

GUIDELINES

FOR THE PROVISION OF FACILITIES AND GENERAL SAFETY AND HEALTH IN

Commercial and Industrial Premises

TO MEET THE REQUIREMENTS OF THE HEALTH AND SAFETY IN EMPLOYMENT ACT 1992 AND REGULATIONS 1995



DEPARTMENT OF
LABOUR
TE TARI MAHI



*Hon. Doug Kidd
Minister of Labour*

Foreword

The Health and Safety in Employment Act 1992 reformed the law and provided, for the first time, comprehensive coverage and a consistency of approach to the management of safety and health in all New Zealand workplaces.

Since its introduction on 1 April 1993 the new law has proven to be innovative and effective. It has not only been successfully enforced through the courts, but — more importantly — has improved attitudes throughout all industries.

Regulations have now been passed which contain standards for matters not specifically addressed in the Act.

The importance of enforcing the law can't be ignored. However, there is also a real need for industry-specific information for employers and employees. These guidelines are an important part of this process, and they provide further information on means of compliance with the Act and the regulations.

My intention in publishing these guidelines is that they will be another step towards the ultimate goal of the legislation — which is to constructively change people's attitudes and responses to workplace health and safety.

A handwritten signature in red ink, appearing to read 'Doug Kidd', with a stylized flourish at the end.

Hon Doug Kidd
Minister of Labour

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About these guidelines

These guidelines apply to all commercial and industrial workplaces.

Guidelines such as these are part of a series aimed at different industries. The other guidelines currently available are:

- Agricultural safety, health and accommodation
- Construction
- Forestry
- Machinery
- Woodworking machinery

In addition, separate regulations cover mining, petroleum, hazardous equipment (boilers, pressure vessels, cranes, and passenger ropeways) and tractor safety frames.

In the case of places of work not covered by the separate guidelines on construction, agriculture, forestry or machinery (or by mining regulations), these “general” guidelines will provide useful information to enable employers to comply with their duties under the Act and regulations.

These guidelines are a guide to the regulations and to good practice in particular situations or hazards. Guidance on the Act is available from other OSH publications, such as *A Guide to the Health and Safety in Employment Act 1992*, or *A Guide to Managing Health and Safety to Meet the Requirements of the Health and Safety in Employment Act 1992*.

Content of the guidelines

The guidelines contain three categories of information on safety and health:

- Relevant sections of the Health and Safety in Employment Act 1992 and the Health and Safety in Employment Regulations 1995.
- The guidelines themselves — based in part on standards contained in former legislation and on generally accepted good practice; and
- References to further information in support of the guidelines.

Application of reference information

Approved codes of practice

If an approved code of practice has been issued for any type of work (under Section 20 of the Act) then such work should be carried out in accordance with that code of practice.

LEGISLATIVE PROVISIONS THAT RELATE SPECIFICALLY TO THE SUBJECT OF THE GUIDELINE.

The **most relevant** sections of the Act and regulations are listed separately.

Often the section of the Act referred to contains general provisions, but has been quoted because it is most likely that any prosecution would be taken under it.

Regulations are reproduced as appropriate, and their observance is mandatory where they apply.

THE GUIDELINES THEMSELVES.

These guidelines contain **recommendations** for employers and others on means of compliance with the Health and Safety in Employment Act 1992 and regulations.

They describe good practices for specific work situations, and as such support the Act and regulations. Where appropriate they refer the reader on to Codes of Practice approved by the Minister of Labour under the Act, Standards, regulations made under other Acts of Parliament, and other recognised statements of good practice relevant to the particular area.

They are, however, **guidelines**, and — while every effort has been made towards completeness and accuracy at the time of publication — they should at any time be read in conjunction with the legislation and other documents referred to.

REFERENCES TO FURTHER INFORMATION IN SUPPORT OF THE GUIDELINES.

These include New Zealand and other Standards, Occupational Safety and Health Service publications, other publications, and other sources of information which **support the guidelines**.

LEGISLATION - Protective clothing and equipment

10

10 Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable

— (1) Where—

(a) There is a significant hazard to employees at work, and

(b) Either—

(i) There are no practicable steps that may be taken to eliminate it, or

(ii) All practicable steps to eliminate it have been taken, but it has not been eliminated, and

(c) Either—

(i) There are no practicable steps that may be taken to isolate it from the employees, or

(ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) To take all practicable steps to remove the likelihood that the hazard will be a cause or source of harm to the employees, and

(b) To ensure that there is provided for, accessible to, and used by the employees suitable clothing and equipment to protect them from any harm that may be caused by or may arise out of the hazard, and

Order of Employers in Relation to Training and Supervision

10 Training and supervision — Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or use plant of any kind, or deals with a substance of any kind, in a place of work—

(a) Either—

(i) Is instructed, by a person who has such knowledge and experience of that place, and work, plant, or substance of that kind, as to ensure that the employee does the work, using the plant, or dealing with the substance, in not likely to cause harm to the employee or other people; and

(ii) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use at work.

REGULATIONS

Regulations 68 and 69 impose duties on designers, manufacturers and sellers of plant. These regulations are reproduced in section 2.16 of these guidelines.

3.1 Protective clothing and equipment

Employers should provide for workers who are engaged in any process or activity that involves a risk of bodily injury to them, or a danger to their health, the protective clothing and equipment necessary to afford them reasonable protection against that risk or danger.

All protective clothing and equipment should comply with the relevant standard to ensure it provides the protection it is intended to (see below).

Protective clothing should be considered as the last option where engineering or management controls cannot completely eliminate or isolate the hazard at source.

Employers should be trained in the use of and maintenance of any protective clothing and equipment they should use.

Regular inspection and maintenance or replacement of defective clothing and equipment is necessary, and suitable storage will help ensure both hygiene and ready accessibility.

Protective clothing and equipment of a personal nature, such as hearing protection or footwear, should be provided on an individual basis.

When purchasing, have regard to individual fitting requirements. Bulk purchasing of, for instance, one model of earmuff may not ensure effective protection for all staff.

The effectiveness of protective clothing and equipment should be regularly assessed by monitoring employees' health and safety in relation to the hazard.

The employer should ensure that employees use the protective clothing, and equipment provided by them so often as the circumstances for which they are provided arise.

Further information

Furniture Regulations 1967

Standards

AS/NZS 1715: 1984 Selection, use and maintenance of respiratory protective devices

AS/NZS 1716: 1984 Respiratory protective devices

NSZ 2284: 1970 and 1988: 1988 Specifications for industrial safety helmets

NSZ 5846: 1989 Specifications for industrial safety footwear

NSZ 5811: 1982 Industrial safety belts and harnesses

NSZ 5812: 1982 Industrial protective gloves

NSZ 5827: 1988 Industrial overalls

NSZ 5836: 1988 High visibility garments and accessories

NSZ 5840: 1988 Leg wear for chainsaw users

OSH publications

A Guide to Respirators and Breathing Apparatus

Safety in Confined Spaces

Hot Work on Drums and Tanks

Manual Handling Guidelines for the Workplace

Noise-induced Hearing Loss — A Message for Employees on Preventing Hearing Loss

Standards

These guidelines frequently refer to New Zealand and other standards that provide technical guidance and specifications for employers and others.

In addition, standards may be specified in particular regulations as having application to any place or type of work, equipment, plant, activity, or any other thing, covered by the regulations. In these cases, employers shall comply with the requirements of that standard unless otherwise advised by an inspector.

The Building Act 1991

Any building which is constructed or altered is required to comply with the requirements of the Building Act 1991 to the extent that those requirements apply to the construction of the building.

OSH Handbook for health and safety inspectors

This resource has been developed and maintained primarily for the use of Occupational Safety and Health Service employees. However, it has been referred to in these guidelines as a source of further information for people in industry, and reference to it can be obtained from any branch office of the Occupational Safety and Health Service.

Video titles

A brief list of some video titles is included in some further information sections. The list is selective and not exhaustive. All titles are available for hire from Media Services Ltd.

Tauranga. Hiring information and a complete catalogue of titles are available from any OSH office.

Definitions

All words have their common or dictionary meaning unless otherwise defined in any associated document such as legislation or codes of practice.

In this document the terms shall and should are used. **Shall** is used in places where there is a technical requirement to achieve the desired result. It is used to alert the reader to the need for that element to be included. **Should** is used as a way of indicating a preference. It does not indicate a mandatory requirement as other alternatives could achieve an equivalent result.

Legislation — Accommodation for clothing

ACT

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....
(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATIONS

5. Duties in respect of facilities at certain places of work —(1) Every employer shall take all practicable steps to ensure —

(a) That facilities of any of the kinds described in subclause (2) of this regulation are provided for employees at every place of work under the control of that employer where the work is of such a nature that those facilities are required; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are,—

.....

(b) Where the work is of such a nature that employees' clothing is reasonably likely to become contaminated or wet, a place in which to change clothes;

(c) Where the work is of such a nature that it is reasonably likely that employees will bring to the place of work clothes that will not be used at work, facilities for keeping such clothes clean and dry;

.....

Legislation — Air conditioning systems

ACT

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

(a) Provide and maintain for employees a safe working environment; and

1.1. Accommodation for clothing

Where a change of clothing is necessary for the work performed, separate change rooms for each sex are required, containing clothing accommodation for the protection of the apparel, clothing and other personal belongings of employees not worn during working hours.

In some industries it could be necessary to provide separate accommodation to avoid the contamination of personal clothing with, for example, soiled protective overalls. Double lockers would usually achieve this.

Arrangements for drying clothes could be necessary in certain industries where work is conducted outdoors or in damp or humid conditions.

Change rooms, cloak spaces and locker accommodation should comply with those standards for the time being in force. See below for detail.

Change rooms should be provided with adequate lighting and ventilation.

All accommodation provided should be properly maintained, kept clean and not used for the storage of materials or goods.

In light, clean or other industries where a change of clothing is not necessary, hanging space with provision for safe custody of personal belongings, or half-length lockers, could be used.

FURTHER INFORMATION

Regulations

Abrasive Blasting Regulations 1958

Asbestos Regulations 1983

Electroplating Regulations 1950

Lead Process Regulations 1950

Noxious Process Regulations 1954

Spraycoating Regulations 1962

Standards

NZS 1187:1969 *Standard specification for clothes lockers* (amended 1976)

OSH publications

Planning the Workplace

Other publications

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

1.2 Air conditioning systems

In every workplace in which an air conditioning system or similar unit or device is used to control or maintain the temperature or overall atmospheric conditions, the employer should ensure it is regularly inspected, tested and maintained so that it cannot contaminate either the atmosphere or drinking water.

“Sick building syndrome” is an umbrella term for a group of symptoms including eye, nose, and throat irritations, skin rashes, mental fatigue, headache and chest infections suffered by persons working indoors in inadequately managed or designed environments.

Disease such as legionnaires disease can result from poorly designed or maintained ventilation systems.

Air conditioning systems should meet the performance criteria outlined in the guidelines for general ventilation and atmospheric conditions.

See also section 1.12, Ventilation, and section 1.3, Atmospheric conditions.

FURTHER INFORMATION

Building Act 1991 (approved Building Code document G4 *Ventilation*)

Standards

AS 1668: *The use of mechanical ventilation and air conditioning in buildings*

Part 2:1991 *Mechanical ventilation for acceptable indoor air quality*

NZS 4302: *Code of practice for the control of hygiene in air and water systems in buildings*

NZS 4303:1990 *Ventilation for acceptable indoor air quality*

OSH publications

Atmospheric Conditions in the Workplace

Planning the Workplace

Workplace Exposure Standards 1994

Other publications

Industrial Ventilation Manual American Conference of Government Industrial Hygienists

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

Clearing the Air — a health and safety guide to clean air in offices. New Zealand Council of Trade Unions

Godish T, *Indoor air pollution in offices and other non-residential buildings* (Journal of Environmental Health, vol. 48(4) 190-195

1.3 Atmospheric conditions

Comfortable atmospheric conditions in the workplace are essential for the health and well-being of employees.

Means should be provided in each workplace that, having regard to the processes and activities being carried on, effectively control atmospheric conditions within reasonably comfortable parameters.

A number of environmental factors are involved in the atmospheric conditions in any workplace and should be considered when deciding what control measures should be taken. These include room temperature, humidity, air velocity and amount of radiant heat plus the quantity of fresh air available. The physical activity of the people working in the room should also be taken into account.

Care should be taken in heating workplaces that no fumes are introduced that are likely to cause offence or harm.

REGULATIONS.

4. Duties in respect of facilities at every place of work — (1) Every employer shall take all practicable steps to ensure —

(a) That facilities of the kinds described in subclause (2) of this regulation are provided at every place of work under the control of that employer; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are—

.....

(f) Ventilation providing either fresh or purified air:

(g) Means for controlling humidity that arises from any work process or activity;

(h) Means for controlling atmospheric conditions, including air velocity, radiant heat, and temperature:

.....

Legislation — Atmospheric conditions

ACT.

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

(a) Provide and maintain for employees a safe working environment; and

.....

REGULATIONS.

4. Duties in respect of facilities at every place of work — (1) Every employer shall take all practicable steps to ensure —

(a) That facilities of the kinds described in subclause (2) of this regulation are provided at every place of work under the control of that employer; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good

order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are—

.....

(f) Ventilation providing either fresh or purified air:

(g) Means for controlling humidity that arises from any work process or activity:

(h) Means for controlling atmospheric conditions, including air velocity, radiant heat, and temperature:

(i) Facilities to enable any atmospheric contaminants to be controlled as closely as possible to their source:

.....

Legislation — Common facilities and amenities

ACT.

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATIONS.

4. Duties in respect of facilities at every place of work — (1) Every employer shall take all practicable steps to ensure —

(a) That facilities of the kinds described in subclause (2) of this regulation are provided at every place of work under the control of that employer; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are—

(a) Toilets:

(b) Hand-washing facilities:

(c) Means of leaving the place of work in an emergency:

(d) First-aid facilities:

Care is required to ensure heating systems are not a source of ignition to any process or activity nearby.

Where practicable, process factors should be controlled at source. If this is not possible then other options could include controlled micro environments such as enclosures, or protective clothing, for example refrigerated suits. These allow employees to work in processes that cannot satisfactorily be controlled in the overall sense. Cool stores or steel mills are examples. In addition, work practices should be arranged to minimise employees exposure to extremes of hot and cold. An example is limiting exposure periods, and the provision of and ensuring the use of, appropriate protective clothing and equipment.

FURTHER INFORMATION

Standards

AS 1668: *The use of mechanical ventilation and air conditioning in buildings*

AS 1668.1: 1991 *Fire and smoke control*

AS 1668.2: 1991 *Mechanical ventilation for acceptable indoor air quality*

Building Act 1991 (approved Building Code document G4 *Ventilation*)

NZS 4302: 1987 *Code of practice for the control of hygiene in air and water systems in buildings*

NZS 4303: 1990 *Ventilation for acceptable indoor air quality*

OSH publications

Atmospheric Conditions in the Workplace

Planning the Workplace

Workplace Air Quality and Environmental Conditions

Workplace Exposure Standards 1994

Other publications

Industrial Ventilation Manual. American Conference of Government Industrial Hygienists

Clearing the Air — a health and safety guide to clean air in offices. New Zealand Council of Trade Unions

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

1.4 Common facilities and amenities

Where more than one workplace is contained within one building, the separate employers could provide common facilities and amenities on the same scale as would be required if all persons were employed in a single workplace.

The facilities should be located in a convenient location within a reasonable distance of the work area.

Systems to ensure suitable access at all times are necessary, as are adequate arrangements for maintaining and cleaning the facilities.

Generally facilities shared should not be those in a private dwelling house as they will seldom be sufficiently accessible.

While this does not contemplate employees using public conveniences provided for the public by local authorities, shopping malls, taverns and similar, regard must be had for any

special rulings made by the Building Industry Authority in respect of certain establishments.

Refer to section 1.14, Toilets, and 1.15, Washing facilities

FURTHER INFORMATION

OSH publications

Planning the Workplace

1.5 Drinking water

An adequate supply of free, cool, wholesome drinking water is required.

Water should be readily accessible to employees including, where necessary, provision for disabled workers.

Except where the water is delivered in inclined upward jets from which workers can conveniently drink, suitable cups or drinking vessels are required at each point of supply, together with facilities for cleaning them.

Drinking points should not be located in sanitary accommodation.

Any appliance used to cool drinking water should be regularly inspected, tested and maintained so that it cannot in itself contaminate that water.

Where water unsafe for drinking is provided for use in industrial processes or for fire protection, effective precautions to ensure no human consumption are necessary.

Precautions are required to ensure that drinking water supplies are not contaminated by any process or activity in the workplace.

FURTHER INFORMATION

Building Act 1991 (see approved Building Code document G12)

Water Supplies Protection Regulation

Standards

Ministry of Health: *Drinking Water Standards for New Zealand 1995*

AS 3500: *National plumbing and drainage code*

AS 3500.1:1992 *Water supply*

AS 3500.4:1994 *Hot water supply systems*

Other publication

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

(e) Facilities for lighting for the purposes of enabling employees to perform their work safely and to move safely about the place of work:

(f) Ventilation providing either fresh or purified air:

(g) Means for controlling humidity that arises from any work process or activity:

(h) Means for controlling atmospheric conditions, including air velocity, radiant heat, and temperature:

(i) Facilities to enable any atmospheric contaminants to be controlled as closely as possible to their source:

(j) Facilities for treating or carrying off any atmospheric contaminants for the purpose of minimising the likelihood that any atmospheric contaminants will be a cause or source of harm to any employee:

(k) Facilities for employees to have meals during work hours in reasonable shelter and comfort, being facilities that are separate from any plant or materials used in the place of work and that are protected from any atmospheric contaminants, dirt, noise, or any other hazard produced by any work process.

.....

7. Tests for suitability and sufficiency of facilities — (1) The suitability of any facilities provided in accordance with regulations 4 to 6 of these regulations shall be determined having regard to—

(a) The purpose for which the facilities are provided; and

(b) The circumstances in which the facilities are provided.

(2) The sufficiency of the numbers of any facilities provided in accordance with regulations 4 to 6 of these regulations shall be determined having regard to—

(a) The number of employees in the place of work; and

(b) The needs of employees in the place of work; and

(c) The nature of the place of work; and

(d) The nature of any particular hazard in the place of work; and

(e) The type or types of work being carried out in the place of work; and

(f) Whether or not the work is always carried out at the same place of work.

Legislation — Drinking water

ACT.

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION

8. **Duty in respect of drinking water** — Every employer shall take all practicable steps to ensure —
- (a) That drinking water is provided for employees at every place of work under the control of that employer; and
 - (b) That any such drinking water is wholesome; and
 - (c) That the amount of any such drinking water is sufficient, having regard to the number of employees in the place of work and the nature of the place of work; and
 - (d) That all employees have access to any such drinking water in a way that is convenient to them.

Legislation — Seating

ACT

General Duties of Employers

6. **Employers to ensure safety of employees** — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

- (b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION

5. **Duties in respect of facilities at certain places of work** — (1) Every employer shall take all practicable steps to ensure—

- (a) That facilities of any of the kinds described in subclause (2) of this regulation are provided for employees at every place of work under the control of that employer where the work is of such a nature that those facilities are required; and
 - (b) That any such facilities are suitable for the purpose for which they are to be used; and
 - (c) That any such facilities are provided in sufficient numbers; and
 - (d) That any such facilities are maintained in good order and condition; and
 - (e) That all employees have access to any such facilities in a way that is convenient to them.
- (2) The facilities referred to in subclause (1) of this regulation are,—

.....

- (d) Where the work is of such a nature that it is reasonable for employees to perform it while seated, facilities for sitting:
- (e) Where the work is of such a nature that it is not reasonable for employees to perform it while seated, facilities for sitting that enable employees to take any reasonable opportunity for rest that may occur in the course of the work:

Regulation 7 describes tests for suitability and sufficiency of facilities. It is reproduced in section 1.4.

1.6 Seating

Where employees can conveniently and practically do their work seated, then such seating should be provided.

Seating should also be provided for the use of employees whose work is done standing to enable them to take advantage of any opportunity for resting that occurs.

When selecting seating, ergonomic principles should be considered to ensure that factors such as the height, weight, adjustability, construction and stability of the seating is appropriate for the task or situation for which it has been provided.

FURTHER INFORMATION

Standards

BS 3044:1990 *Guide to ergonomic principles in the design and selection of office furniture*

OSH publications

Approved Code of Practice for the Safe Use of Visual Display Units

Ergonomic Evaluation of Office Chairs

Planning the Workplace

Other publications

Safeguard Buyers' Guide to Safety and Health Products and Services

Seating for Office Workers (Department of Health 1989)

Video title

Sitting on the Job

1.7 Facilities for rest

Where seven or more persons are usually employed, a rest area should be provided that is suitable for any person who is indisposed to rest in. The area should be equipped with furniture such as a couch or bed for indisposed persons to rest on.

The area should be a secluded, well-ventilated place free from distractions such as noise, movement, or process-related smells or fumes.

A separate first-aid room could be adequate for this purpose.

Where such an area is not reasonably available, then alternative arrangements such as sending or taking the employee home can be appropriate.

FURTHER INFORMATION

Building Act 1991 (approved Building Code documents)

OSH publication

Planning the Workplace

1.8 First aid

The employer should provide and maintain health services, first aid facilities, (including first aid rooms) appliances and requisites in accordance with the requirements of the Factories and Commercial Premises (First Aid) Regulations 1985.

A first aid box or cabinet should be located close to washing facilities (including hot and cold water, soap and clean towels) and should be kept stocked with first aid equipment and materials appropriate for the work being undertaken and the number of persons employed.

The box or cabinet should be clearly identified, kept clean and tidy, and regularly replenished.

First aid supplies should be readily available at all times.

Where more than five employees are employed, a person should be appointed to take charge of the first aid facilities.

Formal first aid training should be encouraged, and where more than 50 persons are employed a registered nurse or the holder of a certificate issued by the Order of St John, the New Zealand Red Cross Society, or a trainer with qualifications for the time being approved by the Secretary of Labour, is required.

Where more than 100 employees are involved, a first aid room is required.

Provision should be made to enable first aid delivery to any person who is injured or becomes ill while at work.

Emergency procedures should be developed and practised regularly.

First aiders should be aware of associated hazards such as hepatitis and human immunodeficiency virus (HIV) and the precautions necessary to protect themselves when administering assistance. They should also be aware of safe clean-up procedures of body fluids and soiled surfaces.

If workplace hazards require emergency washing facilities such as a showers, hose attachments or eye fountains, then they should be readily accessible and close to the potential hazard.

FURTHER INFORMATION

Electroplating Regulations 1950

Factories and Commercial Premises (First Aid) Regulations 1985

Standard

NZS 2274:1969 *Specification for industrial first aid cabinets* (amended 1978)

OSH publications

Planning the Workplace

Practical Guidelines for the Safe Use of Organic Solvents

Safety at Work — What Every Employee Should Know

The Safe Occupational Use of Glutaraldehyde in the Health Industries

Legislation — Facilities for rest

ACT

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION

6. Duty in respect of indisposed employees —

(1) Every employer shall take all practicable steps to ensure that any employee who, at any place of work under the control of that employer, feels indisposed may—

(a) Rest in facilities provided at the place of work, if the employer decides that that is the appropriate course of action in the circumstances; or

(b) Leave the place of work, if the employer decides that that is the appropriate course of action in the circumstances.

(2) Every employer shall take all practicable steps to ensure—

(a) That any facilities provided under subclause (1) (a) of this regulation are—

(i) Suitable for the purpose for which they are to be used; and

(ii) Provided in sufficient numbers; and

(iii) Maintained in good order and condition; and

(b) That all employees have access to any such facilities in a way that is convenient to them.

Regulation 7 describes tests for suitability and sufficiency of facilities. It is reproduced in section 1.4.

Legislation — First aid

ACT

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION

Regulations 4(1) and 4 (2)(d) describe requirements for the provision of first-aid facilities. They are reproduced in section 1.4.

Other publications and information

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services
Order of St John Ambulance Association
The New Zealand Red Cross Society (Inc.)

Video titles

Blood-borne Pathogens in the Workplace for Health Care Facilities
Burn Care: A Life at Stake
Chemical Hazard Identification Training: Biological Hazards
Delay is Dangerous (first aid)
Don't Let Him Die (first aid)
Eye Emergency (first aid)
First Aid for Accidents
Handle Him With Care (first aid)
Safety on the Job — First Aid for Accidents

Legislation — Lighting

ACT

General Duties of Employers

6. Employers to ensure safety of employees —
Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(a) Rest in facilities provided at the place of work, if the employer decides that that is the appropriate course of action in the circumstances; or

.....

REGULATION

Regulations 4 and 7 apply. They are reproduced in section 1.4.

4 (2) The facilities referred to in subclause (1) of this regulation are—

.....

(e) Facilities for lighting for the purposes of enabling employees to perform their work safely and to move safely about the place of work:

1.9 Lighting

Lighting design should ensure a uniform distribution of light over the work area to help reduce visual fatigue and provide for the health and safety of all persons in the place of work.

To determine whether sufficient lighting is provided, the values set out in NZS 6703:1984 should be used. Light value readings should be taken under both daylight and night conditions to determine the sufficiency and suitability of the lighting provided.

Lighting should be provided over the entire place of work, including amenity rooms, passages, stairs, ramps, ladders and gangways, which all should be capable of being lit at such times as people pass along or use them. People passing need not be employees, and could include other persons lawfully in the vicinity. For detailed work or where dangerous processes or machinery is used, higher lighting values will be required than in the general workplace. Localised lighting can meet this requirement.

All exits, not only normal exits, should be lit or be capable of being lit and, where necessary, adequate emergency lighting should be provided.

Outside areas should be satisfactorily lit for work and access during hours of darkness to provide safety and security. A place within the outer boundaries which is used only occasionally for work does not need to be lit constantly, but it should be capable of being lit while work is in progress.

The phrase “capable of being lit” means that electric switches should be so located that light is conveniently and immediately available, and that such switches should be readily identifiable.

In deciding what is suitable lighting, account should be taken not only of the amount of light provided, but also the surrounding brightness, wall colour, light distribution and glare.

Light coloured wall finishes can be used to improve brightness, or darker colours to reduce problems due to reflection, or arc welding flash, for example.

Artificial lights need to be shaded so as to control glare and reflect available light to where it is required. Where necessary, material should be applied to windows and skylights. Blinds, shades, or curtains should be used to reduce heat or glare.

Consideration should be given to any special conditions and other regulations and codes that have application. (See standards listed below.)

The most common of these are specialised fittings and wiring standards applying to hazardous locations, such as spray booths, garage pits, dangerous goods workshops, and wet work areas.

Under certain lighting conditions (flickering from fluorescent tubes), revolving shafting wheels, and high-speed reciprocating parts can appear to be turning backwards, be turning slower than is the case or to be stationary. This optical illusion is known as the stroboscopic effect and its dangers to maintenance staff, machinery operators and passers-by are obvious. This effect is most troublesome and noticeable with fluorescent tubes, but can also arise with filament lamps.

FURTHER INFORMATION

Standards

AS 2381.1:1991 *Electrical equipment for explosive atmospheres* (amended 1992, 1993)

NZS 380: 1968 *Specifications for flameproof electric lighting fittings*

NZS 6703:1984 *Code of practice for interior lighting design*

NZS 6742:1971 *Code of practice for emergency lighting in buildings*

Tables in NZS 6703:1984 (i.e. pages 36-54) give details of measurements, the type of preferred lighting in various circumstances, and minimum lighting values.

Building Act 1991 (approved Building Code document G7 *Natural light* and G8 *Artificial light*)

OSH publications

Approved Code of Practice for the Safe Use of Visual Display Units

Dust Explosions in Factories

Planning the Workplace

Other publications

Lighting for Good Visual Conditions in Workplaces, C Cuttle, ACC, 1980.

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

You and Your Sight, G Graham (ed.), ACC, 1979

Contacts

Ministry of Commerce, Energy Inspection Group for information about electrical wiring requirements under the Electricity Act 1992, Electricity Regulations 1993, and Electrical codes of practice.

ACT

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION

Regulation 4 applies. It is reproduced in section 1.4.

5. Duties in respect of facilities at certain places of work — (1) Every employer shall take all practicable steps to ensure —

(a) That facilities of any of the kinds described in subclause (2) of this regulation are provided for employees at every place of work under the control of that employer where the work is of such a nature that those facilities are required; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are,—

(a) Where the work is of such a nature that employees are reasonably likely to need facilities for washing the body, such facilities:

(b) Where the work is of such a nature that employees' clothing is reasonably likely to become contaminated or wet, a place in which to change clothes:

(c) Where the work is of such a nature that it is reasonably likely that employees will bring to the place of work clothes that will not be used at work, facilities for keeping such clothes clean and dry:

(d) Where the work is of such a nature that it is reasonable for employees to perform it while seated, facilities for sitting:

(e) Where the work is of such a nature that it is not reasonable for employees to perform it while seated, facilities for sitting that enable employees to take any reasonable opportunity for rest that may occur in the course of the work:

(f) Where the work is of such a nature that it is reasonably likely that any floor will become wet, facilities that prevent employees from becoming wet, whether by way of drainage of any such floor or otherwise.

Regulations 6 and 7 apply. They are reproduced in sections 1.7 and 1.4 respectively.

1.10 Maintenance of facilities

Every employer should take all practicable steps to ensure that all facilities are clean and hygienically maintained, fit and suitable for use, and perform to the standard that they are designed or installed to achieve.

FURTHER INFORMATION

OSH health and safety inspectors

Suppliers' and manufacturers' instructions

1.11 Meals in places of work

A dining room or other suitable place for eating is required where employees consume meals in a place of work.

Such a room or place is not required where employees can conveniently have meals at their own homes.

Any dining room or place that is provided should be set apart for that purpose and furnished with tables, chairs, and a suitable means for boiling water.

Dining rooms should be well-ventilated and equipped with a sink and hot and cold running water. It is desirable that a refrigerator be provided.

All facilities provided should be properly maintained, kept clean and not used for the storage of material or goods.

A suitable means of heating food should be provided, especially where extended hours are worked.

Cupboards are required for foodstuffs and crockery so as to provide protection from dust and vermin.

A rubbish bin fitted with a lid is necessary.

The employer should ensure that no meal is consumed in any place affected by noxious materials, processes or contaminants.

Where a kitchen or serving place is provided, it should meet the requirements of the Food Hygiene Regulations 1974.

Isolation is necessary from any room containing sanitary conveniences in accordance with the Building Act 1991.

FURTHER INFORMATION

Abrasive Blasting Regulations 1958

Electroplating Regulations 1950

Food Hygiene Regulations 1974

Lead Process Regulations 1950
Smoke-free Environments Act 1990
Noxious Substances Regulations 1954
Spraycoating Regulations 1962
Building Act 1991 (approved Building Code document G3 *Food preparation and the prevention of contamination*)

OSH publication

Planning the Workplace

Other publications

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

1.12 General place of work ventilation

All workrooms (which includes work areas partially open to the atmosphere where ventilation can be controlled) should be ventilated by natural or mechanical means to provide a constant and sufficient supply of fresh air for the employees using the room.

The supply of fresh air and the removal of hazardous or unpleasant contamination from the air space are two objectives of general workplace ventilation.

The ability to readily control general ventilation is also of importance when managing atmospheric conditions in the workplace.

Usually the ventilation requirement for fresh air is very much less than that for the removal of contamination.

Consideration should be given to the consumption of fresh air for combustion by some heating systems, e.g. gas.

Window openings should, where possible, be placed to enable cross-ventilation. As a guide, when relying on natural ventilation windows should be equivalent to 10 percent of the floor area, and half should be capable of opening.

Doors are not an appropriate means of ventilation in themselves.

FURTHER INFORMATION

Building Act 1991 (approved Building Code document G4 *Ventilation*)

Standards

AS 1668 : *The use of mechanical ventilation and air conditioning in buildings*

Part 2: 1991 *Mechanical ventilation for acceptable indoor air quality*

NZS 4302: 1987 *Code of practice for the control of hygiene in air and water systems in buildings* (amended 1991)

NZS 4303: 1990 *Ventilation for acceptable indoor air quality*

NZS 5261: 1990 *Code of practice for the installation of gas burning appliances and equipment* (Amend 1,1993)

OSH publications

Atmospheric Conditions in the Workplace

Planning the Workplace

Workplace Air Quality and Environmental Conditions

Workplace Exposure Standards 1994

Legislation — Meals in places of work

ACT.

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION.

Regulations 4 and 7 apply. They are reproduced in section 1.4.

Legislation — General place of work ventilation

ACT.

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(a) Provide and maintain for employees a safe working environment; and

.....

REGULATION.

Regulations 4 and 7 apply. They are reproduced in section 1.4.

ACT.

General Duties of Employers

6. Employers to ensure safety of employees —

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(a) Provide and maintain for employees a safe working environment; and

.....

REGULATION.

Regulations 4 and 7 apply. They are reproduced in section 1.4.

Other publications

Industrial Ventilation Manual. American Conference of Government Industrial Hygienists

Clearing the Air — A Health and Safety Guide to Clean Air in Offices. NZ Council of Trade Unions.

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

1.13 Removal of steam, fumes, dust and other contaminants

Employees should be protected from the inhalation of any contaminant in the workplace.

Where practicable, dust, fumes, steam or other impurities which arise as a result of any process or in the course of the work should be removed at the point of origin.

Mechanical extraction appliances should prevent the contamination of any other workroom or place of work.

Where any process or other activity discharges or causes to be discharged into the atmosphere any air impurity to which the Resource Management Act 1990 applies, employers should ensure that the discharge conforms with the requirements of that Act.

With regard to hazard control, where elimination or isolation of people from the contamination is not practical, the hazards should be minimised.

Minimisation requires the following:

- Monitoring of the employee's exposure to the hazard;
- Provision with and ensuring the use of suitable protective clothing and equipment;
- Monitoring (with the employee's informed consent) the employee's health in relation to the hazard; and
- Any other practical steps be taken that could minimise the effects of the hazard on the employee.

Control measures could also include dilution ventilation, filtration, mechanical extraction systems or a combination of these.

When designing extraction systems, the design should ensure that contaminants are drawn away from the breathing zone of workers, not through it.

The relative toxicity of the contaminant is most important in deciding appropriate control methods, as are other characteristics such as flammability and corrosiveness. With regard to toxicity, reference should be made to the publication *Workplace Exposure Standards 1994*.

Matters relating to specific contaminants, including the parameters for ventilation as a means of control are found in parts of various regulations. These include the Asbestos,

Abrasive Blasting, Spraycoating, Electroplating and Lead Process Regulations. Reference should also be made to the Building Code.

FURTHER INFORMATION

Abrasive Blasting Regulations 1958

Asbestos Regulations 1983

Building Act 1991 (approved Building Code document G4 *Ventilation*)

Electroplating Regulations 1950

Lead Process Regulations 1950

Noxious Substances Regulations 1954

Spraycoating Regulations 1962

Standards

AS 1668: *The use of mechanical ventilation and air conditioning in buildings*

Part 2: 1991 *Mechanical ventilation for acceptable indoor air quality*

NZS 4302: *Code of practice for the control of hygiene in air and water systems in buildings*

NZS 4303:1990 *Ventilation for acceptable indoor air quality*

NZS 6101: *Classification of hazardous areas*

Part 1: 1988 *Flammable gas and vapour atmospheres*

Part 2: 1990 *Combustible dusts*

Part 3: 1991 *Specific occupancies (flammable gas and vapour atmospheres)*

NZS 7203: 1992 *Safety in laboratories — fume cupboards* (Amend 1,1992)

OSH publications

Approved Code of Practice for the Safe Use of Isocyanates

Atmospheric Conditions in the Workplace

Code of Practice for Vapour Degreasing

Dust Explosions in Factories

Glutaraldehyde in Health Industries

Guidelines for the Safe Use of Organic Solvents

Safety at Work — What Every Employee Should Know

Welding Safety

Workplace Air Quality and Environmental Conditions

Workplace Exposure Standards 1994

Other publications

Industrial Ventilation Manual. American Conference of Government Industrial Hygienists

NZECP *The safety of electricity in a hazardous area*

Safeguard Buyers' Guide to Safety and Health Products and Services

Legislation — Toilets

General Duties of Employers

6. Employers to ensure safety of employees —

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION

4. Duties in respect of facilities at every place of work—(1) Every employer shall take all practicable steps to ensure—

(a) That facilities of the kinds described in subclause (2) of this regulation are provided at every place of work under the control of that employer; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are—

(a) Toilets;

(b) Hand-washing facilities;

.....

Regulation 7 describes tests for suitability and sufficiency of facilities. It is reproduced in section 1.4.

1.14 Toilets

Suitable and sufficient sanitary conveniences should be provided for the exclusive use of both males and females engaged or employed in or about the place of work.

Where more than one workplace is contained within one building, the separate employers could provide common sanitary conveniences on the same scale as would be required if all persons were employed in a single workplace.

The minimum recommended requirements are:

- 1 water closet where up to 15 females are employed, two for up to 20 plus 1 closet for each additional 20 employees or part thereof;
- 1 water closet where up to 20 males are employed, two for up to 30 plus 1 closet for each additional 30 or part thereof;
- 1 urinal where up to 15 males are employed, two for up to 30 plus 1 for each additional 30 males or part thereof.

Toilets for each sex should be constructed and situated in such a way as to ensure privacy for the persons using them. Access should not be through changing facilities used by members of the opposite sex.

They should be readily accessible, well-lit and ventilated, and protected from the weather. If situated outside, good footpath access with lighting should be provided, and where possible access should be covered.

Toilets should not open directly into workrooms, dining rooms, or rooms where food is prepared.

Provision to wash and dry hands is required, including hot and cold water, soap and clean towels or other effective means of drying.

Suitable construction materials include impervious lining materials and floors that can be easily cleaned and maintained to provide hygienic conditions.

Toilet paper should be provided and a means to hang clothing.

Where females are engaged or employed, there should be suitable provision for the disposal of sanitary towels.

Unisex conveniences can be provided for the use of employees if all persons using them are of the same family, the same sex or where the maximum number of persons employed or engaged is usually less than 15.

Such conveniences should be completely enclosed to ensure privacy, have an efficient inside lock, and provide for the disposal of sanitary towels. They should not contain a urinal.

Sanitary conveniences for the use of persons with disabilities are required in accordance

with the Building Act 1991, and the provisions of the Disabled Persons Community Welfare Act 1975.

They can be used by both persons, with or without disabilities, provided sufficient sanitary conveniences for the numbers engaged or employed are available.

Where conveniences are provided exclusively for the use of persons with disabilities, they should be provided on the basis of one per nine persons employed.

As a rule, any toilets provided by an employer that are open to or available for use by members of the public should not be taken into account when determining whether sufficient conveniences for employees have been provided. However, regard must be had to any special rulings by the Building Industry Association in respect of certain establishments.

Public conveniences provided by local authorities, shopping malls, taverns and similar should not be included in calculating scales of amenities. (Although, again, regard must be had to any special rulings made by the Building Industry Association.)

Refer to section 1.4, Common facilities and amenities.

FURTHER INFORMATION

Disabled Persons Community Welfare Act 1975

Building Act 1991 (approved Building Code document G1 *Personal hygiene*)

Standards

NZS 2038: 1966 *Stainless steel urinals and flushing apparatus*

NZS 3331: 1972 *Specification for quality of vitreous china sanitary appliances*

NZS 4121: 1985 *Code of practice for design for access and use of buildings and facilities by disabled persons*

NZS 4616: 1990 *Washbasins*

OSH publication

Planning the Workplace

1.15 Washing facilities

Employers should provide adequate and suitable washing facilities conveniently accessible to all workers, including as necessary those who are disabled.

Washing facilities should be kept separate from facilities used in connection with any process or activity.

All facilities, conveniences and accommodation provided should be properly maintained, kept clean and not used for the storage of material or goods.

Facilities should include both hot and cold water, suitable non-irritating soap or cleansing agents, nail brushes, and suitable hand and face drying facilities.

Hot water should be tempered or otherwise provided at a temperature low enough to prevent thermal injuries.

Legislation — Washing facilities

ACT

6. Employers to ensure safety of employees—

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

- (a) Provide and maintain for employees a safe working environment; and
 - (b) Provide and maintain for employees while they are at work facilities for their safety and health; and
-

REGULATION

4. Duties in respect of facilities at every place of work—(1) Every employer shall take all practicable steps to ensure—

- (a) That facilities of the kinds described in subclause (2) of this regulation are provided at every place of work under the control of that employer; and
- (b) That any such facilities are suitable for the purpose for which they are to be used; and
- (c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are—

.....

(b) Hand-washing facilities:

.....

5. Duties in respect of facilities at certain places of work—(1) Every employer shall take all practicable steps to ensure—

(a) That facilities of any of the kinds described in subclause (2) of this regulation are provided for employees at every place of work under the control of that employer where the work is of such a nature that those facilities are required; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are,—

(a) Where the work is of such a nature that employees are reasonably likely to need facilities for washing the body, such facilities:

.....

Regulation 7 describes tests for suitability and sufficiency of facilities. It is reproduced in section 1.4.

Legislation — Drainage of floors

ACT

6. Employers to ensure safety of employees —

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

REGULATIONS

Regulations 5 and 7 apply. They are reproduced in sections 1.10 and 1.4 respectively.

Precautions should be taken to ensure hand drying facilities do not spread disease, for example workers should not share towels.

Disposable paper towels, roller cloth towelling, or electrical appliances specifically designed to supply warm air for this purpose meet this objective.

Where employees as a result of their work reasonably need to shower, then showers should be supplied with hot and cold running water, soap, and suitable personal cloth towelling, laundered or replaced at such intervals as are necessary to maintain a clean supply.

Such circumstances could include where employees are exposed to poisonous, infectious, irritating or sensitising substances, and where workers require facilities to clean the whole body (such as when working in very hot environments). It is not desirable for such contaminants to be taken from the workplace to the employee's residence.

Showers should be provided in the minimum ratio of one to every 7 employees ceasing work at any one time, be under cover and provided with suitable doors or curtains to ensure privacy. Adequate changing and drying areas are required and floors should be non-slip.

Doors to shower rooms should be clearly designated and bear the name or design for the gender for which the room is provided.

FURTHER INFORMATION

Abrasive Blasting Regulations 1958

Asbestos Regulations 1983

Electroplating Regulations 1950

Factories and Commercial Premises (First Aid) Regulations 1985

Lead Process Regulations 1950

Noxious Substances Regulations 1954

Spraycoating Regulations 1962

Standards

AS 3588:1989 *Shower bases and shower modules*

NZS 2038:1966 *Stainless steel urinals and flushing apparatus*

NZS 3331:1972 *Specification for quality of vitreous china sanitary appliances*

NZS 4121:1985 *Code of practice for design for access and use of buildings and facilities by disabled persons*

NZS 4616:1990 *Washbasins*

OSH publication

Planning the Workplace

1.16 Drainage of floors

Where any process renders floors liable to be wet to such an extent that the wet is capable of being removed by draining, then effective means for draining are required.

Where in-floor drains or pipes are used, they should be fitted with covers to ensure safe access. Floors can be graded to drain off liquids.

FURTHER INFORMATION

Building Act 1991

OSH publication

Safety at Work — What Every Employee Should Know

Other information

Ministry of Agriculture (meat processing)

1.17 Fire precautions

Employers should ensure all places of work comply with the requirements of the New Zealand Fire Service in matters pertaining to fire safety. Such matters will include the number, type and placement of fire fighting devices, alarms and evacuation systems and facilities.

Effective procedures and methods of control are required to minimise the risk of or effect of fire and ensure the safety of all persons in the vicinity.

In workplaces in which there are processes or materials which in the event of a fire are liable to burn with extreme rapidity, emit poisonous fumes or cause explosions, specific control precautions could be required.

Precautions could include the display of safety warning signs, for example those prohibiting smoking or the introduction of naked flames or any other source of ignition into those parts of the place of work.

The employer should ensure that employees are suitably trained in the use and operation of portable or other fire fighting equipment provided at the place of work.

All fire fighting equipment, apparatus and warning signs should be regularly checked and maintained.

Fire and emergency egress exits should be kept clear, be easily identified and always capable of being opened from within.

Emergency procedures should be prominently displayed and practised at least annually.

Such procedures should be regularly reviewed and upgraded or modified as necessary.

FURTHER INFORMATION

Building Act 1991 (approved Building Code document F7 *Warning systems* and F8 *Signs* also C2 *Means of escape*)

Fire Safety and Evacuation of Buildings Regulations 1992

Spray Coating Regulations 1962

Standards

American Standard NFPA 12 (National Fire Protection Association)

AS 1668 *The use of mechanical ventilation and air conditioning in buildings*

AS/NZS 1319: *Safety signs for the occupational environment*

BS 5306: Part 4: 1986 *Specification for carbon dioxide systems*

Legislation — Fire precautions

ACT

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(e) Develop procedures for dealing with emergencies that may arise while employees are at work.

.....

12. Information for employees generally — Every employer shall ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work has been given, in such a form and manner that the employee is reasonably likely to understand it, information about—

(a) What to do if an emergency arises while the employee is doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place; and

.....

Duties of Employers in relation to Training and Supervision

13. Training and supervision — Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work —

.....

(b) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

14. Employers to involve employees in development of health and safety procedures — Every employer shall ensure that all employees have the opportunity to be fully involved in the development of procedures developed for the purpose of—

.....

(b) Dealing with or reacting to emergencies or imminent dangers.

.....

REGULATIONS

Regulations 4 and 7 apply. They are reproduced in section 1.4.

BS 5378: Part 1: 1980 *Safety signs and colours* (amended 1987)
NZS 2139: 1967 *Specification for heat-actuated fire detectors* (amended 1968)
NZS 4231: 1985 *Specification for self-luminous exit signs*
NZS 4232: *Performance criteria for fire-resisting enclosures*
Part 1: 1988 *Internal and external fire door sets* (amended 1991)
NZS 4503: 1993 *Code of practice for the distribution installation and maintenance of hand-operated fire fighting equipment in buildings*
NZS 4504: 1981 *Specification for fire hose reels* (amended 1991)
NZS 4506: 1978 *Specification for portable fire extinguishers of the water, foam and dry powder types* (amended 1979)
NZS 4508: 1979 *Specification for portable carbon dioxide fire extinguishers* (amended 1980, 1991)
NZS 4551: 1974 *Specification for portable fire extinguishers of the halogenated hydrocarbon type*
NZS 4512: 1981 *Automatic fire alarm systems in buildings*
NZS 4514: 1989 *The installation of smoke alarms*
NZS 4541: 1987 *Automatic fire sprinkler systems*
NZS 4515: 1990 *Residential fire sprinkler systems*
NZS 4561: 1973 *Specification for manual fire alarm systems for use in buildings*

OSH publications

Approved Code of Practice for the Prevention, Detection and Control of Fire and Explosion in NZ Dairy Industry Spray Drying Plant

Code of Practice for Safety in Aerosol Manufacture

Approved Code of Practice for the Prevention of Sulphur Fires and Explosions

Dust Explosions in Factories

Hot Work on Drums and Tanks

Planning the Workplace

Welding Safety

Other publications

Safeguard Buyers' Guide for Workplace Health and Safety Products and Services

Video titles

Fire Extinguishers

Fire Extinguishers: Safety on the Job

Flame Propagation

Flammable Liquid Fire Safety

Flammable Liquids - Beware

For advice

New Zealand Fire Service

ACT

Other Duties

15. Duties of employers to people who are not employees — Every employer shall take all practicable steps to ensure that no action or inaction of any employee while at work harms any other person.

16. Duties of persons with control of places of work —

To the extent that a person is—

(a) The owner, lessee, sublessee, occupier, or person in possession of a place of work or any part of a place of work (not being a home occupied by the person); or

(b) The owner, lessee, sublessee, or bailee, of any plant in a place of work (not being a home occupied by the person),—the person shall take all practicable steps to ensure that people in the place of work, and people in the vicinity of the place of work, are not harmed by any hazard that is or arises in the place of work.

17. Duties of self-employed people — Every self-employed person shall take all practicable steps to ensure that no action or inaction of the self-employed person while at work harms the self-employed person or any other person.

18. Duties of principals — (1) Every principal shall take all practicable steps to ensure that—

(a) No employee of a contractor or subcontractor; and

(b) If an individual, no contractor or subcontractor,—is harmed while doing any work (other than residential work) that the contractor was engaged to do.

(2) Subsection (1) of this section shall be read subject to section 2 (2) of this Act.

19. Duties of employees— Every employee shall take all practicable steps to ensure—

(a) The employee's safety while at work; and

(b) That no action or inaction of the employee while at work causes harm to any other person.

Legislation — Cleanliness

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

(a) Provide and maintain for employees a safe working environment; and

(b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

REGULATION

Regulations 4, 5, 6 and 7 apply. They are reproduced in sections 1.4, 1.10 and 1.7 respectively.

2.1 Safety generally

No person engaged or employed in any place of work should, without reasonable cause, do anything likely to endanger themselves or any other person.

No person engaged or employed in any place of work should interfere with or misuse any appliance, apparatus, clothing, convenience, device, equipment, guard, or other thing that is provided for ensuring the health and safety, of persons in any place of work.

Every person engaged or employed in any place of work should use any such appliance, apparatus, clothing, device, equipment, guard, or other thing, as required to ensure their safety and health.

Every person engaged or employed in any place of work should obey any instructions given to them for the purpose of securing their health and safety.

They should also report defects in any process, procedure, equipment, gear, enclosures, apparatus, plant, clothing, amenities, facility, or any other thing provided to ensure the health and safety of persons in the workplace.

FURTHER INFORMATION

OSH publication

Safety at Work — What Every Employee Should Know

2.2 Cleanliness

Employers should ensure that the place of work is kept in a clean condition, free from refuse, waste, rubbish or any nuisance, and free from any smell or leakage from any drain or sanitary convenience.

Accumulations of dirt and refuse should be removed regularly and as frequently as required by appropriate methods such as washing, vacuuming or sweeping.

Dry sweeping should be avoided where harmful substances are present in the place of work as they are likely to cause atmospheric contamination if disturbed. Where potentially explosive dusts are present, care should be taken to ensure contamination is not spread.

Vigorous sweeping, blowing of compressed air, or any other method of cleaning which can raise a dust cloud should be avoided.

Windows, ledges and skylights should be kept clean.

Sanitary conveniences, meal rooms, rest or first aid rooms require particular attention.

Sufficient suitable containers for waste and refuse, fitted with a cover as necessary, should be available and be regularly emptied.

FURTHER INFORMATION

Abrasive Blasting Regulations 1958
Electroplating Regulations 1950
Lead Process Regulations 1950
Noxious Substances Regulations 1954
Spraycoating Regulations 1962

OSH publications

Dust Explosions in Factories
Good Housekeeping in Industry
Safety at Work — What Every Employee Should Know

Other publications

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

Video titles

Good Housekeeping
Housekeeping Means Safekeeping
Safety Housekeeping and Accident Prevention

2.3 Prevention of falls

Falls often result in serious harm or death and require particular attention in terms of appropriate control.

Effective means to ensure the prevention of falls should be provided.

Some examples are perimeter fencing and fall arrest systems such as static safety lines, safety harnesses and inertia reel systems or safety nets.

When practical, it is desirable to isolate people from the hazard using fencing rather than relying on protective equipment such as fall arrest systems.

Where fall arrest systems are provided, they should ensure any falls that occur are less than 1.5 metres.

Persons using such systems should not work alone.

Training is a vital factor in effective use and maintenance of this equipment.

Careful consideration should be given when work at height is being planned as regards the type and suitability of equipment used for access purposes.

Where such work is regular, permanent safe access should be provided.

FURTHER INFORMATION

Building Act 1991 (approved Building Code document D1 *Access routes* also C2 *Means of escape* and F4 *Safety from falling*)

Standard

NZS/AS 1657: 1992 *Fixed platforms, walkways, stairways and ladders — Design, construction and installation*

OSH publications

Safe Access
Guidelines for the Provision of Facilities and General Safety in the Construction Industry

9. **Duty in respect of cleanliness of place of work** — Every employer shall take all practicable steps to ensure that every place of work under the control of that employer is kept in a clean and hygienic state.

Legislation — Prevention of falls

General Duties of Employers

6. **Employers to ensure safety of employees** — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

- (a) Provide and maintain for employees a safe working environment; and
- (b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

12. **Information for employees generally** — Every employer shall ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work has been given, in such a form and manner that the employee is reasonably likely to understand it, information about—

- (a) What to do if an emergency arises while the employee is doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place; and
- (b) All identified hazards to which the employee is or may be exposed while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to the employee; and
- (c) All identified hazards the employee will or may create while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to other people; and
- (d) Where all necessary safety clothing, devices, equipment, and materials are kept.

Duties of Employers in Relation to Training and Supervision

13. **Training and supervision** — Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work —

.....

- (b) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

REGULATION

Duty in Relation to Heights at Some Workplaces
21. **Heights of more than 3 metres**— (1) In this regulation, the term “employer” does not include

any employer who employs any employee to carry out any agricultural work in a place of work under the control of that employer.

(2) Every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, that, where any employee may fall more than 3 metres,—

(a) Means are provided to prevent the employee from falling; and

(b) Any means so provided are suitable for the purpose for which they are to be used.

2.4 Safe means of access and egress

Safe means of access should be provided to and in every place of work.

All means of access or egress should be of sound construction, and be properly maintained.

Safe access should enable all persons, including the disabled, to move conveniently and safely throughout the place of work in the performance of their normal duties. Marked aisles or walkways help in defining access ways.

Safe and rapid egress should be provided from the place of work in an emergency.

Access for the servicing and maintenance of plant, machinery and buildings should also be provided.

Floors should be even, slip-resistant and free from obstructions.

All doors or other means of access or egress to places of work should be kept unlocked, and clear from any obstruction while employees are actually working.

If for security reasons a door is required to be locked, it should be capable of being opened quickly from the inside without the use of a key, so as to allow quick and easy egress at all times.

Freezers, chillers, manholes and similar confined spaces should have effective means to ensure safe access and, in particular, egress.

Steps, stairs, and ramps should be provided where necessary with substantial handrails, and suitable means to prevent slipping.

Openings in floors and pits should be securely fenced or covered. Mezzanine floors also require fencing, including midrails and toeboards.

Doorways, hatchways and openings in the place of work used for hoisting or lowering goods or materials should have secure fencing and handholds.

Basements whose area exceeds 100m² require at least two safe means of access remotely separated from each other.

Skylights and low level windows in multi-storey buildings should be glazed with shatterproof material or guarded to prevent falls.

Where there is a likelihood of any person inadvertently walking into or striking glazing protective barriers should be provided.

Clear glazing should be suitably marked or patterned for easy identification and warning and all doors clearly identified.

FURTHER INFORMATION

Building Act 1991 (approved Building Code document D1 *Access routes* also C2 *Means of escape* and F4 *Safety from falling*)
Disabled Persons Community Welfare Act 1975

Legislation — Safe means of access and egress

ACT

General Duties of Employers

6. Employers to ensure safety of employees — Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

(a) Provide and maintain for employees a safe working environment; and

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

(e) Develop procedures for dealing with emergencies that may arise while employees are at work.

.....

REGULATION

Regulations 4, 5, 6 and 7 apply. They are reproduced in sections 1.4, 1.10 and 1.7 respectively.

Standards

AS/NZS 1657: 1992 *Fixed platforms, walkways, stairways, and ladders. Design, construction and installation*

EN115: 1983 *Safety rules for the construction and installation of escalators and passenger conveyors*

NZS 3609: 1978 *Specification for timber ladders*

NZS 4121: 1985 *Code of practice for design for access and use of buildings and facilities by disabled persons*

NZS 4223 *Glazing code* (3 parts)

NZS 5235 *Code of practice for safety in mechanical refrigeration* (2 parts)

OSH publications

Approved Code of Practice for Power-operated Elevated Work Platforms

Approved Code of Practice for the Safe Erection and Use of Scaffolding

Approved Code of Practice for Safety in Excavation and Shafts for Foundations

Guidelines for the Provision of Facilities and General Safety in the Construction Industry

Motor Garage Hazards

Planning the Workplace

Safe Access

Safety in Confined Spaces

2.5 Safety in confined spaces

A confined space may be defined as “any chamber, tank, pipe or space in which a worker may be required to go or work and in which hazards are present which may endanger their health”.

Before work is performed in any confined space in which noxious gases, flammable liquids or vapours, electromagnetic or ionising radiation or any other harmful substance or matter are present (or are likely to be present) the employer should carry out tests to ensure the air quality and quantity is adequate to ensure the health and safety of any person going into that space.

Employers should take all practical steps to safeguard the health and safety of any person who is required to enter or work in any confined space, or to assist in any activity that is associated with any confined space, by establishing a system which ensures the following matters are considered.

The evaluation of the atmosphere in the confined space will identify the hazard and assist in defining the appropriate control method, which can include:

- The continuous ventilation, or cleaning or purging of the confined space of any atmospheric contaminant.
- Pure oxygen should not be used for purging or ventilating purposes or as a substitute for compressed air in breathing apparatus.
- The provision of appropriate respiratory protective devices or self-contained breathing apparatus and adequate instruction and training in their use.

Legislation — Safety in confined spaces

ACT

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

- (a) Provide and maintain for employees a safe working environment; and
- (b) Provide and maintain for employees while they are at work facilities for their safety and health; and
- (c) Ensure that plant used by any employee at work is so arranged, designed, made, and maintained that it is safe for the employee to use; and
- (d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—
 - (i) In their place of work; or
 - (ii) Near their place of work and under the employer's control; and
- (e) Develop procedures for dealing with emergencies that may arise while employees are at work.

Duties of Employers in Relation to Hazard Management

7. Identification of hazards— (1) Every employer shall ensure that there are in place effective methods for—

- (a) Systematically identifying existing hazards to employees at work; and
- (b) Systematically identifying (if possible before, and otherwise as, they arise) new hazards to employees at work; and

(c) Regularly assessing each hazard identified, and determining whether or not it is a significant hazard.
(2) Where there occurs any accident or harm in respect of which an employer is required by section 25 (1) of this Act to record particulars, the employer shall take all practicable steps to ensure that the occurrence is so investigated as to determine whether it was caused by or arose from a significant hazard.

- The provision and use of suitable safety harness and lifeline.
- The appointment of persons outside the confined space to ensure the provision of communication, support and rescue services to the person within the confined space.
- The supply and maintenance of suitable rescue and first aid equipment and instruction and training in the use of such equipment for those persons likely to enter the confined space for worker rescue purposes.
- The isolation of any dangerous moving parts.
- Appropriate measures to avoid risks due to electrical energy.
- Any other provisions or requirements identified as necessary.

Employers should make a thorough assessment of the workplace to identify every confined space which could present any danger to people if entered. These should then be categorised into those which are routinely entered and those which are not, but which could be under certain circumstances.

Freezers, chillers, manholes and similar confined spaces should have effective means to ensure safe access and, in particular, egress.

Appropriate procedures should then be developed to enable safe entry. These procedures should be formalised into an “entry permit” system, which includes the prevention of unauthorised entry.

If it is possible to carry out the work (or other reason for entering) from outside the space, then this should be done.

See also section 3.5, Safety in refrigerated compartments and places where electromagnetic or ionising radiation is generated.

FURTHER INFORMATION

Standards

AS/NZS 1715: 1994 *Selection, use and maintenance of respiratory protective devices*

NZS/AS 1716: 1994 *Respiratory protective devices*

NZS 5235: 1991 *Code of practice for safety in mechanical refrigeration (Refrigeration Code)*

NZS 5811: 1981 *Industrial safety belts and harnesses (2 parts)*

OSH publications

Guide to Respirators and Breathing Apparatus

Planning the Workplace

Safety in Confined Spaces

Welding Safety

Workplace Exposure Standards 1994

Other publications

Safeguard Buyers' Guide for Workplace Health and Safety Products and Services

Video titles

Confined Space Safety (3 parts)

Confined Space Safety (identification)

Watch That Space

2.6 Training and supervision

Employers should ensure that employees are not required to undertake any unsupervised work unless they have the necessary knowledge and experience to perform it safely.

Employees should also be trained in the safe use of all plant, objects, substances, and protective clothing and equipment they could be required to use or handle in that work.

Untrained workers or those in the process of training should be directly supervised by a person who has the necessary knowledge and experience and has been adequately trained themselves in the work to be done.

Groups of workers could be supervised by one person, depending on the hazards involved or the complexity of the work.

A record of the training given to workers, the skills they have attained and what further training could be needed should be kept.

FURTHER INFORMATION

Standards

ASME/ANSI B 56.1: 1993 *Safety standard for low lift and hi lift trucks*

NZS 5235: 1991 *Code of practice for safety in mechanical refrigeration (Refrigeration Code)*

OSH publications

A Guide to Managing Health and Safety to Meet the Requirements of the Health and Safety in Employment Act

Approved Code of practice for Training Operators and Instructors of Powered Industrial Lift Trucks (Forklifts)

Hot Work on Drums and Tanks

Practical Guidelines for the Safe Use of Organic Solvents

Safety in Confined Spaces

Safe Occupational Use of Glutaraldehyde in the Health Industries

The Farmers' and Growers' Guide to Health and Safety in Employment Act

Training and Supervising Workers — A Brief Guide

Training and Supervision (Bulletin)

Training and Supervision (Farm Bulletin)

Training and Supervision — Dangerous Goods and Fire Protection

Welding Safety

Other publications

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

Legislation — Training and supervision

ACT

Duties of Employers in Relation to Training and Supervision

13. **Training and supervision** — Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work—

(a) Either—

(i) Has; or

(ii) Is so supervised, by a person who has, — such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the employee's doing the work, using the plant, or dealing with the substance, is not likely to cause harm to the employee or other people; and
(b) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

ACT

General Duties of Employers

6. **Employers to ensure safety of employees**— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

- (a) Provide and maintain for employees a safe working environment; and
- (b) Provide and maintain for employees while they are at work facilities for their safety and health; and
- (c) Ensure that plant used by any employee at work is so arranged, designed, made, and maintained that it is safe for the employee to use; and
- (d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—
 - (i) In their place of work; or
 - (ii) Near their place of work and under the employer's control; and
- (e) Develop procedures for dealing with emergencies that may arise while employees are at work.

REGULATIONS

12. **Application of regulations 13 to 21**—(1) In regulations 13 to 21 of these regulations, the term “employer” includes a person who controls a place of work.

(2) In regulations 13 to 17 and 19 to 21 of these regulations, the term “employee”, in relation to a person who controls a place of work, means a person working in the place of work.

13. **Overcrowding**—(1) Subject to subclause (2) of this regulation, every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, —

- (a) That no part becomes so crowded with people or things or both as to be hazardous to any employee; and
 - (b) That sufficient space is provided in any room in which work is normally performed to permit reasonable movement without that movement being hazardous to any employee.
- (2) Nothing in this regulation applies to any place of work —
- (a) That is a temporary place of work; or
 - (b) That is, or is an integral part of, a structure erected for the purpose of enabling any agricultural work or construction work to be carried out.

.....

LEGISLATION - Traffic control

ACT

Sections 6 (a) and (d) apply. They are reproduced in section 2.7 of these guidelines.

2.7 Overcrowding and airspace

Employers should ensure that employees are not grouped together in a building so closely that they cannot work in a safe and healthy manner.

Workrooms should provide a minimum volume of 12 m³ for each of the workers employed in it at any one time.

In calculating this area, no space should be taken into account unless it is properly lit and ventilated, and clear from all materials, goods and tools, other than those actually used or required by the persons employed in the room.

No space more than 4 m from the floor should be taken into account; no access/egress way nor any gallery or mezzanine floor forming part of the room or opening onto the room.

Refer also to section 1.12, General place of work ventilation, section 1.13, Removal of steam, fumes, dust and other contaminants, and section 2.4, Safe means of access and egress.

FURTHER INFORMATION

OSH publications

Good Housekeeping in Industry

Manual Handling — Guidelines for the Workplace

2.8 Traffic control

Where the movement of vehicular traffic at a place of work creates a hazard that could endanger the safety of any person at work, then employers should take steps to control that traffic hazard.

These steps could include the use of clearly defined traffic ways (marked aisle way for pedestrians and traffic), lights, warning signs, barricades or detours; a suitably trained person directing and controlling the flow of traffic; or other methods or systems suited to the particular circumstances.

FURTHER INFORMATION

OSH health and safety inspectors

2.9 Workers employed under loads

Employers should ensure that where any person in a place of work is engaged in, employed at, or is in the vicinity of work being performed under something that has been raised or lifted, then supports or other devices should be placed or used to prevent that thing dropping or being lowered while the person is underneath.

The employer should also ensure that anything sitting on the ground or tilted or partly in contact with the ground is on stable ground and cannot be undermined by the work being undertaken on it, so endangering any person.

Examples include using stands under motor vehicles or other heavy plant or equipment, ensuring hoists have anti-fall devices, identifying potential hazards associated with hydraulic or air line failure, and taking effective control measures.

FURTHER INFORMATION

Standards

AS 2693: 1993 *Vehicle jacks*

Further advice

OSH health and safety inspectors

2.10 Lifting heavy loads

Employers should ensure that no employee is required or permitted to lift, carry, or move by hand any load, object, or weight so heavy that its lifting, carriage, or movement would be likely to injure or cause risk of injury to them.

Employees should be trained to know how to help prevent back trouble from lifting, by recognising:

- Early warning niggles that could be the first sign that extra care is necessary;
 - That people vary in height, build and strength, loads vary in weight, shape and bulk.
- Therefore, it is impossible to set precise weight limits and every situation should be considered on its merits.

Employees should be taught how to lift and carry correctly, and should know:

- Not to try to lift a load if it feels too heavy or bulky;
- To ask someone else to help; or
- To use lifting equipment if it is available;
- To keep their back straight;
- To bend knees and let the legs, not the back, take the strain;
- To face the direction in which they are going to carry the load to avoid twisting the spine;
- To take care when putting the load down and to keep the back straight.

FURTHER INFORMATION

OSH publications

Manual Handling — A Workbook

Manual Handling — Guidelines for the Workplace

LEGISLATION - Workers employed under loads

ACT

Section 6(d) applies. It is reproduced in section 2.7 of these guidelines.

REGULATION

16. **Raised objects** — Every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, that, where any employee is under any thing that has been raised or lifted by any means to enable any work to be done, supports or other devices are so placed or used under the thing that it cannot drop or be lowered while the employee is under it.

LEGISLATION - Lifting heavy loads

ACT

Section 6(d) applies. It is reproduced in section 2.7 of these guidelines.

REGULATION

55. **Injurious tasks** — Every employer shall take all practicable steps to ensure that no employee under the age of 15 years is required to lift any weight or to perform any task at any place of work under the control of that employer, where lifting the weight or performing the task would be likely to be injurious to the employee's health.

Manual Handling in the Manufacturing Industry
Occupational Overuse Syndrome — Checklists for the Evaluation of Work
What's Being Done About Back Injuries? (pamphlet)

Other publications

Accident Compensation Insurance and Rehabilitation Corporation (various publications)
Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

Video titles

Dealing with Manual Handling
Industrial Weightlifter
Manual Load Handling in the Warehouse
Minimising Back strain on the Job
Moving things — Lifting and Carrying
New Way to Lift
Preventing Back Injuries

LEGISLATION - Protection from harmful noise and noise control

ACT

Section 6 (a) applies. It is reproduced in section 2.7 of these guidelines.

Duties of Employers in Relation to Hazard Management

7. Identification of hazards—(1) Every employer shall ensure that there are in place effective methods for—

- (a) Systematically identifying existing hazards to employees at work; and
 - (b) Systematically identifying (if possible before, and otherwise as, they arise) new hazards to employees at work; and
 - (c) Regularly assessing each hazard identified, and determining whether or not it is a significant hazard.
- (2) Where there occurs any accident or harm in respect of which an employer is required by section 25 (1) of this Act to record particulars, the employer shall take all practicable steps to ensure that the occurrence is so investigated as to determine whether it was caused by or arose from a significant hazard.

8. Significant hazards to employees to be eliminated if practicable—Where there is a significant hazard to employees at work, the employer shall take all practicable steps to eliminate it.

9. Significant hazards to employees to be isolated where elimination impracticable—Where —

- (a) There is a significant hazard to employees at work; and
- (b) Either—
 - (i) There are no practicable steps that may be taken to eliminate it; or
 - (ii) All practicable steps to eliminate it have been taken, but it has not been eliminated,—the employer shall take all practicable steps to isolate it from the employees.

2.11 Protection from harmful noise and noise control

All employers should take all practicable steps to effectively manage the hazards associated with excessive noise. The maximum levels of noise that people can safely be exposed to are set out in Regulation 11 of the Health and Safety in Employment Regulations 1995. Anything above these levels is excessive noise.

A systematic approach should be taken and should include the following steps:

1. Determine whether there is excessive noise by:

- (a) Carrying out an initial audit to determine the likelihood of noise problems;
- (b) Confirming the results of the audit by carrying out a noise assessment by measurement. If the noise levels are excessive, ensure employees are adequately protected.

2. Develop a plan of how the noise problem should be managed (*noise management plan*) and this should include the following aspects:

(a) Eliminate excessive noise emitted by:

- Reducing the noise being emitted to a level below the exposure limits by modifying existing equipment and machinery. An example of this is replacing noisy transmission gears with “v” belt transmissions;
- Reducing the noise being emitted to a level below the exposure limits by replacing noisy equipment and machinery with quieter types. For example, replace a noisy piston-type compressor with a screw-type model;
- Reducing the noise being emitted to a level below the exposure limits by changing the process. For example, replacing a hammering operation with a pneumatic or hydraulic press which applies the force slowly and eliminates the impact noise created by hammering.

(b) Isolate noisy equipment from employees by:

- Relocating the noisy equipment;
- Using barriers and screens;
- Enclosing the equipment in a suitably designed enclosure; or
- Relocating employees in a quiet room or area.

(c) Minimise the effects of excessive noise on employees by:

- Reducing noise levels to the lowest practicable levels even where the end result will still be excessive noise;
- Modify work schedules to reduce employees' exposure to noise; and
- Put in place systematic procedures for the protection of employees where they are exposed to excessive noise.

(d) Develop a *hearing protection programme*, which should include:

- Regular monitoring of noise levels and noise exposure levels of employees still exposed to excessive noise; and
- Regular hearing tests (with the informed consent of the individuals involved) on employees who are exposed to excessive noise.

(e) Where excessive noise is present employers should communicate clearly by way of signs, labelling of machinery, or other means the following information:

- The fact that noise levels in that place of work are or likely to be hazardous; and
- The type and grade of hearing protectors for that area and where this protective equipment may be obtained.

(f) Provide training for employees, which should include:

- An overview of, noise, hearing, the noise management plan and the hearing protection programme detail;
- Correct use and maintenance of noise controls of machinery;
- Reasons for wearing hearing protectors; and
- Selection, use and proper fitting of hearing protectors, including the importance of constant use and maintenance of hearing protectors.

3. Regularly review both the noise management plan and the hearing protection programme.

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable

— (1) Where—

(a) There is a significant hazard to employees at work; and

(b) Either—

(i) There are no practicable steps that may be taken to eliminate it; or

(ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and

(c) Either—

(i) There are no practicable steps that may be taken to isolate it from the employees; or

(ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) The steps are—

(a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and

(b) To ensure that there is provided for, accessible to, and used by the employees suitable clothing and equipment to protect them from any harm that may be caused by or may arise out of the hazard; and

(c) To monitor the employees' exposure to the hazard; and

d) To take all practicable steps to obtain the employees' consent to the monitoring of their health in relation to the hazard; and

e) With their informed consent, to monitor the employees' health in relation to exposure to the hazard.

Duties of Employers in Relation to Information

11. Employees to be given results of monitoring—

(1) This section applies to the results of any monitoring of any employee or place of work if it was undertaken in compliance with this Act; and—

(a) If the monitoring was undertaken by or on behalf of an employer; or

(b) If—

(i) The monitoring was undertaken by or on behalf of a department (within the meaning of the State Sector Act 1988); and

(ii) The results have been given to an employer.

(2) Subject to subsection (3) of this section, every employer shall ensure that—

(a) Every employee is given all results to which this section applies of monitoring of the employee (whether as an individual or as one of a number of employees) in

relation to health or safety; and

(b) All employees who ask for them are given all results to which this section applies of general monitoring of—

(i) Conditions in the employee's place of work; or

(ii) The health or safety of employees there.

(3) Every employer shall ensure that—

- (a) There are omitted from all results to which this section Applies given to any individual employee all information that identifies, or discloses anything about, any other individual employee; and
- (b) There are omitted from all results to which this section applies given to any group of employees all information that identifies, or discloses anything about, any employee.

REGULATION.

11. **Noise**—(1) Every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, that no employee is exposed to noise above the following levels:

- (a) A noise exposure level, $L_{Aeq,8hr}$, of 85 dB(A); and
- (b) A peak noise level, L_{peak} , of 140 dB,—
whether or not the employee is wearing a personal hearing protection device.
- (2) For the purposes of subclause (1) of this regulation,—
- (a) The noise exposure level, $L_{Aeq,8hr}$, is the level of the daily noise exposure normalised to a nominal 8-hour day, in dB(A) referenced to 20 micropascals; that is to say, it is the steady noise level that would, in the course of an eight hour period, cause the same A-frequency-weighted sound energy as that due to the actual noise over the actual working day; and
- (b) The peak noise level, L_{peak} , is the highest frequency-unweighted peak sound pressure level in the place of work in decibels referenced to 20 micropascals, measured using sound measuring equipment with “P” time-weighting, as specified in the Australian Standard numbered AS 1259.1-1990 and entitled “Sound level meters Part 1: Non-integrating”; and
- (c) The levels of noise referred to in subclause (1) of this regulation shall be measured and assessed in accordance with the Australian Standard numbered AS 1269-1989 and entitled “Acoustics—Hearing conservation”.
- (3) Where an employer has taken all practicable steps to ensure that no employee at any place of work under the control of that employer is exposed to noise above the levels specified in subclause (1) of this regulation but has not eliminated the risk that any employee may be exposed to noise above those levels, the employer shall communicate clearly, by way of signs, labelling of machinery, or other appropriate means—
- (a) The fact that noise levels at the place of work are or are likely to be hazardous; and
- (b) The sort of personal hearing protection device that is suitable to protect against the noise levels; and
- (c) Where such a device may be obtained.

FURTHER INFORMATION

Standards

- AS 1259.1: 1990 *Sound level meters; Part 1: Non-integrating*
 AS 1259.2: 1990 *Sound level meters; Part 2: Integrating-averaging*
 AS 1269: 1989 *Acoustics — Hearing conservation*

OSH publications

- Noise-induced Hearing Loss — A Message to Employees on Avoiding Hearing Loss*
Noise-induced Hearing Loss — A Message to Employers on Preventing Hearing Loss
Noise Abatement for Circular Saws
Noise and You — The ABCs of Hearing Conservation
Noise Induced Hearing Loss of Occupational Origin — A Guide for Medical Practitioners

Other publications

- Noise at Work - Noise assessment, information and control*— Noise Guides 3 to 8; Health and Safety Executive, UK; HS(G) 56
Noise Control, Principles and Practice; Bruel and Kjaer. Obtainable from Reid Technology Ltd, PO Box 1898, Auckland
Noise Management at Work — Control Guide; Worksafe Australia. Obtainable from Worksafe Australia, Sydney

2.12 Electrical installation safety

All electrical equipment, fittings, tools and wiring used in connection with any work carried on in any place of work should comply with the requirements of the Electricity Act 1992 and Regulations.

Occupiers should ensure that they obtain certificates of compliance on completion of electrical wiring work.

FURTHER INFORMATION

- Electricity Act 1992
 Electricity Regulations 1993

Standards

- NZS 6101: *Classification of hazardous areas*
 Part 1: 1988 *Flammable gas and vapour atmospheres*
 Part 2: 1990 *Combustible dusts*
 Part 3: 1991 *Specific occupancies (flammable gas and vapour atmospheres)*

For advice

- Ministry of Commerce, Energy Inspection Group

2.13 Portable electric equipment

Where any portable electric power-driven equipment is provided, the employer should ensure that all such equipment:

- Conforms to the requirements of the Electricity Act 1992 and Regulations unless the supply authority otherwise approves;
- Is connected to its electric supply point by a flexible heavy-duty extension cord as described below:
- Where joined, is joined in a manner approved by the supply authority.

The following suggestions if adopted will improve safety:

- Extension cords should be protected or kept clear of the floor or ground so as to prevent damage or injury;
- Extension cords should not exceed 50m in length;
- Connection plugs and sockets should be of a type that cannot be rewired.
- An isolating transformer or residual current device (current-operated earth leakage detector) should be used.
- An employer should ensure that where a plug board or double adaptor is used, it is suitable for the purpose.
- Portable power tools should be correctly guarded, maintained and used as recommended for the purposes for which they were designed.
- Protective clothing and equipment is often necessary, thereby requiring employees to receive training in the safe use of both the equipment and the protective devices.

FURTHER INFORMATION

Electricity Act 1992

Electricity Regulations 1993

Standards

NZS 6101: *Classification of hazardous areas*

Part 1:1988 *Flammable gas and vapour atmospheres*

Part 2:1990 *Combustible dusts*

Part 3:1991 *Specific occupancies (flammable gas and vapour atmospheres)*

OSH publications

Other guidelines in this series

For advice

Ministry of Commerce, Energy Group

Manufacturers, suppliers of equipment

ACT

6. Employers to ensure safety of employees—
Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(c) Ensure that plant used by any employee at work is so arranged, designed, made, and maintained that it is safe for the employee to use;

.....

ACT

6. Employers to ensure safety of employees—

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

(a) Provide and maintain for employees a safe working environment;

.....

REGULATION

12. Information for employees generally —

Every employer shall ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work has been given, in such a form and manner that the employee is reasonably likely to understand it, information about—

(a) What to do if an emergency arises while the employee is doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place;

and

(b) All identified hazards to which the employee is or may be exposed while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to the employee; and

(c) All identified hazards the employee will or may create while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to other people; and

(d) Where all necessary safety clothing, devices, equipment, and materials are kept.

.....

2.14 Signs, colour coding and aisle marking

Suitable safety warning signs should be provided in areas where there are hazards which are not readily apparent. The signs should be displayed in such positions as to be clearly visible to persons working in or entering the area. Areas that need warnings can include:

- Chemical hazards;
- Eye hazards;
- Falling object hazards;
- Foot hazards;
- Hot process hazards;
- Ionising hazards;
- Machinery hazards;
- Noise hazards;
- Radiation hazards;
- Refrigeration hazards;
- Traffic hazards.

Other signs can be used to indicate designated areas or access and egress provisions, e.g. access for persons with disabilities.

The provision of signage is not in itself a means of controlling the hazard, rather it is one possible component of a control system.

Colour coding can be used to indicate hazardous and non-hazardous piping, designated areas, first aid and fire fighting facilities and equipment, traffic areas, process areas, storage areas, including specific colouring of containers and drums, etc.

Aisle marking can be used to indicate traffic and pedestrian ways, storage areas, process areas, fire fighting equipment, etc.

FURTHER INFORMATION

Building Act 1991 (approved Building Code document F8/AS1 Signs)

Standards

NZS 4121: *Disabled persons, for access to buildings*

NZS 5807: *Code of practice for industrial identification by colour, wording or other coding*

NZS 5807C *Poster*

NZS 5842: *Water safety signs*

NZS/AS 1319: *Safety signs for the occupational environment*

OSH publications

Safe Stacking and Storage — Guidelines for

Safety at Work — What Every Employee Should Know

2.15 Duties of designers, manufacturers, suppliers and sellers of plant

Designers of plant are required to take all practicable steps to ensure that plant and machinery they design, and that is to be used in a place of work, is designed so that it will not be a source of harm to any person during manufacture, use and maintenance. In the design process, consideration shall be given to applicable ergonomic principles especially in the placing of power controls.

Adequate information shall be given to the manufacturer concerning the use for which it was designed, installation, use, adjustment, maintenance, repair, cleaning, dismantling and any other relevant matters.

Manufacturers are required to ensure that if the plant is manufactured and tested to the design, used for the purpose for which it is designed, that its installation, use, adjustment, maintenance, repair, cleaning and dismantling will not cause harm to any person.

Manufacturers, suppliers and sellers of plant and machinery shall provide clear and comprehensive information to any purchaser or hirer concerning the use for which it was designed, manufactured and tested and information on its correct installation, use, adjustment, maintenance, dismantling, repair and any other relevant matters.

FURTHER INFORMATION

OSH publication

OSH Handbook for health and safety inspectors

2.16 Duties of designers, manufacturers, suppliers and sellers of protective clothing and equipment

Designers of protective clothing and equipment are required to take all practicable steps to ensure that it is designed to ergonomic principles and, if manufactured and properly used for the purpose for which it was designed, in accordance with the designer's instructions, it will give adequate protection from the harm against which it is intended to protect.

Adequate information shall be given to the manufacturer concerning the installation, use, adjustment, cleaning, maintenance, repairing and dismantling of clothing or equipment in accordance with the designer's instructions.

Manufacturers are required to ensure that every supplier and seller of protective clothing and equipment receives clear and comprehensive information concerning the use for which the clothing or equipment is designed; details on its installation, use, adjustment, cleaning, maintenance, repair and dismantling; and any other relevant matters.

LEGISLATION - Duties of designers, manufacturers, and suppliers

REGULATIONS

PART VII

Duties of Designers, Manufacturers, and Suppliers

65. Sufficient compliance with certain duties in this Part—(1) The Secretary may, from time to time, grant recognition to any document containing requirements relating to the duties imposed by any of the following provisions of these regulations:

- (a) Regulation 66 (1);
- (b) Regulation 67 (1) or (2);
- (c) Regulation 68 (1);
- (d) Regulation 69 (1), (2), or (3).

(2) On granting recognition to a document under subclause (1) of this regulation, the Secretary shall publish a notice in the Gazette—

- (a) Specifying the title of the document and the provision or provisions to which the requirements in the document relate; and
 - (b) Stating that the document has been granted recognition under subclause (1) of this regulation.
- (3) The Secretary may, at any time, withdraw a recognition granted under subclause (1) of this regulation and, on doing so, shall publish a notice in the Gazette to that effect.

(4) It shall, for all purposes, be sufficient compliance with a provision to which subclause (1) of this regulation refers if the designer, manufacturer, or supplier, as the case may be, takes all practicable steps to comply with the requirements in a document—

- (a) That contains requirements relating to the duties imposed by that provision; and
- (b) That is the subject of a current recognition granted under subclause (1) of this regulation.

(5) For the purposes of subclause (4) (b) of this regulation, a document shall be deemed, in the absence of evidence to the contrary, to be the subject of a current recognition granted under subclause (1) of this regulation if its title is specified in a Gazette notice published under subclause (2) of this regulation and no Gazette notice notifying the withdrawal of that recognition has been published under subclause (3) of this regulation.

Plant

66. Duties of designers of plant—(1) Every designer of plant shall take all practicable steps—

- (a) To design any plant in accordance with applicable ergonomic principles, including (without limitation) any such principles in relation to the placement of any power control; and

(b) To design any plant in such a way that, if the plant is—

- (i) Manufactured in accordance with the design; and
- (ii) Used for the purpose for which it was designed; and (iii) Installed, adjusted, used, cleaned, maintained, repaired, and dismantled in accordance with the designer's instructions,—

there is no likelihood that the plant will be a cause

or source of harm to any person, or the likelihood that the plant will be such a cause or source of harm is minimised as far as is practicable.

(2) Every designer of plant shall take all practicable steps to ensure that every manufacturer of the plant receives comprehensive and comprehensible information, including, where relevant, detailed instructions, about—

(a) The use for which the plant has been designed; and

(b) How to install, adjust, use, clean, maintain, repair, and dismantle the plant in accordance with the designer's instructions; and

(c) Any other matters about which the manufacturer needs information from the designer in order to be able to carry out the manufacturer's duties under regulation 67 of these regulations.

67. Duties of manufacturers and suppliers of plant—

(1) Every manufacturer and supplier of plant shall take all practicable steps to ensure that any plant manufactured by that manufacturer or supplied by that supplier is so designed that, if the plant is—

(a) Manufactured in accordance with the design; and

(b) Used for the purpose for which it was designed; and

(c) Installed, adjusted, used, cleaned, maintained, repaired, and dismantled in accordance with the designer's instructions,—

there is no likelihood that the plant will be a cause or source of harm to any person, or the likelihood that the plant will be such a cause or source of harm is minimised as far as is practicable.

(2) Every manufacturer and supplier of plant shall take all practicable steps to ensure that any plant manufactured by that manufacturer or supplied by that supplier is so manufactured and tested that, if the plant is—

(a) Used for the purpose for which it was designed; and

(b) Installed, adjusted, used, cleaned, maintained, repaired, and dismantled in accordance with the designer's instructions,—

there is no likelihood that the plant will be a cause or source of harm to any person, or the likelihood that the plant will be such a cause or source of harm is minimised as far as is practicable.

(3) Every manufacturer of plant shall take all practicable steps to ensure that every supplier of the plant receives comprehensive and comprehensible information, including, where relevant, detailed instructions, about—

(a) The use for which the plant has been designed; and

(b) How to install, adjust, use, clean, maintain, repair, and dismantle the plant in accordance with the designer's instructions; and

(c) Any other matters about which the supplier needs information from the manufacturer in order to be able to carry out any duty of the supplier under this regulation.

(4) Every supplier of plant shall take all practicable

steps to ensure that every purchaser or hirer of the plant receives comprehensive and comprehensible information, including, where relevant, detailed instructions, about—

(a) The use for which the plant has been designed; and
(b) How to install, adjust, use, clean, maintain, repair, and dismantle the plant in accordance with the designer's instructions; and

(c) Any other matters about which the purchaser or hirer needs information from the supplier in order to be able to carry out any duty of the purchaser or hirer under the Act or these regulations.

Protective Clothing and Protective Equipment

68. Duties of designers of protective clothing and protective equipment —

(1) Every designer of protective clothing or protective equipment shall take all practicable steps—

(a) To design any protective clothing or protective equipment in accordance with applicable ergonomic principles; and

(b) To design any protective clothing or protective equipment in such a way that, if the clothing or equipment is—

(i) Manufactured in accordance with the design; and

(ii) Used for the purpose for which it was designed; and (iii) Installed, adjusted, used, cleaned, maintained, repaired, and dismantled in accordance with the designer's instructions,— it will give adequate protection from the harm against which it is intended to protect.

(2) Every designer of protective clothing or protective equipment shall take all practicable steps to ensure that every manufacturer of the protective clothing or equipment receives comprehensive and comprehensible information, including, where relevant, detailed instructions, about—

(a) The use for which the clothing or equipment has been designed; and

(b) How to install, adjust, use, clean, maintain, repair, and dismantle the clothing or equipment in accordance with the designer's instructions; and

(c) Any other matters about which the manufacturer needs information from the designer in order to be able to carry out the manufacturer's duties under regulation 69 of these regulations.

69. Duties of manufacturers and suppliers of protective clothing and protective equipment —

(1) Every manufacturer and supplier of protective clothing or protective equipment shall take all practicable steps to ensure that any such clothing and equipment manufactured by that manufacturer or supplied by that supplier is designed in such a way that, if the clothing or equipment is—

(a) Manufactured in accordance with the design; and

(b) Used for the purpose for which it was designed; and

(c) Installed, adjusted, used, cleaned, maintained, repaired, and dismantled in accordance with the designer's instructions,—

it will give adequate protection from the harm against which it is intended to protect.

(2) Every manufacturer and supplier of protective clothing or protective equipment shall take all practicable steps to ensure that any such clothing or equipment manufactured by that manufacturer or supplied by that supplier is so manufactured and tested that, if the clothing or equipment

is—

(a) Used for the purpose for which it was designed; and

(b) Installed, adjusted, used, cleaned, maintained, repaired, and dismantled in accordance with the designer's instructions,—

it will give adequate protection from the harm against which it is intended to protect.

(3) Every manufacturer and supplier of protective clothing or protective equipment shall take all practicable steps to ensure that any such clothing or equipment manufactured by that manufacturer or supplied by that supplier is, to the extent that is practicable, permanently marked with comprehensive and comprehensible information, including, where relevant, detailed instructions, about—

(a) The use for which the clothing or equipment has been designed; and

(b) How to install, adjust, use, clean, maintain, repair, and dismantle the clothing or equipment in accordance with the designer's instructions.

(4) Every manufacturer of protective clothing or equipment shall take all practicable steps to ensure that every supplier of any such clothing or equipment receives comprehensive and comprehensible information, including, where relevant, detailed instructions, about—

(a) The use for which the clothing or equipment has been designed; and

(b) How to install, adjust, use, clean, maintain, repair, and dismantle the clothing or equipment in accordance with the designer's instructions; and

(c) Any other matters about which the supplier needs information from the manufacturer in order to be able to carry out any duty of the supplier under this regulation.

(5) Every supplier of protective clothing or protective equipment shall take all practicable steps to ensure that every purchaser or hirer of any such clothing or equipment receives comprehensive and comprehensible information, including, where relevant, detailed instructions, about—

(a) The use for which the clothing or equipment has been designed; and

(b) How to install, adjust, use, clean, maintain, repair, and dismantle the clothing or equipment in accordance with the designer's instructions; and

(c) Any other matters about which the purchaser or hirer needs information from the supplier in order to be able to carry out any duty of the purchaser or hirer under the Act or these regulations.

Suppliers and sellers are required to ensure that every purchaser or hirer of protective clothing and equipment receives clear and comprehensive information concerning the use for which the clothing or equipment was designed; details on its installation, use, adjustment, cleaning, maintenance, repair, dismantling; and any other relevant matters.

Manufacturers, suppliers and sellers are required to ensure that clothing and equipment is designed, manufactured and tested so that if the clothing and equipment is used for the purpose for which it was designed and installed, used, adjusted, cleaned, maintained, repaired and dismantled according to the designer's instructions, it will give adequate protection from the harm against which it was intended to protect.

Every manufacturer, supplier and seller of protective clothing and equipment is to ensure that, to the extent that it is practicable, the clothing and equipment is permanently marked with clear and comprehensive relevant information concerning the use for which it has been designed; and how to install, use, adjust, clean, maintain, repair and dismantle the clothing and equipment in accordance with the designer's instructions.

FURTHER INFORMATION

OSH publication

OSH Handbook for health and safety inspectors

2.17 Restriction on the employment of young persons

Hazardous work

No employer shall employ any person under the age of 15 in a place where goods are being manufactured for trade or sale.

Persons under the age of 15 may visit factory workplaces if under the direct supervision of an adult or on a guided tour with the prior permission of the person in charge of the operation.

Night employment

Every employer shall take all practicable steps to ensure that no person who has not attained the age of 16 years is employed between the hours of 10 pm on any day and 6 am on the next day, unless the employee's employment is in accordance with an approved code of practice relating to work of that kind or description.

LEGISLATION - Restriction on the employment of young persons

REGULATIONS

54. **Employment of young persons**—(1) Subject to subclause (2) of this regulation, every employer shall take all practicable steps to ensure that no employee under the age of 15 years works in any area at a place of work under the control of that employer—
- (a) At any time when goods are being prepared or manufactured for trade or sale in that area;
 - (b) At any time when any construction work is being carried out in that area;
 - (c) At any time when any logging operation or tree-felling operation is being carried out in that area;
 - (d) At any time when any work is being carried out in that area that is likely to cause harm to the health and safety of a person under the age of 15 years.
- (2) Subclause (1) of this regulation does not apply to any area if an employee under the age of 15 years works at all times—
- (a) In any office in that area; or
 - (b) In any part of that area used only for selling goods or services.

58. **Night employment**—Every employer shall take all practicable steps to ensure that no employee under the age of 16 years works, at any place of work under the control of that employer, between the hours of 10 p.m. on any day and 6 a.m. on the next day, unless the employee's employment is in all respects in accordance with an approved code of practice relating to the employment of people under the age of 16 years between those hours in work of the kind the employee is doing.

ACT

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable

— (1) Where—

- (a) There is a significant hazard to employees at work; and
- (b) Either—
- (i) There are no practicable steps that may be taken to eliminate it; or
- (ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and
- (c) Either—
- (i) There are no practicable steps that may be taken to isolate it from the employees; or
- (ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.
- (2) The steps are —
- (a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and
- (b) To ensure that there is provided for, accessible to, and used by the employees suitable clothing and equipment to protect them from any harm that may be caused by or may arise out of the hazard; and
-

Duties of Employers in Relation to Training and Supervision

13. **Training and supervision** — Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work—

- (a) Either—
- (i) Has; or
- (ii) Is so supervised, by a person who has such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the employee's doing the work, using the plant, or dealing with the substance, is not likely to cause harm to the employee or other people; and
- (b) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

REGULATIONS

Regulations 68 and 69 impose duties on designers, manufacturers and sellers of plant. These regulations are reproduced in section 2.16 of these guidelines.

3.1 Protective clothing and equipment

Employers should provide for workers who are engaged in any process or activity that involves a risk of bodily injury to them, or a danger to their health, the protective clothing and equipment necessary to afford them reasonable protection against that risk or danger.

All protective clothing and equipment should comply with the relevant standard to ensure it provides the protection it is intended to (see below).

Protective clothing should be considered as the last option where engineering or management controls cannot completely eliminate or isolate the hazard at source. “Protective clothing” means any item of clothing worn to provide protection for the wearer against one or more of the following hazards:

- Harmful liquids, gases, vapours, dusts, powders, toxins, organisms and the like;
- Harmful radiation (both ionizing and non-ionizing);
- Extremes of temperature outside the normal ambient range;
- Impacts, vibrations, abrasions, cuts and the like;
- Poor visual conspicuity;
- Falling or slipping; or
- Electrical hazards.

Employees should be trained in the use of and maintenance of any protective clothing and equipment they should use.

Regular inspection and maintenance or replacement of defective clothing and equipment is necessary, and suitable storage will help ensure both hygiene and ready accessibility.

Protective clothing and equipment of a personal nature, such as hearing protection or footwear, should be provided on an individual basis.

When purchasing, have regard to individual fitting requirements. Bulk purchasing of, for instance, one model of earmuff may not ensure effective protection for all staff.

The effectiveness of protective clothing and equipment should be regularly assessed by monitoring employees' health and safety in relation to the hazard.

The employer should ensure that employees use the protective clothing, and equipment provided by them so often as the circumstances for which they are provided arise.

Where there are authorised visitors to places of work where conditions require the use of particular protective clothing or equipment, then employers are responsible for ensuring that such clothing and equipment is available to visitors to the same standard as for employees.

FURTHER INFORMATION

Fumigation Regulations 1967

Standards

AS/NZS 1715:1994 *Selection, use and maintenance of respiratory protective devices*

AS/NZS 1716:1994 *Respiratory protective devices*
AS/NZS 1337:1992 *Eye protectors for industrial applications*
NZS 2264: 1970 and 5806: 1980 *Specifications for industrial safety helmets*
NZS 5845: 1989 *Specifications for industrial safety footwear*
NZS 5811: 1981 *Industrial safety belts and harnesses*
NZS 5812: 1982 *Industrial protective gloves*
NZS 5827: 1988 *Industrial overalls*
NZS 5839: 1986 *High visibility garments and accessories*
NZS 5840: 1988 *Leg wear for chainsaw users*

OSH publications

A Guide to Respirators and Breathing Apparatus
Safety in Confined Spaces
Hot Work on Drums and Tanks
Manual Handling Guidelines for the Workplace
Noise-induced Hearing Loss — A Message for Employees on Preventing Hearing Loss
Noise-induced Hearing Loss — A Message for Employers on Preventing Hearing Loss
Safety at Work — What Every Employee Should Know
Safety in Confined Spaces
Safety with Corrosive Chemicals
Tyre Safety
Welding Safety

Other publications

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

3.2 Safe work on loose materials

Where any employee is required to work in, upon, or in the vicinity of any material that is capable of subsiding or flowing, in a manner likely to trap or engulf them, the employer should ensure that there is provided a suitable safety harness or lifeline, securely fastened at its extremity, and sufficiently strong to enable the worker to be pulled from that material if trapped or engulfed.

Where any worker is required to use a safety harness or lifeline, a second worker should be in attendance at the end of the safety harness or lifeline ready to assist the worker using it, or raise an alarm, in the event of any emergency.

Emergency procedures should be practised and training provided in the use and maintenance of equipment used.

It should be recognised that mechanical means could be required to provide enough energy to pull the victim free.

Similar precautions are necessary in regard to confined spaces.

FURTHER INFORMATION

Standards

NZS 5811: 1981 *Industrial safety belts and harnesses*
NZS 5839: 1986 *High visibility garments and accessories*

LEGISLATION - Safe work on loose materials

ACT.

Sections 10 and 13 apply. They are reproduced in section 3.1 of these guidelines.

REGULATIONS.

12. **Application of regulations 13 to 21—**(1) In regulations 13 to 21 of these regulations, the term “employer” includes a person who controls a place of work.

(2) In regulations 13 to 17 and 19 to 21 of these regulations, the term “employee”, in relation to a person who controls a place of work, means a person working in the place of work.

.....

15. **Loose but enclosed materials**—(1) In this regulation, the term “material” means material—
(a) That consists of or includes solid material in such a form or state, or in pieces or particles so small, that it is capable of subsiding or flowing in such a manner as to trap or engulf any person; and
(b) That is enclosed inside a structure.

(2) Every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, that, where any employee may be trapped or engulfed by material, there is provided a safety-belt or safety harness that is—

(a) Suitable for the purpose for which it is to be used; and

(b) Attached to a life-line or other device; and

(c) Securely fastened at its extremity; and

(d) Attended by another employee who is competent, equipped, and stationed to effect an immediate rescue, if any employee is so trapped or engulfed.

LEGISLATION - Vessels containing liquids

ACT

General Duties of Employers

6. Employers to ensure safety of employees—
Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

REGULATION

14. Containers of liquids — (1) In this regulation, the term "hazardous container"—

(a) Means any enclosure, fixed vessel, pit, structure, sump, vat, or other container of a similar kind—

(i) That contains any liquid; and

(ii) The edge of which is not at least 1 metre above the adjoining floor, ground, or platform; but

(b) Does not include any drinking trough for animals or any system of water collection, disposal, distribution, or storage.

(2) Every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, that, where there is any hazardous container at that place of work, either—

(a) The hazardous container is securely covered; or

(b) There is placed around the hazardous container a secure fence that—

(i) Extends at least 1 metre above the adjoining floor, ground, or platform; and

(ii) Is in a position that will provide adequate protection for any employee near the hazardous container.

OSH publications

Safety at Work — What Every Employee Should Know

Safety in Confined Spaces

Other publications

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

3.3 Vessels containing liquids

Where in a place of work there is any enclosure, vat, pan, fixed vessel, structure, sump or pit that contains any liquid, then employers should ensure that either a secure fence that extends at least 1m above the adjoining ground, floor, or platform; or a suitable cover is provided to ensure the safety of all persons in the vicinity.

Wherever practicable, a means should be provided to enable any person who might fall into any such tank to climb out. An example would be an internal ladder.

FURTHER INFORMATION

Building Act 1991 approved Building Code documents

OSH publication

Safe Access (for fencing design)

3.4 Flame cutting and welding

Hazards arise from:

- The misuse of welding gear and the use of the wrong equipment for the job;
- Direct contact with heat generated;
- Electromagnetic radiation;
- Fires caused by the ignition of flammable material and nearby containers, often started by sparks or drips of molten metal; and
- Harmful fumes and gases generated during welding, including those from primer and paint layers, other surface coatings, the metals being welded or other surface contaminants such as chemical residues.
- "Flashbacks" — the unintentional and uncontrolled burning back of gas through the blowpipe mixer in gas welding and cutting. These result from the presence of oxygen and a fuel gas in the same supply line. The use of flashback arrestors can virtually eliminate this problem, and these are described in the OSH booklet *Welding Safety*.

Arc welding

Severe and sometimes fatal electric shocks can occur with electric welding apparatus which is designed to operate from a mains supply, either single- or three-phase. The following precautions should be taken:

LEGISLATION - Flame cutting and welding

ACT

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to—

.....

(c) Ensure that plant used by any employee at work is so arranged, designed, made, and maintained that it is safe for the employee to use; and

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things —

.....

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable—(1) Where—

(a) There is a significant hazard to employees at work; and

(b) Either—

(i) There are no practicable steps that may be taken to eliminate it; or

(ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and

(c) Either—

(i) There are no practicable steps that may be taken to isolate it from the employees; or

(ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) The steps are—

(a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and

(b) To ensure that there is provided for, accessible to, and used by the employees suitable clothing and equipment to protect them from any harm that may be caused by or may arise out of the hazard; and

.....

REGULATIONS

4. Duties in respect of facilities at every place of work — (1) Every employer shall take all practicable steps to ensure —

(a) That facilities of the kinds described in subclause (2) of this regulation are provided at every place of work under the control of that employer; and

(b) That any such facilities are suitable for the purpose for which they are to be used; and

(c) That any such facilities are provided in sufficient numbers; and

(d) That any such facilities are maintained in good order and condition; and

(e) That all employees have access to any such facilities in a way that is convenient to them.

(2) The facilities referred to in subclause (1) of this regulation are—

(a) Toilets:

(b) Hand-washing facilities:

(c) Means of leaving the place of work in an emergency:

(d) First-aid facilities:

(e) Facilities for lighting for the purposes of enabling employees to perform their work safely and to move safely about the place of work:

(f) Ventilation providing either fresh or purified air:

(g) Means for controlling humidity that arises from any work process or activity:

(h) Means for controlling atmospheric conditions, including air velocity, radiant heat, and temperature:

(i) Facilities to enable any atmospheric contaminants to be controlled as closely as possible to their source:

(j) Facilities for treating or carrying off any atmospheric contaminants for the purpose of minimising the likelihood that any atmospheric contaminants will be a cause or source of harm to any employee:

(k) Facilities for employees to have meals during work hours in reasonable shelter and comfort, being facilities that are separate from any plant or materials used in the place of work and that are protected from any atmospheric contaminants, dirt, noise, or any other hazard produced by any work process.

.....

7. Tests for suitability and sufficiency of facilities — (1) The suitability of any facilities provided in accordance with regulations 4 to 6 of these regulations shall be determined having regard to —

(a) The purpose for which the facilities are provided; and

(b) The circumstances in which the facilities are provided.

(2) The sufficiency of the numbers of any facilities provided in accordance with regulations 4 to 6 of these regulations shall be determined having regard to—

(a) The number of employees in the place of work; and

(b) The needs of employees in the place of work; and

(c) The nature of the place of work; and

(d) The nature of any particular hazard in the place of work; and

(e) The type or types of work being carried out in the place of work; and

(f) Whether or not the work is always carried out at the same place of work.

- Provide fuse protection and mechanically interlock the switch fuse or isolator with the socket outlet so that the plug cannot be inserted or withdrawn with the switch in the on position;
- Earth the work piece to protect the operator in the event of an inter-winding fault between the primary and secondary windings of the transformer. A robust flexible cable terminating in a clamp connected to the work piece with its other end attached to the metalwork or earth terminal of the power source, is an efficient means of earthing;
- During MIG (metal inert gas) welding, prevent contact between the electrode wire and any earthed metalwork to avoid heavy welding current flowing through the earth continuity conductor and destroying it. Use a safe design such as an insulated spool in an insulated chamber in the power source with the wire being fed through insulated rollers and a tube inside the welding cable, to the torch; and
- Maintain the electrode holder welding current return cables, clamps and safety earths in good condition.

Radiation hazard

Prevent exposure to direct and reflected ultraviolet light and infra-red rays by wearing protective clothing, and using welding screens. Use welding screens and wear eye protection to prevent arc eye.

Fumes and gas hazards

Use local exhaust ventilation wherever possible and always in confined locations. Mobile extraction units with flexible exhaust hoods and trunking can remove fumes and gases from most locations. These could need to be supplemented by personal protective equipment such as face masks or respirators.

Fire hazard

Remove adjacent flammable material before flame cutting or welding. Check that nearby containers will not be affected, empty and remove any which are near or shield them particularly when welding or flame cutting.

FURTHER INFORMATION

Standards

NZS 4781: 1973 *Code of practice for safety in welding and cutting*

OSH publications

Hot Work on Drums and Tanks

Safety at Work — What Every Employee Should Know

Welding Safety

Workplace Exposure Standards 1994

Other publications

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

Video titles

Chemical Hazard Identification Training: Flammables, Combustibles, and Explosives

Fume Control

Welding Safety

3.5 Safety in refrigerated compartments and places where electromagnetic or ionising radiation is generated

In any place of work in which there is a chamber, tank, pipe, room, or other space, in which the temperature of the atmosphere, the level of electromagnetic or ionising radiation or any atmospheric contaminant exists, or could exist, that is likely to harm an employee trapped inside it, the employer should ensure:

- There is either an opening through which any person inside it can readily escape; or
- A door which can readily be opened by any person inside it, even if the door is securely locked from the outside.

Permanent means of indicating the door's position, such as luminous direction notices or pilot lights should also be provided.

See also section 2.5, Safety in confined spaces.

FURTHER INFORMATION

Building Act 1991 (approved Building Code documents)

Standards

NZS 5235: *Code of practice for safety in mechanical refrigeration, Parts 1 and 2.*

While this Standard provide practical advice for the safe design and operation of refrigerated rooms, the requirements for the provision of egress doors is in conflict with the Building Act provision. The Building Act sets the minimum requirements to be provided, however, the Standard should still be considered and applied where the safety of employees employed in refrigerated rooms can be more appropriately catered for, and it is practicable to do so, by installing egress doors in line with the Standard. In terms of the Health and Safety in Employment Act, employers are required to take all practicable steps to provide for the health and safety of employees and others. Meeting the requirements of the Standard can well be a practicable step that employers should take.

OSH publication

Safe Access

3.6 Precautions with respect to explosive or flammable substances

Employers should take all practicable precautions to prevent the explosion of any dust, gas, mist, vapour, fume, or any other substance present in the workplace.

Precautions include the effective enclosure of all plant producing or holding the substance; the removal or prevention of accumulations of the substance, and the exclusion or effective enclosure or isolation of all possible sources of ignition.

It is important to restrict the potential spread and effect of any explosion.

This can be achieved by ensuring all the equipment generating or collecting the substance

LEGISLATION - Safety in refrigerated compartments and places where electromagnetic or ionising radiation is generated

ACT

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(e) Develop procedures for dealing with emergencies that may arise while employees are at work.

.....

REGULATION

Regulations 4 and 7 apply. They are reproduced in section 1.4 of these guidelines.

LEGISLATION - Precautions with respect to explosive or flammable substances

ACT

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

is either sufficiently strong to withstand the effects of any explosion, or is protected by the provision of devices or systems such as chokes, baffles or vents. Water, inert gas or other extinguishing systems are other alternatives.

Any system used should not be capable of becoming a hazard to any person when activated.

FURTHER INFORMATION

Dangerous Goods Act 1974

Dangerous Goods Class 2 Gases Regulations 1980

Dangerous Goods Regulations 1958

Explosives Act 1957

Explosives Regulations 1959

OSH publications

Code of Practice for Hazardous Goods Storage Facilities

Guide on Sources of Ignition Where Dangerous Goods are Present

Other publications

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

Video title

Chemical Hazard Identification Training: Flammables, Combustibles, and Explosives

Other information

District councils, city councils

Local dangerous goods licensing authorities

OSH dangerous goods inspectors

OSH health and safety inspectors

LEGISLATION - Storage of materials

ACT

General Duties of Employers

6. Employers to ensure safety of employees—

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

REGULATION

15. **Loose but enclosed materials** — (1) In this regulation, the term "material" means material—

(a) That consists of or includes solid material in such a form or state, or in pieces or particles so small, that it is capable of subsiding or flowing in such a manner as to trap or engulf any person; and

(b) That is enclosed inside a structure.

(2) Every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, that, where any employee may be trapped or engulfed by material, there is provided a safety-belt or safety harness that is—

(a) Suitable for the purpose for which it is to be used; and

(b) Attached to a life-line or other device; and

(c) Securely fastened at its extremity; and

(d) Attended by another employee who is competent, equipped, and stationed to effect an immediate rescue, if any employee is so trapped or engulfed.

3.7 Storage of materials

Employers should take all reasonable steps to ensure that all goods, materials, substances, and equipment in workplaces are so stacked, stored, secured and kept that they do not constitute a danger to persons in their vicinity, in the event of an earthquake or during the course of daily operations.

Such steps should ensure that they cannot, whether of their own accord, or by virtue of any external force (intentionally applied or otherwise), so flow, move, roll, or collapse, and endanger persons in their vicinity.

All workers who are responsible for stacking, storing, securing, or keeping or removing any goods, materials, substances, or equipment require full training in safe methods of doing so.

Where manual stacking or storage is appropriate, work methods should be designed to ensure that individual loads are not excessive, resulting in injury.

Where machinery such as forklifts are used, particular attention is needed in terms of operator training and machinery maintenance.

Materials handling equipment is becoming increasingly diverse, ranging from hand trolleys

to sophisticated warehouse robots. It is important to ensure that the potential hazards such equipment can introduce are identified and effectively managed.

Stacks should be positioned with clear and adequately illuminated passageways between them to allow safe movement of persons or vehicles used in the process.

Good housekeeping is a vital component of a safety system.

Shelving columns, particularly on steel racking systems, should be provided with protection against vehicle impact.

All storage containers, pallets and similar equipment used for handling, transporting or storing materials should be well maintained and free from sharp edges, projections or rough surfaces that are likely to injure any person working near or passing by them.

Where practical, make use of marked aisles or walkways to maintain safe movement about any stored goods or materials.

Safe means of access is required to all shelving. Care should be taken to ensure shelving loading capacities are not exceeded and that shelves are suitably anchored.

Floors or surfaces required to support stacks, shelving, racks or other means of storage should be capable of sustaining the intended load together with shock loads.

Fire safety and the segregation of incompatible materials and chemicals should be considered, as should the accessibility of emergency evacuation.

FURTHER INFORMATION

Dangerous Goods Act 1974

Dangerous Goods Class 2 Gases Regulations 1980

Dangerous Goods Regulations 1958

Standard

AS 2143:1978 *Industrial and commercial steel shelving*

NZS 4203:1992 *General structure design and design loadings for buildings*

AS 4104:1994 *Seismic constraint of building contents*

OSH publications

Approved Code of Practice for Training Operators and Instructors of Powered Industrial Lift Trucks (Forklifts)

Code of Practice for Hazardous Goods Storage Facilities

Forklift Trucks — Safety Code for Operators

Guide on Sources of Ignition Where Dangerous Goods are Present

Manual Handling Guidelines for the Workplace

Safe Access

Safe Stacking and Storage — Guidelines for

Safety with Corrosive Chemicals

Other publications

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

Video titles

Chemical Hazard Identification Training: Flammables, Combustibles, and Explosives

Other information

District councils, city councils

Local dangerous goods licensing authorities

OSH dangerous goods inspectors

ACT

General Duties of Employers

6. **Employers to ensure safety of employees**— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

- (i) In their place of work; or
- (ii) Near their place of work and under the employer's control; and

.....

12. **Information for employees generally** — Every employer shall ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work has been given, in such a form and manner that the employee is reasonably likely to understand it, information about—

(a) What to do if an emergency arises while the employee is doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place; and

(b) All identified hazards to which the employee is or may be exposed while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to the employee; and

(c) All identified hazards the employee will or may create while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to other people; and

(d) Where all necessary safety clothing, devices, equipment, and materials are kept.

Duties of Employers in Relation to Training and Supervision

13. **Training and supervision**—Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work —

(a) Either—

(i) Has; or

(ii) Is so supervised, by a person who has such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the employee's doing the work, using the plant, or dealing with the substance, is not likely to cause harm to the employee or other people; and

(b) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

3.8 Storage of hazardous substances

Employers should ensure that every container in a place of work which holds any material or substance that is corrosive, irritant, toxic, radioactive, explosive, or otherwise capable of endangering the safety or health of any person who may come into contact with it is suitable for the material or substance being held, and where required, approved for such storage.

Such materials or substances should be safely and securely stored; clearly labelled and, where necessary, containers containing incompatible materials and substances should be properly isolated from each other.

Material safety data sheets (MSDS) should be available in each workplace for all stocks and appropriate training and protective clothing /equipment provided. Eye injuries by chemicals form a large part of total industrial eye injuries.

The storage, use and disposal of used chemicals and substances requires careful consideration from both an environmental and safety perspective.

Chemicals can be inhaled, absorbed through the skin or ingested (swallowed). These three entry routes should be considered when designing suitable control methods and providing protective clothing and equipment.

FURTHER INFORMATION

Dangerous Goods Act 1974

Dangerous Goods (Class 2 – Gases) Regulations 1980

Dangerous Goods (Class 3 – Flammable liquids) Regulations 1985

Dangerous Goods (Class 4 – Flammable solids or substances and Class 5 – Oxidising substances) Regulations 1985

Explosives Act 1957

Explosives Regulations 1959

OSH publications

Approved Code of Practice for the Prevention of Sulphur Fires and Explosions

Code of Practice for Hazardous Goods Storage Facilities

Guide on Sources of Ignition Where Dangerous Goods are Present

Bulletin: Dangerous Goods and Fire Protection

Safe Stacking and Storage

Safety with Corrosive Chemicals

Other publications

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

Video title

Chemical Hazard Identification Training: Flammables, Combustibles, and Explosives

Other information sources

District councils, city councils

Local dangerous goods licensing authorities

OSH dangerous goods inspectors

3.9 Eliminating hazardous substances

Every employer is required to take all practical steps to eliminate significant hazards. Where elimination is not practicable, isolation and minimisation of the hazard should be considered. Employers should eliminate, or at least to adequately control, employees' exposure to hazardous substances.

One of the best ways to do this is to replace or substitute the hazardous substance or process with a less harmful one, so eliminating or reducing the risks and avoiding problems before they arise.

Employers need to be able to successfully switch from the use of hazardous to less harmful substances, and the following seven easy steps may assist those employers considering substitution:

- Identify the dangers; assess the risks in the use, storage and disposal of the present substance; and assess the risks in the present process.
- Identify alternative substances or processes that can be used; then obtain information on the dangers associated with them from manufacturers, suppliers, trade associations or government departments.
- Study the alternatives, with health, safety and environmental considerations in mind.
- Compare the alternatives (and their risks) with each other and with what happens now.
- If change would be an improvement, decide how and when to bring in the substitute (after, where possible, testing it in a small way first). Making the change needs careful planning and it is vital to give staff the right information and training. Look closely at the change to see if it has been successful; checking should be ongoing to keep pace with progress, one day the substitute may itself be replaced by an even safer alternative.

FURTHER INFORMATION

A guide *Seven Steps to Successful Substitution* Ref. HS(G)110 ISBN 0-7176-0695-3, is available from HSE Books, P O Box 1999, Sudbury, Suffolk CO10 6FS England. This guide may be available through New Zealand technical libraries, or retail outlets.

Chemical manufacturers and suppliers
Safety consultants
Specialist consultants
Technical libraries

3.10 Safe use of harmful substances

Where in a place of work harmful substances in solid, liquid or gaseous form are manufactured, handled, or used, or in which flammable, infectious, irritating, offensive or toxic dusts, fibres, fumes, gases, mists or vapours, are generated or released in quantities liable to injure health, employers should ensure that all practicable steps are taken to

LEGISLATION - Eliminating hazardous substances

ACT.

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

- (i) In their place of work; or
- (ii) Near their place of work and under the employer's control; and

.....

8. Significant hazards to employees to be eliminated if practicable— Where there is a significant hazard to employees at work, the employer shall take all practicable steps to eliminate it.

LEGISLATION - Safe use of harmful substances

ACT.

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

- (i) In their place of work; or
- (ii) Near their place of work and under the employer's control; and

.....

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable—(1) Where—

- (a) There is a significant hazard to employees at work; and
- (b) Either—
 - (i) There are no practicable steps that may be taken to eliminate it; or
 - (ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and
- (c) Either—
 - (i) There are no practicable steps that may be taken to isolate it from the employees; or

(ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) The steps are—

- (a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and
- (b) To ensure that there is provided for, accessible to, and used by the employees suitable clothing and equipment to protect them from any harm that may be caused by or may arise out of the hazard; and
- (c) To monitor the employees' exposure to the hazard; and
- d) To take all practicable steps to obtain the employees' consent to the monitoring of their health in relation to the hazard; and
- e) With their informed consent, to monitor the employees' health in relation to exposure to the hazard.

.....
Duties of Employers in Relation to Information

12. Information for employees generally —

Every employer shall ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work has been given, in such a form and manner that the employee is reasonably likely to understand it, information about—

- (a) What to do if an emergency arises while the employee is doing work of that kind, using plant of that kind, or w- dealing with substances of that kind, in that place; and
- (b) All identified hazards to which the employee is or may be exposed while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to the employee; and
- (c) All identified hazards the employee will or may create while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to other people; and
- (d) Where all necessary safety clothing, devices, equipment, and materials are kept.

.....
Duties of Employers in Relation to Training and Supervision

13. **Training and supervision**—Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work—

- (a) Either—
 - (i) Has; or
 - (ii) Is so supervised, by a person who has such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the employee's doing the work, using the plant, or dealing with the substance, is not likely to cause harm to the employee or other people; and

protect employees from any resulting harm.

Employees should be made aware of the dangers of any harmful substances handled or used in the place of work, and should be trained in the precautions to be observed when handling or working with such substances.

In these situations, the atmosphere of workrooms and of partly enclosed working areas should be tested regularly by a competent person to ensure that the concentration of irritating or toxic dusts, fibres, fumes, gases, mists or vapours is kept within acceptable workplace exposure standards (see below).

Hazard-specific personal protective clothing and equipment should be provided and maintained and training given in its correct use and care.

The employer should provide and maintain in easily accessible locations, for immediate emergency treatment in case of accident or sudden illness, suitable and adequate first-aid facilities appropriate for the nature of the hazard associated with any harmful substance.

These first aid facilities need not be in addition to those provided for general use (unless there is a particular necessity), but should be in the charge of a person trained in their use.

At least one person trained to provide first aid should be available on each working day or shift unless appropriate alternatives are available.

FURTHER INFORMATION

Abrasive Blasting Regulation 1958

Asbestos Regulations 1983

Electroplating Regulations 1950

Lead Process Regulations 1950

Spraycoating Regulations 1962

Standards

AS 1668: 1991 *The use of mechanical ventilation and air conditioning in buildings*

Building Act 1991 (approved Building Code document G4 *Ventilation*)

NZCEP *The safety of electricity in a hazardous area*

NZS 4302: 1987 *Code of practice for the control of hygiene in air and water systems in buildings*

NZS 4303: 1990 *Ventilation for acceptable indoor air quality*

NZS 6101: *Classification of hazardous areas*

NZS 7203: 1992 *Fume cupboards* (amended 1992)

Part 2:1991 *Mechanical ventilation for acceptable indoor air quality*

OSH publications

Approved Code of Practice for the Safe Use of Isocyanates

Atmospheric Conditions in the Workplace

Code of Practice for Vapour Degreasing Operations

Dust Explosions in Factories

Safe Use of Glutaraldehyde in the Health Industries

Guidelines for the Safe Use of Organic Solvents

Safety at Work — What Every Employee Should Know

Welding Safety

Workplace Air Quality and Environmental Conditions

Workplace Exposure Standards 1994

Other publication

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

Video titles

Chemical Hazard Identification Training: Flammables, Combustibles, and Explosives

Fume Control

Welding Safety

3.11 Workplace exposure standards

The standards set out in the OSH publication *Workplace Exposure Standards 1994* have been endorsed as recommended guidelines for those involved in occupational health practice by a specially appointed Exposure Standards Committee.

In applying the standards, consideration should be given to the following:

- Exposure to substances that may be hazardous to health should be kept to the lowest practicable level.
- In most situations, by taking reasonable steps, it should be possible to achieve levels of exposure considerably below the Workplace Exposure Standards.
- An environmental and biological monitoring programme provides a convenient means of assessing the quality of the environment in the workplace but it is only one facet of the comprehensive approach that should be taken. Education and training, engineering control, administrative control, protective equipment and medical surveillance are all elements that should be considered in an integrated occupational health programme.
- For many substances, levels of exposure that are now considered acceptable may in the future be found to be excessive. As the scientific data on the toxic effects of substances have been reviewed, they are generally being lowered, not raised;
- It is stressed that the primary consideration should be to avoid exposure to substances that may be harmful to health. Where this is not possible the exposure should be reduced to the lowest practicable level. It is recognised that the health risks presented by occupational exposure to some substances cannot be completely eliminated and that some residual risk will remain even after reasonable precautions have been taken;
- In preventing or controlling exposure to substances that may be harmful to health, substitution with a less hazardous substance and the provision of engineering controls are preferred to the use of personal protective equipment. Respirators do, however, provide a means of reducing unnecessary exposure. Their routine use should, in particular, be encouraged as a means of providing additional protection for short periods of increased exposure.

(b) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

REGULATIONS.

Regulations 4 and 7 apply. They are reproduced in section 1.4 of these guidelines.

LEGISLATION - Workplace exposure standards

ACT.

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

- (a) Provide and maintain for employees a safe working environment; and
- (b) Provide and maintain for employees while they are at work facilities for their safety and health; and

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

- (i) In their place of work; or
- (ii) Near their place of work and under the employer's control; and

.....

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable—(1) Where—

- (a) There is a significant hazard to employees at work; and
- (b) Either—
 - (i) There are no practicable steps that may be taken to eliminate it; or
 - (ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and
- (c) Either—
 - (i) There are no practicable steps that may be taken to isolate it from the employees; or
 - (ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) The steps are—

- (a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and
- (b) To ensure that there is provided for, accessible to, and used by the employees suitable clothing and equipment to protect them from any harm that may be caused by or may arise out of the hazard; and
- (c) To monitor the employees' exposure to the hazard; and

- d) To take all practicable steps to obtain the employees' consent to the monitoring of their health in relation to the hazard; and
e) With their informed consent, to monitor the employees' health in relation to exposure to the hazard.

REGULATIONS.

Regulations 4 and 7 apply. They are reproduced in section 1.4 of these guidelines.

LEGISLATION - Work with compressed air and high pressure equipment

ACT.

General Duties of Employers

6. Employers to ensure safety of employees—
Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

- Factors apart from occupational exposure will often contribute to the development of work-related disorders. A worker's susceptibility may be influenced by genetic factors, age, state of health, exposure outside of the workplace, smoking and alcohol or other drug usage. Ultimately, it is the health of the individual worker that should be protected and the employer should ensure that the procedures designed to meet the average response remain flexible.

FURTHER INFORMATION

OSH publication

Workplace Exposure Standards 1994

3.12 Work with compressed air and high-pressure equipment

Employers should take all practicable steps to prevent accidents occurring due to the use of compressed air hoses, pipes, outlets, or other similar high pressure equipment.

All equipment used in connection with compressed air or high pressure equipment should be soundly constructed and properly stored, maintained, and comply with the appropriate New Zealand Standard.

Air lines should be suitable for the pressure or connected to a pressure control device.

All gauges and control devices should be regularly checked against a master pressure gauge. Damaged or faulty equipment should not be used.

All tyres should be deflated before removal from the vehicle's wheel rim, and only inflated while they are restrained in a properly constructed cage guard or other suitable restraining device.

No hand-operated air line should be left unattended while it is in use. Hand-operated airlines should be fitted with a valve or self-sealing device.

All pressurised oxygen equipment should be kept free from contamination from dirt, oil and grease.

The use of pure oxygen can be extremely hazardous and precautions need to be taken. Pure oxygen should not be supplied to breathing apparatus used in confined spaces, or used for ventilation purposes or as a general alternative to compressed air.

Compressed air should not be used for blowing down or cleaning, clothing, equipment, machinery, or similar items or articles. No compressed air or high-pressure, nozzle, gun, or equipment should be pointed at any person.

All compressed air, or high-pressure equipment capable of being operated at a pressure exceeding 7000 kPa (1000 psi), should be fitted with a deadman operating trigger.

High-pressure equipment means equipment capable of being operated at pressures exceeding 700 kPa (100 psi).

FURTHER INFORMATION

Standards

AS/NZS 4233: 1994 Interim standard *High pressure water jetting systems — Safe operation and maintenance*

AS/NZS 1349: 1986 *Bourdon tube pressure and vacuum gauges*

BS/NZS 5118: 1980 *Specification for rubber hoses for compressed air*

OSH publications

Grease Gun Safety

Hot Work on Drums and Tanks

Safety in Confined Spaces

Tyre Safety

Welding Safety

4.1 Identification of occupational health problems in places of work

Most work-related diseases occur over time, and the effects are often not immediately apparent. Health hazards are often less obvious than safety hazards, but the effects can be just as serious.

Typical occupational diseases include respiratory disease, skin disorders, hearing impairment, communicable diseases, musculoskeletal conditions, occupational cancer, and disorders resulting from the neurotoxicity of chemicals and solvents.

Recognising that a disease or condition is work related is usually the role of an occupational physician or nurse.

Initial health screening will assist in the identification of those people who should not work in the process and set baseline health information for future reference.

Assessment of the work process to identify hazards and appropriate control strategies are essential.

FURTHER INFORMATION

OSH publications

OSH publishes a wide range of publications on specific occupational diseases and their prevention.

Other publication

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

Other sources of information

Crown Health Enterprises

OSH health and safety inspectors

Medical professionals

Ministry of Health

Private consultants

Trade unions

LEGISLATION - General hygiene

ACT

Subsection 10 (2) (a) applies. It is reproduced on the facing page.

REGULATION

9. Duty in respect of cleanliness of place of work—
Every employer shall take all practicable steps to ensure that every place of work under the control of that employer is kept in a clean and hygienic state.

4.2 General hygiene

Good hygiene practices should be observed, such as washing hands before smoking or eating. In some occupations, such as sewer workers or lead workers, this is most important. In many cases soap and hot water needs to be provided.

The use of barrier creams should not be relied on to maintain hygiene. In those industries which are particularly dirty, such as engineering, the use of hand cleaners is essential and will assist in preventing skin conditions such as dermatitis.

Education and health promotion programmes are necessary to educate employees in good hygiene practices.

LEGISLATION - identification of occupational health problems in places of work

ACT

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

Duties of Employers in Relation to Hazard Management

7. Identification of hazards— (1) Every employer shall ensure that there are in place effective methods for—

(a) Systematically identifying existing hazards to employees at work; and

(b) Systematically identifying (if possible before, and otherwise as, they arise) new hazards to employees at work; and

(c) Regularly assessing each hazard identified, and determining whether or not it is a significant hazard.

(2) Where there occurs any accident or harm in respect of which an employer is required by section 25 (1) of this Act to record particulars, the employer shall take all practicable steps to ensure that the occurrence is so investigated as to determine whether it was caused by or arose from a significant hazard.

8. Significant hazards to employees to be eliminated if practicable— Where there is a significant hazard to employees at work, the employer shall take all practicable steps to eliminate it.

9. Significant hazards to employees to be isolated where elimination impracticable— Where —

(a) There is a significant hazard to employees at work; and

(b) Either—

(i) There are no practicable steps that may be taken to eliminate it; or

(ii) All practicable steps to eliminate it have been taken, but it has not been eliminated,— the employer shall take all practicable steps to isolate it from the employees.

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable

— (1) Where—

(a) There is a significant hazard to employees at work; and

(b) Either—

(i) There are no practicable steps that may be taken to eliminate it; or

(ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and

(c) Either—

(i) There are no practicable steps that may be taken to isolate it from the employees; or

(ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) The steps are—

(a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and

(b) To ensure that there is provided for, accessible to, and used by the employees suitable clothing and equipment to protect them from any harm that may be caused by or may arise out of the hazard; and

(c) To monitor the employees' exposure to the hazard; and

d) To take all practicable steps to obtain the employees' consent to the monitoring of their health in relation to the hazard; and

e) With their informed consent, to monitor the employees' health in relation to exposure to the hazard.

Duties of Employers in Relation to Information

11. Employees to be given results of monitoring—

(1) This section applies to the results of any monitoring of any employee or place of work if it was undertaken in compliance with this Act; and—

(a) If the monitoring was undertaken by or on behalf of an employer; or

(b) If—

(i) The monitoring was undertaken by or on behalf of a department (within the meaning of the State Sector Act 1988); and

(ii) The results have been given to an employer.

(2) Subject to subsection (3) of this section, every employer shall ensure that—

(a) Every employee is given all results to which this section applies of monitoring of the employee (whether as an individual or as one of a number of employees) in relation to health or safety; and

(b) All employees who ask for them are given all results to which this section applies of general monitoring of—

(i) Conditions in the employee's place of work; or

(ii) The health or safety of employees there.

(3) Every employer shall ensure that—

(a) There are omitted from all results to which this section Applies given to any individual employee all

information that identifies, or discloses anything about, any other individual employee; and
(b) There are omitted from all results to which this section applies given to any group of employees all information that identifies, or discloses anything about, any employee.

12. Information for employees generally — Every employer shall ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work has been given, in such a form and manner that the employee is reasonably likely to understand it, information about—

(a) What to do if an emergency arises while the employee is doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place; and

(b) All identified hazards to which the employee is or may be exposed while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to the employee; and

(c) All identified hazards the employee will or may create while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to other people; and

(d) Where all necessary safety clothing, devices, equipment, and materials are kept.

FURTHER INFORMATION

OSH publications

OSH publish a wide range of publications on specific occupational diseases and their prevention.

Other publications

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

Other sources of information

Crown Health Enterprises

OSH health and safety inspectors

Medical professionals

Ministry of Health

Private consultants

Trade unions

LEGISLATION - Prevention of infection

ACT

General Duties of Employers

6. Employers to ensure safety of employees—

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

4.3 Prevention of infection

In some occupations there is an increased risk of infection. Biological hazards include occupational exposure to pathogens such as hepatitis B virus (HBV) and human immunodeficiency virus (HIV) and other potentially infectious materials. Workers in the health care industries, such as hospitals and biological laboratories, should take special precautions to prevent infection.

Disease may also arise from contact with animals already infected, as seen in the group of infections referred to as zoonoses (animal diseases transferable to humans). Examples of these diseases are leptospirosis and orf.

Employers and employees in the farming sector and meat processing industries should take precautions against contracting such diseases.

FURTHER INFORMATION

OSH publications

OSH publish a wide range of publications on specific occupational diseases and their prevention.

Other publications

Safeguard Buyers' Guide to Safety and Health Products and Services

Other sources of information

Crown Health Enterprises

OSH health and safety inspectors

Medical professionals

Ministry of Health

Private consultants

Trade unions

4.4 Managing occupational health

Employers need to consider methods to reduce and monitor occupational health problems in their places of work. These may include employing a qualified occupational health nurse (that is, a registered general nurse with an occupational health nursing certificate) or other suitably qualified person such as an occupational hygienist to assist in:

- Assessing the workplace to identify hazards to health;
- Carrying out health surveillance and biological monitoring;
- Consulting other occupational health specialists where necessary;
- Developing control methods to prevent the hazards;
- Giving information and training about workplace hazards;
- Maintaining records;
- Providing health education, rehabilitation and other counselling;
- Supervising and training first aiders.

FURTHER INFORMATION

OSH publication

A Guide to Managing Health and Safety to Meet the Requirements of the Health and Safety in Employment Act 1992

Other publications

Safeguard Buyers' Guide to Workplace Safety and Health Products and Services

Other sources of information

Crown Health Enterprises
OSH health and safety inspectors
Medical professionals
Ministry of Health
Private consultants
Trade unions
Employers' Associations

4.5 Advice to employees

Employers should provide information, education and training for employees in occupational health, specifically on what they can do to protect their own health at work. Employees should be encouraged to:

- Read labels carefully and follow all instructions;
- Satisfy themselves that material safety data sheets from all suppliers are provided. Where this information is in a form not easily understood, additional information clarifying the issues should be sought;

LEGISLATION - Managing occupational health

ACT.

Sections 7-12 apply. They are reproduced in section 4.1 of these guidelines.

Duties of Employers in Relation to Training and Supervision

13. **Training and supervision**—Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work—

(a) Either—

(i) Has; or

(ii) Is so supervised, by a person who has such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the employee's doing the work, using the plant, or dealing with the substance, is not likely to cause harm to the employee or other people; and
(b) Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

14. **Employers to involve employees in development of health and safety procedures**

—Every employer shall ensure that all employees have the opportunity to be fully involved in the development of procedures developed for the purpose of—

(a) Complying with sections 7 to 10 of this Act; or

(b) Dealing with or reacting to emergencies or imminent dangers.

LEGISLATION - Advice to employees

ACT.

Section 12 applies. It is reproduced in section 4.1 of these guidelines.

- Seek information on other substances they use at work.

Employees should be trained to protect themselves, and know:

- How to use protective equipment like gloves, goggles, earmuffs or respiratory protection where necessary to protect health;
- How to maintain and look after their protective equipment.

Employees should be encouraged to maintain a high standard of hygiene and understand the benefits of:

- Not wearing contaminated clothing (where work clothes become heavily soiled, a laundry service provided by their employer is preferable to taking the clothing home);
- Always washing hands before eating, drinking or smoking;
- Keeping the workplace clean and tidy;
- Not eating, drinking or smoking in hazardous work areas.

Employees should know what to do if they suspect something at work is causing ill health, and be advised to inform the employer or supervisor without delay.

FURTHER INFORMATION

Other publications

Safeguard Buyers' Guide to Safety and Health Products and Services

Other sources of information

Crown Health Enterprises

Occupational Safety and Health Service of the Department of Labour

Medical professionals

Ministry of Health

Private consultants

Trade unions

Employers' Associations

LEGISLATION - Stress

ACT

Section 12 applies. It is reproduced in section 4.1 of these guidelines.

4.6 Stress

Stress at work can be a contributing factor to many health-related conditions. Work-related stress is also thought to have negative effects on interpersonal relationships, job satisfaction, and productivity, as well as life outside the workplace.

In order to manage stress the employer should identify those aspects of the work environment that may have adverse effects on the health of employees.

These aspects may include, but are not limited to:

- Job and performance demands;
- Interpersonal relationships;

- Job content and workload (e.g. monotony and overload);
- Physical environmental problems (e.g. noise and poor lighting);
- Organisational policies and other similar issues;
- Complexity of the job;
- Job dissatisfaction;
- Lack of job security.

FURTHER INFORMATION

OSH publications

Approved Code of Practice for the Use of Visual Display Units in the Place of Work

OSH Handbook for health and safety inspectors

Other publications

Safeguard Buyers' Guide to Safety and Health Products and Services

For further advice

Crown Health Enterprises

OSH health and safety inspectors

Medical professionals

Ministry of Health

Private consultants

Trade unions

Employers' Associations

4.7 Occupational overuse syndrome (OOS)

Occupational overuse syndrome is an umbrella term that refers to a range of conditions which affect the muscles, tendons and ligaments, usually in the upper limb. Sustained excessive muscle tension is currently regarded to be the cause of OOS.

Relaxation in its many possible applications is the best approach to OOS prevention.

This relaxation can be encouraged by:

- Providing proper workstation design;
- Encouraging and promoting correct postures and actions;
- Organising and designing work so that people are not required to work beyond their own capacity;
- Providing opportunities for breaks and building in recovery time;
- Training employees so that they can identify and avoid improper habits (for example carrying out tasks with the shoulders raised).

LEGISLATION - Occupational overuse syndrome

ACT.

General Duties of Employers

6. Employers to ensure safety of employees— Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable—(1) Where—

(a) There is a significant hazard to employees at work; and

(b) Either—

(i) There are no practicable steps that may be taken to eliminate it; or

(ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and

(c) Either—

(i) There are no practicable steps that may be taken to isolate it from the employees; or

(ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) The steps are—

(a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and

.....

There are many other ways of preventing and remedying OOS and these are explained in the documents listed below.

FURTHER INFORMATION

Standards

BS 3044: 1990 *Guide to ergonomic principles in the design and selection of office furniture*

ISO 9241.1: 1992 *Ergonomic requirements for office work with visual display terminals (VDT) — Part 1: General introduction*

ISO 9241.2: 1992 *Ergonomic requirements for office work with visual display terminals (VDT) — Part 2: Guidance on task requirements*

ISO 9241.3: 1992 *Ergonomic requirements for office work with visual display terminals (VDT) — Part 3: Visual display requirements*

OSH publications

Approved Code of Practice for the Use of Visual Display Units in the Place of Work

Ergonomic Evaluation of Office Chairs

How to Use Your Visual Display Unit Safely

Occupational Overuse Syndrome: Guidelines for prevention and management

Occupational Overuse Syndrome: Treatment and rehabilitation, a practitioners guide

Occupational Overuse Syndrome: Checklists for the Evaluation of Work

The Floppy Ergonomist: Comfort and efficiency for VDU users

The Pocket Ergonomist: Keyboard /clerical version

The Pocket Ergonomist: Industrial /retail version

Other publications

Accident Rehabilitation and Compensation Insurance Corporation (various documents)

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

For further advice

Crown Health Enterprises

OSH health and safety inspectors

Medical professionals

Ministry of Health

Private consultants

Trade unions

Employers' Associations

LEGISLATION - Ergonomics at work

ACT

General Duties of Employers

6. Employers to ensure safety of employees—

Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

Sections 7-9 apply. They are reproduced in section 4.1 of these guidelines.

4.8 Ergonomics at work

Ergonomics is the scientific study of the relationship between people, the equipment they use, and the environment they work in. Ergonomic design is the application of this knowledge to the design of tools, machines, systems, tasks, jobs and environments for safe, comfortable and effective human use. The fact that people are able to use poorly designed equipment, often under difficult working conditions, shows that people are adaptable, but there is a limit to the amount of adaptation a person may reasonably be asked to make. The cost can be in terms of efficiency in a doing a job, discomfort, frustration and dissatisfaction on the part of the user, and the potential for accidents and personal injury. A user-centred approach to design and evaluation may avoid these problems and result in:

- Lower injury and accident rates;
- Greater user comfort;
- Greater user acceptance;
- Improved reliability;
- Fewer errors and mistakes;
- A general increase in job satisfaction;
- Less absenteeism;
- Increased productivity;
- Improved safety;
- Reduced fatigue and strain.

FURTHER INFORMATION

Standard

BS 3044: 1990 *Guide to ergonomic principles in the design and selection of office furniture*

OSH publications

Ergonomics for Machine Guarding

Manual Handling: A Workbook

Manual Handling in the Manufacturing Industry

Manual Handling — Guidelines for the Workplace

Occupational Overuse Syndrome: Checklists for the Evaluation of Work

Approved Code of Practice for the Use of Visual Display Units in the Place of Work

What's Being Done About Back Injuries?

Other publications

Accident Rehabilitation and Compensation Insurance Corporation (various documents)

Safeguard Buyers' Guide to Workplace Health and Safety Products and Services

Video titles

Dealing with Manual Handling

Industrial Weightlifter

Manual Load Handling in the Warehouse

Minimising Back Strain on the Job

Moving Things — Lifting and Carrying

New Way to Lift

Preventing Back Injuries

For further advice

Crown Health Enterprises

OSH health and safety inspectors

Medical professionals

Ministry of Health

Private consultants

Trade unions

Employers' Associations

10. Significant hazards to employees to be minimised, and employees to be protected, where elimination and isolation impracticable—(1) Where—

(a) There is a significant hazard to employees at work; and

(b) Either—

(i) There are no practicable steps that may be taken to eliminate it; or

(ii) All practicable steps to eliminate it have been taken, but it has not been eliminated; and

(c) Either—

(i) There are no practicable steps that may be taken to isolate it from the employees; or

(ii) All practicable steps to isolate it from the employees have been taken, but it has not been isolated,— the employer shall take the steps set out in subsection (2) of this section.

(2) The steps are—

(a) To take all practicable steps to minimise the likelihood that the hazard will be a cause or source of harm to the employees; and

.....

ACT

General Duties of Employers

6. **Employers to ensure safety of employees—**
Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

.....

(d) Ensure that while at work employees are not exposed to hazards arising out of the arrangement, disposal, manipulation, organisation, processing, storage, transport, working, or use of things—

(i) In their place of work; or

(ii) Near their place of work and under the employer's control; and

.....

4.9 Changes in working hours and shift work

Employers should not require people to work excessive hours or unsuitable shift patterns likely to lead to ill health or accidents caused by fatigue. Work schedules should also allow for adequate rest periods.

Changing from normal working hours to non-traditional work schedules, such as rotating shifts and night shifts, disturbs internal body rhythms which may have safety implications or may lead to a variety of health-related ailments.

Shift work requires biological adjustments, sleeping at odd hours, eating at different times, and it can have a big impact on family and social life.

Employers proposing changes in employees' working hours should consider a number of points beforehand so that new working patterns are introduced as smoothly as possible. These include:

- Consulting with employees and involving them in designing the changes;
- Provision of first aid rooms, canteens, tea rooms and similar facilities during the shift;
- Provision of training in the correct practices and procedures relevant to shift work; and
- Referring to appropriate reference material and, where necessary, engaging the services of an expert in this field.

FURTHER INFORMATION

Publication

The Shift Workers' Handbook, 1993 Synchro Tech, Marty Klein, PhD. Available from: 315 S, 9th Street, Suite 211 Lincoln NE 68508 USA

For further advice

Crown Health Enterprises

Occupational Safety and Health Service of the Department of Labour

Medical professionals

Ministry of Health

Private consultants

Trade unions

Employers' Associations

ACT

General Duties of Employers

6. **Employers to ensure safety of employees—**
Every employer shall take all practicable steps to ensure the safety of employees while at work; and in particular shall take all practicable steps to —

(a) Provide and maintain for employees a safe working environment; and

.....

(e) Develop procedures for dealing with emergencies that may arise while employees are at work.

.....

4.10 Violence at work

Violence at work is an increasing problem. Incidents arise where:

- Interpersonal relationships between employees break down;
- People deal with the general public in a stressful situation;

- There are improper or uninvited interpersonal contacts;
- There is a threat of robbery (armed or not).

Employers should take all practicable steps to prevent and deal with violent situations at work. This can be achieved by developing systems and procedures to prevent incidents occurring, dealing with an incident when it occurs, and providing appropriate responses or counselling after an incident.

Employees should be encouraged to report any fear they have or any incidents to their employers, who should treat the approach or incident in a sensitive and serious manner and ensure that it is suitably and fairly dealt with. Employers should respect an employee's need for confidentiality and ability to raise issues without fear of discrimination or ridicule.

FURTHER INFORMATION

OSH publications

Guidelines for the Safety of Staff from the Threat of Armed Robbery
A Guide for Employers and Employees on Dealing With Violence at Work
What Employees Need to Know About Violence at Work (pamphlet)

For further advice

Advice from specialist consultants
 New Zealand Police
 Trade unions
 Employers' Associations

4.11 Language and cultural considerations

It is important that employers recognise language and cultural issues which may arise in the place of work. Employers should take into account when providing information, training and supervision to employees, that the information should be provided in a way which can be easily understood by the person receiving it. The needs of individuals should be considered when providing training and supervision in the place of work.

FURTHER INFORMATION

For further advice

Private consultants
 Church organisations
 Cultural groups and associations
 Maori Language Commission
 Ministry of Pacific Island Affairs
 New Zealand Employment Service
 New Zealand Immigration Service
 Te Puni Kokiri

LEGISLATION - Language and cultural considerations

ACT

12. Information for employees generally — Every employer shall ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work has been given, in such a form and manner that the employee is reasonably likely to understand it, information about—

- What to do if an emergency arises while the employee is doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place; and
- All identified hazards to which the employee is or may be exposed while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to the employee; and
- All identified hazards the employee will or may create while doing work of that kind, using plant of that kind, or dealing with substances of that kind, in that place, and the steps to be taken to minimise the likelihood that the hazards will be a cause or source of harm to other people; and
- Where all necessary safety clothing, devices, equipment, and materials are kept.

Duties of Employers in Relation to Training and Supervision

13. Training and supervision—Every employer shall take all practicable steps to ensure that every employee who does work of any kind, or uses plant of any kind, or deals with a substance of any kind, in a place of work—

- Either—
 - Has; or
 - Is so supervised, by a person who has such knowledge and experience of similar places, and work, plant, or substances of that kind, as to ensure that the employee's doing the work, using the plant, or dealing with the substance, is not likely to cause harm to the employee or other people; and
- Is adequately trained in the safe use of all plant, objects, substances, and protective clothing and equipment that the employee is or may be required to use or handle.

ACT.

Sections 7, 10 and 12 apply. They are reproduced in section 4.1 of these guidelines.

4.12 Alcohol and drug dependence

Dependence may arise through many situations facing people at work or home.

Such problems can lead to unhealthy and unsafe work methods or practices being used which may endanger the person concerned and others in the place of work.

As part of taking all practical steps to deal with this problem, employers should have in place policies and procedures for dealing with such issues before and as they arise, as well as having in place procedures to provide help and advice to employees who may have a dependence on alcohol or drugs. The involvement of an occupational health nurse, industrial chaplain or the setting up of an employee assistance programme may assist employers to deal with these issues.

The procedures and policies that are adopted to deal with these problems should be developed in close consultation with all employees in the place of work. Employers should also have regard to the provisions of the Privacy Act 1993 and the New Zealand Bill of Rights Act 1990 when dealing with these issues.

FURTHER INFORMATION

For further advice

Crown Health Enterprises

Health centres

Medical practitioners

Ministry of Health

The Industrial Chaplain service

Trade unions

Employers' Associations