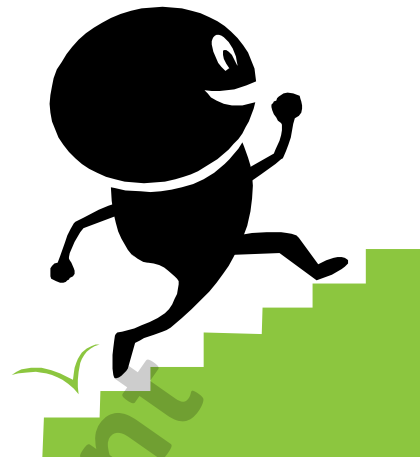


Easy Steps



Unit 497 (v7)

**Demonstrate knowledge of
workplace health and safety
requirements**

- ☒ Easy to follow
- ☒ Step-by-step instructions
- ☒ Covers Unit Standard Criteria

A Cheryl Price Publication

Unit Standard 497 (Version 7)

Demonstrate knowledge of workplace health and safety requirements

This book covers the course outline for the following New Zealand Qualifications Authority Unit Standard

Unit Standard 497 - OCCUPATIONAL HEALTH AND SAFETY PRACTICE (Level 1, Credit 3)
Demonstrate knowledge of workplace health and safety requirements

All topics the above Unit Standard have been included in this book.

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Original material supplied by:
Stephen Harvey
LLM, LLB (Hons)

Edited by
Cheryl Price
T.Dip.WP, T.Dip.T

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Cherylprice.co.nz Limited

PO Box 187
Matakana 0948
Auckland

Phone: (09) 42 27230
Fax: (09) 42 27236

Web address:

www.cherylprice.co.nz

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Sample Document

Unit 497 Version 7

Demonstrate knowledge of workplace health and safety requirements

Level 1

Credits 3

Purpose People credited with this unit standard are able to: identify and describe legislative rights and responsibilities for workplace health and safety; describe the systems approach to workplace health and safety; and explain how hazards are defined in the HSE Act.

Subfield Occupational Health and Safety

Domain Occupational Health and Safety Practice

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Standard setting body (SSB) New Zealand Industry Training Organisation

Special notes

- 1 This unit standard is intended for use by employees as well as students and those on pre-employment training, and may be assessed in either a provider or workplace environment.
- 2 Legislation relevant to this unit standard includes – Health and Safety in Employment (HSE) Act 1992.

Elements and performance criteria

Element 1

Identify and describe legislative rights and responsibilities for workplace health and safety.

Performance criteria

- 1.1 Responsibilities of employers under the HSE Act are identified and described.
- Range responsibilities include but are not limited to – taking all practicable steps to ensure the safety of employees, providing personal protective clothing and equipment, managing hazards, providing supervision and training.
- 1.2 Responsibilities and rights of employees under the HSE Act are identified and described.
- Range responsibilities and rights include but are not limited to – protecting the health and safety of self and others, using protective clothing and equipment, the right to refuse unsafe work, to be adequately supervised and/or trained.

Element 2

Describe the systems approach to workplace health and safety.

Performance criteria

- 2.1 The principal systems are described in terms of their requirements.
- Range principal systems include but are not limited to – emergency procedures, training, employee participation, incident and hazard reporting, hazard management.
- 2.2 The hierarchy of hazard management controls is described in terms of eliminating, isolating, and minimising hazards.
- Range evidence is required of two examples each of eliminating, isolating, and minimising hazards.

Element 3

Explain how hazards are defined in the HSE Act.

Performance criteria

- 3.1 Hazards are defined in terms of the requirements in the HSE Act.
- Range evidence is required of examples of four different types of hazards.

Workplace Health and Safety Requirements

in relation to the
Health and Safety in Employment Act 1992

Sample Document

Introduction

Every year in New Zealand, workers are injured - and even killed - by accidents at work. In addition, some suffer a work-related illness.

To **stop** people being injured (and killed) at work, special **health and safety laws** ensure that **every workplace must** have **safety procedures** in place which **must** be followed.

What is a 'safety procedure'?

A **safety procedure** is an arrangement for carrying out a task in a safe way - a well-considered, safe way to do something in the circumstances.

Typical injuries from workplace hazards

Here are some **typical injuries** that happen at work because of unheeded **workplace hazards**:

- Burns caused by tripping onto hot machinery,
- Hearing loss caused by exposure to noisy machinery,
- Cuts caused by falling on sharp construction tools,
- Crushing injuries caused by moving objects,
- Skin diseases caused by irritating substances,
- Bruises and cuts caused by an assault by a fellow employee,
- Acute low back pain or serious back injury due to using incorrect handling techniques, and
- Broken bones caused by slipping on worn stairs.



Typical causes of work injury to young people

- Manual handling (lifting and moving things),
- Slips, trips or falls,
- Being hit by a moving object,
- Psychological stress from a stressful workplace,
- Falling from a height, and
- Hitting a moving object.

Injuries at work are caused by **hazards** in the workplace. You must be able to **recognise different hazards** in the workplace, and follow any **rules** or **arrangements** that have been made to **deal** with those hazards. This way, you and those around you will **stay safe**.

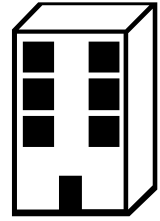


Following safety procedures

When you see this sign in the book, it will be followed by safety procedures for you to follow.

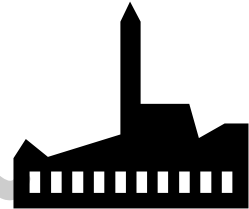
What is a 'hazard in the workplace'?

A 'hazard in the workplace' is basically **anything** that could **hurt or harm you or someone else** at work. A hazard can arise in any number of ways, and it may occur *inside* or *outside* a place of work.



A hazard might be:

- An *activity* (using chemicals or dye in a hair dressing salon),
- An *occurrence* (Friday afternoon mental fatigue),
- A *situation* (power cables left trailing on an office floor),
- An *arrangement* (a bad method of storage in a warehouse),
- A *circumstance* (a wet floor in a hotel foyer),
- A *phenomenon* (being exposed to adverse weather) ,
- An *event* (the unloading of a ship's cargo),
- An *action* (machinery moving overhead),
- A *process* (automated plastics manufacturing),
- A *substance* (a poison), and
- A *person* (a worker who is under the influence of drugs or alcohol, highly stressed, or tired)



It is important to think as broadly as possible when identifying a hazard. **A hazard is not only something that may cause physical or biological harm, but is also something that might lead to psychological harm.** For example, a crowded or hot workplace might increase anxiety, or an isolated worker could be at risk from depression or loneliness.

Not only is a hazard something that may cause psychological harm, but **a person themselves can also be a hazard.** For this reason, it is important to be aware of the health and welfare of your employees, as stressed, inebriated, or sick employees have the potential to "hurt or harm" someone else at work.

Typical HAZARDS and INJURIES in the workplace

Workplace	Typical hazard	Typical injury or disease
Office	typing without breaks	OOS (occupational overuse syndrome)
Smelting Plant	fire, molten metal	burns, disease from poisonous fumes
Warehouse	lifting ('manual handling')	back injury
Building Site	physical environment	tripping, slipping, falling injuries, cuts
Carpet Factory	airborne fibres, poor ventilation	respiratory disease
Farm	noise from heavy plant	hearing loss
Manufacturing Plant	no personal protective clothing	poisoning by hazardous substances

Exercise 1

- 1 List two typical causes of work injury to young people:.....
.....
- 2 List another typical hazard you might find in each of the workplaces below:
Office:.....
Smelting plant:.....
Warehouse:.....
Building site:
Carpet factory:.....
Farm:.....
Manufacturing plant:

Hazard Warning and Safety Signs

Examples of safety signs and hazard warning signs displayed in the workplace are shown below.



Exercise 2

- For four of the signs above, very briefly describe the kind of circumstances in which each may be displayed:

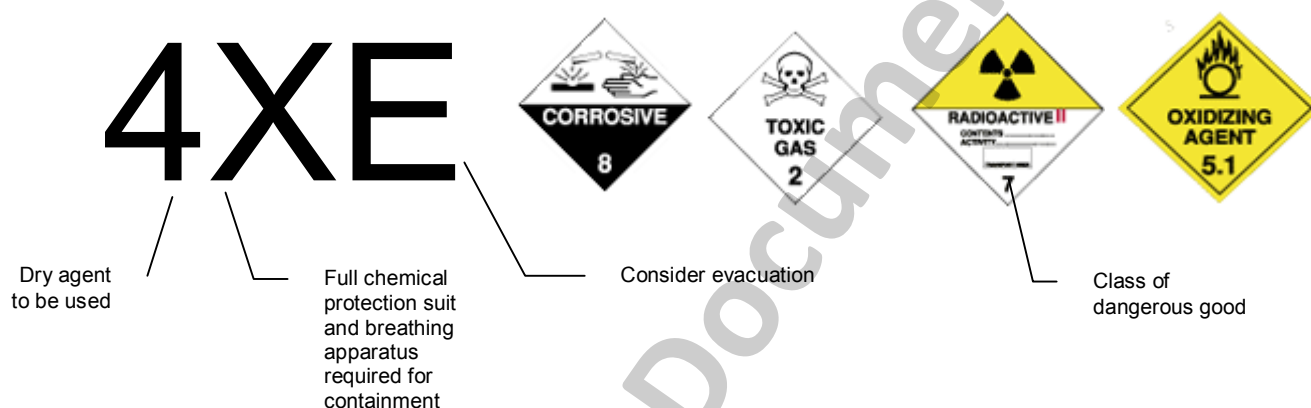
- 1
- 2
- 3
- 4

HAZCHEM codes

HAZCHEM codes relate to **dangerous goods** stored on premises (or transported by road or rail). Signs (wall plaques) display coded information which can be quickly understood by emergency personnel in the event of a fire or spillage of a hazardous chemical at the workplace. They can then deal with the incident in the most efficient and safe manner.

If hazardous substances are kept at your workplace, a sign will be displayed at the gate or entry point. HAZCHEM codes show:

- Type of hazardous substance kept on the premises.
- Medium to be used to fight fire or spillage.
- Risk of violent reaction.
- Personal protective equipment to be worn to deal with any incident.
- Whether evacuation should be considered.



The number in the bottom corner of the diamond describes the *class* of dangerous goods on the premises.

Classes of dangerous goods

Class 2	Compressed gases (flammable, toxic, oxidising gas).
Class 3	Flammable liquids.
Class 4	Flammable solids; spontaneously combustible substance; gas emitting substances (when mixed with water).
Class 5	Oxidising agents / organic peroxide.
Class 6	Toxic substances.
Class 7	Radioactive substances.
Class 8	Corrosive substances.
Class 9	Miscellaneous dangerous goods.

Personal Protective Equipment

Personal protective equipment (PPE) is special clothing and other equipment designed to protect workers from injuries caused by workplace hazards. PPE *must* be used or worn where provided for a purpose. PPE is used for all sorts of tasks - in laboratory work, spray painting, welding, high-pressure cleaning, working with radioactive substances or working with machinery.

PPE is designed to protect a specific part of the body as the following examples show.

Overalls	Protect body from grime and hazardous substances, and are fire resistant.
Protective safety boots	Protect feet. Boots may be compulsory (building sites). Steel toe-capped, non-slip for grip.
Safety gloves	Protect hands against cuts, extreme hot and cold, chemicals.
Safety helmets, other headwear	Protect against risk of falling objects overhead - compulsory on construction sites.
Safety masks, goggles	For eye protection where eyes are at risk from accidents with tools (lathes, chisels), welding, hazardous substances (acids, lubricants).
Respirators	For lung protection, breathing aid for noxious atmospheres or confined spaces.
Ear muffs	For noisy environments, to guard against 'industrial deafness' (hearing loss over time after prolonged exposure to noise).

If a particular hazard can't be eliminated altogether, employers **must**:

- a ensure that PPE is readily available and accessible, and**
- b ensure that PPE is used.**

Under New Zealand law, all PPE must be owned by the employer, and it is their responsibility to:

- ensure that it fits the employee properly,
- replace or repair PPE free of charge to the employee, and
- ensure that PPE caters to employees' individual needs or disabilities

Often used in conjunction with other risk control measures, PPE is protection of the last resort - supplied only after other hazard controls have been considered. PPE must be the best form of protection, not just the cheapest.





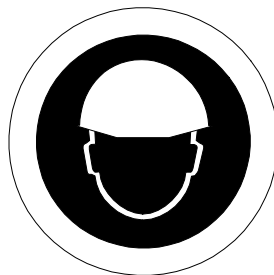
Following safety procedures

- Use PPE provided by the employer.
- Use it in accordance with proper instructions for use.
- Make sure PPE fits properly so it can protect you properly.
- Make sure PPE is properly maintained.
- Ensure PPE is replaced at appropriate intervals.

Exercise 3

➤ Answer the following questions.

- 1 What is a 'hazard in the workplace'? (Tick all correct answers.)
 - ☐ Something flammable
 - ☐ Anything that could hurt or harm you or somebody else at work
 - ☐ A frayed wire in a storeroom
 - ☐ Something like a disused mineshaft
- 2 What kind of hazardous goods stored on premises might be coded 'Class 3'?
.....
- 3 When PPE is provided at work, you should (tick all correct answers):
 - ☐ Be instructed to use it properly
 - ☐ Always wear it when required
 - ☐ Pay for repairs to your PPE out of your own pocket.
 - ☐ Make sure it fits properly
 - ☐ Keep it safely at home



HEAD PROTECTION

Hazards in the Workplace

Looking out for, and identifying, hazards in a workplace to keep people safe is everyone's responsibility.

Immediate/visual detection

Use all of your senses to identify hazards in the workplace. Observe your environment by looking around, listening, noticing any strange smells (like smoke or chemicals) and use your knowledge about things that might be dangerous.

STAY ALERT.

- Can you SEE anything dangerous?
- Can you HEAR anything unusual?
- Can you SMELL anything noxious?

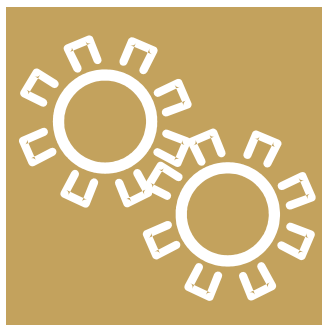
Reporting hazards

You should report any hazards as soon as they arise or occur. You can report hazards by giving any information about hazards to a supervisor or health and safety representative – your workplace should have a form that you can fill in to report hazards. Reporting enables something to be done before a hazard causes any injury.

Communication might be **informal**, such as when your supervisor asks if everything is okay in carrying out your duties, or whether you are experiencing any problems, say, with certain equipment.

Also, communication may be **formal**, such as

- a workplace inspection,
- reporting an issue to your health and safety representative or health and safety committee,
- having meetings at work addressing health and safety matters.



Workplace inspections

Managers and supervisors should conduct workplace inspections on a regular basis to identify hazards, with the assistance of workers familiar with the work area (or a health and safety representative).

A checklist should be used to identify potential hazards. A workplace inspection checklist should meet the needs of the workplace or work area to be inspected, and encourage the people conducting the inspection to record:

- Hazards found,
- Actions taken at the time of the inspection,
- Allocation of responsibilities for future action to be taken,
- Timeframes for actions to be completed.

Later in this training module, you will conduct your own workplace inspection (see page 39).

We are now going to identify and examine different types of general hazard in the workplace. These can be categorised as follows:

- Machinery, equipment and tools hazards – otherwise known as ‘plant’ hazards
- Manual handling hazards
- Occupational Overuse Syndrome
- Hazardous substances
- Noise
- Electrical hazards
- Atmospheric contaminants
- Confined workspaces.



Machinery, Equipment and Tools (or 'Plant') Hazards

Machinery, equipment and tools (often called 'plant') can cause injury through accidents.

Examples of machinery hazards

- Trapping
- Impact and entanglement
- Friction/cutting
- Projectiles
- Others such as burns, radiation, noise.



Injuries caused by plant

The most common injuries are to hands and fingers which can be cut, sprained, dislocated, broken, crushed or severed by machinery, equipment or tools in the workplace.

Eye injuries are also caused by accidents with plant, including:

- being hit in the eye by something,
- heat, radiation on the eye,
- falls, trips and slips involving plant or with plant nearby.

Workplace	Plant	Injury
Office	Computer equipment, lifts, desks and chairs, trolleys	Overuse problems, strains, falls
Restaurant	Stoves, knives, meat slicers, hot fat, blenders, boilers	Burns, cuts, electric shocks, skin grazes, loss of fingers
Plumbing	Welding equipment, pneumatic drills, powered hand tools	Eye burns, sprains, hearing damage, vibration, flying parts
Construction	Ladders, concrete mixers, power tools, scaffolding, cranes, wheelbarrows	Falls, flying parts, electric shock, body entrapment in moving parts, falling objects
Printing	Presses, binders, guillotine, forklifts, scissor lifts	Clothing or body entrapment in moving parts, amputations, driving accidents
Hospital	Lifts, boilers, sterilisation equipment, trolleys, syringes	Burns, dangerous chemicals, back and arm sprains
School	Heaters, guillotines, desks and chairs, computers, workshop equipment, mowers	Burns, falls, entrapment in moving parts
Factory	Lathes, presses, grinders, milling machines, conveyors	Flying particles, inhaling particles, chemicals, noise
Warehouse	Conveyors, forklifts, scissor lifts, stacker cranes, overhead gantry	Falls and falling objects, entrapment in moving parts, collapsing stacks

Workplace	Plant	Injury
<i>Fish and chip shop</i>	Deep fryers, grills, exhaust fans, chipmakers	Burns, cuts
<i>Commercial fishing</i>	Engines, winches, nets, slipways, freezers	Drowning, cuts, sprains and strains, slips and falls
<i>Farms</i>	Tractors, harvesters, forklifts, bulldozers, power tools, seeders	Roll over/driving accidents, electrocution from overhead cables, inhaling particles, entrapment in moving parts.

[Table adapted from Equipment Hazard Factsheet by NOHSC. Copyright Commonwealth of Australia, reproduced by kind permission]

Beware of common hazards

A hazard exists where a piece of machinery, equipment or a tool is:

- not properly guarded,
- not well maintained,
- used by untrained operators,
- used for something it's not designed for,
- used in wrong conditions (eg in the wet, near electric cables),
- illegally modified or changed, or
- where the operator is not properly supervised or is unable to concentrate for some reason.



Standard Operating Procedure Sheets (SOPS)

SOPS are written operating instructions and safe operating procedures for plant or machinery. They must be kept near the plant or machinery or given to workers directly by their supervisor.

‘DANGER’ and ‘OUT OF SERVICE’ tags

Red and black ‘DANGER’ tags warn workers about equipment hazards and machinery maintenance hazards.

Yellow and black ‘OUT OF SERVICE’ tags are used to prevent accidents or damage to machinery that is out of service awaiting repair.

Any faulty equipment should be tagged so it cannot be used until it is replaced or repaired.

Guarding/fencing machinery

The Health and Safety in Employment Act 1992 requires that if hazards cannot be eliminated, then all practicable steps should be taken to isolate people from those hazards.

Guards, fencing and barriers should be used to isolate the hazards.

When guards and barriers are used to provide secure fencing for machinery the guards should be designed so that people cannot reach over, around or through them and come into contact with the dangerous parts of the machine.



Following safety procedures

- Follow safe procedure for the removal of 'DANGER' and 'OUT OF SERVICE' tags.
- Check machinery is in sound working order.
- Use equipment, machinery and tools in accordance with instructions (SOPS).
- Apply the training you've been given - DON'T operate any equipment, machinery or tools unless you know what to do if something goes wrong or in an emergency.
- Keep guards installed in place - if removed during cleaning, replace them afterwards.
- Wear any personal protective equipment provided (protective gloves, armguards, safety glasses, hard hats or safety boots).
- Isolate machinery before cleaning.
- If you have any worries about equipment, machinery or tools - talk to your supervisor or health and safety representative.



Exercise 4

1 What are the most common injuries with plant and machinery?

.....

.....

2 When should you report a hazard?

- ☐ Only at a health and safety meeting.
- ☐ It's not your responsibility to report it.
- ☐ As soon as it arises or occurs.
- ☐ As soon as someone is injured by it.

3 Red and black danger tags are used to:

- ☐ Warn workers about equipment hazards.
- ☐ Let workers know that machinery is out of service.
- ☐ Warn workers about equipment and machinery maintenance hazards.
- ☐ All of the above.

4 Where would you expect to find copies of 'SOPS'?

.....

5 What's the purpose of a workplace inspection?

.....