(s) are contacted. If the hazard is directly related to health or property call the emergency services on 000.

**Record the Spill** – record when, what, how and where the spill occurred, clean up measures undertaken and the names of any witnesses.

**Make Note** - of any changes that can be made when handling, transporting or storing chemicals to ensure a similar incident does not occur again.



# Electrical Safety

## Employee Induction



- Electricity, so widely used and necessary to modern life, is all around us, and at the same time has the high potential to cause a serious incident or accident resulting either directly or indirectly loss of life, if not managed with care and attention.
- To ensure that, as far as practicable, risk of injury related to electrical hazards is eliminated or minimised it is imperative to monitor maintenance of electrical equipment.
- This procedure applies to all work locations, personnel and all items of company electrical equipment.

# Electrical Safety

- continued

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Electric shock is the most obvious and widely known hazard associated with electricity. The degree to which an electric shock affects the human body depends on the current.

Current as measured in milliamps (mA) (1000 mA = 1Amp)

0.5 – 1.58 mA	Tingling Sensation
1.5 mA	Muscle Contractions
3 – 10 mA	Pain
10 – 40 mA	Let go threshold
40 – 75 mA	Respiratory Paralysis
75 – 100 mA	Ventricular Fibrillation
250 – 300 mA	Heart Paralysis
> 200 mA	Burns & Probable fatality

The above values for electrical current (mA) are for guidance and illustrate the general level of the effects of electric shock; this may vary according to the victim's body size, gender and general health fitness.

# Electrical Safety

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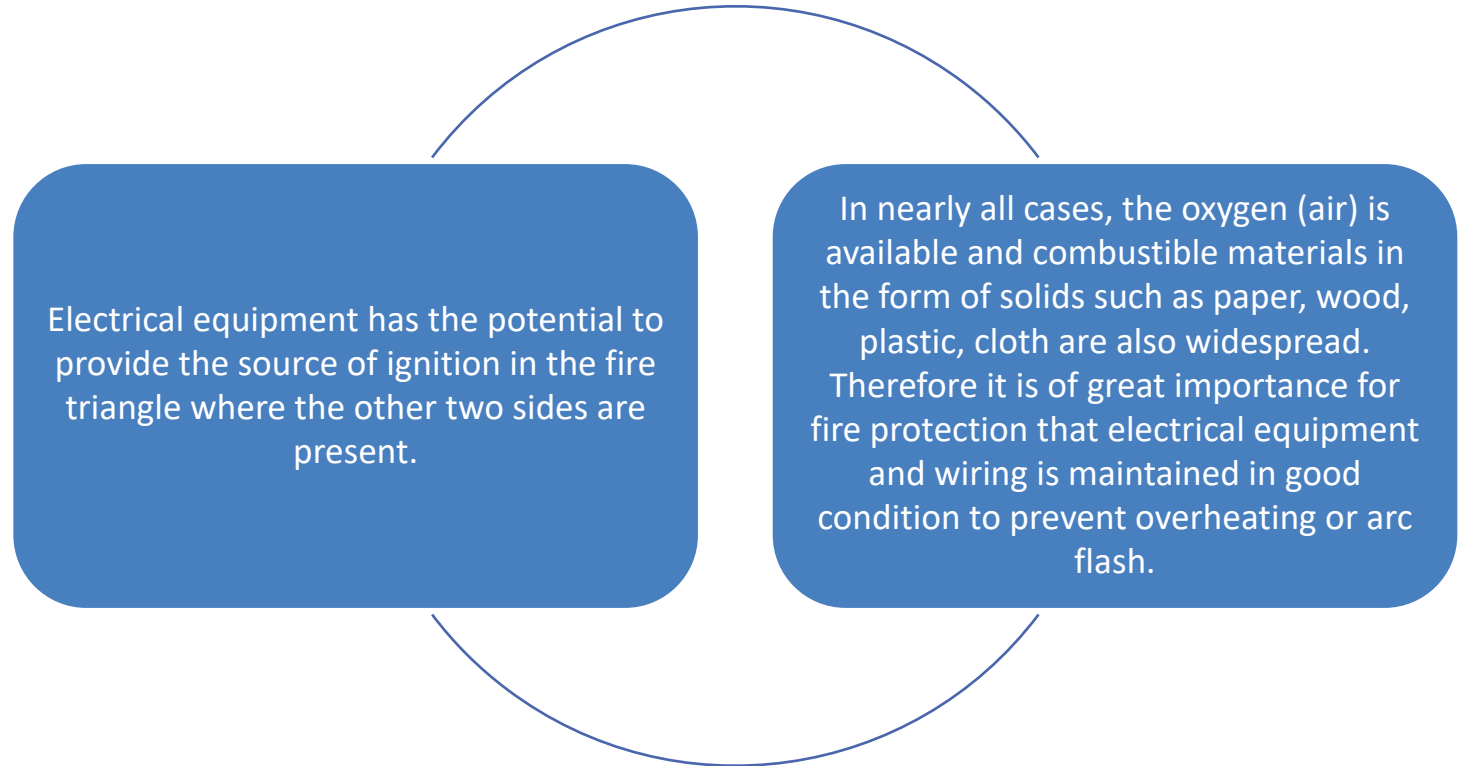
For electric shock to occur, part of the body must be in contact with the ground (earthed). This determines the 'path' of the electric current to ground.

## Effects of path include:

- Touch: hand to electrical source – hand to earth;
- Electrical current passes through vital organs, heart and lungs. (very serious).
- Touch / Step: hand to electrical source – leg and foot to earth:
- Electrical current passes through vital organs, heart & lungs (very serious).
- Step / Step: leg and foot to source – other leg and foot to earth;
- Electrical current does not pass through vital organs, heart and lungs. (Survivable, threshold for serious injury is raised

# Electrical Hazards – Fire & Explosion

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# Electrical Hazards – Fire & Explosion

- continued

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Type Extinguisher	Fire	CLASS A	CLASS B	CLASS C	CLASS D	Electrical	CLASS F	Comments
		Combustible materials (e.g. paper & wood)	Flammable liquids (e.g. paint & petrol)	Flammable gases (e.g. butane and methane)	Flammable metals (e.g. lithium & potassium)	Electrical equipment (e.g. computers & generators)	Deep fat fryers (e.g. chip pans)	
Water		✓	✗	✗	✗	✗	✗	Do not use on liquid or electric fires
Foam		✓	✓	✗	✗	✗	✗	Not suited to domestic use
Dry Powder		✓	✓	✓	✓	✓	✗	Can be used safely up to 1000 volts
CO2		✗	✓	✗	✗	✓	✗	Safe on both high and low voltage
Wet Chemical		✓	✗	✗	✗	✗	✓	Use on extremely high temperatures

# Chemical Safety

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Hazardous substances are substances that have the potential to harm human health. This can be immediate or long-term and the severity of the health effect will depend on the substance and the dose absorbed.

The major routes of exposure to hazardous substances in the workplace are through inhalation and skin contact and less commonly by ingestion or injection.

Dangerous goods are substances and articles that are potentially hazardous to people, property and the environment.

They pose an immediate threat of fire, spill, gas escape or explosion and may cause harm due to their individual property e.g. flammable, corrosive, explosive, spontaneously combustible, toxic and oxidizing or water reactive properties.

# Chemical Safety

- continued

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**Regarding chemicals, all personnel have a responsibility to:**

- Use all products for their intended purposes only
- Handle and store products in an appropriate manner / location
- Avoid contact with through skin, inhalation or swallowing
- Wear PPE appropriate to the substances being handled
- Take reasonable care for their individual safety and that of anyone else who could be affected by their actions
- Fully co-operate with management in any action it considers necessary to maintain a working environment which is safe and without risk to health.

# Terminology

## Employee Induction



**Toxic Substance** – A chemical or mixture that may present an unreasonable risk of injury to health or to the environment

**Chronic** – Where the effect of exposure to a toxic substance may have delayed or prolonged adverse effects on health.

**Acute** – Where the effects of exposure to a toxic substance will have immediate or sudden onset of adverse reaction.

**TLV (Threshold Limit Value)** – The maximum concentration of a chemical in which a person may work for an average 8 hour day, day after day, with no apparent adverse effects on health.



# Terminology

- continued

Employee Induction



- **MEL (Maximum Exposure Limit)** – the maximum permitted concentration to which a worker may be exposed over an extended period of time, usually expressed as PPM (Parts per Million) over an 8 hour working day. In some cases this may be some time less.
- **Carcinogen** – A chemical which is known or believed to cause cancer in humans.
- **Corrosive** – A chemical which on contact causes damage to skin, eyes or other parts of the body.
- **SDS (Safety Data Sheet)** – Previously known as MSDS (Material Safety Data Sheet), the term has been superseded in the Globally Harmonised System (GHS) and gradually being phased out as regulators move towards adoption of GHS requirements. SDS specifications are clearly laid down.

# Chemical Hazards

## Employee Induction



## Routes of Entry

In addition to the possibility of damage to surface organs such as eyes, skin, mucous membranes, there are three routes by which hazardous substances can enter the human body and attack internal organs – becoming known as ‘target organs’.

- Inhalation into the lungs
- Absorption through the skin
- Ingestion through the mouth

# Chemical Hazards

- continued

## Employee Induction



## Risk Assessment

The company will perform risk assessment on hazardous substances and dangerous goods.

The SDS sheet provides the appropriate information as regards the use of PPE and what first aid treatment should be used in case of accidental over exposure or contamination.

The SDS sheets should be displayed and readily available at all sites where hazardous substances are stored or used.

# Chemical Hazards

- Continued to next slide

Employee Induction



The place where the chemical transfer is carried out is:

- Set aside for that purpose
- Not within the storage area (but adjacent to it)
- Free of ignition sources
- Free of obstruction with sufficient room to enable the transfer to occur
- Any clean up equipment are kept close by
- The transferred container is of suitable type for the substance

# Chemical Hazards

- continued

Employee Induction



## Decanting / Transfer

Where substances need to be transferred (by pumping, decanting, dispensing or filling) into or from a container or moved from place to place, ensure that:

- Spill containment is provided that can hold at least the quantity of the largest container
- The transfer is done in a manner that reduces the generation of any vapours and avoids splashing or spillage
- The container being filled and any transfer equipment is earthed (if there is a likelihood of static electricity being generated and risk from ignition of flammable vapours during the transfer).

Thank you for  
participating in  
this Induction  
Program.

- THE END

Employee Induction



# REMEMBER

