



PART 2

General Risk and Workplace Management

Requirements for remote or isolated work, atmospheres with potential for fire or explosion, raised and falling objects, loose material in enclosed spaces and substances hazardous to health

March 2017

Guidance to the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.

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INTRODUCTION

IN THIS SECTION:

- 1.1 Introduction
- 1.2 How to use these Guidelines
- 1.3 Relationship between the GRWM Regulations and other health and safety legislation
- 1.4 Involving workers
- 1.5 Working with other PCBU's

These Guidelines describe certain health and safety duties under the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.

1.1 Introduction

These Guidelines (Part 2) cover the requirements under the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 (the GRWM Regulations) for:

- > remote or isolated work
- > atmospheres with the potential for fire or explosion
- > raised and falling objects
- > loose materials in enclosed spaces
- > substances hazardous to health.

The remaining requirements are covered by other guidance:

- > WorkSafe's Interpretive Guidelines *General Risk and Workplace Management – Requirements for workplaces and facilities, information, training, instruction and supervision, personal protective equipment, monitoring, first aid, emergency plans and young people* (Part 1) describe the requirements for:
 - workplaces and workplace facilities including containers of liquids
 - information, instruction, training and supervision
 - personal protective equipment (PPE)
 - monitoring worker exposure
 - monitoring worker health
 - first aid equipment, facilities and first aiders
 - emergency plans
 - young workers and young people at workplaces.
- > There is a related WorkSafe fact sheet about the information, instruction, training and supervision requirements called *Providing Information, Training, Instruction or Supervision for Workers*.
- > Vetting limited attendance childcare centre workers is covered by a WorkSafe fact sheet with the same name.

Under the GRWM Regulations, persons conducting a business or undertaking (PCBUs), workers and other persons at workplaces have health and safety duties (see Table 1 for a description of the different duty holders).

DUTY HOLDER	EXPLANATION
A duty holder is a person who has a duty under the Health and Safety at Work Act 2015 (HSWA). There are four types of duty holders – PCBUs, officers, workers and other persons at workplaces.	
PCBU	<p>A PCBU is a ‘person conducting a business or undertaking’. A PCBU may be an individual person or an organisation.</p> <p>This does not include workers or officers of PCBUs, volunteer associations, or home occupiers that employ or engage a tradesperson to carry out residential work.</p> <p>A PCBU must ensure, so far as is reasonably practicable, the health and safety of workers, and that other persons are not put at risk by its work. This is called the ‘primary duty of care’.</p>
Officer	<p>An officer is a person who occupies a specified position or who occupies a position that allows them to exercise significant influence over the management of the business or undertaking. This includes, for example, company directors and chief executives.</p> <p>Officers must exercise due diligence to ensure that the PCBU complies with health and safety duties and obligations.</p> <p>Note: While officers do not have specified duties in the GRWM Regulations, they have the due diligence duty under HSWA to ensure the PCBU is meeting their GRWM Regulations duties.</p>
Worker	<p>A worker is an individual who carries out work in any capacity for a PCBU. A worker may be an employee, a contractor or sub-contractor, an employee of a contractor or sub-contractor, an employee of a labour hire company, an outworker (including a homeworker), an apprentice or a trainee, a person gaining work experience or on a work trial, or a volunteer worker. Workers can be at any level (eg managers are workers too).</p> <p>Workers have their own health and safety duty to take reasonable care to keep themselves and others healthy and safe when carrying out work.</p>
Other persons at workplaces	<p>Examples of other persons at workplaces include workplace visitors and casual volunteers at workplaces.</p> <p>Other persons have duties to take reasonable care for their own health and safety and to take reasonable care that they don’t harm others at a workplace.</p>

Table 1: Description of duty holders

For further information about the duty holders and their duties, see WorkSafe’s Special Guide *Introduction to the Health and Safety at Work Act 2015*.

1.2 How to use these Guidelines

KEY TO THE LAYOUT OF THESE GUIDELINES

REGULATION	Provides a hyperlink to the relevant regulation in the GRWM Regulations
GUIDANCE	Provides an explanation of the regulation

1.3 Relationship between the GRWM Regulations and other health and safety legislation

The Health and Safety at Work Act 2015 (HSWA) is New Zealand's key work health and safety legislation. It sets out the health and safety duties that must be complied with. All work and workplaces are covered by HSWA unless specifically excluded. WorkSafe New Zealand (WorkSafe) is the government agency that is the work health and safety regulator.

Health and safety regulations like the GRWM Regulations sit under HSWA, and prescribe certain requirements to be met for certain duties under HSWA. Safe work instruments (SWIs) set out further technical rules in relation to matters covered by regulations.

HSWA requirements have been added in these Guidelines where useful for completeness.

In addition to the GRWM Regulations, there are a range of regulations that cover different aspects of work health and safety. Of particular note are the HSE Regulations 1995 which also have more general requirements including requirements relating to noise, machinery, working at height, scaffolding, excavation, and certificates of competence.

For a list of work health and safety regulations, see WorkSafe's Special Guide *Introduction to the Health and Safety at Work Act 2015*.

1.4 Involving workers

PCBUs must, so far as is reasonably practicable, engage with the workers who carry out work for it and who are, or are likely to be, directly affected by a work health or safety matter.

PCBUs have a general duty to engage with workers. In addition, PCBUs must engage when:

- > identifying hazards and assessing risks to health and safety
- > proposing changes that may affect workers' health or safety
- > making decisions about:
 - ways to eliminate or minimise health and safety risks
 - procedures for resolving health or safety issues
 - whether facilities for workers' welfare are adequate
 - procedures for engaging with workers
 - procedures for monitoring workers' health
 - procedures for monitoring workplace conditions
 - procedures for providing information and training for workers
- > developing worker participation practices, including when determining work groups
- > carrying out any other activity specified in regulations.

PCBUs must engage with workers when working out how to comply with the requirements described in these Guidelines.

PCBUs must also have practices that give their workers reasonable opportunities to participate effectively in improving health and safety in the business or undertaking on an ongoing basis (these are known as worker participation practices). This includes processes for workers to report health and safety issues such as concerns that risks are not being adequately managed.

Worker representatives are one way for workers to participate. Well-established ways to do this include Health and Safety Representatives (HSRs), Health and Safety Committees (HSCs) and unions. Other representatives can include community or church leaders.

For further guidance on worker engagement, participation and representation, see:

- > WorkSafe's Good Practice Guidelines *Worker Engagement, Participation and Representation*
- > WorkSafe's Interpretive Guidelines *Worker Representation through Health and Safety Representatives and Health and Safety Committees*.

1.5 Working with other PCBUs

More than one PCBU can have a duty in relation to the same matter (overlapping duties).

PCBUs with overlapping duties must, so far as is reasonably practicable, consult, co-operate and coordinate activities with other PCBUs so that they can all meet their joint responsibilities. PCBUs do not need to duplicate each other's efforts.

A PCBU cannot contract out of its duties, but can enter into reasonable agreements with other PCBUs to meet duties. However, these PCBUs still retain the responsibility to meet their duties.

The extent of the duty to manage risk depends on the ability of each PCBU to influence and control the matter.

For further guidance on overlapping duties, see WorkSafe's Special Guide *Introduction to the Health and Safety at Work Act 2015*.

02/

THE PRESCRIBED RISK MANAGEMENT PROCESS

IN THIS SECTION:

- 2.1 Managing work risks**
- 2.2 The prescribed risk management process**

PCBUs must deal with specified risks by following a risk management process prescribed in the GRWM Regulations.

2.1 Managing work risks

Risks to health and safety arise from people being exposed to hazards (anything that can cause harm). Risks that could result from work must be effectively managed. Risk has two components – the consequences (degree of harm) if it happens and the likelihood that it will occur. A risk can be minimised by reducing the likelihood of it occurring or the level of harm caused if it does, or ideally both.

Under HSWA¹ the first step is to try to eliminate the risk so far as is reasonably practicable. If the risk can't be eliminated, it must be minimised so far as is reasonably practicable. This applies to **all** risks.

For further guidance on how to generally manage risks:

- > See WorkSafe's website: www.worksafe.govt.nz/hswa
- > See WorkSafe's fact sheets:
 - *A Way to Identify, Assess and Manage Work Risks*
 - *How to Manage Work Risks*
 - *Reasonably Practicable*.

As well as this general requirement, work health and safety regulations describe how certain work risks or situations must be handled. The GRWM Regulations specify the work risks to be dealt with by using a prescribed risk management process. The prescribed risk management process and the work risks that must be dealt with by using it are discussed in these Guidelines.

PCBUs must engage with their workers when identifying hazards and assessing risks to health and safety, and when making decisions about the ways to eliminate or minimise health and safety risks.

2.2 The prescribed risk management process

2.2.1 OVERVIEW

REGULATION	<i>Regulation 4: Application of regulations 5 to 8</i>
GUIDANCE	<p>PCBUs must follow the risk management process described in Regulations 5-8 when this is specified in regulations. This could be specified in the GRWM Regulations themselves or other health and safety regulations.</p> <p>Currently, the work risks that must be dealt with using the prescribed risk management process are risks arising from:</p> <ul style="list-style-type: none"> > remote or isolated tasks > atmospheres with the potential for fire or explosion > raised and falling objects > loose material in enclosed spaces > substances hazardous to health. <p>The steps of the prescribed risk management process are explained below in Sections 2.2.2-2.2.5 of these Guidelines.</p>

¹ Section 30 of HSWA.

2.2.2 DUTY TO IDENTIFY HAZARDS

REGULATION	<i>Regulation 5: Duty to identify hazards</i>
GUIDANCE	<p>PCBUs must first identify the hazards (sources of harm) related to the work listed in Section 2.2.1 of these Guidelines.</p> <p>PCBUs don't need to identify all potential hazards. They must identify hazards that could give rise to reasonably foreseeable work health and safety risks (eg risks to health and safety that a reasonable person should anticipate as a result of the work).</p> <p>For further guidance on how to identify and assess risks, see WorkSafe's fact sheet <i>A Way to Identify, Assess and Manage Work Risks</i>.</p> <p>The ways the work risks identified above must be eliminated or minimised are described in the next section.</p>

2.2.3 HIERARCHY OF CONTROL MEASURES

REGULATION	<i>Regulation 6: Hierarchy of control measures</i>
GUIDANCE	<p>ELIMINATING THE RISK</p> <p>PCBUs must first try to eliminate a risk if this is reasonably practicable. This can be done by removing the source of the harm (eg removing a trip hazard or faulty equipment).</p> <p>If it is not reasonably practicable to eliminate, the risk must be minimised so far as is reasonably practicable.</p> <p>MINIMISING RISK IF THE RISK CAN'T BE ELIMINATED</p> <p>Risk has two components – the consequences (degree of harm) if it happens and the likelihood that it will occur. A risk can be minimised by reducing the likelihood of it occurring or the level of harm caused if it does, or ideally both.</p> <p>PCBUs must minimise the risks by putting in place control measures as described in the 'hierarchy of control measures' (summarised in Figure 1). Control measures include equipment, processes, procedures or behaviour to minimise risk.</p> <p>Use the most effective control measures first so far as is reasonably practicable. More than one type of control measure at a time can be used. The control measures used should be proportionate to the risk.</p>

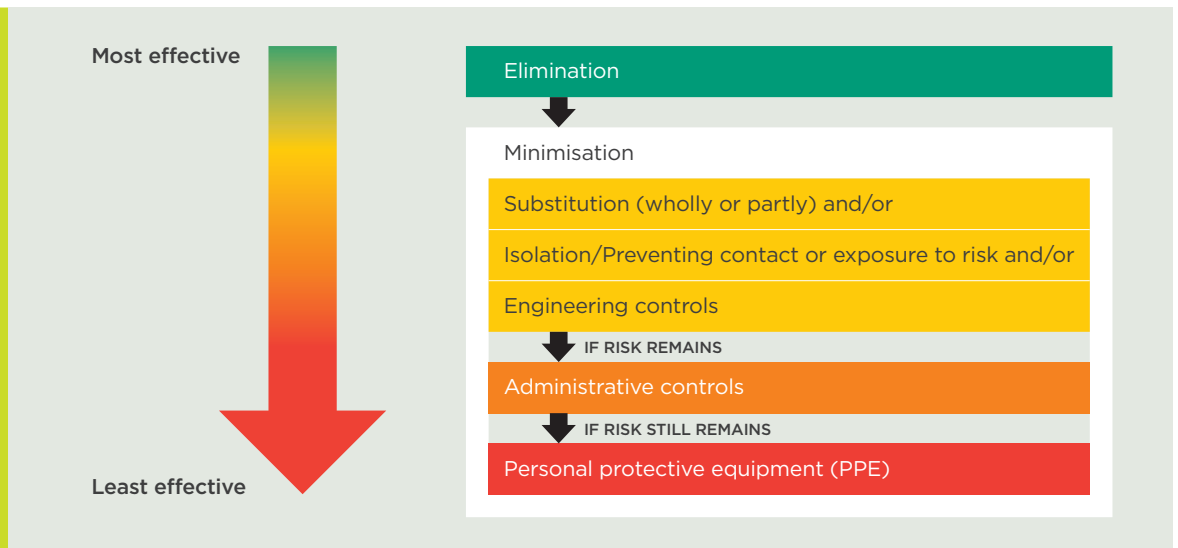


Figure 1: Hierarchy of control measures

In the hierarchy, PCBU's must minimise risks to health and safety, so far as is reasonably practicable, by first taking one or more of the following actions that are the most appropriate and effective taking into account the nature of the risk:

- > substituting with a lower risk activity or substance
- > isolating people from the hazard/preventing people being exposed to the risk
- > applying engineering control measures.

If a risk then remains, the PCBU must minimise the remaining risk, so far as is reasonably practicable, by putting in place administrative control measures.

Finally, if a risk still remains, the PCBU must minimise the remaining risk by ensuring the provision and use of suitable personal protective equipment (PPE). PPE is only used when other control measures alone can't adequately manage the risk. PPE should not be the first or only control considered and WorkSafe expects PCBU's to give preference to other controls that protect multiple at-risk workers at once.

Table 2 explains the different types of control measures.

PCBU's should be aware that the control measures chosen may introduce new risks that will also need to be managed (eg using hearing protection means workers may not hear approaching vehicles).

ACTION		WHAT IS THIS?
Elimination		Removing the sources of harm (eg equipment, substances or work processes)
Minimisation	Substitution	Substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk (eg using a less hazardous thing, substance or work practice).
	Isolation	Isolating the hazard giving rise to the risk to prevent any person coming into contact with it (eg by separating people from the hazard/preventing people being exposed to the hazard). Isolation focuses on boxing in the hazard or boxing in people to keep them away from the hazard.
	Impose engineering control measures	Using physical control measures including mechanical devices or processes.
	Impose administrative control measures	Using safe methods of work, processes or procedures designed to minimise risk. It does not include an engineering control; or the wearing or use of personal protective equipment.
	Use personal protective equipment (PPE)	Using safety equipment to protect against harm. PPE acts by reducing exposure to, or contact with the hazard. For information on PPE requirements, see WorkSafe's Interpretive Guidelines <i>General Risk and Workplace Management – Requirements for workplaces and facilities, information, training, instruction and supervision, personal protective equipment, monitoring, first aid, emergency plans and young people</i> .

Table 2: Control measures

For further guidance on managing risk, see WorkSafe's fact sheet *A Way to Identify, Assess and Manage Work Risks*.

2.2.4 MAINTAIN EFFECTIVE CONTROL MEASURES

REGULATION	<i>Regulation 7: Duty to maintain effective control measures</i>
GUIDANCE	<p>PCBUs who implement a control measure as described previously must ensure that the control measure is effective, and is maintained so that it remains effective. This includes by ensuring that the control measure is and continues to be:</p> <ul style="list-style-type: none"> > fit for purpose and > suitable for the nature and duration of the work and > installed, set up, and used correctly. <p>This means that control measures must be regularly monitored and checked to ensure that they are still managing the risk effectively. This should occur on an ongoing basis – not just when the control measure is first put in place.</p>

For example, regularly:

- > checking the control measures are correctly installed/set up and being used correctly by workers
- > checking the control measures are still working to manage the risk
- > monitoring workplace exposure and/or worker health (where relevant) to check control measures are effectively reducing worker exposure.

Section 2.2.5 of these Guidelines describes the circumstances when the control measures must be reviewed and revised.

2.2.5 REVIEW CONTROL MEASURES

REGULATION	<i>Regulation 8: Duty to review control measures</i>								
GUIDANCE	<p>Work activities should be reviewed on an ongoing basis to check that the existing control measures are still managing risks and to identify new risks to be managed.</p> <p>PCBUs must review and, as necessary, revise the control measures so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.</p> <p>While all control measures must be reviewed and revised as needed to ensure they remain effective, this review/revision must occur in the circumstances described in Table 3.</p> <table border="1"> <thead> <tr> <th>REVIEW MUST OCCUR:</th><th>FURTHER GUIDANCE</th></tr> </thead> <tbody> <tr> <td>> if the control measure does not control the risk it was implemented to control so far as is reasonably practicable.</td><td>For example, an incident occurs or monitoring shows the control measure is not managing the risk.</td></tr> <tr> <td>> before a change at the workplace that is likely to give rise to a new or different risk to health and safety that the measure may not effectively control.</td><td> <p>A change at the workplace includes:</p> <ul style="list-style-type: none"> > a change to the workplace itself or any aspect of the work environment; or > a change to a system of work, a process, or a procedure. <p>For example, a change at the workplace could include when there has been a change in the risk profile of the work such as:</p> <ul style="list-style-type: none"> > the temporary introduction of a night shift, increased workload or extended working hours > the introduction of a new work process that introduces new risks (eg use of a substance hazardous to health) > alterations to the work environment. </td></tr> <tr> <td>> if a new relevant hazard or risk is identified.</td><td>See Section 2.2.2 of these Guidelines about identification.</td></tr> </tbody> </table>	REVIEW MUST OCCUR:	FURTHER GUIDANCE	> if the control measure does not control the risk it was implemented to control so far as is reasonably practicable.	For example, an incident occurs or monitoring shows the control measure is not managing the risk.	> before a change at the workplace that is likely to give rise to a new or different risk to health and safety that the measure may not effectively control.	<p>A change at the workplace includes:</p> <ul style="list-style-type: none"> > a change to the workplace itself or any aspect of the work environment; or > a change to a system of work, a process, or a procedure. <p>For example, a change at the workplace could include when there has been a change in the risk profile of the work such as:</p> <ul style="list-style-type: none"> > the temporary introduction of a night shift, increased workload or extended working hours > the introduction of a new work process that introduces new risks (eg use of a substance hazardous to health) > alterations to the work environment. 	> if a new relevant hazard or risk is identified.	See Section 2.2.2 of these Guidelines about identification.
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> if a new relevant hazard or risk is identified.	See Section 2.2.2 of these Guidelines about identification.								

REVIEW MUST OCCUR:	FURTHER GUIDANCE
<ul style="list-style-type: none"> > if the PCBU obtains a health monitoring report that contains: <ul style="list-style-type: none"> - test results that indicate that the worker has been exposed to a substance hazardous to health at a concentration that may cause harm and has an elevated level of that substance or its metabolites in his or her body or - advice that test results indicate that the worker may have contracted a disease or an illness or suffered an injury as a result of carrying out work that involves a health hazard that triggered the requirement for health monitoring or - a recommendation that the PCBU take remedial measures, including a recommendation as to whether the worker can continue to carry out the work that involves a health hazard that triggered the requirement for health monitoring. 	<p>This health monitoring is that carried out as described in WorkSafe's Interpretive Guidelines <i>General Risk and Workplace Management – Requirements for workplaces and facilities, information, training, instruction and supervision, personal protective equipment, monitoring, first aid, emergency plans and young people.</i></p>
<ul style="list-style-type: none"> > if the results of exposure monitoring determine that the concentration of a substance hazardous to health at the workplace exceeds a relevant prescribed exposure standard. 	<p>This exposure monitoring is that described in WorkSafe's Interpretive Guidelines <i>General Risk and Workplace Management – Requirements for workplaces and facilities, information, training, instruction and supervision, personal protective equipment, monitoring, first aid, emergency plans and young people.</i></p>
<ul style="list-style-type: none"> > if the results of engagement with workers undertaken by the PCBU indicate that a review is necessary. 	<p>Worker engagement, participation and representation is described in Section 1.4 of these Guidelines.</p>
<ul style="list-style-type: none"> > if an HSR requests a review. 	<p>HSRs may request a review of a control measure if they reasonably believe that:</p> <ul style="list-style-type: none"> > a circumstance referred to in the first four rows of this table affects, or may affect, the health and safety of a member of the work group represented by the HSR and > the PCBU has not adequately reviewed the control measure in response to the circumstance. <p>Worker engagement, participation and representation is described in Section 1.4 of these Guidelines.</p>

Table 3: When control measures must be reviewed

03/

RISKS TO BE MANAGED UNDER THE GRWM REGULATIONS

IN THIS SECTION:

- 3.1 Remote or isolated work**
- 3.2 Atmospheres with potential for fire or explosion**
- 3.3 Raised and falling objects**
- 3.4 Loose material in enclosed spaces**
- 3.5 Substances hazardous to health**

Certain risks must be dealt with following the risk management process prescribed in the GRWM Regulations.

PCBUs must manage risks associated with remote or isolated work, work involving atmospheres with potential for fire or explosion, raised and falling objects, loose but enclosed materials, and substances hazardous to health by following the risk management process prescribed in the GRWM Regulations. These risks are described in this part of the Guidelines.

3.1 Remote or isolated work

REGULATION	<i>Regulation 21: Managing risks associated with remote or isolated work</i>
GUIDANCE	<p>Work can be remote or isolated from the assistance of other persons because of location, time, or the nature of the work. Work can be isolated without being remote, and be remote without being isolated.</p> <p>Remote or isolated work includes:</p> <ul style="list-style-type: none"> > working alone or separated from colleagues > working in a geographically isolated or inaccessible area –where the nearest emergency help (eg fire service or hospital) is some distance away > working outside normal business hours or shift/night work > working in locations where communication is difficult. <p>Examples of remote or isolated work:</p> <ul style="list-style-type: none"> > Jim and his apprentice working late at a building site. Apart from them, everyone else had left for the day. > Bob carrying out an urgent repair in a workshop on a day the business is normally closed. > Ken and his team working in the basement of a large office building. Occupants of the building do not have access to the basement. > Dick mowing the grass verge beside a quiet country road where there is limited to no mobile coverage. > Members of a forestry gang working in hard-to-get-to locations. > A carer undertaking solo home visits to members of the public. > Petrol station attendants on night shift. <p>PCBUs should first consider whether the remote or isolated work is necessary.</p> <p>For lone workers, consider:</p> <ul style="list-style-type: none"> > is the work suitable to be carried out by a lone worker or if the worker proposed to carry out the work has the competence to work alone and be unsupervised? > can the work be done using a buddy system? > what support systems (such as radio telephones, man-down alarms, emergency procedures and first aid kits, and safety checks) may help to reduce the risk?

If remote or isolated work is to take place, PCBUs must follow the prescribed risk management process described in Section 2 of these Guidelines to manage risks to the health and safety of a worker who performs remote or isolated work.

In addition, the PCBU must provide a system of work that includes effective communication with workers. What constitutes an effective communication system will also depend on the sorts of risks faced by the worker (and may need to include panic systems). A communication system that has gaps in coverage or cannot be used in an emergency is unlikely to be effective.

Examples of control measures for remote or isolated workers include to:

- > have a buddy system or to work together with others
- > be trained in emergency procedures including what to do during natural disasters
- > carry appropriate supplies including suitable first aid equipment
- > have access to adequate facilities (water, eating facilities, toilets, accommodation) at the remote location
- > carry communication devices that work at the remote location (eg radio, satellite or cell phones, pagers or distress beacons) and another means to raise the alarm
- > contact home to check-in at specified times (or are contacted by another worker at specific times) with failure to check-in triggering the emergency response plan
- > be remotely monitored (eg using CCTV).

Remember: PCBU's must first try to eliminate a risk if this is reasonably practicable. If it is not reasonably practicable to eliminate, the risk must be minimised so far as is reasonably practicable.

3.2 Atmospheres with potential for fire or explosion

3.2.1 POTENTIAL FLAMMABLE OR EXPLOSIVE ATMOSPHERES

REGULATION	<i>Regulation 22: Managing risks associated with atmosphere with potential for fire or explosion</i>
GUIDANCE	<p>The PCBU <i>with management or control of the workplace</i> must manage risks from potential flammable or explosive atmospheres by following the prescribed risk management described in Section 2 of these Guidelines.</p> <p>The risks that arise from such work must be appropriately managed by PCBU's.</p> <p>Atmospheres with potential for fire or explosion are those:</p> <ul style="list-style-type: none"> > that do not have a safe oxygen level (the safe range is between 19.5%-23.5% by volume under normal atmospheric conditions) or > in which the concentration of oxygen in the atmosphere increases the fire risk or > in which the concentration of flammable gas, vapour, mist, or fumes exceeds 5% of the lower explosive limit for the gas, vapour, mist, or fumes or > in which combustible dust is present in a quantity and form that creates a risk of fire or explosion (eg dusts from wood, charcoal, food products such as milk powder and flour).

Lower explosive limit, in relation to any flammable gas, vapour, mist, or fumes, means the concentration of the gas, vapour, mist, or fumes in air below which the propagation of a flame would not occur on contact with an ignition source.

Combustible dust means finely divided solid particles (including dust, fibres, or flyings) that are:

- > suspended in air or settle out of the atmosphere under their own weight **and**
- > able to burn or glow in air **and**
- > able to form an explosive **mixture** with air at atmospheric pressure and normal temperature.

Mixture means a combination of, or a solution composed of two or more substances that do not react to each other.

Atmospheres with potential for fire or explosion can be created in confined spaces (such as tanks, pits).

Examples of control measures include:

- > eliminating the use of flammable substances by substituting with non-flammable ones
- > reducing the amounts of flammable substances stored or used at the workplace
- > avoiding or minimising the release of flammable substances or combustible dusts
- > controlling the release of flammable substances or combustible dusts at the source
- > using ventilation/extraction to prevent such atmospheres from forming
- > providing explosion relief in extraction equipment
- > cleaning the workplace to prevent dust accumulating by using procedures that protect workers from dust (eg vacuuming rather than sweeping, cleaners wearing PPE)
- > removing ignition sources (see Section 3.2.2 of these Guidelines).

Remember: PCBU's must first try to eliminate a risk if this is reasonably practicable. If it is not reasonably practicable to eliminate, the risk must be minimised so far as is reasonably practicable.

For further information on working in confined spaces, see WorkSafe's fact sheet *Confined Spaces: Planning entry and working safely in a confined space*.

3.2.2 IGNITION SOURCES IN ATMOSPHERES WITH THE POTENTIAL FOR FIRE OR EXPLOSION

REGULATION	<i>Regulation 23: Managing risks associated with ignition sources</i>
GUIDANCE	<p>The PCBU <i>with management or control of the workplace</i> must manage risks from ignition sources in potential flammable or explosive atmospheres by following the prescribed risk management described in Section 2 of these Guidelines.</p> <p>Ignition source means a source of energy capable of igniting flammable or combustible substances. Possible ignition sources include:</p> <ul style="list-style-type: none"> > sparks from activities such as welding, cutting, grinding and crushing > sparks from inadequately protected appliances (eg domestic refrigerators) > sparks caused by static electricity (eg from rotating belts) > embers and sparks from incinerators and furnaces

- > hot surfaces (eg boilers, furnaces, steam pipes, hot ducts and flues)
- > matches and naked flames, lit cigarettes or ash.

While this regulation doesn't include ignition sources that are part of a deliberate process or activity at the workplace, the risks that arise from these must be appropriately managed by PCBU's.

3.3 Raised and falling objects

3.3.1 RAISED OBJECTS

REGULATION	<i>Regulation 24: Managing risks associated with working under raised objects</i>
GUIDANCE	<p>Raised objects include objects lifted by cranes, forklifts, hoists and jacks, or by hand. They commonly include objects on shelves or fixed to walls above work areas.</p> <p>PCBU's must follow the prescribed risk management process described in Section 2 of these Guidelines to manage risks to health and safety from work under objects raised or lifted by any means.</p> <p>If PCBU's can't eliminate the above risk, PCBU's must minimise it, so far as is reasonably practicable, by providing supports or other devices to be placed or used under the raised object so that the raised object can't be lowered onto or fall onto anyone underneath it.</p> <p>For further information, see WorkSafe's website: www.worksafe.govt.nz for forklift and crane information.</p>

3.3.2 FALLING OBJECTS

REGULATION	<i>Regulation 25: Managing risks associated with falling objects</i>
GUIDANCE	<p>Objects falling from height can injure or kill workers or others. For example, equipment, material, tools and debris can fall during work at heights.</p> <p>PCBU's must follow the prescribed risk management process described in Section 2 of these Guidelines to manage the health and safety risks from falling objects that are reasonably likely to fall on and injure a person.</p> <p>PCBU's must first try to eliminate the risk so far as is reasonably practicable:</p> <ul style="list-style-type: none"> > If they can't eliminate the risk, PCBU's must minimise the risk by providing and maintaining a safe system of work that includes measures for preventing an object from falling freely so far as is reasonably practicable. > If it is not reasonably practicable to prevent the object from falling freely, use a system to arrest the fall so far as is reasonably practicable. > If it is not reasonably practicable to prevent the object from falling freely or to use a system to arrest the fall, an exclusion zone that persons are prohibited from entering must be provided.

Examples of control measures to prevent objects from falling include:

- > keeping tools or materials away from edges and off railings or sills, or tethering or securing them
- > providing a safe means of raising and lowering objects including using waste disposal chutes for rubbish.

Examples of fall arrest measures include:

- > using nets or catch platforms
- > providing covered pedestrian walkways
- > providing overhead protection on mobile plant.

Remember: PCBU's must first try to eliminate a risk if this is reasonably practicable. If it is not reasonably practicable to eliminate, the risk must be minimised so far as is reasonably practicable.

3.4 Loose material in enclosed spaces

REGULATION	<i>Regulation 27: Managing risks associated with loose but enclosed materials</i>
GUIDANCE	<p>Certain materials (such as grain inside a silo, or cement or food products in bulk storage bins) can trap or engulf workers. This regulation is about this loose material in enclosed spaces.</p> <p>Loose but enclosed material is material that:</p> <ul style="list-style-type: none"> > 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 > is enclosed in a structure. <p>PCBU's must follow the prescribed risk management process described in Section 2 of these Guidelines to manage the health and safety risks associated with a worker becoming trapped or engulfed by loose but enclosed material.</p> <p>For further information, see Section 3.2 of these Guidelines about work in confined spaces.</p>

3.5 Substances hazardous to health

3.5.1 MANAGING RISK FROM SUBSTANCES HAZARDOUS TO HEALTH

REGULATION	<i>Regulation 28: Managing risks associated with substances hazardous to health</i>
GUIDANCE	<p>PCBU's must follow the prescribed risk management process described in Section 2 of these Guidelines to manage the risks associated with substances hazardous to health at the workplace.</p> <p>Substances hazardous to health means a substance, or product containing a substance, that is known or suspected to cause harm to health and includes:</p> <ul style="list-style-type: none"> > a substance classified as having toxic or corrosive properties under the Hazardous Substances and New Organisms Act 1996 > a substance for which a prescribed exposure standard exists > a substance specified in a safe work instrument as requiring health monitoring.

Substances hazardous to health can be substances used in work processes or those that result from work processes (eg as an end product or by-product).

To find out if the substance is a 'substance hazardous to health':

- > Look at the safety data sheet (SDS) for the substance – SDSs are available from the chemical supplier and provide information about any toxic or corrosive properties of the substance.
- > Go to the WorkSafe Hazardous Substances Toolbox: www.hazardoussubstances.govt.nz and enter the substance into the HSNO Calculator to see if the substance has any toxic (class 6) or corrosive (class 8) properties.
- > Go to the Chemical Classifications and Information database on the EPA website: www.epa.govt.nz to see if the substance has any toxic or corrosive properties.
- > Go the WorkSafe website for a list of substances which have been specified as requiring health monitoring in safe work instruments (if any). **Note:** Safe work instruments (SWIs) set out technical rules approved by the Minister.

3.5.2 NOT EXCEEDING PRESCRIBED EXPOSURE STANDARDS

REGULATION	<i>Regulation 29: Ensuring prescribed exposure standards for substances hazardous to health are not exceeded</i>
GUIDANCE	<p>The PCBU <i>with management or control of the workplace</i> must ensure no person at the workplace is exposed to levels of a substance hazardous to health at levels above the prescribed exposure standard for that substance.</p> <p>What are exposure standards?</p> <p>An exposure standard is a workplace exposure standard (WES) or a biological exposure index (BEI).</p> <p>A WES for a substance refers to the airborne concentration of a substance at which it is believed nearly all workers can be repeatedly exposed to day after day without coming to harm. Compliance with the WES level does not guarantee that all workers are protected from discomfort or ill-health. The range of individual susceptibility to hazardous and toxic substances is wide, and it is possible that some workers will experience discomfort or develop work-related diseases from exposure to substances at levels below the WES. So PCBUs should aim to have airborne concentrations well below the WES value.</p> <p>A BEI for a substance indicates a concentration below which nearly all workers should not experience adverse health effects from exposure to a particular substance. However, certain BEIs are not relevant for certain workers (eg the lead BEI is not relevant to pregnant women as they should not be exposed to any lead at work).</p>

What are prescribed exposure standards?

A 'prescribed exposure standard' means a WES or BEI that has the purpose of protecting persons in a workplace from harm to health and that is prescribed in:

- > regulations **or**
- > a safe work instrument **or**
- > an approval or a reassessment in accordance with section 77B of the Hazardous Substances and New Organisms Act 1996 **or**
- > a group standard approval issued under section 96B of the Hazardous Substances and New Organisms Act 1996.

Note: Safe work instruments (SWIs) set out technical rules approved by the Minister.

To find out if a substance has a prescribed exposure standard, you can go to the Controls database on the Environmental Protection Authority website: www.epa.govt.nz to see if your substance has an exposure standard prescribed in a hazardous substances approval, a group standard approval or a reassessment (if this applies).

In many HSNO approvals, the prescribed exposure standard for that substance is the value listed in WorkSafe's *Workplace Exposure Standards and Biological Exposure Indices*.

Note: At the date of publication there are no substances that have exposure standards prescribed in regulations or SWIs.

3.5.3 WHEN EXPOSURE MONITORING IS REQUIRED

Note: This section only explains the requirements to monitor the exposure of workers to substances hazardous to health under the GRWM Regulations.

However, even if PCBU's don't need to monitor under these regulations, they still have a **primary duty to monitor workplace conditions**, so far as is reasonably practicable, if exposure to a particular health risk warrants it. The results from exposure monitoring are an important step in assessing whether the control measures in use are managing a risk effectively.

REGULATION	<i>Regulation 30: When exposure monitoring required</i>
GUIDANCE	<p>PCBU's must ensure exposure monitoring is carried out (as described in Section 5 of WorkSafe's Interpretive Guidelines <i>General Risk and Workplace Management – Requirements for workplaces and facilities, information, training, instruction and supervision, personal protective equipment, monitoring, first aid, emergency plans and young people</i>) when the PCBU is not certain on reasonable grounds whether the concentration of a substance hazardous to health at the workplace exceeds the relevant prescribed exposure standard.</p> <p>Section 2.2.5 of these Guidelines describes when the PCBU must review the control measures in light of exposure monitoring findings.</p>

3.5.4 WHEN HEALTH MONITORING IS REQUIRED

Note: This section only explains the requirements to monitor the health of workers that deal with substances hazardous to health under the GRWM Regulations.

However, even if PCBUs aren't required to monitor health under this regulation, they still have a **primary duty to monitor worker health**, so far as is reasonably practicable, if exposure to a particular health risk warrants it. The results from health monitoring are an important step in assessing whether the control measures in use are managing a risk effectively.

REGULATION	<i>Regulation 31: When health monitoring required</i>
GUIDANCE	<p>PCBUs must ensure that health monitoring (as described in Section 6 of WorkSafe's Interpretive Guidelines <i>General Risk and Workplace Management – Requirements for workplaces and facilities, information, training, instruction and supervision, personal protective equipment, monitoring, first aid, emergency plans and young people</i>) is provided to a worker who works for the PCBU if:</p> <ul style="list-style-type: none"> > the worker is carrying out ongoing work involving a substance hazardous to health that is specified in a safe work instrument as requiring health monitoring and > there is a serious risk to the worker's health because of exposure to that substance. <p>When deciding if there is a 'serious' risk, consider:</p> <ul style="list-style-type: none"> > the nature of the work (including how often the work occurs) > the amounts of substance being handled, with a consideration of how many hours a day the worker is handling that substance > what effects the substance could have on worker health (acute and chronic effects) > what control measures are in place to minimise exposure. <p>Section 2.2.5 of these Guidelines describes when the PCBU must review the control measures in light of health monitoring findings.</p> <p>Note: At the date of publication there is no work involving substances hazardous to health that requires the health monitoring of workers under the GRWM Regulations.</p>

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APPENDIX

IN THIS SECTION:

4.1 Terms and definitions

4.1 Terms and definitions

TERM	DEFINITION
Administrative control (from the GRWM Regulations)	<p>(a) means a control measure that is a method of work, process, or procedure designed to minimise risk; but</p> <p>(b) does not include—</p> <ul style="list-style-type: none"> (i) an engineering control; or (ii) the wearing or use of personal protective equipment.
Control measure (from the GRWM Regulations)	in relation to a risk to health and safety, means a measure to eliminate or minimise the risk.
Engineering control (from the GRWM Regulations)	<p>(a) means a control measure that is physical in nature; and</p> <p>(b) includes a mechanical device or process.</p>
Exposure monitoring (from the GRWM Regulations)	<p>(a) means the measurement and evaluation of exposure to a health hazard experienced by a person; and</p> <p>(b) includes— (i) monitoring of the conditions at the workplace; and (ii) biological monitoring of people.</p>
Hazardous substance	<p>Is a chemical or mixture of chemicals that has one or more of the following properties:</p> <ul style="list-style-type: none"> > an explosive nature, including fireworks > flammability, for example, petrol, turps, LPG, diesel > ability to oxidise, accelerate a fire, for example hydrogen peroxide > corrosiveness, for example, caustic drain cleaner > acute or chronic toxicity to humans, for example, arsenic.
Health and safety committee (HSC)	An HSC supports the ongoing improvement of health and safety at work. An HSC enables PCBU representatives, workers and other HSC members to meet regularly and work co-operatively to ensure workers' health and safety.
Health and safety representative (HSR)	An HSR is a worker elected by the members of their work group to represent them in health and safety matters, in accordance with subpart 2 of Part 3 of HSWA. Throughout these guidelines, the term HSR means an elected representative who meets the requirements of HSWA and WEPR Regulations. It does not apply to people who are referred to as HSRs under other arrangements, but who are not elected under HSWA.
Health monitoring (from the GRWM Regulations)	in relation to an individual, means monitoring of the individual to identify any changes in his or her health status because of exposure to certain health hazards.
Person conducting a business or undertaking (PCBU) (from section 17 of HSWA)	<p>In this Act, unless the context otherwise requires, a person conducting a business or undertaking or PCBU—</p> <p>(a) means a person conducting a business or undertaking—</p> <ul style="list-style-type: none"> (i) whether the person conducts a business or undertaking alone or with others; and (ii) whether or not the business or undertaking is conducted for profit or gain; but <p>(b) does not include— (i) a person to the extent that the person is employed or engaged solely as a worker in, or as an officer of, the business or undertaking: (ii) a volunteer association: (iii) an occupier of a home to the extent that the occupier employs or engages another person solely to do residential work: (iv) a statutory officer to the extent that the officer is a worker in, or an officer of, the business or undertaking: (v) a person, or class of persons, that is declared by regulations not to be a PCBU for the purposes of this Act or any provision of this Act.</p>

TERM	DEFINITION
	(2) In this section, volunteer association means a group of volunteers (whether incorporated or unincorporated) working together for 1 or more community purposes where none of the volunteers, whether alone or jointly with any other volunteers, employs any person to carry out work for the volunteer association.
Personal protective equipment (PPE) (from section 16 of HSWA)	(a) means anything used or worn by a person (including clothing) to minimise risks to the person's health and safety; and (b) includes air-supplied respiratory equipment.
Plant (from section 16 of HSWA)	includes— (a) any machinery, vehicle, vessel, aircraft, equipment (including personal protective equipment), appliance, container, implement, or tool; and (b) any component of any of those things; and (c) anything fitted or connected to any of those things.
Prescribed exposure standard (from GRWM Regulations)	means a workplace exposure standard or a biological exposure index that has the purpose of protecting persons in a workplace from harm to health and that is prescribed in— (a) regulations; or (b) a safe work instrument; or (c) an approval or a reassessment in accordance with section 77B of the Hazardous Substances and New Organisms Act 1996; or (d) a group standard approval issued under section 96B of the Hazardous Substances and New Organisms Act 1996.
Structure (from section 16 of HSWA)	(a) means anything that is constructed, whether fixed, moveable, temporary, or permanent; and (b) includes— (i) buildings, masts, towers, frameworks, pipelines, quarries, bridges, and underground works (including shafts or tunnels); and (ii) any component of a structure; and (iii) part of a structure.
Substances hazardous to health (from the GRWM Regulations)	(a) means a substance, or product containing a substance, that is known or suspected to cause harm to health; and (b) includes— (i) a substance classified as having toxic or corrosive properties under the Hazardous Substances and New Organisms Act 1996; (ii) a substance for which a prescribed exposure standard exists; (iii) a substance specified in a safe work instrument as requiring health monitoring.
Union	<p>A union is an organisation that supports its membership by advocating on their behalf. The Employment Relations Act 2000 (ERA) sets out rules about employment relations between employers and employees, and gives employees the freedom to join unions and bargain collectively without discrimination. Workers can choose whether or not to join a union.</p> <p>A union is entitled to represent members' employment interests, including health and safety matters.</p> <p>Unions can access a workplace to deal with matters concerning the health and safety of union members. Union representatives must seek permission beforehand, which an employer cannot unreasonably withhold.</p>

TERM	DEFINITION
Worker (from section 19 of HSWA)	<p>(1) In this Act, unless the context otherwise requires, a worker means an individual who carries out work in any capacity for a PCBU, including work as—</p> <ul style="list-style-type: none"> (a) an employee; or (b) a contractor or subcontractor; or (c) an employee of a contractor or subcontractor; or (d) an employee of a labour hire company who has been assigned to work in the business or undertaking; or (e) an outworker (including a homeworker); or (f) an apprentice or a trainee; or (g) a person gaining work experience or undertaking a work trial; or (h) a volunteer worker; or (i) a person of a prescribed class. <p>(2) For the purposes of subsection (1),—</p> <ul style="list-style-type: none"> (a) a constable is—(i) a worker; and (ii) at work throughout the time when the constable is on duty or is lawfully performing the functions of a constable, but not otherwise; (b) a member of the Armed Forces is— (i) a worker; and (ii) at work throughout the time when the member is on duty or is lawfully performing the functions of a member of the Armed Forces, but not otherwise; (c) a PCBU is also a worker if the PCBU is an individual who carries out work in that business or undertaking. <p>(3) In this Act, a volunteer worker—</p> <ul style="list-style-type: none"> (a) means a volunteer who carries out work in any capacity for a PCBU— (i) with the knowledge or consent of the PCBU; and (ii) on an ongoing and regular basis; and (iii) that is an integral part of the business or undertaking; but (b) does not include a volunteer undertaking any of the following voluntary work activities: (i) participating in a fund-raising activity; (ii) assisting with sports or recreation for an educational institute, sports club, or recreation club; (iii) assisting with activities for an educational institute outside the premises of the educational institution; (iv) providing care for another person in the volunteer's home.
Workplace (from section 20 of HSWA)	<p>(1) In this Act, unless the context otherwise requires, a workplace—</p> <ul style="list-style-type: none"> (a) means a place where work is being carried out, or is customarily carried out, for a business or undertaking; and (b) includes any place where a worker goes, or is likely to be, while at work. <p>(2) In this section, place includes—</p> <ul style="list-style-type: none"> (a) a vehicle, vessel, aircraft, ship, or other mobile structure; and (b) any waters and any installation on land, on the bed of any waters, or floating on any waters.

Table 4: Terms and definitions

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