

A guide to developing safety management systems for the extractives industry





**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
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MBIE develops and delivers policy, services, advice and regulation to support economic growth and the prosperity and wellbeing of New Zealanders.

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Introduction

Purpose

The Guide to Developing Safety Management Systems for the Extractives Industry (the Guide) was developed to help small operations to prepare a Safety Management System (SMS) for their business.

An SMS is an established set of processes to manage health and safety and maintain a high safety standard in an operation. It is important to note that an SMS is a system – a combination of processes – and this requires a different approach than you may be used to. An SMS should include:

- › An over-arching commitment by the manager and staff to focus and improve upon safety and health
- › Clear activity schedules and improvement plans
- › Good documentation and records-keeping
- › Clear allocation of responsibility to staff and managers
- › Strong processes to cover every task performed by employees and managers
- › Employee participation in every level of safety management
- › Hazard management
- › Workplace inspections
- › Understanding and monitoring of environmental issues which could impact upon the health of employees
- › Emergency procedures
- › Maintenance of plant and equipment
- › Incident investigation and reporting
- › Contractor and sub-contractor management
- › Training
- › Employee fitness and wellbeing
- › HSNO understanding and management
- › Auditing the SMS on a regular basis to confirm that it works.

Each of these components is discussed in the Guide. This series of separate parts form a whole SMS, just as your business consists of many separate processes and people.



Scope

This Guide has been developed to assist mining and extractive operations in developing a safety management system. However, any industry, and particularly smaller operations, will find this Guide a useful tool to develop their safety management system.

The Health and Safety in Employment Act 1992 requires you to have effective ways of managing health and safety. You are not legally required to use this Guide, but it will help you to comply with the intention of the law.

For the purposes of this Guide, “should” indicates that the recommendation be adopted where practicable to comply with the requirement to “take all practicable steps” as required by the Act and Regulations.

“Shall” is used in places where there are legal obligations required by the Act, Regulations, or where a practice is considered the minimum threshold for safety standards. It is used to alert the reader to the need for that recommendation to be implemented.

Further information on the HSE Act 1992 (and how it applies to your business and the SMS you create) can be found in Appendix A.

Contents

This Guide should provide a good starting point for you to develop your SMS and put it in place at your site. Each chapter contains information that may help you to prepare your SMS. It gives you a base from which you may seek more information from other sources.

The aim is to produce a safer operation, not to prepare a set of documents that sit in a folder in an office. You can choose to use as much of the Guide as you want, depending on whether you want to build a SMS from scratch or just pick and choose parts to improve your current systems. Once you have a basic SMS, it should grow and change year to year as the operation develops.

Applying good H&S process in your business

To develop your SMS, you do not need to be an occupational health and safety expert or specialist. Much of the necessary expertise is likely to reside within your organisation already; that is, with people at your site with suitable experience and training in the mining/quarrying/extractive industry generally and your business specifically. Expert input may be needed in certain circumstances.

Consultation, communication and leadership are key to developing and using your SMS. People who work at the site should be involved in the preparation of the programs that make up the SMS. Good leadership is required to achieve success and to get things happening and to keep things moving.



Glossary

For the purpose of this publication, the following definitions apply:

Word	Meaning
Incident Register	A record of incidents that occur, including date, time, circumstances, and any follow-up action, investigation, etc.
Act	The Health and Safety in Employment Act 1992.
Activity Register	A record of planned activities like maintenance, inspections, emergency drills, which contribute to a well-planned SMS.
Annual Safety Improvement Plan	A description of how the site health and safety targets will be achieved, including time-scales and persons responsible for implementing the OHS policy.
Checklist	A list of items of all issues or tasks, used to ensure they have been assessed or completed.
Communication (Communicate)	To exchange or share health and safety information. This includes listening to the other person's point of view.
Company	An organisation, group or person(s) being the registered owner and/or operator of the mining, quarrying, extractive industry business.
Competent	A person who has acquired, through a combination of qualifications, training or experience, the knowledge and skill to perform the task required.
Consequence	The outcome of an event, being a loss, injury or disadvantage.
Consultation	To seek the views of the people who work at the site and to have regard for their views for resolving health and safety matters.
Contractor	A person who is not an employee of the operation, who undertakes work at the site.
Controls	An action taken that eliminates, isolates, or minimises the hazard.
Document Control	The systems by which records are kept, including the allocation of responsibility to specific staff members.
Drill	A process of testing training, relating to emergency events, which is repeated from time to time.
Emergency (emergency event, emergencies)	An unplanned event or situation that is not controlled where there is a threat to life or the health and safety of people at or outside the operation.
Employee (For the purposes of this Guide)	A person who works at the site. May include, but not limited to employer, employees, workers, contractors, sub-contractors and consultants.



Word	Meaning
Employee Participation	Any arrangement between an employer and employees (and employee organisations where appropriate) that allows the participation of employees in processes relating to health and safety in the place of work, so that: (a) all persons with relevant knowledge and expertise can help make the place of work healthy and safe; and (b) when making decisions that affect employees and their work, an employer has information from employees who face the health and safety issues in practice.
Employer	A person who or that employs any other person to do any work for hire or reward; and, in relation to any employee, means an employer of the employee.
Equipment	Refer to machinery.
Site Manager (SM)	The person nominated by the operation owner to manage the site.
Hazard	Something that is an actual or potential cause or source of harm, as per the HSE Act 1992.
Hazard assessment	The overall process of analysing and evaluating hazard.
Hazard control	Refer to controls.
Hazard management	The culture, processes and structures that are directed towards the effective management of potential injury, illness, damage or loss.
Hazard rating	The level or hazard assigned following risk assessment (e.g. high, medium, low).
Hazard Register	A register to record (in writing) the existence of a hazard, and how and when it is controlled.
Hazardous substance	<ul style="list-style-type: none"> Any mixture, element or chemical; or any solid, liquid or gaseous substance that has the potential, through being used at work, to harm the health or safety of persons in the workplace.
Health and Safety Committee	A committee established to support the ongoing improvement of health and safety in a place of work.
Health and Safety Representative	<ul style="list-style-type: none"> Elected or appointed definitions as per act Trained rep as per the act (hazard notice)
HSNO	Includes both the Hazardous Substances and New Organisms Act 1996 and HSNO Regulations in relation to hazard classification and life cycle requirements for hazardous substances.
Improvement Notice	A notice issued by a Health and Safety inspector under the Health and Safety in Employment Act, requiring a person to comply with a provision of the Act.
JSA Job safety analysis	An orderly way of breaking a job into logical steps and identifying the hazards, assessing the hazard and putting in place controls for the hazard. Note that this is also referred to as a Task Analysis (or TA) on some worksites.
Likelihood	Used as a description of probability of the hazard occurring.



Word	Meaning
Machinery	Plant that is to be used or is used in a place of work.
Mine	As per the Health and Safety in Employment (Mining Administration) Regulations 1996.
Mine Manager	Can include the manager of the business, the site supervisor, or whoever is responsible for the operation and safety of the site, to exercise authority over the operations occurring at that time.
Mobile plant	Self-propelled mobile mechanical plant, as per Health and Safety in Employment Regulations 1995.
Monitor	To check, supervise, observe or record the progress of an activity or procedure on a regular basis in order to ensure it is being carried out.
Near Miss	An event that has the potential to cause injury or illness if circumstances, such as the interval of time of the event, were different.
Objectives	Goals or targets that are to be achieved within the SMS.
OHS (OH&S)	Occupational Health and Safety.
Operation	The business, and each site within that business.
Policy (OHS Policy)	Statement by a site (or company) of its commitment, intentions and principles in relation to its overall health and safety performance.
PPE Personal protective equipment	Safety apparel, protective devices and equipment that protect the health and safety of persons.
Pre-start	A safety checklist that is undertaken prior to first use of machinery for that day or shift.
Principal	A person who or that engages any person (other than an employee) to do any work for gain or reward.
Procedure	A set of instructions, rules or a step-by-step description of what's to be done and by whom.
Production Manager (PM)	Person who supervises the production operations at the operation and is a person who is qualified to be a production manager.
Quarries	As per the Health and Safety in Employment (Mining Administration) Regulations 1996.
Regulations	Mining regulations include but are not exclusive to: <ul style="list-style-type: none"> • Health and Safety in Employment (Mining—Underground) Regulations 1999 • Health and Safety in Employment (Mining Administration) Regulations 1996
Review	Checking to see whether goals have been achieved, and to assess what needs to be done in future.



Word	Meaning
RTW	Return to work.
SDS	Safety Data Sheet.
Safe operating Procedures (SOPs)	Documented, often step-by-step, processes by which employees can perform each task or aspect of the operation.
Serious harm and significant hazard	An injury that is defined in Schedule 1 of the HSE Act 1992.
Short term	A period of time that is not prolonged. In hazard control terms, a temporary control or a control that is put in place to prevent a potential accident.
Site	A place of work where extractive operations and/or associated activities are carried out.
SMS	Safety Management System (also known as HSMS).
Supervisor	A person who has the responsibility for persons who work at the site or at part of the site and who supervises the activities undertaken – includes persons who act in such a position.
SWL Safe Working Load	Safe work limit. Applies to lifting equipment and machinery and is the maximum load that should be applied to the equipment.
SWP Safe work procedure SWMS Safe Work Method Statement	A written instruction that sets out how an activity is to be undertaken at an operation. It can be used for training or observing activities for monitoring or review. Also known as: <ul style="list-style-type: none"> • Safe Work Method Statement & JSA • Standard Operating Procedure • Work Method Statement • Task Analysis
Tunnels	As per the Health and Safety in Employment (Mining Administration) Regulations 1996.
Yearly safety plan	A schedule of health and safety activities that are to be undertaken for the year.



1. Health and Safety (H&S) Policy

An H&S policy is a statement by the operation about its commitment and intent to manage and improve occupational health and safety.

The reasons for having a written health and safety policy are:

- › to provide the starting point for developing your SMS;
- › to state clearly the employer's commitment and support for a sound H&S program;
- › to allocate responsibilities; and
- › to assist in designing H&S objectives.

Important points to consider when writing the policy are:

- › involving employees;
- › promoting the health and safety of employees;
- › protection from hazards; and
- › complying with legislation.

Your policy statement could include the following references:

- › the commitment of the employer to provide a healthy and safe work place for employees;
- › the employer's duty to take all reasonable actions to prevent illness and injury to an employee: e.g. (a) addressing training needs of employees in the use of safe work procedures; (b) supplying proper supervision and enforcement of safe work procedures;
- › the employer's commitment to consult and cooperate with all levels of the site to put in place the H&S policy;
- › the employer's commitment to provide opportunities for worker participation; and
- › the need for everyone to be responsible for a healthy and safe workplace.

To enhance commitment to the policy it is good practice for it to also be agreed to and signed by H&S representatives and site managers, or, on small sites, by the whole workforce.

✓ Checklist

- The H&S Policy is kept current with workplace changes and legislation
- The H&S Policy is clearly stated and easily understood
- The H&S Policy is communicated to all employees
- The H&S Policy is signed by senior management
- The H&S Policy is adhered to in all work activities
- The H&S Policy is a summary of the company's commitments
- The H&S Policy is well displayed around the site
- The H&S Policy is clear about the worksite/s to which it applies
- The H&S Policy is reviewed at least every year



2. Planning

An annual safety improvement plan sets out an operation's occupational health and safety objectives and targets for the year. A yearly plan should be developed based on the principles in the policy, and focused on more specific safety goals for the business year.

The plan should be based on the management of identified hazards or shortcomings, as well as to set new goals to meet. The plan should be developed in a yearly meeting, with representation from management, H&S representatives, and staff. Goals which were not achieved in the previous year can be rolled over to the next.

Specific targets can include:

- › reduction of incidents
- › improvement of plant or equipment
- › training goals.

An activity plan can help to outline the less frequent and more formal processes that an operation should put in place. (See Template 1)

✓ Checklist

- An annual improvement plan was put in place
- Progress has been made towards the goals on the plan
- An activity plan was put in place
- The activities on the activity plan were completed



3. Document Management

Documents are a key part of any SMS and should be prepared, maintained, and stored to meet the needs of the site or business. Your document control system will be appropriate to the needs of each site.

Keeping records:

- › demonstrates compliance with the on-going SMS and with other requirements such as those arising in legislation
- › helps to raise employee awareness of what is needed
- › helps to evaluate the SMS and H&S performance.

In New Zealand, financial document retention is legally required for seven years. However, it is good practice to retain all business-related records for seven years, except in the case of living documents, where there is one version, continuously updated. (Note: Medical records shall be retained for ten years.)

The SMS needs to be kept up to date and available at all times.

Some of the documents that should be kept and maintained include:

Internal

- › operation H&S Policy and Annual Safety Improvement Plans
- › the company SMS
- › employee training records and certification of qualifications attained
- › hazard identification and risk assessments
- › monitoring data
- › details of incidents, complaints and follow-up action
- › product identification including composition
- › Hazard Register
- › site maps
- › HSNO safety data sheets (SDSs)
- › procedures
- › site rules
- › organisation charts
- › H&S meeting minutes
- › results of exposure monitoring
- › results of employee health monitoring.



External

- › legal requirements
- › improvement notices
- › supplier and contractor information
- › H&S audits and reviews
- › letters from stakeholders and external organisations
- › permits to work
- › inspection, calibration and maintenance activity
- › standards and guidelines.

Where SMS programs are joined with the site's overall business management system, H&S documents should fit into existing documentation and all material should be stored securely – either electronically or in paper form.

✓ Checklist

- All documents are marked with version, date and the appropriate organisation, division, function, activity, or contact person
- All documents are regularly reviewed, updated as necessary and approved by authorised personnel before issue
- Current documents are available at all locations where needed
- Outdated documents are promptly removed from all points of issue
- All documents that need to be kept for legal or historical reasons are identified
- There is a "Document Master List" which provides a record of all processes and registers
- There is a review process to double-check all documents and ensure they have the required information written on them prior to sign-off



4. Roles and Responsibilities

Allocate responsibilities within your SMS to people who have the knowledge and skills to make the SMS effective. Responsibilities and accountabilities should be discussed with employees or their supervisors and signed off when an agreement has been reached.

Being clear about health and safety responsibilities and accountabilities will ensure all tasks to manage health and safety have been allocated; and that the allocated tasks fit within the level of authority, skills and knowledge of the individual.

To ensure that each person employed at the site is aware of and understands their roles, employers, jointly with employees, need to record the responsibilities for each position. Record the management structure for your operation, including all responsibilities and accountabilities.

- › Allocate responsibility according to ability, and ensure a back-up is nominated for critical safety responsibilities in case of absence.
- › Involve employees through the site safety meetings in the development of their responsibilities. They may cover areas that you have missed, or may highlight the need for sharing of some roles.
- › Add this item to your first site safety meeting agenda.
- › Once these responsibilities have been agreed upon, record them.
- › Include a relevant schedule of responsibilities in the induction kits that are issued to each employee upon induction.
- › When allocating responsibilities, explain each item and ask for feedback to make sure they understand.

Nominate who will be responsible for identifying and recording the information. A copy should go:

- › to each person with those responsibilities
- › on the file of each person with those responsibilities
- › in the master file of documents.

✓ Checklist

- All tasks have been allocated to a responsible and competent person
- A back-up person has been allocated in each case
- Induction and/or training on each task has been delivered
- Responsibilities have been documented



5. Employee Participation

Employee participation can be an effective means of reducing injuries as well as helping overall business efficiency. It makes workers feel empowered, involved and valued and which has flow on benefits beyond health and safety.

- › Make it clear to your employees that you value and support their involvement in health and safety
- › Employers in small operations need to talk with their employees about employee participation
- › If you have an existing arrangement in place, consider reviewing it if you haven't recently done so
- › Document your system if you haven't already done so
- › Introduce a committee to focus on your safety-critical elements if you haven't already done so
- › Involve and train health and safety representatives
- › Actively involve your health and safety representatives on the committee and in the routine health and safety matters such as hazard identification and management, incident investigation, and audits.
- › Support their training in both health and safety and broader matters relating to health and safety, and give them a clear mandate to operate and support their efforts

Under the Act, employers shall provide their employees with 'reasonable opportunities' to participate in improving health and safety in their workplace.

The HSE Act does *not* require employers to adopt a particular system. In fact, there is a clear expectation that employers and employees (and their unions when elected by the employees), will, in good faith, work out systems and processes that best suit the workplace's particular circumstances. This collaboration should provide the best opportunities for employees to participate effectively in health and safety. Where employers and employees cannot agree on an employee participation system, a default system set out in the HSE Act applies and workers can elect Health and Safety Representatives and they can be part of any H&S committee

Because of the particularly challenging nature of mining, quarrying, and tunnelling, the Ministry strongly recommends *all* operations should consider:

- › implementing a documented system for employee participation based on good faith and a clear commitment to health and safety outcomes
- › having at least one health and safety committee for *every* location or site and that each committee focus primarily on safety-critical aspects of the mining operation
- › having effective, empowered and informed health and safety representatives that are trained under the Act.

A copy of the minutes for every H&S meeting will be posted on the notice board for an agreed period of time, to allow all staff to access them, with the master filed with all other records.

✓ Checklist

- There are trained H&S representatives for each site and shift with clearly defined functions
- Scheduled H&S meetings are being held



6. Hazard Management

“Hazard” –

(a) means an activity, arrangement, circumstance, event, occurrence, phenomenon, process, situation, or substance (whether arising or caused within or outside a place of work) that is an actual or potential cause or source of harm; and

(b) includes–

(i) a situation where a person’s behaviour may be an actual or potential cause or source of harm to the person or another person; and

(ii) without limitation, a situation described in subparagraph (i) resulting from physical or mental fatigue, drugs, alcohol, traumatic shock, or another temporary condition that affects a person’s behaviour.

The concept of a hazard is central to the Act’s focus on preventing harm. A hazard is a source of harm. Hazards must be systematically identified and managed.

Hazards can:

- › be actual or potential
- › be physical, biological, or behavioural (including temporary conditions that can affect a person’s behaviour, such as fatigue, shock, alcohol or drugs)
- › arise or be caused within or outside a place of work.

Hazard management is all about identifying how someone could be harmed in the workplace and putting in place effective measures to prevent that harm occurring. Hazard management is the basis of all health and safety management.

There are three basic steps to Hazard Management:

- **Identifying the hazards**
- **Controlling each hazard**
- **Monitoring the effectiveness of the hazard controls**

It is important to regularly review these steps when the work environment changes, new technology is introduced, or standards change.

Hazard identification

There are a number of methods of identifying potential sources of injury or illness. Selection of the right one will depend on the type of work processes and hazards involved.

Methods may range from a simple checklist for a piece of equipment or substance, to an open-ended appraisal of a group of related work processes. A combination of methods outlined below may provide the best results.

- › developing a hazard checklist;
- › conducting walk-through surveys;
- › reviewing information from designers or manufacturers;



- › analysing unsafe incidents, accident and injury alerts and data;
- › reviewing and analysing work processes;
- › analysing the appropriateness and consistency of implementation;
- › consulting with employees;
- › examining and considering SDSs and product labels; and
- › seeking advice from specialists, consultants and representatives in situations where specific technical expertise is needed to identify and manage a hazard.

Hazard Identification Methods

These processes can be carried out by a group that is selected for this purpose because of their knowledge and expertise, or even a trained facilitator.

On a less formal level, Toolbox meetings can provide an opportunity to conduct more team-based hazard identification, as well as to reconfirm employee knowledge of known hazards and their controls. And finally, individuals, as part of their everyday work, can identify potential hazards simply by **thinking before they act**.

Some hazards exist in the work process, such as mechanical hazards, noise, or the toxic properties of substances. Other hazards result from equipment machine failures and misuse, structural failures, control or power system failures and chemical spills.

It is useful to consider these types of hazards when identifying work related hazards to ensure that a wide range is considered. The table below lists some types of hazards together with some specific examples. You should have a list of hazard sources, the way in which that hazard occurs, the areas of the site or work process where it occurs, and the people exposed to that hazard. The hazard prompt list below will help in identifying hazards and developing inspection checklists.

Types of hazards include	Examples
Gravity	falling objects, falls of people
Nip points	caught between
Struck by	being hit
Kinetic energy	projectiles, penetrating objects
Hazardous substances	skin contact, inhalation
Thermal energy	spills and splashes of hot matter
Extremes of temperature	effects of heat or cold
Radiation	ultra violet, arc flashes, micro waves, lasers
Noise	hearing damage
Electrical	shock, burns
Vibration	to hands and body
Biological	micro-organisms
Human Factors	drugs, alcohol, stress, fatigue

Once a hazard has been identified it needs to be recorded in the Hazard Register.



Hazard control

There is a hierarchy of controls or preferred order of control measures, which range from the most effective to the least effective. The hierarchy of control measures is:

Elimination – removing the hazard or hazardous work practice from the operation. This is the most effective control measure;

Isolation – preventing people from interacting with the hazard e.g. machine guarding, remote handling;

Minimisation – if the hazard cannot be removed, replaced or isolated, a minimising control is the next preferred measure. This may include changes to tools or equipment, providing guarding to machinery or equipment, and introducing work practices that reduce the risk. This could include limiting the amount of time a person is exposed to a particular hazard and providing Personal Protective Equipment where appropriate.

There may be circumstances where more than one control measure should be used to reduce exposure to hazards.

By using these controls you will be able to remove or reduce the exposure of the hazard to employees. When setting up these controls it is always better to remove the risk rather than just issue employees with PPE. As a hazard is controlled, it should be updated in the Hazard Register.

Hazard Monitoring

Constantly reviewing hazards and control measures is important to ensure they continue to be relevant and stop or control exposure to hazards or hazardous work practices. This includes monitoring the health of those employees exposed.

✓ Checklist

- Responsibility has been allocated for hazard management briefing of everyone who comes on to the site
- The site is inspected frequently
- Identified hazards are controlled and monitored
- The hazard register is kept up to date



7. Workplace Inspections

Workplace inspections are one of the best tools for finding problems and assessing their risks before accidents or other losses occur.

A well-managed inspection schedule should meet such goals as:

- › Confirming site rules and processes are followed
- › Identifying potential problems that were not anticipated during design or task analysis.
- › Identifying equipment deficiencies such as normal wear and tear, abuse, or misuse.
- › Identifying bad practice.
- › Identifying process requirements that are unrealistic or unattainable.
- › Identifying effects of changes in processes or materials.
- › Identifying inadequacies in hazard controls
- › Providing management self-appraisal information
- › Demonstrating management commitment through visible activity for health and safety.

Inspection, detection and correction activities are hard to beat as ways of showing employees that their health and safety is important.

Two broad categories are 'informal' inspections and 'planned' inspections. Both are important. Both are discussed below, with major emphasis on planned inspections.

Planned inspections

Regular, planned inspections of all aspects of the workplace – plant (fixed and mobile), vehicles, buildings, yards and site – are necessary to pick up and deal with hazards before they result in accidents. Pre-shift inspections should be conducted by a competent site manager or supervisor.

Workplace inspections are part of on-going risk assessment and help in identifying which parts of your SMS are working well. They are all part of continually improving your SMS and in turn the safety of those in your workplace.

What's to be inspected, how often, what do you need to look for, who's doing the looking and what has to be done with the information collected will make up your inspection program.

Here are some steps to use when developing a formal inspection plan

- › Using a site plan, divide the site up into manageable chunks.
- › Allocate the role of conducting inspections to competent people
- › Create a General Workplace Inspection List
- › Once you have developed your inspection list, review it with other employees. This will ensure that all the areas of the operation have been included on the form, and the people doing the inspection are made aware of what to look for.
- › Decide the frequency of these inspections. If one area is quite hazardous, (e.g., crushers or conveyors), the inspection frequency should reflect this and be conducted more often than in other areas. Most operations conduct inspections at least monthly.
- › Ensure the person conducting the inspection is sufficiently knowledgeable about required processes and technical information



- › Allocate a person responsible for the collection and control of completed inspection forms and who is going to respond to the issues identified.
- › Nominate where all the completed inspection forms are to be filed and located. Record all the master inspection forms in the document control master list. Move to formal inspection section

Here are some key points that will help make inspections more effective.

- › Refer to a map and checklist.
- › Record the positive as well as the negative.
- › Look for off-the-floor and out-of-the-way items.
- › Take immediate action, even if it is a temporary measure, if it is safe to do so.
- › Describe and locate each item clearly.
- › Prioritise the hazards.
- › Determine the basic causes of unsafe actions and conditions.
- › Answer the “why” questions.
- › Informal inspections
- › Notify all employees of identified hazards and the controls put in place

Informal inspections

Informal inspections can be conducted by managers or supervisors at any time. Ad hoc inspections can miss things that take extra effort to find. To overcome this problem, some supervisors note problem items during a shift to check on and remedial actions to be taken. Employees should be aware of this possibility that inspections could be conducted unexpectedly.

Another form of informal inspection is simply when people are aware of their environment as they work. Periodically stopping to reassess their surroundings can alert employees to new hazards.

✓ Checklist

- An inspection process has been agreed upon and mapped
- The site is formally inspected regularly
- Staff are encouraged to conduct informal checks before and during their shifts
- Inspection documentation is kept up to date



8. Work Environment and Health Surveillance

Workers in the extractives and tunnelling industry may be exposed to mineral dusts, diesel exhaust emissions, and a wide range of hazardous chemicals. These hazards can impact on workers slowly over time, and effects vary from person to person.

It is possible to measure physical, chemical and biological hazards, such as dust, heat, noise, vibration, radiation, fumes and bacteria. These activities are referred to as work environment monitoring. Information on specific environmental hazards can be found in Appendix A.

Health Surveillance

It is not always practical to remove the hazard altogether. Where hazards and their risks are controlled only, one way of measuring how successful the control strategies have been is to monitor the effect on people and their health. An example in mining/quarrying would be dust and lung function testing, which can be performed by a GP.

Monitoring people's health following exposure to the hazards should never be seen as a control in itself but only as an indicator of the effectiveness of the controls you have put into place.

Another form of health surveillance involves monitoring people's health to ensure that they remain fit to perform their tasks where their health may directly impact on the health and safety of others. An example would be the health of the drivers of heavy goods and dangerous goods vehicles. Employees should be made aware of and consent to health surveillance from the start of their employment with the company.

Health surveillance may also give people early warning of medical conditions that can be treated before they become a problem, affect their health or prevent them from working.

To ensure that a health surveillance program yields accurate results, a baseline health assessment at the start of employment is recommended. This identifies pre-existing conditions, and allows subsequent testing to demonstrate whether the employee's health is worsening as a result of workplace hazards. In the case of work which requires the use of hearing protection, a baseline hearing check should be considered necessary.

While hazards of the work environment may not immediately present dangers to the workforce, it is their combined nature that poses real issues if left unattended.

✓ Checklist

- Work environment hazards have been identified and documented
- Environmental elements have been included into the inspection schedule and hazard register
- A policy of health surveillance has been agreed on and incorporated into contracts and induction where appropriate
- Inspection documentation is kept up to date



9. Emergency Planning

While the main purpose of your SMS is to prevent incidents, emergency events can occur.

The purpose of an emergency response plan is to:

- › minimise the level of risk to life, property and the environment as a result of an emergency situation;
- › identify the resources – people, equipment, information and knowledge – necessary to ensure that when used effectively, minimise that risk; and
- › provide guidance for all employees – what to do in emergency situations.

Each site needs to plan for these events. They are generally incidents that may be unlikely to occur but with potential high consequences. A set of plans (known as the emergency response plan) and procedures for how to deal with these events shall be developed and regularly tested to ensure that the effects of these unplanned events are minimised.

Emergency response plans may include, but not be limited to, the following:

- › Warning and alarm systems – installation, availability and testing requirements;
- › Emergency procedures – who does what when an emergency occurs (including evacuation);
- › List of key emergency personnel;
- › Emergency rescue equipment available on site;
- › Details of offsite emergency services available;
- › Information requirements of offsite emergency services;
- › Internal and external communication plans;
- › Training plans; and
- › Drills and simulation exercises.
- › First aid supplies and trained first aiders

Planning for emergencies

All potential emergency situations need to be identified and emergency procedures documented for preventing and minimising injury and illness.

Assessing possible emergencies

Identifying potential emergency situations is the key to having effective emergency response plans. Developing the plan begins with emergency assessment.

The results of emergency assessment will show:

- › how likely an event is to happen;
- › what means are available to stop or prevent the event; and
- › what response is necessary for the event.

The emergency assessment may result in a list that may include:

- › Fire
- › Explosion
- › Flood
- › Significant collapse of workings of the extractive operation
- › Major trauma (injuries)



- › Medical emergency (general and specific such as heart attack)
- › Hazardous material or chemical spill
- › Electrical
- › Mobile plant or vehicle collision
- › Illegal acts such as bomb threat or unauthorised entry

Any of the above can be related. For example if a dump truck goes over a highwall there may be explosion, fire, collapse of the highwall, injury and hazardous material spill.

Identifying emergency events

At the planning stage it is important to include employees who may have had experience in emergency work, such as volunteer fire fighters, volunteer rescue service or first aiders. They can help identify emergencies and the response procedures needed. Other emergency events may be known from previous experience or local knowledge. Also look at other risk assessments that you have done such as safe work procedures, workplace inspections and accident investigations. Discuss the issues with other operators and industry bodies.

Emergency resources

The final consideration is a list and the location of what emergency equipment is needed. Table 1 lists some possible emergency equipment and locations.

Emergency equipment	Location
medical supplies (first aid kits)	main office weighbridge / workshop mobile plant
fire fighting equipment:	
extinguishers	office and plant, mobile plant
fire hose reel	workshop and main office
bush fire kit	workshop store and main gate
ambulance	offsite ambulance service
emergency chemical spill kit	No 1 feed bin
trained personnel	all employees senior first-aid trained two persons trained in heights rescue and confined space rescue

Preparing an emergency procedure

To develop standard emergency procedure, you should first list what potential emergencies may occur at your operation. You should have identified these during your hazard management process.

The procedure needs to be posted in the workplace. This will need to be in an obvious location, ideally close to your communication system so contact with emergency services can be made. It can be posted in multiple locations.



An emergency procedure flipchart, a set of simple forms that can help you identify and manage your emergency procedures, is available from the Environmental Protection Agency (EPA). Phone 0800 376 234 or email hsinfo@epa.govt.nz to order a free copy; or download a pdf version from: www.osh.govt.nz/order/catalogue/emergency-procedures.sthml

The emergency response plan will be made up of procedures for the identified emergencies. Emergency response is about making rapid decisions due to time and the circumstances.

The emergency response plan should have specific duties, responsibilities and authorities.

Some of these are:

- › who reports the emergency;
- › who starts the emergency response plan;
- › who has overall control;
- › who establishes communication;
- › who alerts emergency personnel;
- › who orders evacuation;
- › who alerts external emergency services;
- › who provides first aid;
- › who advises relatives of casualties; and
- › who sounds the all-clear; and
- › how the site of the incident is secured and what safety work can be undertaken

To ensure good emergency response, you should:

- › develop an evacuation procedure;
- › develop procedures for emergency response for your specific major emergency events (e.g. flood, fire, explosion, medical, tyre fire);
- › install and maintain all necessary fire fighting and emergency equipment
- › train all emergency personnel as required;
- › appoint first aid officers;
- › provide a site plan of the operation, including exits, safe evacuation paths, location of fire fighting and emergency equipment, emergency phones and evacuation assembly areas; and
- › identify the local emergency services (fire, ambulance, police, SES, VRA) and how to contact them.

Emergency training

All employees should be trained and educated so they know what to do for their role and responsibilities in the event of an emergency.

There should be a schedule developed for training and refresher training for all employees for all emergency events identified. Six monthly emergency trials or evacuations are required under the Fire Safety and Evacuation of Buildings Regulations 2006 to be held and documented to make people aware of their immediate actions, how to raise the alarm, the position of fire fighting equipment and the location of emergency assembly areas.

The emergency response plan should be reviewed (and where necessary revised) after an incident or emergency event.

Planning for emergencies is vital. Planning helps prevent injury to people, damage to property or the work environment.



Plan

A site plan of the total operation needs to be drawn, showing the location of all potential emergencies. This is so that employees, visitors, and emergency services will be able to find emergency equipment to control a situation (fire extinguishers, etc.), identify areas of high risk, or find alternate entry and exit points. A standard site map could be used, once the emergency features have been included.

This site plan needs to be displayed in the workplace and provided to emergency services.

First Aid

MBIE has produced *First Aid for Workplace, A Good Practice Guide*. This publication outlines expectations regarding first aid equipment and staff in the workplace.

✓ Checklist

- Emergency procedures have been agreed upon and documented, with signage prominently displayed
- All employees, contractors, and sub-contractors have been trained in the use of the procedures and their training recorded
- Emergency drills are conducted regularly
- All emergency documentation, including records of first aiders and emergency equipment, is kept up to date



10. Maintenance

A program of planned maintenance is essential to achieving and sustaining health and safety at your site.

Advantages of planned maintenance

- › Routine checks by operators And Maintenance prevent harm to people and plant.
- › Repairs are more likely to be permanent rather than temporary patch-ups, which may not be reliable and often end up as the 'permanent' solution until the next breakdown.
- › Production personnel are less likely to be exposed to risks when machinery malfunctions demand manual intervention.
- › Down time is planned and results in less disruption of personnel and production.
- › Maintenance costs are controlled which allows for the best use of resources.

Health and safety requirements

Health and safety legislation places a general duty on businesses to maintain machinery and equipment in a safe operating condition.

Controls, emergency stops, access and guarding systems shall be maintained in full functional order. Priority for this should be no less than for maintaining any other part of a machine. Machines that are designed to function automatically should be maintained in this condition to avoid the need for operators to intervene manually and place themselves at risk. Modifications and repairs shall be conducted by an appropriate person (in some cases, a Certified Practicing Engineer – CPEng) and documented.

Equipment that is solely or mainly H&S equipment shall have a high priority for maintenance. These include:

- › all personal protective equipment;
- › air filters and air conditioners in dusty or hot work environments;
- › seats, seat-belts and controls on mobile machines;
- › windows; and
- › dust seals.

Routine maintenance tasks checklists

Checklists should be prepared and used to check and confirm condition mechanical integrity, and correct operation. These should include all tasks and be based on machinery and equipment manufacturer recommendations and your own experience. The use of these checklists will provide information for operators, supervisors and managers.

Safe work procedures shall be observed while carrying out the above maintenance tasks.

Suggested aids in planning maintenance

- › manufacturers' handbooks and maintenance schedules;
- › records of maintenance work performed on major plant items;
- › site plant register;
- › external diagnostic services e.g. SOS (scheduled oil sampling);
- › site maintenance schedules/checklists; and
- › computer-based schedules which include reminders and completion of audit reports.



Repairs

Unplanned maintenance activities often present a greater risk of injury than the normal operation of plant and machinery. For this reason greater control and supervision is required. It would be an advantage to have a plant breakdown procedure or checklist. Questions to be asked include the following:

- › What level of competency is required for to work to be undertaken?
- › Who is responsible for repairs?
- › Who will supervise?
- › How will communication and consultation with employees occur?
- › How will plant and machinery be made safe?
- › What procedure will be used for hazard identification, risk assessment and risk control?
- › What specific safe work procedures and permits will be used, e.g. lockout, hot work, confined spaces?
- › How will safe access be provided, e.g. fixed access, scaffolding, elevating work platforms?
- › How will heavy or bulky items be moved e.g. cranes, fork lifts, trolleys?
- › How will services be provided e.g. light, compressed air, electricity, water, ventilation?
- › How will spills of flammables, combustibles or pollutants be controlled?
- › What emergency equipment will be required e.g. fire extinguishers, breathing equipment, rescue harness, first aid kit?
- › How will pedestrian and vehicle access be controlled?
- › What facilities will be needed for temporarily storing tools, parts and scrap?
- › What will be needed to properly clean up after the job?
- › What start-up precautions will be needed e.g. all guards replaced, all adjustments made, all controls working properly, all emergency stops operational, observation and close supervision?
- › Will there be wider safety implications for the operation?

One of the most practical parts of any safety management plan is scheduling and recording maintenance activities. The use of mobile and fixed plant presents some of the greatest hazards at the site. All plant should be inspected and serviced using service manuals and known safe methods.

Checklist

- A plant register has been established, as well as maintenance records for each piece of equipment
- Maintenance has been completed and certified on all plant
- Repairs are completed promptly by a competent person, and certified where appropriate or needed
- All maintenance documentation, including service manuals, is kept up to date



11. Incident Reporting and Investigation

A key part of an SMS is to evaluate accidents and near-miss incidents so that the chances of the same or similar incidents happening again can be removed or at least reduced. To achieve this requires good investigation and keeping of records to monitor progress.

What is an incident?

An incident is an event resulting in, or having the potential for injury or illness, or damage to machinery and equipment, or the possibility of injury or damage. An event that does not cause injury or damage is called a *near miss*.

Following an incident, the integrity of the scene must be preserved. Apart from the need to administer aid to those hurt in the incident, and stabilising anything that could cause further harm, the scene should be cordoned off until initial investigations are completed and, where applicable, clearance to release the scene has been given by a health and safety inspector.

Serious Harm

Serious harm means death, or harm of a kind or description declared by the Governor-General by Order in Council to be serious for the purposes of the Act; and “seriously harmed” has a corresponding meaning.

Until such an Order in Council is made, the following types of harm are defined in Schedule 1 as “serious harm” for the purposes of the Act:

1. Any of the following conditions that amounts to or results in permanent loss of bodily function, or temporary severe loss of bodily function: respiratory disease, noise-induced hearing loss, neurological disease, cancer, dermatological disease, communicable disease, musculoskeletal disease, illness caused by exposure to infected material, decompression sickness, poisoning, vision impairment, chemical or hot-metal burn of eye, penetrating wound of eye, bone fracture, laceration, crushing.
2. Amputation of body part.
3. Burns requiring referral to a specialist registered medical practitioner or specialist outpatient clinic.
4. Loss of consciousness from lack of oxygen.
5. Loss of consciousness, or acute illness requiring treatment by a registered medical practitioner, from absorption, inhalation or ingestion of any substance.
6. Any harm that causes the person harmed to be hospitalised for a period of 48 hours or more commencing within 7 days of the harm’s occurrence.



Incident reporting

- › It is a legal requirement for the site to record serious harm events and deaths and report them to the Ministry. Go to www.osh.govt.nz/services/notification/accident.shtml
- › When people are injured or become ill it is important that they receive the right treatment.
- › The information recorded can be valuable in determining the how, when, why and where of accidents that can be used to stop further accidents from happening.

Certain information must be recorded to meet your health and safety legal requirements. Health and safety legislation requires that some types of accidents and incidents be reported and fully investigated. All accidents and near misses must be recorded in the site accident register. You must be aware of the legislation that applies to your operation and what your reporting requirements are.

Everyone in the workplace shall report incidents.

Incident investigation

Accident investigation is a process of gathering facts and breaking them down by continually asking 'why'. Only then can you identify the underlying causes, put controls in place and prevent it happening again.

Because accidents are never caused by a single factor, it is important to identify all the causes and put in the right controls. Human error may only be one small part of the cause, and process failure or poor management could be the real catalysts.

What should be investigated?

All incidents and near misses should be investigated. This investigation should take place as soon as possible after the incident happens. Getting the investigation started quickly is important as crucial evidence can be disturbed or destroyed as time passes. Important information from people involved in or witnessing the accident or incident may be lost if the investigation is not started as soon as possible.

Investigations should not be confined to the immediate scene. Information from safety records, safe work procedures, manufactures handbooks and authoritative (e.g. government) publications may indicate particular areas of concern.

Who investigates?

Management should appoint an appropriate and objective person to conduct an investigation. This could be the manager and/or supervisor responsible for the area where the incident occurred, or someone external. Involving an employee or employee representative who knows the work area in the investigation can help to identify the causes and corrective actions required.

Incidents that are reported to MBIE may require the involvement of the site manager and experts from outside the site. Anyone who carries out an investigation should have some training. The site should not be disturbed during and after an injured person is removed, unless for immediate safety reasons, until MBIE personnel give clearance to do so.

It is advisable that more than one person carries out accident and incident investigation.



Where to from here?

The investigation should have:

- › Determined what happened
- › identified the cause(s) of the accident or incident;
- › identified and implemented the necessary corrective action;
- › implemented or modified controls necessary to avoid a repeat of the accident or incident;
- › recorded the changes in safe work procedures from the corrective actions; and
- › determined who is responsible for completing the corrective actions.

Incident investigations are aimed at preventing future accidents and incidents; it is not about blame. This should be stressed to employees who are interviewed in an investigation, so that all relevant information can be gained.

To effectively collect accident and incident data, you require a simple documented system that allows you to implement ways to prevent the incidents from recurring.

✓ Checklist

- An incident register has been established, and includes all incidents including near misses
- Processes to preserve incident scenes for investigation have been established
- Any incidents are reported promptly
- Investigations are conducted to determine the cause of any incidents
- Processes are put in place to prevent incidents from reoccurring



12. Contractor Management

Contractors and sub-contractors play a major role at many small industry operations.

Your responsibility extends to the health and safety of all people who undertake tasks at the site – full time, part time and casual employees, contractors and their employees, sub-contractors and consultants. They, in turn have certain responsibilities to you as the employer (principal) and it is in pulling these two sets of responsibilities together that a program for contractor and sub-contractor management can be developed.

It is important to note that contractors and sub-contractors have the same level of care requirements to their employees as the Principal does. They need to be informed of all health and safety procedures, audits, investigations and the like so that they can assess the safety of their employees on site/.

The level of risk that is involved in work to be done can assist in determining the level of control.

Purpose

- › to ensure fulfilment of obligations for the health and safety of contractors and their employees
- › to provide a systematic risk assessment based approach to the management of contractor health and safety
- › to structure contracts which have the power to impose health and safety standards
- › to provide evidence of due diligence through documentation of the contractor health and safety management process.

More information on contracting situations can be found in *A principal's guide to contracting to meet the Health and Safety in Employment Act 1992* [www.osh.dol.govt.nz/order/catalogue/contracting-guide.shtml]

✓ Checklist

- Induction has been developed for all visitors and contractors, including emergency procedures and site rules
- All visitors and contractors sign in and out of the site
- The induction process is reviewed regularly and documented



13. Training and supervision

Why train?

One of the requirements of health and safety legislation is that employees must be trained and supervised to carry out their work safely. A very high number of serious injuries happen to young workers, new employees, people undertaking new or different work, and sometimes after having a long period of leave.

Training is a means of sharing knowledge and developing skills and attitudes. It is one way of influencing behaviour and improving health and safety.

What is a training program?

Mine, tunnel, and quarry operators should implement a training program, which will:

- › identify what skills, knowledge or competencies an employee should have before starting a job, and analyse the training needed for that job;
- › develop, maintain or improve employment-related skills, knowledge or competencies of employees;
- › let trainers determine what skills and knowledge new people have;
- › design the training for the skills needed;
- › show how the training will be conducted;
- › let trainers evaluate the training; and
- › ensure people are only required to do work if trained or appropriately supervised.

Training program requirements

Framework

A formal training program should include a range of tasks and outcomes and should:

- › provide induction training for new people to the industry (and site);
- › evaluate competence of new staff to confirm they have relevant skills and qualifications;
- › give additional training for people moved to new work;
- › train under close personal supervision when starting work, and new tasks;
- › provide certification for technical tasks where appropriate;
- › give skills maintenance training to each person employed at a mine/quarry/extractive industry operation; and
- › require that records of the training of each person be kept.

Induction training

Induction training is usually the first introduction to the site. It is usually a formal training session and basic on-the-job training, which can be conducted by a supervisor/manager.

Job and task performances

Training should focus on a job or task rather than on an occupation. All employees should be appropriately trained for the tasks and processes they are involved with.



Diagnostic maintenance skills

For employees involved with equipment and changing work site conditions, training should include techniques for identifying potential malfunctions, hazardous conditions and unsafe work situations.

Refresher training

Refresher training should be included in operational training programs, and should include briefing techniques for updating individuals, supervisors, production managers and Senior Site Persons on changes in work practices, new equipment operating procedures and changes in the working environment generally.

Reviews of training schemes

Site instruction and training programs should be reviewed regularly and employees supervised on an on-going basis.

The type of training that each person at the site needs depends on:

- › each person's role and responsibilities at work;
- › each person's occupation (e.g. plant and machine operators and people who handle hazardous substances need specific training);
- › the hazards identified during an inspection of your workplace; and
- › the type and occurrence of injury and disease at work.

Health and safety training

At all operations, no matter how large or small, everyone needs training in health and safety matters, this will include:

- › the employer, including managers;
- › the supervisor;
- › all employees – casual, part-time and full-time;
- › students on work experience;
- › new employees;
- › contractors and sub-contractors who work on your site;
- › the health and safety committee representative; and
- › members of the health and safety committee.

The basic aim of health and safety training is to impress the principles of good health, accident and incident prevention and safe behaviour upon employees so that they will apply these principles to their work. Some training needs to be specific to the task or role of the employee.

The need for health and safety training at work is continuous. As circumstances at work change, there will always be the need to ask the questions:

- › How does this change affect health and safety?
- › What health and safety instruction and training do I need to provide now?

Typical times when you need to ask these questions are:

- › whenever you take on someone new at work – health and safety is an important part of induction training;
- › whenever you buy new machinery or equipment or new substances such as chemicals;
- › whenever people's jobs change;



- › whenever you change the layout of your work environment;
- › whenever there are new health and safety regulations, standards or laws that affect your industry; and
- › if there has been an accident, injury or health and safety incident at work.

Planning for safety and health training

Training programs are best planned if everyone at work:

- › has basic information about what the laws and regulations are;
- › has the opportunity to talk about health and safety concerns;
- › uses the health and safety skills and knowledge they have;
- › takes part in a workplace inspection and identifies hazards at work; and
- › takes part in a training needs analysis to find out what training each person needs.

Training needs analysis

Conducting a health and safety training needs analysis (TNA) will ensure that the people at your site get the type of training they require to perform their tasks.

It will enable you to ensure that the training is relevant to the job and the changing needs of the workplace.

A TNA involves looking at all aspects of work, including the work environment, the actual jobs people do and the skills and knowledge of each person at work. Once this information is collected, then you can start to plan what training your operation needs.

Employees are one of the most important assets of any operation. Training employees to perform their roles competently is vital to any operation.

✓ Checklist

- Employee records include training schedules and certification
- Training and re-training is conducted promptly



14. Fitness for Work

All operations should, as part of hazard management, have processes to ensure that employees are fit for work. Employees who are not fit are potentially a hazard.

Fit for work means that an individual is physically and mentally able to perform assigned tasks competently and in a manner which does not compromise the safety or health of themselves or others. Linking up with Employment Assistance Programme can help an employer to develop and manage processes relating to employee wellbeing and fitness for work.

The HSE Act defines a hazard to include:

- (i) a situation where a person's behaviour may be an actual or potential cause or source of harm to the person or another person; and*
- (ii) without limitation, a situation described in subparagraph (i) resulting from physical or mental fatigue, drugs, alcohol, traumatic shock, or another temporary condition that affects a person's behaviour*

In extractive and tunnelling operations fitness for work can be impaired by a number of factors including:-

- › Fatigue
- › Dehydration;
- › Psychological and emotional Issues;
- › Alcohol and drugs.

General principles for dealing with fitness for work issues include:-

- › Recognising that the hazards exist and having strategies in place to manage them before issues arise
- › Ensuring that all employees are aware of the hazards and are able to recognise symptoms in themselves and in others when issues are developing, and are aware of the responses expected of them
- › Recognising that all people are susceptible to these sorts of issues from time to time and a supportive response from management is generally more appropriate than discipline.
- › Establishing and maintaining a good drug and alcohol policy.
- › Recognising when something is compromising an employee's ability to perform their role safely, and intervening
- › Where rules are used to help to manage these issues, ensure that these rules are clear, well known and applied consistently.

Reference – good information on impairment factors can be found at www.osh.govt.nz/publications/stress/index.asp and in Appendix B. Information on managing the effects of shift work can be found at www.osh.govt.nz/order/catalogue/4.shtml

✓ Checklist

- Policies are developed and agreed upon to manage shifts
- Codes of conduct and policies are included in induction
- Performance management and Return To Work systems are in place and documented



15. Hazardous Substances (HSNO)

The Hazardous Substances and New Organisms (HSNO) Act 1996 applies where people import, create, use, store or dispose of hazardous substances.

Small mines, quarries and tunnel operations store and use a range of hazardous substances, from diesel to explosives. However, if hazardous substances are not stored or used correctly, they can cause a lot of damage to the environment and cause harm to workers. Therefore, it's very important to observe these simple rules:

- › Know what the hazardous substance is.
- › Store it safely and securely.
- › Use the substance safely – some require specialised training.
- › Plan for emergencies in advance.

Hazardous substances are classified according to six hazardous property areas set out in the Hazardous Substances and New Organisms Act 1996. The six classes and their numbers are:

- › Class 1: explosiveness
- › Class 2: flammable gases
- › Class 3: flammable liquids
- › Class 4: flammable solids
- › Class 5: oxidising ability
- › Class 6: toxicity (harmful to humans)
- › Class 8: corrosiveness
- › Class 9: ecotoxicity (harmful to the environment)

Safety data sheets

Safety data sheets are necessary for every hazardous substance used as an operational requirement. They contain important information, including: how people might be harmed by the substance, whether it can be stored with other hazardous substances safely, and what you should do if there's a spill or an accidental release.

Safety data sheets are available from your hazardous substance supplier – they are required to give this information to everyone using hazardous substances in the workplace.

Read the information on the safety data sheets, and go over this information with employees and others using the substance or working nearby.

Keep the safety data sheets in a safe place – if the emergency services have to attend an emergency involving a hazardous substance, they would greatly appreciate having a look at the information.

Explosives

One of the most significant hazardous substances used by small mines, quarry and tunnel operations is explosives. As a significantly hazardous product, a number of legal controls must be in place to use explosives safely.



Examples include:

- › People handling explosives must be an approved handler and have a controlled substance licence
- › Explosives must be securely stored and kept away from sunlight and sources of ignition
- › Separation distances must be followed when detonating explosives
- › Detonation and deflagration requirements
- › Emergency response plans should plan for potential emergencies involving explosives (including theft of explosives)
- › Transportation restrictions.

For further information, visit www.epa.govt.nz/hazardous-substances/using-storing-at-work/explosives/Pages/default.aspx

Helpful tools and further information

The publication “Chemical Safety in the Workplace for Small Business” has been designed to help small businesses and the self-employed manage their chemical compliance, even if they are not sure what the HSNO Act requires. It can be downloaded from the following website:

www.osh.govt.nz/order/catalogue/chemical-safety.shtml

Note: particular hazardous substances require the users to become “Approved Handlers”, and others may require specialised fire-resistant storage areas to be set up. Test Certifiers are people approved by the Environmental Protection Authority (EPA) who can help you with the more complex areas of hazardous substance management. A list of test certifiers can be obtained from:

www.epa.govt.nz/search-databases/Pages/testcertifiers-search.aspx

Employers Duties:

- › Take the opportunity to remove hazardous substances that you haven’t used in years or cannot identify
- › Obtain safety data sheets (SDS) from suppliers for all hazardous substances used in the workplace.
- › Compile a Hazardous Substance Register – refer to the publication “Chemical Safety in the Workplace for Small Business”.
- › Ensure all hazardous substances are clearly labelled.
- › Ensure all employees exposed to a hazardous substance receive appropriate training and instruction.
- › Ensure all employees handling hazardous substances are trained and approved
- › Decide whether any improvements should be made to machinery or procedures that may eliminate, isolate or minimise employee exposure to hazardous substances.
- › Decide whether any environmental monitoring should be done.
- › Check that emergency equipment and procedures are adequate.
- › Carry out a basic risk assessment by:
 - › identifying the hazardous substance by examining the label looking for words such as caution, poison, hazardous and dangerous goods labels;
 - › reviewing information from SDS regarding the toxicity and the precautions to reduce risk;



- › examine the workplace and work practices asking:
 - › how often are employees exposed to the substance? and
 - › are there fumes, dust or other airborne contaminants exposed to employees?
- › Take steps to prevent or adequately control exposure to hazardous substances.

Employers, contractors, and sub-contractors should identify all hazardous substances used in the workplace, and obtain information about each one by:

- › checking the suppliers' labels for words like Warning, Poison, Hazardous, and other phrases that indicate a hazard.
- › checking the Safety Data Sheet (SDS) from the supplier.
- › undertaking training on the hazards and controls for the hazardous substances that they are required to handle
- › Becoming an approved handler where appropriate as per HSNO legislation
- › Wearing or using the appropriate personal protective equipment and clothing.

For further information about HSNO, visit the Environment Protection Authority's website at www.epa.govt.nz, or phone 0800 376 234.

For assistance with complying with HSNO controls at a worksite, visit the Ministry of Business, Innovation and Employment website at www.mbie.govt.nz or phone 0800 20 90 20.

If you need the services of a test certifier, visit www.epa.govt.nz/hazardous-substances/using-storing/key-req/Pages/Test-certificates.aspx to find a test certifier in your area.

✓ Checklist

- All hazardous substances and dangerous goods stored on the site are identified.
- Approved handlers are trained and identified where necessary
- SDSs exist for all HSNO substances
- HSNO substances are included in the hazard register
- Documentation is maintained for all HSNO needs



16. Audits and Ongoing Improvements

Get your SMS underway before giving any attention to auditing it. One year after you've had a SMS in operation, have a look at whether it's working.

A good review can start with two basic questions asked honestly:

- › What went really well over the last 12 months with our safety / health performance; and
- › In what areas could we do better?

These questions can be asked informally so they have immediate appeal. However, just as a structured (formal) workplace inspection can detect hazards that are not so obvious, a structured review will help identify concerns that might otherwise go unnoticed.

You should consider bringing in an H&S specialist adviser to assist with a formal audit.

As time goes by and your experience and level of comfort with a SMS increases you might be wise to engage a fresh set of eyes to have a look for any strengths, gaps or improvement areas.

The checklists at the bottom of each section can be used together as an auditing tool, as can the WSMP audit checklist produced by ACC.



Appendix A: A summary of the Health and Safety in Employment Act 1992

This summary of the Act focuses on the aspects that are relevant to working in extractive and tunnelling operations. While it provides some advice as to the interpretation of the Act, it should not replace legal advice and if you have any queries, seek assistance from a health and safety professional and/or legal counsel as appropriate.

The Act

The object of the Act is to prevent harm to all people at work and people in the vicinity of a place of work.

The Act does this by:

- › promoting excellence, particularly through systematic management of health and safety
- › defining harm and hazards in a comprehensive way
- › imposing duties on those who are responsible for work, or do work
- › setting requirements that relate to taking all practicable steps to ensure health and safety, and ensuring that the requirements are flexible to cover different circumstances
- › recognising employee participation in health and safety management and that the process is conducted in good faith by all those involved.

The Act creates duties for most people connected with places of work, including:

- › employers
- › employees (including trainees, people gaining work experience and volunteers)
- › the self-employed
- › principals to contractors and employees of contractors and sub-contractors
- › persons who control a place of work
- › hirers, sellers and suppliers of plant.

Regulations

Regulations are promulgated from time to time under the Act. Regulations may, among other things, impose duties on employers, employees, designers, manufacturers and others relating to health and safety. These regulations may apply to places of work, plant, processes or substances, and may deal with particular problems that have arisen.

The Health and Safety in Employment Regulations 1995 require the provision of facilities such as toilets, first aid, facilities for employees to wash, a place to have meals and the provision of wholesome and sufficient drinking water. The regulations also set a range of general health and safety and welfare requirements in addition to the Act, including:

- › restricting young people from certain hazardous work and times of work
- › requiring certification of workers using some hazardous equipment
- › requiring notification of particular types of hazardous work, including forestry and construction
- › creating duties for the designers, manufacturers and suppliers of plant and protective clothing and equipment. Approved codes of practice (section 20)



Approved codes of practice are provided for in the Act. They are statements of preferred work practice or arrangements, and may include procedures which could be taken into account when deciding on the practicable steps to be taken. Compliance with codes of practice is not mandatory. However, compliance with an approved code of practice may be used in court as evidence of an employer or other duty holder having taken “all practicable steps” to meet the duty.

Employers’ duties (section 6)

Employers have a general duty to take all practicable steps to ensure the safety of employees while at work. In particular, they are required to take all practicable steps to:

- › provide and maintain a safe working environment
- › provide and maintain facilities for the safety and health of employees at work
- › ensure that machinery and equipment are safe for employees
- › ensure that working arrangements are not hazardous to employees
- › provide procedures to deal with emergencies that may arise while employees are at work.

Taking all practicable steps means doing what is reasonably able to be done in the circumstances, taking into account:

- › the severity of any injury or harm to health that may occur
- › the degree of risk or probability of that injury or harm occurring
- › how much is known about the hazard and the ways of eliminating, reducing or controlling it
- › the availability, effectiveness and cost of the possible safeguards.

A person is required to take all practicable steps in respect of circumstances that they know or ought reasonably to know about.

Hazard management (sections 7 to 10)

Employers shall identify and regularly review hazards in the place of work (existing, new and potential) to determine whether they are “significant hazards” and require further action. If an accident or harm occurs that requires particulars to be recorded, employers are required to have the matter investigated to determine if it was caused by or arose from a significant hazard.

Significant hazard means a hazard that is an actual or potential cause or source of:

- › serious harm (defined in Schedule 1 of the Act)
- › harm (being more than trivial) where the severity of effects on any person depend (entirely or among other things) on the extent or frequency of the person’s exposure to the hazard
- › harm that does not usually occur, or usually is not easily detectable, until a significant time after exposure to the hazard.

The Act requires all employers, principals, and persons in control of a place of work to take all practicable steps to ensure that workers are not exposed to hazards by following an effective hazard identification process. This involves the following steps.

- › Systematically identifying and assessing the risk of harm to a person exposed to the hazard.
- › In the case of a significant hazard, controlling the hazard, and if the hazard cannot be eliminated or isolated then it should be minimised.
- › Monitoring the hazard, regularly assessing the hazard.

Where the hazard is significant, the Act sets out the steps employers shall take.



- › Where practicable, the hazard shall be eliminated.
- › If elimination is not practicable, the hazard shall be isolated.
- › If it is impracticable to eliminate or isolate the hazard completely, then employers shall minimise the likelihood that employees will be harmed by the hazard.
- › Where the hazard has not been eliminated or isolated, employers shall take steps to minimise the exposure or likelihood of exposure to the hazard and where appropriate:
 - › provide protective clothing and equipment and ensure that it is accessible and used
 - › monitor employees' exposure to the hazard
 - › seek the consent of employees to monitor their health
 - › with informed consent, monitor employees' health.

Identifying hazards

The first stage of identifying hazards occurs in the design and work planning phase. It is at this time that the generic hazards associated with that type of work and some of the specific hazards for the job are identified.

During the planning phases it may be possible to identify ways to eliminate a potential hazard, for example by using different equipment.

One way to ensure hazards are adequately identified is to complete a task analysis prior to commencing the work and include site-specific hazards. This enables a review of the proposed work practices and provides an opportunity to plan for any safety equipment or tools required for the control of the hazards.

Once you have identified the hazard, you shall assess the risk of harm occurring. Taking all practicable steps means doing what is reasonably able to be done in the circumstances, taking into account:

- › the severity of any injury or harm to health that may occur
- › the degree of risk or probability of that injury or harm occurring
- › how much is known about the hazard and the ways of eliminating, reducing or controlling it
- › the availability, effectiveness and cost of the possible safeguards.

Controlling a hazard – the hierarchy of controls

The control hierarchy is outlined in the Act and requires people to take all practicable steps to control each hazard. The Act is very specific about the order in which you need to consider the appropriate control/s for a hazard.

In order of preference, the methods of control are:

- › Eliminate
- › Isolate
- › Minimise

To take all practicable steps to control a hazard, you should plan the work to identify how to be control it.

Ways to assess which control is appropriate for each identified hazard include:

- › looking at similar workplaces or processes
- › looking at the workplace's previous incident and injury reports and data for falls
- › consulting health and safety representatives and other employees
- › looking at the way tasks/jobs are performed
- › looking at the way work is organised.



Employees and health and safety representatives (section 12)

Before employees begin work, they must be informed by their employer of:

- › hazards they may be exposed to while at work
- › hazards they may create which could harm other people
- › how to minimise the likelihood of these hazards becoming a source of harm to themselves and others
- › the location and correct use of safety equipment
- › emergency procedures.

Employers are also required to inform employees of the results of any health and safety monitoring. In doing so, the privacy of individual employees must be protected.

Where there are employee health and safety representatives, the employer must ensure that the representatives have ready access to sufficient information about health and safety systems and issues in the place of work to enable them to be able to carry out their functions effectively.

Training and supervision of employees (section 13)

An employer must ensure that every employee has the knowledge and experience required to do the work – or is supervised by someone who has – so that they are not likely to suffer harm, or lead to the harm of others. This includes every employee who:

- › does work of any kind
- › uses plant of any kind
- › deals with a substance of any kind in a place of work.

Every employee must be adequately trained in the safe use of all plant, objects, substances, protective clothing and equipment that they are, or may be, required to use or handle.

Responsibility for employees' work activities (section 15)

Employers are also responsible for the health and safety of others arising from the work activities of their employees. They must take all practicable steps to ensure that no action or inaction of an employee while at work causes harm to any other person.

Persons in control of a place of work (section 16)

The Act places duties on persons who control a place of work in relation to people in the vicinity, and to visitors.

A person who controls a place of work includes a person who owns, leases, subleases or occupies a place of work, or who owns, leases or subleases plant or equipment used in a place of work.

Duties of the self-employed (section 17)

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

Duties of principals (section 18)

Principals engaging contractors are required to take all practicable steps to ensure that no employee of a contractor or sub-contractor, or if an individual, no contractor or sub-contractor is harmed while doing any work (other than residential work) that the contractor was engaged to do.



Hirers, sellers and suppliers of plant (section 18A)

The Act places duties on people to ensure that any plant or equipment that is used in a place of work is designed and made, and has been maintained, so that it is safe for its intended use. The duties apply to people who:

- › hire, lease or lend plant to another person that could be used in a place of work
- › sell or supply plant (other than for hire, lease or loan)
- › install or arrange plant in addition to either of the above.

Duties of employees (section 19)

Every employee shall take all practicable steps to ensure:

- › their own safety while at work (including using protective clothing and equipment)
- › that no action or inaction of theirs while at work causes harm to any other person.

Employees have a right to refuse to undertake work that they consider likely to cause them serious harm. However, employees have an obligation to attempt to resolve the matter with their employer. If the matter remains unresolved and the employee believes (on reasonable grounds) that the work could cause them serious harm, they may continue to refuse to do the work. (Section 28A)

Deemed employees

People receiving on-the-job training or work experience, loaned employees and volunteer workers are all deemed to be employees of an employer or self-employed person for whom they are working. Most employer duties apply, but not the duty to provide opportunities for employee participation.

Opportunities for employee participation (Part 2A)

Employers must provide reasonable opportunities for employees to participate effectively in on-going processes for the improvement of health and safety in the place of work. Where there are more than 30 employees, or where an employee or union representing employees requests it, the employer must seek agreement on, develop, implement and maintain a system of employee participation. Where agreement cannot be reached on the system of employee participation, there are default provisions set out in the Act.

Where employee health and safety representatives are elected, they are entitled to paid leave to attend approved training courses.

A trained employee health and safety representative may issue a hazard notice to an employer where they believe there is a hazard in the place of work, they have brought it to the employer's attention and the issue has not been resolved.

Employers and employees must deal with each other in good faith while seeking agreement on, developing and maintaining a system of employee participation.

Notification of particular hazardous works (Regulation 23)

This section refers to the Regulations. There are some activities that are considered by their very nature to be particularly hazardous. This work may have additional requirements to ensure worker safety. These requirements may include items such as licensing, registration and certificates of competence.

Section 26 of the Health and Safety in Employment Regulations 1995 outlines the requirement to notify MBIE if you are undertaking one of these activities. A form for notification of hazardous work can be found on the MBIE website www.osh.dol.govt.nz/services/notification/index.shtml



Accidents, serious harm and notification (Regulations 25 and 26)

The Act requires employers, the self-employed and principals to contractors to keep a register of work-related accidents and serious harm.

For employers, this includes every accident that harmed (or might have harmed):

- › any employee at work
- › any person in a place of work controlled by the employer.

Employers are also required to investigate all accidents, harm and “near misses” to determine whether they were caused by a significant hazard. Serious harm is defined in Schedule 1 of the Act.

Any occurrences of serious harm of a kind that must be recorded shall also be notified to the Secretary of Labour (in practice, the nearest MBIE office) as soon as possible after the occurrence becomes known to the employer. In addition, the accident must also be reported in the prescribed form within seven days. (Forms are available from the MBIE website. www.osh.dol.govt.nz/services/notification/index.shtml)

If a person suffers serious harm, the scene of the accident must not be interfered with unless to:

- › save the life of, prevent harm to, or prevent suffering to, any person
- › maintain public access for essential services, e.g., electricity, gas
- › prevent serious damage or loss of property.

A health and safety inspector will advise whether or not MBIE will investigate the accident and what action may be taken in the meantime.



Appendix B: Environmental factors

Dust

All dusts that can be breathed in must be considered harmful in some degree.

Dust particles of size ranging from 0.001 to 0.1 mm (1 to 100 microns) are a threat to health when they become airborne. They reduce visibility, create an uncomfortable environment (irritation of eyes, ears, nose, throat and skin) and possibly result in damage to the tissues of the lungs. Included in these potentially harmful dusts are silica, asbestos, carborundum, diatomite, and talc – each of which can produce its own form of lung damage when dust control is inadequate.

The most common harmful dust contains silica; the harmfulness increases with the increase in the percentage of silica in the dust. Dust less than 5 microns in size is considered most harmful (that is, particles smaller than 0.005mm). Although the dust is not visible to the eye, this does not mean that because it cannot be seen there is no danger.

Noise

Measuring noise levels and workers' noise exposures is the most important part of a workplace hearing conservation and noise control program. It helps identify work locations where there are noise problems, employees who may be affected, and where additional noise measurements need to be made.

A noise survey involves measuring noise levels at selected locations throughout an entire plant or in workplaces underground to identify noisy areas, and is usually done with a sound level meter.

Safety and Health regulations allow for a maximum exposure to sound of 85 decibels over an eight-hour day without the use of hearing protection. Hearing protection should be used appropriate to the levels of hazardous noise present in the work environment.

AS/NZS 1269, 2005 charts the class of hearing protection needed based on the levels of hazardous noise.

Class	dB(A) over an 8 hour period
1	Less than 90
2	90 to less than 95
3	95 to less than 100
4	100 to less than 105
5	105 to less than 110

Vibration

Vibration can cause permanent damage to health including:

- › bone damage, rubbing of bones and joints causing inflammation, especially along the backbone;
- › stomach and digestive problems from shaking of organs and the abdominal cavity;
- › heart problems, varicose veins, varicocele and piles due to constant variation in blood pressure; and
- › disruption of the nervous system resulting in weakness, fatigue, loss of appetite, irritability, headache, insomnia and impotence.
- › aches in arms and shoulders, loss of nerve conduction and vibration white finger, which can lead to gangrene in hands and fingers.



In the case of any concern about the level of vibration sustained by an employee, an ergonomic assessment should be conducted and steps taken to mitigate it.

Manual Handling

Manual handling injuries include:

- › strains and sprains;
- › neck and back injury;
- › slips, falls and crush incidents;
- › cuts, bruises and broken bones;
- › hernia; strained heart muscles; and
- › occupational overuse syndrome (OOS), once known as repetitive strain Injury (RSI).

The employee should be informed and trained in:

- › safe manual handling methods;
- › specific manual handling hazards;
- › safe work procedures;
- › using manual handling aids; and
- › the right to ask for help.

Most manual handling injuries can be prevented by education, training, and supervision. Safe work procedures should be prepared by employers with the help of employees to care for the special needs of young and new workers.

Radiation

Ultraviolet radiation (UV) from welding arcs is the most common source of radiation in above ground mines and quarries.

Although exposure to small amounts of UV radiation can have beneficial effects, such as vitamin D synthesis in the skin, overexposure can cause serious acute (short-term) and chronic (long-term) health effects. The amount of radiation produced or sustained can be measured with specialised instruments.

Weather conditions

Visibility on a worksite can be seriously compromised by fog. When workers can't see obstacles around them, or where the edge of a cliff or a workmate using tools, it constitutes a hazard.

Working hard for hours at a time in hot and sunny conditions can lead to the risk of heat strain or heat stroke. These are serious health conditions that, if not identified and managed appropriately, can lead to long-term damage to the body, and death in some cases. Exposing the skin to the sun will rapidly lead to sunburn for people with light-coloured skin. Prolonged exposure significantly increases the chances of developing sun spots or cancerous melanomas.

Working outside in cold, rainy or even snowy conditions can also cause health problems. Working in the cold reduces the rate of blood flow around the body, meaning that the body's extremities (including fingers and toes) are susceptible to serious injury, such as frostnip, frostbite or trench foot.

If you're working at heights, strong gusty winds may lead to a higher risk of asbestos or other dust movement, falling tools/debris or unstable work platforms.

Workers should always wear clothing and use protective equipment appropriate to the conditions, and ensure they are hydrated. Shade and/or shelter should be considered as a control.



Appendix C: Impairment factors

Fatigue

Fatigue (or tiredness) is a reduced state of mental alertness. Fatigue is cumulative. This means that it gets worse over a period of time. The effect of this can be that if someone has a week of insufficient sleep, the fatigue will get worse each day. It will not be made up by one good night's sleep.

Fatigue can arise from work demands (e.g. long working hours) and also from what happens outside of work (e.g. where the person does not use time between shifts for sufficient rest). Fatigue can also be caused by a medical condition known as Sleep Apnoea or by medication that the employee may be taking for some other medical condition.

Strategies to avoid fatigue related issues include:-

- › Discussing the potential for fatigue with employees and jointly agreeing strategies to deal with it
- › Educating employees on how to recognise fatigue in themselves and in others and on what they can do about it. Ensure that employees understand that the potential for fatigue requires self-management as well as the implementation of supportive work arrangements. Use a fatigue indicator checklist to help employees to self-assess fatigue (template/example)
- › Ensure that employees and supervisors understand that employees will not be disciplined for self-reporting fatigue
- › Ensure that employees report if they are taking any medication that may cause fatigue
- › Ensuring that work patterns allow sufficient time for rest and recovery between shifts
- › Being clear with employees that they are expected to use the time between shifts for sufficient rest and recovery
- › If any employee has a second job, be prepared to discuss the implications for potential fatigue
- › Monitoring working hours, including overtime, to ensure that employees are not working excessive hours
- › Monitoring performance, and recognising when behaviours indicate that an employee may be fatigued and dealing with it immediately
- › Encouraging and assisting an employee to get medical assistance when a fatigue issue is thought to be caused by a medical condition.

Dehydration

Dehydration can be a significant issue when employees work outside in conditions of extreme heat. High temperatures and humidity stress the body's ability to cool itself, and heat illness (dehydration) becomes a special concern. There are three major forms of heat illnesses: heat cramps, heat exhaustion, and heat stroke, with heat stroke being a life threatening condition. In its mildest form dehydration will cause fatigue.

Dehydration is classified as mild, moderate or severe based on how much of the body's fluid is lost or not replenished. When severe, dehydration is a life-threatening emergency.

Strategies to avoid dehydration issues include:-

- › Education to ensure that employees are aware of the hazard
- › Use posters to maintain awareness such as those describing the urine colour test
- › Provide ready access to drinking water



Personal Issues

This includes but is not limited to; relationship difficulties, concern for family members, grief stress, work related issues.

Distress will cause an employee to be distracted and where it continues for long periods will produce feelings of discomfort, fatigue, and physical illness. At all stages it has the potential to impact on safety at work.

Strategies to manage personal issues include:-

- › Individuals should be encouraged to report issues of this nature that may affect their work performance and to seek appropriate assistance to deal with these issues.
- › They will however, seldom do this at their own volition and management should be prepared to initiate discussions when behaviours indicate that personal issues are affecting work performance.
- › Managers and supervisors are rarely qualified to assist people in this situation and intervention should instead focus on helping them to access professionals who are able to assist. There are a number of external organisations that provide employee assistance services. Some companies implement an internal employee assistance programme which usually involves contracting an external organisation to provide this service for its employees and families.
- › Managers should consider assisting employees to access external services in various ways including if required; allowing time off to attend appointments; assistance with costs; revised shift arrangements.

Drugs and alcohol

Anyone on site who is under the influence of drugs and /or alcohol is a safety hazard and the operator has the right and responsibility to take action.

Strategies for managing the hazard of drugs and alcohol include:-

- › The operator shall take a clear position on its rules about drugs and alcohol (D&A). Generally this position is expressed in the form of a policy, rules or procedures
- › The policy should be clear about what is acceptable and what isn't, and about what will happen when the policy is breached.
- › The policy should be discussed with employees and developed with their assistance. It is generally found that employees are fully supportive of initiatives to ensure that working sites are D&A free.
- › The policy should:
 - › Specify the D&A limits that will apply on site. It is common that operations adopt the same rules for the site as apply on public roads. This is not necessarily the case however and some sites apply a rule that requires employees to be entirely D&A free when at work.
 - › Be clear that the use of an illegal drug, or being under its influence, is never acceptable on site
 - › Cover what happens whenever a person is suspected of being under the influence
 - › Cover what happens whenever someone admits or is proven to be under the influence
 - › Apply equally to everyone on site
- › Providing awareness training in D&A so that everyone understands the potential for D&A to be present on site, the potential impact on safety, how to recognise when someone may be under the influence and what to do. There are a number of external organisations that specialise in providing this kind of training.
- › The policy should be well publicised in induction material. On notice boards etc.



- › When someone is suspected of being under the influence the most common response is testing. Breath analysers are available and easy to use to test for alcohol usage. Urine sampling is used to test for drugs. Urine tests shall be conducted in accordance with strict protocols and it is common for organisations to put arrangements in place with qualified external organisations for this. If internal management are used for these tests they shall be trained.
- › The policy should recognise that a D&A issue may arise from dependency which is an illness that can be controlled and treated. The policy may provide for support from the company when this is the case, similar to what is available in other cases of sickness. There are a number of external organisations that can help people with these types of problem.
- › The policy should deal with the use of prescription drugs. In particular it should require for such usage to be reported if there is potential for it to impact on safety at work.
- › The policy should address the need to confidentiality to be respected
- › The policy should recognise that any serious breach of the D&A policy, or any on-going disregard for it, may result in disciplinary action.
- › The policy should address the rules concerning consumption of alcohol on site. If you allow people to consume alcohol at the site, remember your responsibility for their safety. Host responsibility rules are available from www.alac.org.nz/legislation-policy/host-responsibility/unlicensed
- › The policy should cover the circumstances when testing for D&A will take place. This will commonly include; as a pre-employment process, following a significant incident, when there is reasonable cause to suspect that a person is under the influence. Some companies also undertake random testing.



Appendix D: Further references

Safety Management Systems

AS/NZS 4801:2001 – Occupational Health and Safety Management Systems – Specification with guidance for use

www.standards.co.nz/web-shop/?action=viewSearchProduct&mod=catalog&pid=4801%3A2001%28AS%7CNZS%29&searchId=1662386&searchOrderingIndex=1&searchSessionId=5B533A8CABC12AA42BE64BB5E4D35D37

ACC Workplace Safety Management Practices (WSMP)

www.acc.co.nz/for-business/small-medium-and-large-business/how-to-pay-less/BUS00054

HSE Act

Introduction to the Health and Safety in Employment Act

www.osh.govt.nz/law/quickguide/index.shtml

Health and Safety in Employment Act – A Guide to

www.osh.govt.nz/order/catalogue/808.shtml

Noise

Introducing the Approved Code of Practice for the Management of Noise in the Workplace

www.osh.govt.nz/order/catalogue/17.shtml

Approved Code of Practice for the Management of Noise in the Workplace

www.osh.govt.nz/order/catalogue/15.shtml

Selection and Use of Hearing Protectors

www.osh.govt.nz/order/catalogue/733.shtml

AS/NZS 1269, 1–3, 2005 – Occupational Noise Management

www.standards.co.nz/web-shop/?action=basicShopSearch&mod=search&SearchBox1_txtShopName=1269&selStatus=CURRENTANDDRAFT&catalog=NZ

Respiratory

A Guide to Respiratory Protection

www.osh.govt.nz/order/catalogue/534.shtml

Mining Regulations

Health and Safety in Employment (Mining Administration) Regulations 1996

www.legislation.govt.nz/regulation/public/1996/0220/latest/DLM217348.html

Contractors

Health and Safety in Contracting Situations

www.osh.govt.nz/order/catalogue/contracting-health-safety.asp

A principal's guide to contracting to meet the Health and Safety in Employment Act 1992

www.osh.govt.nz/order/catalogue/contracting-guide.shtml



Guarding

Safe use of machinery project

www.dol.govt.nz/safe-use-machinery/index.asp

SMS assessment tool

www.osh.govt.nz/order/catalogue/225.shtml

Chemical safety

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

www.osh.govt.nz/order/catalogue/101.shtml

Chemical Safety in the Workplace for Small Businesses

www.osh.govt.nz/order/catalogue/chemical-safety.shtml

Temperature

Guidelines for the Management of Work in Extremes of Temperature

www.osh.govt.nz/order/catalogue/381.shtml

What you need to know about Temperature in Places of Work

www.osh.govt.nz/order/catalogue/102.shtml

Shift work

Managing shift work to minimise workplace fatigue – A guide for small businesses

www.osh.govt.nz/order/catalogue/shiftwork-fatigue-smallbus2007.shtml

Managing shift work to minimise workplace fatigue – A guide for employers

www.osh.govt.nz/order/catalogue/shiftwork-fatigue-guide2007.shtml

Stress and fatigue

Various publications on stress, fatigue, and conflict

www.osh.dol.govt.nz/publications/stress/stress.asp

Forms and register

www.osh.govt.nz/order/catalogue/forms.shtml – including:

- › Form of register or notification of circumstances of Accident or Serious Harm
- › Accident Investigation
- › Trained First Aiders Register
- › Hazard and First Aid Assessment Register
- › Workplace First Aid Needs Assessment Checklist
- › First Aid Register Template
- › Hazard Identification Register
- › Hazard Notice
- › Notification of Particular Hazardous Work
- › Occupational Audiometry Record

General facilities

Guidelines for the Provision of Facilities and General Safety in Commercial and Industrial Premises

www.osh.govt.nz/order/catalogue/33.shtml

First aid

First Aid for Workplaces – A Good Practice Guide

www.osh.govt.nz/order/catalogue/252.shtml







