

# RIIWHS201D

# Work safely and follow WHS policies and procedures



# **Participant Manual**

# Please return this manual to the Trainer

Please do not write on this manual you will be provided with a workbook

**NSW Government Roads and Maritime Services** 

July 2015

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# Before you begin

This leaner guide is based on RIIWHS201D Work Safely and follows WHS Process form the RII Resources and Infrastructure Training Package

## **Knowledge and Skills**

The following is a list of the skills and knowledge required to prepare work zone traffic management plans for worksites, it includes

- demonstrates consistent, timely working safely and following WHS policies and procedures that safely, effectively and efficiently meets the required outcomes on more than one (1) occasion, including:
- sourcing, interpreting, clarifying and applying site safety information
- listening carefully to health and safety instructions and information, responding to and clarifying information and directions
- carrying out work instructions that complies with WHS policies and procedures
- selecting, wearing and caring for personal protective equipment for all activities that require personal protective equipment
- applying safe lifting and manual handling techniques
- identify and report on WHS issues to appropriate personnel
- recognising and following procedure to respond to alarms
- completing workplace reporting procedures



# **Expectations**

This is a level 2 mapped unit of competency from the RII Resources and Infrastructure Training Package At this level you are expected to meet the following learner outcomes;

- Apply sound solutions and actions toward health and safety
- Carry out activities and tasks relating to safety
- Apply personal safety procedures and measures
- Recognise safety issues and act accordingly
- Identify risks and report appropriately
- Maintain fitness for duty
- Complete appropriate paperwork
- Use safety equipment correctly



# **Unit of Competency**

RIIWHS201D	Wor	Work safely and follow WHS policies and procedures				
Application	safely	This unit describes a participant's skills and knowledge required to work safely and follow WHS policies and procedures in the Resources and Infrastructure Industries.				
	This u	This unit is appropriate for those working in operational roles.				
	apply secto	Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.				
Elements	Perfo	Performance Criteria				
Access and apply safety procedure		Access, interpret and apply work health and safety procedures and ensure the work activity is compliant				
	1.2	Carry out isolation of energy sources and immobilisation of potential energy sources				
	1.3	Locate destinations by interpreting and applying site plans, transport rules and signage				
	1.4	Identify, act on, and report breaches in site safety				
2. Apply personal s	afety 2.1	Select and wear personal protective equipment				
measures	2.2	Establish and maintain a clean and tidy safe working area				
	2.3	Obtain permits and clearances before specialised work is carried out				
	2.4	Apply safe manual handling procedures				
	2.5	Identify and apply site procedures for conducting high-risk activities				
3. Apply operation		Recognise and respond to alarms				
safety measures	3.2	Identify and clarify responsibility in responding to emergency situations				
	3.3	Apply basic fire fighting techniques				
	3.4	Identify emergency escape route(s) and procedures				



4.	Maintain personal wellbeing	4.1	Identify risks to personal wellbeing and recognise preventative strategies
		4.2	Identify, act on, and report situations which may endanger others
		4.3	Access and explain verbally or in writing the requirements for fitness for duty
		4.4	Comply with all work health and safety policies including smoking, alcohol and drug use
5.	5. Identify and report incidents 5.2 5.3		Recognise and communicate incident and injury statistics Report and prepare written records of incidents and injuries Contribute to and participate in incident investigations



# Introduction

All work carries with it some degree of risk to health and safety, however, the traffic control industry poses unique and elevated levels of risk to workers.

It is important that you become acquainted with how legislation and company policies and procedures interact to help keep workers safe and with what your own personal responsibilities to health and safety are.

### Induction

Workplace induction/orientation, also known as 'on-boarding' will introduce you to the various policy and procedures and introduce you to mandatory and statutory arrangements.

WHS in workplaces is supported and driven by legislation and codes of practice and there is a big responsibility on employers to ensure that workers are introduced to WHS requirements, therefore inductions are very important.

New workers could be at risk from the moment they enter the workplace on their first day, it is important to be exposed to WHS documentation from the start

# Legislation

In all jurisdictions, there is a statutory body responsible to work with and assist industry top meet their WHS needs and requirements.

- They do this providing the following
- Advice on improving WHS to prevent workplace injuries and deaths from occurring
- Provide support and advice for business in regard to WHS
- Provide licensing and registration for dangerous work
- Enforcing WHS laws and policies
- They may provide insurance for employers
- Manage Workers compensation systems
- Help workers return for work

If you are using this workbook in the context of traffic control, it is important to note that traffic control work may be designated as **high-risk work** in your jurisdiction.

If this is the case, there may be additional safety requirements that must be adhered to on traffic control sites. This is partly why traffic control personnel need formal accreditation before they can work.



# **Employer's or PCBU responsibilities**

A 'person conducting a business or undertaking' (PCBU) is a legal term under WHS laws for individuals, businesses or organisations that are conducting business. A person who performs work for a PCBU is considered a worker.

### Types of PCBUs can include:

- public and private companies
- partners in a partnership
- sole traders and self-employed people
- government departments and authorities
- associations if they have one or more employees
- local government councils
- independent schools
- cooperatives
- universities

PCBU's are responsible for the health and safety of workers, contractors, volunteers, visitors and anyone else who might be put at risk by the work being carried out.

### By law they must:

- talk to workers to identify any potential hazards
- put systems in place for the safe use and maintenance of plant and machinery, such as machine guards
- provide suitable information, instruction and supervision, especially to new workers
- ensure there are adequate workplace facilities including toilets, drinking water, washing and eating facilities and first aid
- record any workplace incidents in a register of injuries and respond to hazards quickly
- prepare emergency plans
- manage the risks of any remote and isolated work
- have a return to work program to help injured workers with their recovery and return to work.

A PCBU is not the same as an individual worker or officer and the term does not apply to purely social, domestic or recreational activities. Individual workers and officers have separate duties under the WHS Act

www.workcover.nsw.gov.au



### **Workers**

Anyone who performs paid work in any capacity for an employer, business or organisation is considered a worker. However the term can also include unpaid workers such as volunteers or work experience students. You're considered a worker if you're an:

- employee
- trainee, apprentice or work experience student
- outworker, contractor or sub-contractor
- employee of a contractor or sub-contractor
- employee of a labour hire company

# A worker has a responsibility to take reasonable care of their own health and safety, and that of others.

A worker is a person who carried out work in any capacity for a business or employer (or other **PCBU**). They can be:

- an employee
- a trainee, apprentice or work experience student
- a volunteer
- an outworker
- a contractor or sub-contractor
- an employee of a contractor or sub-contractor
- an employee of a labour hire company

### **Duties of a worker**

While at work a worker must:

- take reasonable care for their own health and safety
- take reasonable care for the health and safety of others
- comply with any reasonable instructions, policies and procedure given by their employer, business or controller (or other PCBU) of the workplace

www.workcover.nsw.gov.au



# 1.1 Access, Interpret and apply work health and safety procedures and ensure the work activity is compliant

Your work site will have some form of Site Health and Safety Management System.

This system will include risk management elements and practices that ensure safety and health of workers on site. It is the primary means by which an operator ensures the health, safety and welfare of employees and others at a work site.

Work Health and Safety Procedures on a work site may include:

- Personal Protective Equipment (PPE)
- Hazard identification and risk assessment
- Personal health and hygiene
- Working with hazardous substances
- Working with plant and mobile equipment
- Environmental protection
- · Fire prevention and fire fighting
- Site communications
- Training
- Emergency response
- Tagging and isolation
- Defect reporting system
- Standard Operating Procedures
- Work instructions

One of the key pieces of compliance documentation in high risk environments is a 'Safe Work Methods Statement' (SWMS)

The primary purpose of a SWMS is to enable supervisors, workers and any other persons at the workplace to understand the requirements that have been established to carry out the high risk construction work in a safe and healthy manner. It sets out the work activities in a logical sequence and identifies hazards and describes control measures.

Any activity, no matter how simple or complex, can be broken down into a series of basic steps that will permit a systematic analysis of each part of the activity for hazards and potential accidents. The description of the process should not be so broad that it leaves out activities with the potential to cause accidents and prevents proper identification of the hazards, nor is it necessary to go into fine detail of the tasks.

Safe Work Australia Construction Work Code of Practice March 2012



### SAFE WORK METHOD STATEMENTS

A safe work method statement must be prepared for all high risk construction work. The statement must:

- list the types of high risk construction work being done
- state the health and safety hazards and risks arising from the work to be carried out
- describe how the risks will be controlled
- describe how the risk control measures will be implemented, monitored and reviewed
- take into consideration factors that may affect the way in which the high risk work is carried out be accessible and easy to read

The business or employer (or other **PCBU**) must make sure that the high risk construction work activities are carried out in accordance with the statement.

If high risk construction work is being carried out in connection with a construction project, it must take into account all relevant information that is in the **work health and safety management plan**.

A safe work method statement must be given to the principal contractor before the high risk construction work starts. The statement must be reviewed and updated if relevant control measures are revised.

### Record keeping

The employer must keep a copy of the safe work method statement until all the work is completed. If there is a notifiable incident when the work is carried out, the statement must be kept for at least two years after the incident occurs

http://www.workcover.nsw.gov.au/health-and-safety/industry-safety/construction/high-risk-building-work

PCBU's are responsible for preparing and distributing SWMS for all high risk activities within the workplace ion consultation with workers.

The PCBU must provide all workers involved with high risk work with a SWMS

Your trainer will provide you a sample SWMS



# 1.2 Carry out isolation of energy sources and immobilisation of potential energy sources

Isolation: process of ensuring that harm or loss cannot be caused by an energy source when conducting work

A *Hazard* can be defined as a source of potential harm or a situation with potential to cause harm.

If you look at hazards as an energy source, then you will need to know how to identify and manage it

Below are some examples of the common types of energy sources/hazards that you may encounter at a traffic control worksite:

- Mechanical
  - o Vehicle/mobile equipment, vehicle fan belts
- Hydraulic
  - o Pressurised hydraulic systems,
- Pneumatic
  - Pressurised air or gas systems
- Electrical
  - o Power supply to electrical equipment
- Thermal
  - o Hot mechanical components, hot liquids, fire,
- Chemical
  - Liquids such as fuels, cleaning products, acid and caustics
- Radiation
  - Ultra Violet (sun), welding arc flash, microwaves, lasers
- Acoustic/Vibration
  - Plant and machinery noise

Energy becomes hazardous when it builds to a dangerous level or is released in a quantity that could injure a worker

Hazardous energy in the workplace can kill

To control hazardous energy, you must prevent it from being transmitted from its source to the equipment that it powers. You can accomplish that by doing the following:

- 1. Identify energy sources and energy-isolating devices
- 2. De-energise equipment
- 3. Secure energy-isolating devices in a safe position
- 4. Dissipate or restrain potential energy that cannot be isolated
- 5. Verify equipment isolation



# Isolation

**Isolation** refers to the process of ensuring that there is no possibility of any energy source being present which could cause injury to personnel as they are carrying out tasks on or near plant and equipment.

Isolation measures include locks, clasps, tags, closing and blanking devices, removal of mechanical linkages, blocks, slings, and removal from service. An appropriate measure that is high on the hierarchy of controls must be used where practicable to isolate the energy sources(s)

This does not mean simply switching off the source of energy.

Failure to shut down, de-energise or isolate energy sources on plant during maintenance and non-production tasks puts workers at risk of death or injury

The following general procedures regarding isolation provide a basis to which you can add site-specific information.

The basic steps of safe isolation are:

- 1. **Identify** the equipment to be worked on and the isolation requirements.
  - a. Including all locations where the equipment can be started
  - b. Including any associated equipment
- 2. **Isolate** Ensure that the intended isolation will not cause injury or damage and that all points are isolated. Be aware that the equipment may require the isolation of several energy sources.
- 3. Lock & Tag Apply your personal isolation lock and personal danger tag to the isolation point/s.
- 4. **Dissipate** Check and remove all stored energy
- 5. Verify Test to ensure that the equipment is correctly isolated and cannot be re-energised

Other lockout methods can include group lockouts with items such as scissor locks, lock boxes and isolation boards.

In addition to a Personal Danger Tag other tags often used on site include:

**Out of Service Tags** – are placed on the isolation point/s of defective equipment which, if operated, could cause injury, equipment damage or adversely affect some part of the operation.

**Information Tags** – are used to pass on a message or instruction to personnel operating or working on a particular item of equipment or machinery.

Tagging out, also known as tag out (TO), when performed correctly, is a procedure for securing a warning sign to an energy-isolating device when a lockout device cannot be used.

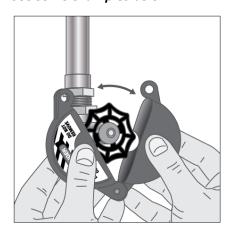


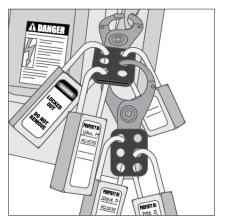
Locking out, also known as lockout (LO), is a procedure for physically securing energy-isolating devices in an off, closed, or neutral position.

A lockout device, typically a lock with a unique key secures the energy-isolating device in a safe position.

When an energy-isolating device is secured by a lockout device, it physically prevents the energy-isolating device from being manipulated.

# See some examples below







Worksafe Victoria June 2011



# Please see a sample of a checklist for isolating Plant

St	eps to isolating plant		Yes ✓
1	Shut down the plant		
-	operator is aware	plant is turned off.	
2	Isolate energy sources, such as:		
-	multiple control stations	local isolators	
•	independent energy sources	single/multiple point isolation.	
3	De-energise stored energy.		
-	Plant has been de-energised. This includes different forms	of energy (consider plant not returned to its rest position	
	gravity etc).		
4	Lockout isolation points - personal danger locks.		
•	Each worker has been allocated sufficient locks to lock out	t each isolation point.	
•	There is only one key per lock.		
•	Locks are attached to each isolation point for each worker	performing work on the plant.	
5	Lockout isolation points – out of service locks.		
-	A supervisor or nominated person has been allocated with		
•		or day.	
6	•		
	Note: tagging is not lockout.		
7	Confirm isolation has been achieved effectively. Ensure:		
•	6 Tag out.  Plant has been tagged with the appropriate tag. Note: tagging is not lockout.  7 Confirm isolation has been achieved effectively. Ensure:  No errors have been made (eg correct isolators have been selected).  Isolators are in safe positions.  All stored energy is dissipated or restrained.  Locks are attached to each isolation point for each worker performing work on the plant.  8 Test for zero energy.  Before starting work, the plant has been tested to ensure energy is isolated and the plant and its parts will not move.  Testing included different operational controls (eg remote computers).  9 Changing shifts or crews.  Handover discussions have been held.  Locks and tags have been changed over.		
•	Isolators are in safe positions.		
•	All stored energy is dissipated or restrained.		
•	Locks are attached to each isolation point for each worker	performing work on the plant.	
8	Test for zero energy.		
•	Before starting work, the plant has been tested to ensure e	energy is isolated and the plant and its parts will not move.	
•		computers).	
9			
•			
•	Locks and tags have been changed over.		
10	Removing another worker's locks and tags.		
•	All options to remove their own locks and tags have been a		
•	A senior person is accountable for the process to remove t	the locks and tags.	
•		safety is maintained and no additional hazards or risks have	
- 11	been created.		-
11	Reactivate isolated plant.  Plant has been reactivated in the correct order after work is	- finish - di	
1	•	S sensory guarding tested	
2	workers clear of hazardous areas 7	7 emergency devices tested	
3	blocks and wedges are removed 8	3 workers understand how energy will be restored.	
4	physical guarding in place		
5	locks and tags removed		<u>i</u>
Da	ate:	Signed:	
Ne	ext review date:	Name and position: (Health and safety representative)	



# 1.3 Locate destinations by interpreting and applying site plans, transport rules and signage

When moving around your work site you need to be aware of the specific rules regarding plant and equipment, pedestrians, signage and devices and no go zones

Become familiar with the main locations, access routes and especially restricted zones, the Traffic Management Plan will identify these areas

Traffic control signs and devices are specified in AS1742.3 Manual of Uniform Traffic Control Devices, as well as in State and Territory Codes of Practice and Manuals for Traffic Control.

# Info on TC signage

# Signs

Common signage that you will come across in the workplace is based around safety and risk

Within the traffic control environment you will encounter signage used in the implementation of traffic control guidance schemes to warn and guide road users

Other signage that will assist in general workplace communication may referee to general, mandatory, Hazchem, danger, warning, emergency and prohibitory signage

These sign are colour coded and many are stylised so they are recognisable

### Check site plans for

- First aid kits
- Spill kits
- Parking
- Firefighting equipment
- Emergency exits
- Maintenance areas
- Restricted areas



# Please see below some categories and examples of signage

# Mandatory



Prohibitory



# Hazchem/Dangerous goods



# Fire related



# Danger



# Warning



# First Aid



# Exits





# 1.4 Identify, act on, and report breaches in site safety

As stated previously, employers and workers have significant responsibilities when it comes to safety in the workplace.

All workers have obligation to identify and report hazardous and dangerous issues and situation that may occur in the workplace.

How do you identify potential issues?

- Conduct regular safety checks, this is a proactive approach
- Know your immediate work environment, this way you will notice any out of the ordinary issues or concerns
- Be familiar with workers and equipment, again this will assist in noting any issues
- Check all activities against SWMS

Some examples of breaches in safety may include;

- Working at heights without safety controls
- Inappropriate use of equipment
- Unsafe movement around plant and equipment
- Allowing unlicensed and non-qualified workers to use equipment or perform duties
- Lack of proper guards and restrictors on equipment
- Using mobile phones whilst carrying out duties

You are required to know the reporting structure and escalation process for reporting safety breaches These steps may include:

- reporting the issue verbally to your supervisor or manager
- reporting the issue through the workplace's hazard reporting procedures
- raising the issue with the health and safety representative
- raising the issue with management

Reporting safety breaches will also contribute to the overall risk management of the workplace

These reports will be used to identify long term system issues and can lead to process improvement.

Do not assume that it is some one else's job to report issues, failure to report or act upon safety breaches may result in injury, damage or a workplace fatality.



# 2 Apply personal safety Measures

There are no guarantees of personal safety in any environment.

It is incumbent upon each individual to safeguard themselves against incidents, near misses and risks

One of the best ways to maximise your safety and minimise risk is to follow some very simple safety rules;

- Follow directions and instructions
- Use equipment correctly
- Do not participate in 'horse play'
- Know your emergency procedures and equipment
- Stay alert
- Understand your responsibilities
- Conduct regular safety checks
- Keep yourself fit and healthy
- Look out for others
- Treat all high risk environments with respect
- Be familiar with the site and equipment
- Wear personal protective equipment and clothing

# 2.1 Select and wear personal protective equipment

There are requirements for Traffic Controllers to wear appropriate clothing and PPE to ensure their safety while conducting their specific duties.

High Visibility Clothing

Traffic Controllers are required to wear approved high visibility clothing (outer garments):

- at all worksites affected by traffic
- while outside a vehicle within the bounds of the road reserve

There are different types of approved high visibility clothing that Traffic Controllers must wear at the appropriate times.

Traffic Controllers must wear Approved Safety Clothing which may include:

For day time work:

- Approved High Visibility vest.
- · Approved High Visibility shirt.

For night time work:

• High Visibility overalls with reflective tape





Because of the potential hazards associated with working on, or adjacent to, road worksites, all persons working on or authorised to enter such worksites, shall be supplied by their employer/Person Conducting Business or Undertaking (PCBU) with the relevant high visibility Personal Protective Equipment (PPE) and shall be instructed to wear it at all times when required.

This equipment and clothing should comprise of the following items (but may not be limited to):

- High visibility garments:
  - Fluorescent high visibility vest, shirt, jacket or overalls (day use only)
  - Retro-reflective outer garment (night use only)
- Safety footwear

### **Work Clothes**

In order to protect the traffic controller from exposure to UV radiation, and to ensure that they are visible they should wear:

- · broad brimmed hats
- broad brimmed safety attachments to safety helmet (if appropriate)
- long sleeved collared shirt
- long pants or overalls (especially when working near bitumen)
- tinted safety glasses (recommendation AS 1337.1: Safety Glasses and Spectacles)
- · safety footwear
- broad spectrum SPF +30 sun screen and lip creams

Other requirements for personal protection equipment such as hearing protectors (earmuffs, ear plugs)

# 2.2 Establish and maintain a clean and tidy safe working area

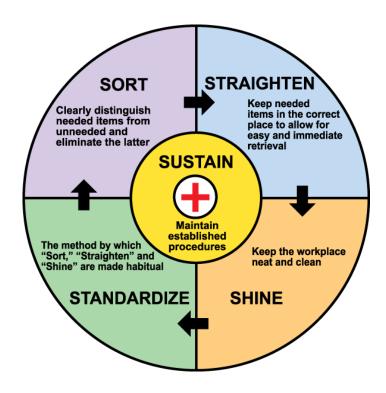
Tidy and sae work environments minimise risk and damage to equipment, worker, road users and supports a professional approach to the overall business

It is everyone's responsibility to maintain a clean and tidy workplace; poor housekeeping can lead to the unnecessary creating of hazards

A common practice relating clean and tidy workplaces is adopting the 5S methodology, by which workplaces are organised in an efficient and sustainable order.

- Sort
- Systematic arrangement
- Shine (keep the workplace tidy)
- Standardise
- Sustain

# **TCP**TRAINING



### Please see below some tips and processes

- each worker is responsible for keeping his/her own work area clean and tidy
- all rubbish is to be placed in the appropriate bin as soon as it is generated
- aisles and walkways must be kept clear
- walkways for pedestrians should be wide enough to accommodate two-way flow
- material should always be neatly stacked on stable and level floors capable of carrying the weight of the stack
- all unnecessary items should be removed from the workplace
- food scraps should be placed in bins which have plastic liners.
- rubbish bins provided for the disposal of rags, oily materials or similar flammable materials, should be used
- used aerosol cans should be disposed of in the flammable materials bin provided
- separate bins for the collection of rubbish and scrap metal will be strategically located around the site and should be used.



# 2.3 Obtain permits and clearances before specialised work is carried out

Permit systems are used extensively on work sites for specialised work, especially in traffic control at worksites

In addition to Traffic control Guidance Schemes, Traffic management plans, other work may be carried out on the worksite that may need additional permits and clearance before work can be carried out

The responsible officer must complete a risk assessment and put all appropriate controls in place prior to issuing a permit.

Work that may require permits may include:

- Access to restricted areas
- Welding and cutting
- Working at heights
- Digging and excavation work

Permits and clearances need to be applied for and issued before the specialised work can begin

To apply for a permit or clearance, you will need to have all the appropriate information about the work and those who will be involved in carrying it out

Information may include;

- Locational and duration
- Hazards that may be encountered
- PPE
- Qualified workers
- Types of plant and equipment
- Environmental impact information
- Urgency of work
- Hazard control measure
- Risk management processes



# 2.4 Apply safe manual handling procedures

Manual handling covers a wide range of activities including lifting, pushing, pulling, holding, throwing and carrying. It includes repetitive tasks such as packing, typing, assembling, cleaning and sorting, using hand-tools, and operating machinery and equipment.

Because most jobs involve some form of manual handling, most workers are at risk of manual handling injury.

The types of injuries that can be caused by manual handling may include

- muscle sprains and strains
- injuries to muscles, ligaments, intervertebral discs and other structures in the back
- injuries to soft tissues such as nerves, ligaments and tendons in the wrists, arms, shoulders, neck or legs
- abdominal hernias
- chronic pain

### **MANAGING RISKS**

You must manage risks to health and safety relating to a hazardous manual task.

You must:

- identify hazards
- eliminate the risk, wherever possible
- minimise the risk by implementing control measures in accordance with the hierarchy of control
- maintain the control measure so that it remains effective
- review risk control measures

You must also consult with workers who are affected, or likely to be affected, by the manual task.

Designers, manufacturers, importers and suppliers of plant or structures must also eliminate or minimise the need for any hazardous manual task to be undertaken with the plant or structure or face one of these fines

Consider the following questions

- Change the task; does the load or task need to be carried out?
- Change the object; can it be repacked, decanted or made smaller?
- Use mechanical aids; can the load be moved mechanically?
- Change the workspace; can we use ergonomic approaches, furniture
- Can you change the nature of work?
- Can assistance be obtained?
- Is the load too heavy to lift safely?



Characteristics of hazardous manual tasks may include

Repetitive force - using force repeatedly over a period of time to move or support an object

**Sustained force** - occurs when force is applied continually over a period of time.

**High force** – may be exerted by the back, arm or leg muscles or by the hands and fingers.

High force occurs in any tasks that:

- a worker describes as very demanding physically
- a worker needs help to do because of the effort it requires
- require a stronger person or two persons to do the task.

**Sudden force** – jerky or unexpected movements while handling an item or load are particularly hazardous because the body must suddenly adapt to the changing force.

Tasks where force is applied suddenly and with speed also generates high force

Tips on how you can prevent manual task injuries

- Stretch prior to doing any manual handling tasks.
- Exercise and take short breaks frequently
- Cool down after any heavy lifting/manual handling.
- Prevention is better than cure! You can do just a few of the exercises anytime during the day. Try some of them before you get stiff and sore.
- Include a variety of movements in your workday.
- Some stretches may cause you pain or discomfort. If this occurs, stop the stretch immediately.

### **INSERT MANUAL HANDLING IMAGE**



# 2.5 Identify and apply site procedures for conducting high-risk activities

High risk activities are tasks that require a higher level of precautions to ensure the safety of those involved. High risk activities are usually defined by legislation governing the particular industry affected.

High Risk construction work may include (general)

- involves a risk of a person falling more than 2 metres
- is carried out on a telecommunication tower
- involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure
- involves, or is likely to involve, the disturbance of asbestos
- involves structural alterations or repairs that require temporary support to prevent collapse
- is carried out in or near a confined space
- is carried out in or near a shaft or trench with an excavated depth greater than 1.5 metres, or a tunnel
- involves the use of explosives
- is carried out on or near pressurised gas distribution mains or piping
- is carried out on or near chemical, fuel or refrigerant lines
- is carried out on or near energised electrical installations or services
- is carried out in an area that may have a contaminated or flammable atmosphere
- involves tilt-up or precast concrete
- is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians
- is carried out at a workplace in which there is any movement of powered mobile plant
- is carried out in an area in which there are artificial extremes of temperature
- is carried out in or near water or other liquid that involves a risk of drowning, or

# High risk work may require;

- · Permits and licenses
- · Specialised training and certification
- Specialise plant and equipment
- Specialised facilities
- Designated time frames and environmental controls
- PPE
- Supervision
- Emergency plans
- Exclusion zones
- Traffic management
- Essential services

Is work zone traffic management considered high Risk work?



# 3 Apply Operational Safety Measures

Operational or essential safety measures form the baseline of life safety within the workplace, relating to firefighting, emergencies, evacuation, alarm and first aid.

# 3.1 Recognise and respond to alarms

Traffic control sites will be different than most regular or stable worksites, alarms will be temporary.

While there may not be fixed alarms, there will still be procedures for alerting site personnel that an emergency situation is unfolding.

Radio communication will be the most common type of onsite method for communicating and will be significant in any alarm.

In the event of an emergency on a work site generally some form of visual or audible alarm will activate. The types of alarms may include:

- Alarm bell
- Electronic tone (warbling, whoop-whoop etc. often used for fire)
- Sirens
- Tones transmitted over site radio/communication systems
- Flashing lights

# 3.2 Identify and clarify responsibility in responding to emergency situations

All workers will have differing responsibilities relating to reposing to an emergency, these details would have been covered during a workplace induction, and/or through toolbox talks and regular training.

You have a responsibility for ensuring your own safety in the event of an emergency.

In the context of traffic control and traffic management, worker may be responsible for moving traffic through and around safely during and emergency.

- Traffic may need to be stopped completely
- Diverted or restricted from the area for lengths of time
- The worksite may need to be shut down completely



# See below some of the types of roles and some suggested responsibilities

### General workers

- Isolate energy sources
- Deploy fire-fighting equipment
- Move plant and equipment
- Call emergencies services
- Administer first aid

## Traffic controllers

- Communicate with road users
- Stop traffic completely
- Maintain communication with other traffic controllers
- Do not leave the post unless directed
- Remain calm

### Team leaders

- Take control of the situation
- Communicate to all workers
- Manage staff
- Direct plant and equipment
- Direct and manager emergency service
- Complete reports

### Managers

- Manage workers and road users
- Manage Media
- Consult with major stakeholders
- Manage the continuation of the site/project



# 3.3 Apply Basic Firefighting techniques

What is a fire and what makes up a fire?

The potential for a fire to occur in high risk environment is very likely, as there may be present a range of plant equipment, combustible waste and hazardous chemical and materials.

Before fighting a fire it is crucial to understand more about fires, how they start, how they can be controlled and what to do after the fact

There are three basic components that are required for a fire to ignite, burn and continue to burn. These are **oxygen**, **heat** and **fuel** and are described in the fire triangle. The fuel can be any material that can be burnt, oxygen  $(O_2)$  is an essential part of the chemical reaction needed to create fire, and heat is needed for ignition.

The **fire triangle** or combustion **triangle** is a simple model for understanding the necessary ingredients for most fires. The **triangle** illustrates the three elements a **fire** needs to ignite: heat, fuel, and an oxidizing agent (usually oxygen)

**FUEL** - any combustible material - solid, liquid or gas.

**OXYGEN** - Sufficient oxygen must be present in the atmosphere surrounding the fuel for fire to burn.

**HEAT**- Sufficient heat energy must be applied to raise the fuel to its ignition temperature

## Classes of Fire

The following table sets out the classes of fire. Note that they are classified according to the fuel the fire needs to exist.

Class A - Paper, textiles, wood, most plastics and rubber

Class B - Flammable liquids

Class C - Combustible gases

Class E - Electrically energised equipment

Class F - Cooking oils or fats

# Fire Extinguishers

There are a number of different types of portable fire extinguishers, each can be identified by the colour coding and labelling.

Check that the extinguisher you intend to use is suitable for the type of fire encountered eg a water extinguisher must never be used on any fire involving electrical equipment

With proper use, a portable fire extinguisher will be able to reduce or eliminate the degree of injury, damage and cost to business in the event of a small fire

Warning: Never use an extinguisher on a fire type not included on the label.





The table below summarises the common extinguishers and their uses.

	A A	B	<b>∵</b> C	D	4	
	Wood, paper, textiles and other carbon- aceous materials.	Flammable liquids, petrols and spirits.		Fires involving burning metals.	Fires caused by electrical equipment where electric current may be present.	Cooking oil and fat. For example olive oil, maize oil, lard and butter.
Water	<b>✓</b>	×	×	×	×	×
Foam	<b>✓</b>	<b>✓</b>	×	×	×	ABF Foam Only
Dry Powder	<b>✓</b>	<b>√</b>	<b>✓</b>	×	<b>√</b> *	×
L2	×	×	×	<b>√</b>	×	×
CO2 Gas	×	<b>√</b>	×	×	<b>✓</b>	×
Wet Chemical	<b>✓</b>	×	×	×	×	<b>✓</b>



# Fighting a Fire

Before you consider fighting a fire you must make sure that all people in the area are alerted and are evacuating.

You must ask yourself if you should fight the fire at all.

# **General Fire Fighting Procedure**

If you ever discover a fire follow these steps:

- 1. Remain calm.
- 2. Sound the fire alarm and/or alert all the occupants to evacuate.
- 3. Alert the fire brigade by dialling 000 (or your supervisor depending on what procedures are currently in place).
- 4. Leave the area
- 5. Assemble with other staff at the evacuation assembly point.
- 6. Upon their arrival, inform the fire fighters of the situation

In addition if you are going to fight the fire;

- Attack the fire with the fire fighting equipment that is available and suitable –
- Send another person to raise the alarm.
- Arrange for power or fuel supplies feeding the area to be turned off.
- Approach the fire from a safe direction
- Do not turn your back on the fire.



# Using Fire Extinguishers

There are four (4) basic steps for using modern portable fire extinguishers.

The acronym **PASS** is used to describe these four basic steps.

### Pull (Pin)

Pull pin at the top of the extinguisher, breaking the seal. When in place, the pin keeps the handle from being pressed and accidentally operating the extinguisher. Immediately test the extinguisher. (Aiming away from the operator) This is to ensure the extinguisher works and also shows the operator how far the stream travels

### Aim

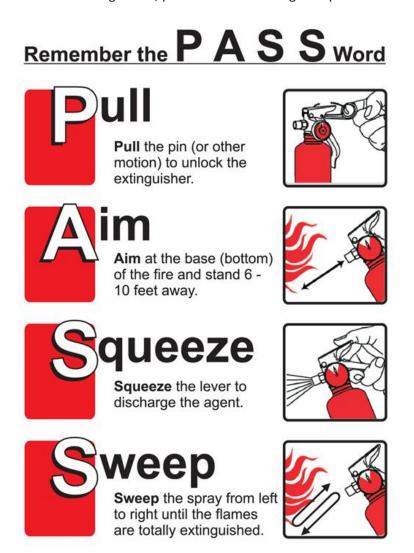
Approach the fire standing at a safe distance. Aim the nozzle or outlet towards the base of the fire.

### Squeeze

Squeeze the handles together to discharge the extinguishing agent inside. To stop discharge, release the handles.

## **Sweep**

Sweep the nozzle from side to side as you approach the fire, directing the extinguishing agent at the base of the flames. After an A Class fire is extinguished, probe for smouldering hot spots that could reignite the fuel





# **Extinguisher tips**

The Australian Standard 2444 (AS 2444) Portable Fire Extinguishers and Fire Blankets selection and location will provide comprehensive information.

- Ensure everyone knows the location of all extinguishers and how to use them.
- Only ever operate an extinguisher if safe to do so. If in doubt, get out.
- Remove the safety pin by pulling it sharply (this also breaks the plastic seal).
- Test to ensure that the extinguisher is operable immediately after removing from the mounting bracket.
- Always try to work in pairs for safety.
- Carry or drag extinguisher to the scene of the fire
- Keep the area where extinguishers are kept free form obstruction

### FIRE PREVENTION

- 1. Implement a program that includes preparation, prevention, and recognition of fire hazards.
- 2. Make sure you practice proper handling of combustible and flammable material.
- 3. Maintain safe housekeeping practices that reduce the risk of fire danger.
- 4. Always keep adequate fire suppression equipment in your work area to extinguish fire before it goes out of control.

The following are general safety measures in establishing and maintaining fire protection in the workplace:

- Never pile or lay material in a way that it covers or blocks access to firefighting equipment.
- Make sure to use only approved containers for the separation and disposal of combustible refuse.
- Never store flammable materials within 10 feet of a building or other structure.
- Stack and pile all materials in orderly and stable piles.
- Never let unnecessary combustible materials get accumulated in any part of your work area.
- Make a periodic clean-up of entire work site and keep grass and weeds under control.
- Regularly dispose of combustible debris and scrap from your work area.
- Use only approved containers and tanks for storage, handling, and transport of combustible and flammable liquid.
- Always perform evaluation procedures before performing operations that present fire hazards like welding



# 3.4 identify emergency escape route(s) and procedures

PCBUs must ensure that an emergency plan is prepared for the workplace, including for workers who may work at multiple workplaces

An emergency plan is a written set of instructions that outlines what workers and others at the workplace should do in an emergency. An emergency plan must provide for the following:

- emergency procedures, including: an effective response to an emergency
- evacuation procedures
- notifying emergency service organisations at the earliest opportunity
- medical treatment and assistance, and
- effective communication between the person authorised to coordinate the emergency response and all people at the workplace
- testing of the emergency procedures—including the frequency of testing, and
- information, training and instruction to relevant workers in relation to implementing the emergency procedures

# Examples of inclusions in an emergency plan

An emergency plan may include practical information for workers such as:

- emergency contact details for key personnel who have specific roles or responsibilities under the emergency plan, for example fire wardens, floor wardens and first aid officers
- contact details for local emergency services, for example police, fire brigade and poison information centre
- a description of the mechanisms for alerting people at the workplace to an emergency or possible emergency, for example siren or bell alarm
- evacuation procedures including arrangements for assisting any hearing, vision or mobility-impaired people
- a map of the workplace illustrating the location of fire protection equipment, emergency exits, assembly points
- triggers and processes for advising neighbouring businesses about emergencies, and
- the post-incident follow-up process, for example notifying the regulator, organising trauma counselling or medical treatment.
- Procedures for testing the emergency plan including the frequency of testing must be included.



# **Evacuation Paths**

You must ensure that you have a clear and direct escape or evacuation path that you can use in the event that your health or safety is threatened in your designated position, such as if a vehicle loses control and will hit you.

This path should lead you clear of the path of traffic and away from any hazards associated with the work area. Your evacuation path should only be used in these circumstances; otherwise, you should stay in your position, unless directed to move by the site supervisor.

# **Muster Points**

You should familiarise yourself with the location of your nominated muster point on site and ensure that you make your way there during an emergency. Once at the muster point you should remain there until you have been notified that the emergency is over.



# 4 Maintain Personal Wellbeing

Maintaining your wellbeing is not just about minimising risk or the absence of disease or illness It is also about a person's physical, mental, emotional and social health factors

# 4.1 Identify risks to personal wellbeing and recognise preventative strategies

There are many risks to your personal wellbeing both away from and at work.

It is essential that you understand that you are primarily responsible for your own personal safety and health.

Some of the risks that may affect your wellbeing at work may include

- Stress
- Poor Environment (conditions)
- Negative Worker interaction
- Over worked
- Poor Equipment
- Lack of Training
- Poor fatigue management

It is easy to identify these risks; the difficulty is managing these risks and put preventative measure in place.

Preventative measure may include

- Rotating of shifts, this will allow workers the opportunity to vary the times they are at work, allowing them to experience different break times and travel times
- Job share, if the opportunity arises, this could reduce issues and spread the load
- Employee assistance programs, there are a number of free services available that can assistance workers to discuss issues or concerns confidentially
- Information kits, well-being information kits provide details on nutrition, exercise, stress management as well as balancing home and social life
- Safe work systems, these are inherent to ensure that staff feel safe and secure and reduces anxiety
- Ergonomics, attempt to have good workplace design
- Job design, have a look at the overall job and the tasks required, is there a better and more efficient way.
- Prevention of workplace bullying and harassment
- Prevention of sickness and disease, ensure that you encourage sick staff to stay at home rather than spread illness through the workplace
- Improved communication, informed staff are less like to stress or become anxious



## **Fatigue management**

Fatigue is more than feeling tired and drowsy. In a work context, fatigue is a state of mental and/or physical exhaustion that reduces a person's ability to perform work safely and effectively.

It can occur because of prolonged or intense mental or physical activity, sleep loss and/or disruption of the internal body clock.

Signs of fatigue include:

- tiredness even after sleep
- reduced hand-eye coordination or slow reflexes
- short term memory problems and an inability to concentrate
- blurred vision or impaired visual perception
- a need for extended sleep during days off work

It is important that you manage fatigue effectively

On a construction site, you may be out in the elements for long periods, in differing conditions

You will be required to be on your feet standing for long periods

- Carry water and food
- Wear comfortable footwear and appropriate clothing
- Always take breaks and adhere to task rotation

When working shifts, all workers should be aware of the problems associated with fatigue that may occur where there are periods of consecutive night shifts or during a series of long shifts.

# 4.2 Identify, act on, and report situations which may endanger others

In a construction environment such as traffic control, there a numerous activities occurring at the same time

Some of these activities you will be part of, some of these you will control and some you will not see at all

As you become familiar with the different types of traffic control worksites, you will be exposed to various, risks and safety issues

Some of the most common situations you may come across in traffic control include

- Vehicle accidents (road users)
- Workers around plant and equipment
- Dust exposure
- Exposure to heat
- Exposure to chemicals
- Exposure to excessive noise
- Working at night
- Pedestrians



### What can you do?

- If there is a danger, make sure that you are free from danger
- Raise the alarm immediately to warn others, but noise and distance may be an issue
- You need to be able to act and report these issues within the area you are working and managing
- You can use you communication devices to seek the assistance of others
- Enlist other around you to act appropriately
- Upon any issue you will need to report it, and follow all policy and procedure and the chain of command
- Section 5 will assist in reporting and what you can do

# 4.3 Access and explain verbally or in writing the requirements for fitness for duty *What is fitness for duty?*

Fitness-for-duty means that an individual is in a physical, mental, and emotional state which enables the employee to perform the essential tasks of his or her work assignment in a manner which does NOT threaten the safety or health of oneself, co-workers, property, or the public at large Generally you need to present yourself fit for duty in terms of

- Alcohol
- Drugs
- Fatigue
- Physical or Psychological impairment.

If you feel that you are not fit for duty for any reason at the start of or during your shift, you must talk to your supervisor about it immediately.

This is a shared responsibility between workers and management.

## I'M SAFE Checklist

Ilness - do I have any symptoms?

Medication – have I been taking prescription or over the counter drugs

Stress - Am I under psychological pressure from the job? Worried about financial matters, health problems, of family issues?

Alcohol – Have I been drinking within 8 hours?

Fatigue – Am I tired and not adequately rested

Emotion – Am I emotional update

Fitness for duty may also refer to returning to work

Participant Manual V290715



# 4.4 Comply with all work health and safety polices including smoking, alcohol and drug use

There will be a number of general health and safety polices in procedures that you will be required to follow and fulfil noted earlier that include

- Personal Protective Equipment (PPE)
- Hazard identification and risk assessment
- Personal health and hygiene
- Working with hazardous substances
- Working with plant and mobile equipment
- Environmental protection
- · Fire prevention and fire fighting
- Site communications
- Training
- Emergency response
- Tagging and isolation
- Defect reporting system
- Standard Operating Procedures
- Work instructions

In addition to these specific polices, it is important to understand your responsibilities regarding smoking, alcohol and drug use

#### **Smoking**

Smoking is restricted and banned for all worksites

The Smoke-free Environment Act 2000 bans smoking in enclosed public places and certain outdoor public areas. These bans protect people from harmful second hand tobacco smoke - the smoke which smokers exhale after inhaling from a lit cigarette. There is no safe level of exposure to second hand smoke

There will be designated smoking areas and these are usually off the work site entirely.

#### **Alcohol**

Most jurisdictions in Australia have mandated that traffic control workers must maintain a 0% blood-alcohol content (BAC) while on duty.

It is important to note that alcohol can stay in your blood for long periods of time well after you have stopped consuming alcohol and may still affect how you work and operate equipment.

Workplaces now have the opportunity and authority to conduct alcohol and other drugs testing.

Participant Manual V290715



## **Medication and Drugs**

Many prescribed and over-the-counter medications may affect your ability to perform your normal work safely.

#### Check that

- It allows the allocation of jobs and tasks which are safe for a worker on medication to perform.
- It provides important information that may be of use in a medical emergency.



# 5 Identify and report Incidents

High risk work environments will never be injury or incident free; employers must keep a register of injuries or illnesses sustained by workers regardless of whether there has been a claim

The register of injuries must include

- name of the injured worker
- the worker's address
- the worker's age at the time of injury
- the worker's occupation at the time of injury
- the industry in which the worker was engaged at the time of injury
- the time and date of injury
- the nature of the injury
- the cause of the injury



# 5.1Recognise and communicate incident and injury statistics

Recording and communicating injuries and near misses at work assists, employers, industry bodies and safety actioners in many ways

- Assists with prevention
- Provides incident and behaviour patterns
- Contributes to risk management processes
- Contributes to improved practices
- Aids in insurance claims and premiums
- Assists with investigations
- Analysis can be made to prevent future incidents

What incidents and Injuries and incidents need to be reported?

- Deaths and life threatening injuries
- Physical injuries (accidental and deliberate)
- Psychological injuries (abuse/bullying/harassment)
- Near misses

## Incidents may include

- · Breaches of safety and security
- Road users breaking the road rules
- Misuse of plant and equipment
- Fire and emergency issues
- Damage and destruction of plan and equipment
- Collapse of buildings
- Explosions
- Chemical spills



## Sample register supplied by WorkCover NSW

## Injured / ill worker's details

First name:		Last name	e:			Date of birth:		
Position:		Departme	nt/team:					
Volunteers:		Worker's a	address:					
Manager/supe	ervisor's name:							
Injury or illness details								
Date of injury/illness:			Time of injury/illness:				am/pm	
Nature of injury/illness:								
Bodily location of injury/illness (for illnesses include symptoms):								
Location at time of injury:								
How was the injury/illness sustained (cause of injury /illness):								
Was any plant, equipment, substance or thing involved in the injury/ illness? If yes, please provide details:								
Witnesses								
Were there any witnesses to the injury/illness? Yes or No. If yes, please list name and contact number for each witness:								
Name:			Contact:					
Name:			Contact:					
Name:			Contact:					
Name:			Contact:					
Name:			Contact:					



## Follow up

Has the injury been reported to the worker's super	rvisor? Yes or No:							
Was any treatment provided? Yes or No. If yes, please provide details:								
Did the injured worker return to work following the	injury/illness? If yes,	please p	rovide details:					
Details of person making this entry								
First name:	Last name:							
Position:	Department/team:							
Signature:	Date:							
If you are not the injured worker, did you witness the injury/illness? Yes or No								
TO BE COMPLETED BY MANAGER/SUPERVISOR OF INJURED / ILL WORKER								
Has an investigation been conducted into the incid	dent? If yes, by whom	?						
What controls have been implemented to ensure the incident doesn't happen again:								
Employer confirmation								
l,			(print name), of					
			(insert company name),					
Hereby confirm receipt of this notification.								
ignature: Date:								



# 5.2 Report and prepare written records of incidents and injuries

### Incidents at worksites or road works

A traffic controller shall report incidents occurring at or within a worksite or road works to which they are stationed immediately to their supervisor.

Written reports shall be completed and submitted to their site supervisor at the conclusion of their shift or at the resumption of duty on the following day.

An incident is an occurrence that in the opinion of the traffic controller affects the safety and/or effectiveness of any persons at a worksite or at road works and may include:

- Road users disobeying a direction or signal given by a traffic controller when approaching a designated worksite.
- Drivers who fail to stop at a hand held stop sign.
- Accidents occurring within the designated worksite or road works.
- Dangerous practices of other road users within a worksite or at road works.
- Suggested improvements to operational procedures during adverse weather conditions.
- Difficulties experienced with stopping certain vehicle types (for example excess dimension vehicles).

A traffic controller may report to their supervisor, incidences of road users disobeying a direction or signal given by a traffic controller when approaching a designated worksite.

## Incident reports may contain the following information:

- time, date and location of incident;
- type of incident (for example, a motorist fails to stop; accident; abusive/insulting/threatening language; assault; breach of these Approved Procedures by another person);
- incident identification, including:
  - vehicle type and colour
  - registration number including registered state or territory
  - direction of travel
  - description of driver/other road user and occupants
  - full and accurate description of the incident
  - witness details.

In an emergency situation, Traffic Controllers must:

- never leave their post (unless their own safety is threatened or a competent person takes over the job of traffic controlling)
- never risk their personal safety when trying to get a vehicle to stop
- secure traffic behind the incident to prevent additional collisions
- always warn co-workers, other Traffic Controllers and supervisor (if time permits) of the situation



# 5.3 Contribute to and participate in incident investigations

The general duty of care for employers under the *WHS legislation* requires employers to maintain safe and healthy workplaces and systems of work.

Investigating accidents and incidents to prevent recurrence helps to achieve safer workplaces.

The main objective of an investigation is prevention. A good investigation aims to establish a series of events that should have taken place and compares it to what actually happened to identify areas that need changing.

General you will need to

- Cooperate with all reasonable requests
- Recount information as accurately and honestly as possible

Although you may also be involved in the following

Investigation procedures need to be systematic. For any investigation y should:

- act as soon as possible after the incident;
- visit the scene before physical evidence is disturbed;
- not prejudge the situation;
- not remove anything from the scene;
- enquire if anyone else has moved anything; and
- Take photographs and/or sketches to assist in reconstructing the incident.

After the initial investigation is complete the team should:

- Identify, label and keep all evidence. For example, tools, defective equipment, fragments, chemical samples etc;
- interview witnesses separately;
- check to see if there have been any 'near misses' in similar circumstances;
- note down all sources of information;
- keep records to show that the investigation was conducted in a fair and impartial manner;
- review all potentially useful information, including design specifications, operating logs, purchasing records, previous reports, procedures, equipment manuals, job safety analysis reports, records of training and instruction of the people involved and experiences of people in similar workplaces/industries; and
- reconstruct the incident (while ensuring that another incident does not occur) to assist in verifying facts, identifying what went wrong and what can be done to prevent it happening again



This list of questions may assist the investigation to establish the facts.

#### WHO

- was injured?
- saw the accident/incident?
- was working with the injured person/s?
- had instructed and/or assigned the job?
- else was involved?
- has information on circumstances/events prior to the accident/incident?

#### **WHAT**

- is the injury?
- is the damage or loss?
- was the injured person/s doing?
- is the work process?
- had the injured person/s been instructed to do?
- tools were being used?
- machinery/plant/equipment was in use?
- previous similar accidents or incidents have occurred?
- action had been taken to prevent recurrence?
- did the injured person/s and any witnesses see?
- safety rules were violated?
- safe systems or work, permits to work, isolation procedures were in place?
- training had been given?
- were the contributing causes of the accident/incident?
- communication system was in use?

#### WHEN

- did the accident/incident occur?
- did the damage become evident?
- did the injured person/s start the job?
- was an explanation of the hazards given?
- did the supervisor last see the injured person/s?
- was something seen to be wrong?



#### WHY

- did the injury occur?
- did communication fail?
- was training not given?
- were there unsafe conditions?
- was the hazard not evaluated?
- was the system of work inadequate or inappropriate?
- was personal protective equipment not provided?
- was protective equipment not used?
- was there no safe system of work, permit to work or isolation procedure operating?
- were specific safety instructions not given?
- was the supervisor not consulted when things started to go wrong?
- was the supervisor not there at the time?

#### WHFRF

- did the accident/incident occur?
- did the damage occur?
- was the supervisor at the time?
- were the witnesses at the time?
- HOW
- did the injury occur?
- could the accident/incident have been avoided?
- could the injury have been avoided?
- could the supervisor have prevented the accident/incident?
- could better design of plant or systems of work help?



# Summary

- Apply sound solutions and actions toward health and safety
- Carry out activities and tasks relating to safety
- Apply personal safety procedures and measures
- Recognise safety issues and act accordingly
- Identify risks and report appropriately
- Maintain fitness for duty
- Complete appropriate paperwork
- Use safety equipment correctly