



# ***OSH Association UK***

**Occupational Safety and Health Training**

**International Professional Certificate in Occupational Safety and Health**

## **COURSE 105 GUIDE**

# **IMPLEMENTATION OF EFFECTIVE HEALTH & SAFETY STANDARDS**



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Revision Questions

Risk assessment is one of the most important activities in a health and safety system. It makes a significant contribution towards the reduction in workplace accidents and ill health.

The process varies from a rapid visual assessment of a simple procedure, such as hammering a nail into a piece of wood, to a thorough written assessment of a large workplace operation, such as the bottling operation at a food processing plant.

Managers and staff might be involved in carrying out risk assessments. Supervisors and safety representatives are often in the best position to carry them out, liaise with the management team and or safety committee and advice employees on the implementation of the findings.

#### **KEY WORDS AND PHRASES**

**Competent Person** – a person with the appropriate qualifications, knowledge and experience to identify the risks arising from a situation and the measures needed to control them.

**Control Measures or Control** – the arrangements made or precautions taken to reduce risk.

**Hazard** – a source of danger; anything, condition or circumstances that could cause harm to people or damage to property.

**Hazard Sponge** – looking for and noting hazards in the workplace.

**Risk** – a measure or scale of the likelihood that harm will occur from a particular hazard, and the severity of the consequences.

**Risk Assessment** – a systematic process for identifying workplace hazards and assessing the risks involved from those hazards.

**Safe System of Work** – a set of procedures for carrying out a task safely.

### WHAT IS RISK ASSESSMENT?

A risk assessment is a careful examination of your work or workplace to identify hazards and assess the risks from those hazards. The aim is to prevent accidents and dangerous incidents and to reduce ill health from work activities.

The assessment involves identifying the hazards in a workplace or its associated activities, then assessing the risks involved, taking into account any precautions already in place.

The step by step process encourages organisations to assess every work activity. This enables the senior management team to identify the organisation's health and safety priorities and to allocate available resources to the measures that will have the maximum effect in reducing accidents, either by eliminating particular hazards altogether, or by controlling them so that the risk is at the lowest level that is reasonably practicable.

The assessment also helps employers (through their managers and supervisors) to comply with legal requirements.

As you are aware, a hazard is something with the potential to cause harm. Once the significant hazards have been identified in a workplace, the assessment must rate the likelihood that the hazard will actually cause harm-in other words, the level of risk. Any assessment of risk must also consider the:

- Number of people who are at risk
- Possible severity of any injury or illness
- The consequences of this harm.

A risk assessment is not a once-and-for all task. It should be a continual process of assessment and review. Circumstances can change frequently in the workplace and employers (through their managers) need to keep the assessment up to date to comply with the legal duties of diligence and care.

### Principles of Risk Management

Risk management aims at ensuring that workers and the public are properly protected and that there is an overall benefit to society.

This involves balancing benefits and risks, with a focus on reducing significant risks. Sensible risk management is neither about creating a totally risk free society (as it is possible to eliminate risk altogether), nor is it about generating a useless paper trail. It is not intended to scare people by exaggerating or publicising trivial risks, or to stop important businesses, recreational or learning activities where the risks are managed properly.

It is designed to prevent ill health and injuries- and health and safety is about saving lives, not to stop living.



If you are involved in risk assessments and risk management, you should concentrate on the significant risks from hazards that cannot be eliminated and on the practical steps to control the risks that cause the real harm and suffering.

### **The Responsibility for Risk Assessments**

The responsibility for carrying out risk assessments lies with employers, but managers and supervisors usually have a pivotal role in carrying them out and implementing actions identified as necessary.

Safety representatives, where appointed, are also likely to be involved.

Employers must make sure that an appropriate assessment is carried out of health and safety risk to which employees are exposed through their work. Employers and self-employed people must also assess the risk from work activities to the health and safety of people who are not their employees for example, members of public.

According to the law an employer with five or more employees must record his significant findings of the assessment.

In a small business with simple hazards-a wool shop, for example- the risk assessment could be so straight forward that it may not need any specialist skills or knowledge. In larger businesses and in those with a specific type of danger, such as a nuclear processing plant, an extremely detailed investigation may be required with the help of a specialist consultant.

In any business, it is often wise to seek advice from technical specialists- for instance, in assessing the risks from manual handling or display screen equipment. If you run a small organisation and you are confident you understand what is needed, you can do the assessment yourself. However, severe or fatal consequences can arise from an employer's failure to carry out risk assessments.

### **The Extent of a Risk Assessment**

Risk assessment may seem daunting at first, but they are in fact very simple. They are not rocket science, although they were used in developing the American space programme.

### **FAILURE TO CARRY OUT RESPONSIBILITIES**

A casual worker was seriously injured while unloading stones from a ship's hold. The crane operator's clothes got caught on a lever so that a grab closed onto the casual worker's head and almost severed his neck.

The company had failed to make a proper risk assessment of the unloading technique and the use of the grab.

Regulations state that risk assessment should be adequate or suitable and sufficient. These terms mean the same thing, that the assessment should not be over complicated but should be thorough.

A single risk assessment may be all that is needed to cover all the work activities and hazards in some workplaces. However, some businesses may need to carry out separate assessments for particular hazards or groups of hazards.

The level of detail largely depends on the level of risk. The greater the risk, the more detail is likely to be required. If an employer has a number of similar workplaces- for example, a chain of supermarkets or restaurants- then a generic or model risk assessment can be done for the same particular hazards in each workplace. For jobs in which people carry out various tasks in different conditions at a variety of sites, such as gas engineers, building surveyors, structural engineers and tree surgeons, a generic risk assessment could cover a broad range of hazards and risk, but a site-specific assessment should also be carried out at each site.

The findings of any assessment must be followed up by an action plan designed to improve health and safety standards.

### **Failure to Assess Risk and Follow Safe Procedures**

A security guard died of carbon monoxide poisoning while working alone in a vacant building. There was no mains electricity, so a petrol generator was used to power the lightening but no account was taken of the need to remove the fumes.

As the guard was a lone worker, no one raised the alarm when he passed out from the fumes. The company had failed to assess and control the risks in a short term job and had failed to follow its own procedures for employees who were working alone.

### **Carrying Out a Risk Management**

The precise details of how to carry out an assessment depends on the activities in your workplace and the type and extent of hazards and risks in that same workplace. However, there are normally five steps involved:

1. Identify the hazard
2. Decide who is likely to be harmed and how
3. Evaluate the risks by looking at the existing measures and deciding whether more controls are needed
4. Record the findings, inform the workforce of the controls to be introduced and implement them
5. Review the risk assessment and update if necessary

What is likely to be involved in each of these steps is outlined below and on the following four pages, but it is worth considering the following general advice.

### **General Advice for Carrying out a Risk Assessment**

- Walk around the workplace and observe all the work activities before starting the risk assessment. It helps to get a feel of the extent of the assessment to be done.
- Look at simple activities first. This gives you experience and confidence in doing the full risk assessment.
- Involve employees as well as the management team.
- Get advice, particularly if you or the organisation do not have the technical knowledge to carry out the risk assessment
- Consider interruptions to work as well as the activities, because interruptions frequently lead to accidents.
- Ignore trivial hazards and insignificant levels of risk.

### **Step 1 – Identify the workplace hazards**

You can use a number of sources of information to identify the hazards in the workplace- you may be one of the sources.

- Look at the work activities that actually take place in the workplace. Walk around the workplace and concentrate on the significant hazards – those which could cause a severe injury or have a high risk that could affect several people.
- List the hazards in order of priority by hazard spotting
- If your workplace has a number of hazards, consider assessing some of them in separate groups such as machinery, transport, electrical equipment and installations, manual handling and noise.
- Examine accident records and consider the manufacturer's instructions for machines and safety data sheets for harmful substances
- Hold meetings to discuss the hazards in the workplace
- Make sure that you include the tasks that are not done every day, such as maintenance and repair jobs, as well as long term hazards to health, such as exposure to noise or vibration.

### **Step 2 – Establish who might be harmed and how**

Everyone must be considered in a risk assessment – for example, office staff, machinists, cleaners, contractors, maintenance workers, visiting suppliers and representatives, security staff, people who share the building and members of the public. You should also identify groups of workers who may be particularly at risk – such as young people and trainees: migrant workers; employees who speak poor English, physical disabilities or learning difficulties; and pregnant women. Identify how they might be harmed – for example, railway workers might be struck by a passing train or by objects falling or being thrown from the train.

### **Step 3 – Assess the risks and decide on whether further controls are needed**

Assess the risks that each hazard presents including:

- The likelihood that harm will occur
- The nature of the injury that may result
- The severity of the harm
- Who is likely to be affected by the hazard

What are you already doing? Decide whether the existing precautions are adequate (and comply with current legislation) and whether more control measures are needed. It may be that the existing controls have already reduced the risk to acceptable level.

### **Risk Rating**

Risk can be rated using a number of simple systems that help to determine the level of risk and action priorities.

One such system is based on assigning:

- A letter from A to C for the severity of harm that could result from a hazard
- A number from 1 – 3 for the likelihood that the hazard will occur.

### **Severity**

A – Represents death, major, injury or major damage or loss of property or equipment

B – Represents an injury lasting over three days or damage to property or equipment



C – Represents a minor injury and minor damage to property or equipment.

### Likelihood

- 1 – Extremely likely to occur
- 2 – Frequently/Often/likely to occur
- 3 – Slight chance of occurring

If the existing measures are insufficient to reduce the risk to an acceptable level, additional controls should be introduced. Always aim to do better than the minimum legislative standard: try to reduce the risk to as low a level as possible. This will help you to reduce the number of accidents and cases of ill health in the workplace.

However, do bear in mind that no workplace is completely hazard-free and risk-free. You are required to take control measures that are reasonably practicable. Try to find a less risky option, get rid of the hazard if you can, prevent access to a hazard, organise the work so that you reduce exposure to the hazard, provide personal protective equipment and provide adequate welfare facilities.

If the work involves staff moving from site to site, you can identify the common hazards and their risks. At individual sites, you should carry out a hazard spotting exercise for unusual hazards and assess the risk for those specific site based hazards.

Make sure that your assessment covers, for example, the normal operation of a machine, and also its setting, maintenance, cleaning and repair. Bear in mind that the dangerous part may be safe in normal use, but dangerous when accessible during maintenance cleaning and so on.

When you consider which controls you should introduce, use a hierarchy of control.

As with all control measures, it is best to remove the risk by eliminating a particular hazard from the workplace. If this is impossible, substitute with something that will do the same job with less risk. If that cannot be done, control the level of risk by installing physical guards. Where a job must still be done, but none of the earlier measures mentioned is effective and risk cannot be reduced to an acceptable level, introduce safe systems of work. The last resort is to provide personal protective equipment.

Whichever measures are introduced, all employees must be provided with adequate instruction, information and training

### **Step 4 – Record the findings, inform the workforce of the controls to be introduced and implement them**

If your workplace employs five or more people you must, by law, record your risk assessments. Even if there are less than five employees in your workplace, it is good practice to record the findings. (See below for guidance on the period for which record should be kept).

The records provide a benchmark against measurements improvements. They also help an organisation to demonstrate that it has gone through the process, complied with the law and is seriously committed to health and safety.

Employers must inform employees about the significant findings of a risk assessment, this might be a part of the job of a manager or supervisor.



The record should be kept clear and simple. It can be hand-written, typed or recorded electronically, it should include the significant findings of the assessment- for example, the hazards that are serious risk to employees and others, the existing control measures, the extent to which the controls do actually mitigate the risks, and who may be exposed to the risks. You need to be able to show that proper check was made and that you asked who might be affected.

You also need to show that you dealt with all the significant hazards, taking into account the number of people who could be involved together with the reasonable precautions. You must demonstrate the remaining risk is low and that you involved your staff or their representatives in the process.

A good plan of action often includes a mixture of controls, such as:

- A few cheap or easy improvements that can be done quickly, perhaps as a temporary solution until more reliable controls are in place.
- Long term solutions to those hazards most likely to cause accidents or ill health.
- Long term solutions to those hazards with the most severe potential consequences
- Arrangements for training employees about the main risks that remain and how they are to be controlled.
- Regular checks to make sure that the control measures are being followed and have remained effective.
- Clear responsibilities- who must do what, who will lead each action and the timescale.

Set priorities and tackle the most important things first. As you complete each action, tick it off your plan.

The health and safety policy should include the main findings and actions taken.

### **Step 5 – Review The Risk Assessment and update it if necessary**

Review your risk assessments regularly because the nature of the work can change. The circumstances in the workplace sometimes indicate that the existing risk assessment is no longer valid. This is certainly the case where there are significant changes in work activities or there has been an accident. Look at what is already in place, consult employees, and consider employee work habits and assets records- including those for injury and illness, workers compensation costs, rates of employee turnover and records of training.

Decide on suitable adjustments to the assessment as appropriate. Ensure that the proposed changes are communicated to the management and the employees, then make sure they are implemented.

### Who can do a risk assessment?

If your employer or manager delegates the risk assessment to you, it may be possible to carry it out without special training if you follow the five-step processes outlined above. General guidance is provided on the Health and Safety Executive website, which includes examples of risk assessments in many types of small businesses.

If you are working for a small firm with few hazards, then the process is relatively straightforward. However, if you work for a large organisation or there are significant hazards and risks, it is advisable to obtain some training in risk assessment. You should also have a good knowledge of the workplace, its activities and processes and the control measures already taken, where work activities are complex or specific technical knowledge is required, it is recommended that a competent person from within the workforce undertake the risk assessment or be part of a team carrying out the risk assessment.

If outside consultants are contracted, it is always wise for someone who knows the business operation intimately to be involved as well: that person might be you.

Assessors need a sound knowledge and understanding of the workplace and the activities that are being assessed. They need to be able to gather information and arrange it clearly and logically. They need to be able to analyse this information and evaluate it so that it is valid and used to make reliable recommendations. They also need to be able to draw up a clear and concise report and communicate the findings of the assessment to those who have requested it and those that it applies to, such as the employees. These skills make up what is called the competencies (or competences) required by risk assessors.

### Legally required specific risk assessments

Every company should carry out a general risk assessment, but you may also need to undertake separate specific risk assessments, such as for specific sites – for example, where staff work at different locations everyday – or for matters such as fire, manual handling and the control of hazardous substances. The legislation that requires a specific risk assessment gives guidance on what to examine. Some regulations also specify the length of time that the records of risk assessment have to be kept.

Here are some examples of specific assessments required by legislation.

- Asbestos – risk assessment records must be made for each employee exposed and must be kept for the time that the work is being carried out. Regular review is required.
- Display screen equipment – employers must carry out assessments. Self – employed people are not obliged to assess work stations, but must satisfy themselves that they are, so far as is reasonably practicable, not at risk from the equipment.
- Hazardous substances – work cannot begin until the risks have been assessed. Regular review is required
- Lead – risk assessments must be recorded and the records kept for two years aGer

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- they have been superseded or when work involving lead is stopped altogether.
- Manual handling – the specific requirements and the factors that must be taken into account are listed in the legislation.
  - Noise – the risk from noise affecting employees must be assessed according to the action values. Assess the risks to members of the public according to what is reasonably practicable. Records must be kept until a new assessment is made.
  - Personal protective equipment (PPE) – this risk assessment is for the use of PPE only, and not for the hazards and risks the PPE is protecting against, as this assessment should have been done in the general risk assessment.

### Examples of Risk Assessment

Examples of risk assessments are available from the Health and Safety Executive website. They are intended to improve standards by demonstrating what a risk assessment is, the sort of hazards you should be thinking about and the practical steps that can be taken to protect people.

They are also intended to help you save time and money. Examples include hairdressing salon, office work in a manufacturing company, contracted bricklayers, a motor vehicle showroom, a butcher's shop, cleaning work in large retail premises and chilled storage warehousing.

The example below suggests some of the things that should be included in a risk assessment, but is not intended to be comprehensive. Remember that each situation presents its own hazards and risks and certain controls should already be in place.

### Ladders in a shop – Example

#### Use

Retrieving goods from a height, changing light units and erecting display materials.

#### Hazards

Staff member falling, materials falling and hitting someone. Someone bumping into or tripping over foot of ladder.

#### Who is at risk?

Employees, members of the public and visitors.

#### Controls

##### Retrieving goods from a height

Existing – ladders are provided with security hooks to stabilize the top of the ladders against a storage rack.

Proposed – set up a ladder register and ensure that the shift supervisor inspects the ladders every week and records the findings.

##### Changing Light Units

Existing – stepladders have stabilizers and wheel chocks used for this activity. No guardrails are provided on the stepladders.

Proposed – area should be 'out of bounds' and a member of staff should warn employees and members of the public about the operation. Set up ladder register. New stepladders with adequate guardrails to be provided.

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### **Erecting display materials**

Existing – stepladders with stabilisers and wheel chocks used for this activity.

Proposed – area to be cordoned off and a member of staff to warn employees and members of the public about the operation. Set up ladder register. Where display materials are large or heavy, a **safe system of work** should be set up in consultation with the shiG supervisor.

### **Records**

Retained in the risk assessment register and kept together with the organisation's health and safety policy. Also held in electronic format on the organisation's computer system.

### **Review**

Reviewed every 12 months and when work activities or equipment change significantly or after an accident occurs.

### **Legal Requirements**

Under the Management of Health and Safety at Work Regulations 1999 employers and self-employed people must make a suitable and sufficient assessment of the risks to the health and safety of employees and others as a result of work activities.

Where there are five or more employees, the employer must record the significant findings of the assessment and make a note of any group of employees identified as being particularly at risk.

Risk assessment must be reviewed by the employer or self-employed person if there is reason to suspect that it is no longer valid or there has been a significant change in the activity assessed.

Risk assessment is also specifically required by other regulations, such as The Control of Asbestos at Work Regulations 2006; The Control of Substances Hazardous to Health Regulations 2002; the Health and Safety (Display Screen Equipment) Regulations 1992; The Ionising Radiations Regulations, 1999; The Control of Noise at Work Regulations 2005; The Control of Vibration at Work Regulations 2005 and The Manual Handling Operations Regulations 1992.

A safe system of work is a set of procedures that helps staff to carry out tasks safely. It is the main tool for implementing safe working practices.

The procedures include information about the hazards involved in a work activity or work environment, together with the safety procedures that must be followed. Managers, supervisors and safety representatives are likely to participate in drawing up safe systems of work. Supervisors and safety representatives are most likely to be involved in explaining the instructions to all the staff involved in a particular activity.

Safe systems of work should be in writing and recorded as part of the company's overall health and safety management system.

#### Key Words and Phrases

**Competent person** – someone with the appropriate qualifications, knowledge and experience to identify the risks arising from a situation and the measures needed to control them.

**Permit to work** – a formal document that specifies the work that a named member of staff is permitted to do and the precautions to be taken.

**Risk management** – a systematic process for identifying workplace hazards and assessing the risks involved from those hazards.

**Safe system of work** – a set of procedures for carrying out a task safely.

### Developing safe systems of work

A safe system of work should be based upon a systematic examination of the task involving a risk assessment of the:

- Equipment to be used
- Processes involved
- Environment where the work will be carried out
- People carrying out the task.

This should be carried out by a **competent person with** a sound knowledge of the task and usually, hands – on experience of what is involved. It helps to take into account the experience and comments of several staff members who already do the work. Safety representatives should also be consulted for their views.

### Priorities

For existing processes, safe systems of work should first be prepared for high – risk activities. Then safe systems of work should be prepared for medium – risk and low – risk tasks. You should also give a high priority to preparing systems of work for any task likely to be carried out by inexperienced or young workers, and for the tasks carried out most frequently.

### Stages of Development

The first step in preparing a safe system of work for a particular activity is to conduct a thorough risk assessment to determine:

- The nature of the hazards
- Who is at risk
- Whether the hazard could be eliminated by using other work procedures or equipment
- What controls would be appropriate to deal with the residual level of risk.

### Preparing the document

Once this has been done, the safe system of work should be documented. It is likely to include:

- Information about who is authorised to do a particular work
- Detailed information about the hazards and their associated risks
- Specific information about the hazards and their associated risk in the particular working environment
- Precautions to be taken before starting the task
- Details about any collective protective measures (such as fences, barriers and warning signs)
- Instructions about any personal protective equipment (PPE) to be worn while working
- Clear instructions about how to carry out the task
- Specific instructions about minimising the risks from the task, including, where appropriate, measures to protect particular groups of people
- Instructions about ensuring that the work area is left safe for others
- Guidelines for correct waste disposal
- Procedures for emergencies

### Examples of what might be included

- Authorisation – for example, authorisation required to undertake a particular technique/process or use equipment/machinery; in company prohibitions on workers under the age of 18 (such as an in – house ban on the use of food slicers by young workers); procedures and personnel that provide authorisation; training/supervision required for task or certificates of competence required.
- Hazards associated with equipment/machinery/technique/process – for example, hazardous chemicals, radiation, biological materials, sharps, high voltage, swarf produced, speed of operation, possibility of infection or allergy
- Hazards associated with the environment where the task is to be undertaken – for example, road, motorway, railway line, drain; pole, tree, scaffold, ladder; fume cupboard, local exhaust ventilation, bio-safety cabinet, radiation laboratory; presence of children, elderly people or people with limited mobility, sight or hearing in the vicinity.
- Precautions before starting work – for example, where to find information about particular hazards, such as material safety data sheets (MSDS), manufacturers' instructions, company safety manual, location – specific safety manual (such as for a laboratory); emergency procedures including information about nearest accident and emergency hospital; first aid equipment; associated documents such as inspection certificates (such as for lifting equipment); details about preparation of the area, materials and the people required before commencing task.

#### **Concrete Hose Kills Construction Worker**

A construction worker died after a concrete – hardened hose struck his head when a blocked concrete pump was cleaned in an unsafe manner.

There had been a delay in delivering new concrete to the piling rig which the man was operating. As a consequence, the concrete already in the flexible rubber hose began to harden, leading to a blockage.

It was decided to use compressed air to blow the concrete clear, but the end of the hose was not restrained. The hose flew up and hit the man's head, causing his fatal injuries.

The Health and Safety Executives (HSE) prosecuted the company on the grounds that it failed to carry out a formal risk assessment of the cleaning and unblocking of the rig, so there was no safe system of work. An HSE inspector commented, a risk assessment is the starting point for developing a formal safe system of work for operations. Once developed, clear instruction and training should then be given to those carrying out the work.

A court fined the company £75,000 and ordered it to pay costs of more than £34,400 for failing to ensure the health and safety of its employees.



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- Personal protective equipment to be used – for example, safety glasses, goggles, face shield, steel toe cap footwear, non-slip foot wear, chemical resistant footwear, chainsaw boots, gloves; laboratory coat/back-opening gown, apron, overalls; safety helmet, hair nets, ear defenders; respiratory protection.
- Step by step procedures for the task
- Clean up procedures- for example, removing swarf, decontaminating glassware, cleaning work benches, transporting and storing hazardous materials, removing animal carcasses.
- Waste disposal procedures- for example, for chemical, biological or radioactive waste; broken glass; wood dust; rinsing water.
- Emergency procedures – for example, specific instructions for what to do in the case of a chemical spill, power outage, explosion, injury to someone working at height.
- Procedures for lone or isolated working conditions after work hours – for example, prohibited activity at specific hours; access out of normal working hours; buddy system where at least two people work together or in close proximity; regular contact arrangements for lone or isolated workers; such as foresters and agricultural workers

### **Reviewing the document**

When a draft document is complete, the safe system of work should be reviewed by a supervisor, manager and a safety representative, then signed and dated by them.

### **Implementing Safe Systems of Work**

Safe systems of work must be communicated to staff. This is often the responsibility of a supervisor. Ideally, the system should be explained face to face, perhaps with a walk through if appropriate. This may form a part of induction, job – specific and refreshers training. In some occupations where staff work at different sites each day, the supervisor may need to explain the safe system of work everyday for the particular site and task. This may be known as a toolbox talk or job briefing.

A written copy of the system should also be readily available for reference. In some workplaces a notice of the safe system of work could be displayed next to a piece of machinery. Alternatively, the system could be in a ready to hand safety manual or job envelop.

### **Liaising with other workers**

Where there are more than one employer on a site or in a building, the supervisor should ensure that other contractors and employees are clear about what needs to happen to ensure that work is safe. This liaison with others is a legal requirement.

### **Keeping the system effective**

No system is effective unless it is followed. Managers and supervisors must ensure that staff works in safe ways that conform to the appropriate safe system of work. From time to time the system should be reviewed as a matter of importance and adjusted if necessary. It should also be reviewed if there are any accidents or incidents (near – misses), or if employees or safety representatives raise safety concerns.

### **Worker Slipped on Hot Oil water Improvising Work System**

A supermarket was fined and ordered to pay costs because a catering worker was burnt by hot oil when improvising ways to empty a deep fat fryer.

The catering assistant had been emptying oil from a deep fat fryer into a plastic bucket when the bucket melted, spilling the oil onto her feet and the floor. She then slipped over and burnt her back.

Three months before the accident the fat fryer had been replaced with one without an integral filter and collection tray. The company was unaware of the change of design and failed to provide additional equipment for removing the oil safely, so staff improvised with the plastic bucket.

During the investigation it became apparent that there was no safe system of work in place of emptying the fryer. Poor training – where employees often train one another, reinforcing unsafe working practices – and inadequate supervision also contributed to the accident. Although risk assessment existed for fat fryers, the information was not passed on to all staff and was not reviewed when the new equipment was installed.

The council that instigated the prosecution commented that an extensive portfolio of policies, procedures and risk assessments are useless unless they are implemented at grass root level.

### **Types of Safe Systems of Work**

Safe systems of work can be created in various ways and under various titles. These include:

- Permit to work systems
- Isolation and lock- off systems
- Safe work instructions
- Vehicle management plans
- Safe work method statement

An example of one of these systems – permit to work – is given below.

### **Permit to Work**

A permit to work is a formal document specifying the work that a designated jobholder is allowed to do and the precautions to be taken. Permits to work may be issued to help control the risks in particularly hazardous situations or in non – routine circumstances. The permits are separate from certificates of competence and they authorise named individuals or specific jobholders to carry out specified tasks, to work in specified areas or to work at specified times.

They might, for example, be issued for the use of certain powered equipment such as chainsaws, for working in confined spaces or on overhead electricity cables, for carrying out excavation work, working near railway lines or working at height. Non – routine work requiring a permit to work includes anything



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that creates non – typical health and safety risks.

These might occur during annual or emergency maintenance or repair, deep cleaning, equipment installation and refurbishment or the use of specialised equipment not usually in that working environment.

Employees working away from their own base – on another company's site or premises, for example – must abide by all permits to work being operated on that site.

### **Who Can Issue Permit?**

The issuance of permits to work should be toughly controlled. Only named, authorised and competent people should be allowed to issue permits to work. They might include managers and supervisors.

### **What should be specified?**

Permits to work should be written. They should identify the level of competence and any specialist skills of all individuals issued with a permit. They should list isolation and pre work precautions, the prohibited activities (communicated to others as necessary), the plant and equipment required and the personal protective equipment (PPE) to be used.

The sequence of work to be undertaken should be stated, together with hazards identified and any residual risks. The controls should be clearly defined; any emergency procedures for all foreseeable risks should also be included. Most permits cover work for 24 hours and need an authorising signature for extra time.

### **Communicating the permit requirements**

Workers who are required to operate under the permit system should be briefed fully on the hazards and controls necessary. This should be done by a competent person such as a supervisor or team leader who must be familiar with all the details of the methods and sequence of work and all the emergency procedures.

It is also advisable to explain what will happen after any emergency – such as instructions to stop work and leave the area untouched.

A notice explaining that a permit system is in operation should be displayed clearly at the work site or isolation point to remind everyone of what is required.

## **Legal Requirements**

Employers and the self – employed have a duty under the health and safety at work etc. act 1974 or the health and safety at work (Northern Ireland) order 1978 to ensure the safety of people at work and anyone else affected by work activities. The legislation specifically requires safe system of work. The management of health and safety at work regulations 1999 require risk assessments to be carried out and competent people to be appointed to assist in doing so.

Information about the performance of a workplace is essential if an organisation is to manage health and safety successfully. Monitoring, inspecting and auditing can provide the information required. The key is to identify and collect the right information and use it effectively.

#### Key Words and Phrases

**Active monitoring** – regular proactive measurement of performance against safety management standards and targets.

**Audit** - a formal examination against a fixed standard by competent people who are independent of the area of work being audited.

**Competent person** – a person with the appropriate qualifications, knowledge and experience to identify the risks arising from a situation and the measures needed to control them.

**Examination** – in a health and safety context, checks on equipment that are more thorough but less frequent than inspections.

**INSPECTION of equipment** – checks on items of equipment to verify that they can be operated, adjusted and maintained safely.

**INSPECTION of the health and safety system** – the assessment of the health and safety performance of a workplace, which enables any necessary remedial measures to be taken.

**Monitoring** – regular, often, daily checks on what is going on in the workplace to help deal with problems as they arise.

**PRE-USE check** – a check on equipment by an operator before using the equipment.

**Reactive monitoring** – the reporting and investigation of incidents and accidents relating to health and safety.

**RISK ASSESSMENT** – a systematic process for identifying workplace hazards and assessing the risks involved from those hazards.

### Checking the Essentials

Managers, supervisors and safety/employee representatives all have a role to play in the monitoring, inspection and auditing of an organisation's health and safety. Monitoring is usually done by supervisors who then report to managers.

Inspections can be carried out by safety representatives. A health and safety consultant might be contracted to carry out the audit with the assistance of a supervisor and safety/employee representative. The audit report will then be considered by a manager.

Monitoring, inspection and auditing considers the factors responsible for causing accidents and ill-health in the workplace. By looking at the human, organisational and environmental factors in the workplace and the work activities, the root cause of injury and illness can be identified so that hazards can be eliminated or controls applied that reduce the risk of accidents and ill health.

For monitoring, inspection and audit systems to work properly, there is need for:

- Proper allocation of financial and staff resources
- Commitment from managers, supervisors, safety/employee representatives and employees alike
- Agreed inspection and auditing procedures
- Adequate training and information for all involved in the systems
- Regular reviews of the organisation's performance.

They can be carried out from a number of viewpoints such as the work environment, the particular occupation of the worker or the organisation's health and safety policy.

### Monitoring

Monitoring can be either active or reactive. Active monitoring is the process of checking the day to day operations of the health and safety management system. It is the regular proactive measures of performance against safety management standards and targets. It involves keeping an eye on what is going on and helping to deal with problems as they arise. Regular monitoring should help to identify the strength and weaknesses of the system. Active monitoring includes methods such as safety inspections, tours of workplace and surveys.

Monitoring can be impromptu or at set times: as you work around the workplace you can check for variations in the way tasks are carried out, spots hazards, and discuss health and safety issues with employees, or you can arrange specific monitoring meetings.

Risk assessments allow you to monitor the existing controls and to recommend improvements for implementation.

Reactive monitoring is the reporting and investigation of incidents and accidents, whether these relate to people, processes, properties or the combination of the above mentioned. The process includes recording, investigating and examining information about accidents, ill health and complaints by employees about health and safety conditions.

### The importance of keeping record

Apart from investigating incidents and accidents, much of reactive monitoring is about keeping and analysing records. So one of the indicators of a good health and safety culture is the quality and type of records kept by the organisation.

Examples of the types of records you should keep include those dealing with:

- Training
- Fire drill
- Alarm testing
- Electrical equipment testing
- Plant and equipment maintenance
- Operation or processes
- Accidents and incidents investigation
- RIDDOR report
- Accident form
- Sickness and absence reports
- Safety committee minutes
- Inspections
- Audits of safety systems
- Work with hazardous substances – such as ionising radiation, lead and asbestos- or working with excessive noise or compressed air

When record have been analysed, they can:

- Demonstrate the company's history of safety management
- Identify long-term trend
- Be used to plan maintenance or identify training needs
- Be used as evidence in case of litigation or prosecution
- To be used to measure the effectiveness of control measures
- Show the identified hazards and the control measures put in place
- Be used by managers to conduct regular reviews of, for example, work processes/systems and health and safety performance.

Regulations such as the Health and Safety Executives can also use information gathered through the reporting of injuries, diseases, and dangerous occurrences Regulations 1995 to target health and safety issues- for example, the better back campaign and the ladder safety campaign.

### Inspection

The term inspection has various meanings. When used in relation to a specific item of equipment, the purpose of an inspection is to identify whether the equipment can be operated, adjusted and maintained safely so that any deterioration can be detected and remedied before it results in unacceptable risks. The process of inspection is more thorough and more formal than the routine checks that the employees would do- for example, the pre- use check before starting work with a chainsaw.

In relation to the overall performance of the health and safety management system, an inspection is the assessments of the health and safety performance of a workplace, which enables any necessary remedial measures to be taken.

A competent person should carry out the inspection. He/she should be familiar with the workplace practices and the health and safety standard of the workplace. It is good practice for inspections to be carried out at least every six months, records of the inspections should be kept for three years. Inspection report should be given to managers responsible for health and safety for any corrective work to be done.

### What is included in an inspection of the system?

An overall inspection of the health and safety management system does not necessarily have to cover all of the matters in the checklist below. Matters to be inspected could include checking that the:

- Safety policy is up to date and available
- Safety committee minutes are available
- Accidents and ill health records are up to date and available
- Training records are up to date and available
- First aid facilities are available and up to legal standard
- Control of substances hazardous to health – records of assessments and safety data sheets available and up to date.
- Health surveillance records available and up to date.
- Display screen equipment risk assessments available and up to date
- Manual handling risk assessments available and up to date
- Records of disposal of hazardous waste available and up to date.

Fire precaution include ensuring that the:

- Alarm test records are up to date and available
- Means of escape are clearly marked and visible
- Detectors are tested and record kept
- Fire extinguishers are available and records of testing available and up to date
- Training record available and up to date
- Fire drill records available and up to date
- The storage of flammable substances is up to standard



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Other checks include:

- Workplace
- Lighting
- Temperature
- Ventilation
- Cleanliness
- Storage
- Toilet and washing facilities
- State of repair
- Fire escape routes
- Equipment
- Guarding
- Maintenance
- Electrical equipment inspection and testing
- Pressure systems examinations and records
- Fire-fighting equipment
- Fire protection facilities
- Lifting equipment examination and records

You can customise your own checklist and compare the existing conditions observed against the relevant standards of health and safety.

The inspection report should note where unsatisfactory conditions occur and should make the recommendations on any work that needs to be done to ensure that health and safety standards are maintained at a high level.

### **Examinations**

Examinations, which apply only to equipment, are more thorough but carried out less often than inspections. The extent of a thorough examination depends on an assessment of a risk, based on the type of equipment where it is installed and how it is to be used. Examination is done so that deterioration can be detected in sufficient time for remedial action to be taken.

Examination must be done by a competent person. Examples include the thorough examination of pressure systems or lifting equipment.

### **Auditing**

An audit is a systematic detailed assessment of the health and safety management system. It involves collecting information on the efficiency, effectiveness and reliability of the health and safety management system and measuring it against a fixed standard.

Auditing complements the routine inspection and monitoring of health and safety systems and goes deeper into the operation of the health and safety management system than monitoring or inspection. For example, if you want to audit a health surveillance system, the audit would try to find out whether:

- All employees exposed to risk are included in the health surveillance programme
- The people operating the health surveillance system are competent to do so
- Proper records are kept and analysed
- The person responsible for health and safety in the workplace has seen the system records.

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Auditing the health and safety management system helps to establish whether appropriate management arrangements are in place and helps you to make changes and improvements throughout the whole system. The conclusion and recommendations from an audit can help to:

- Identify weaknesses in the system
- Make improvement in the health and safety policy
- Improve the organisation of the health and safety management system
- Develop the planning of the system and the implementation of the policy
- Continuously improve the performance measurement and the review of the system
- Reduce accidents and ill health

### Carrying out the Audit

An audit should be carried out by an independent, competent person, experienced in auditing health and safety management systems. Good practice is for an audit to be carried out every year, not minding the size of the organisation, be it by department, function (for example, maintenance) or hazard (for example, electrical). Auditors should assess the records, question employees and observe procedures.

The aim is to evaluate the:

- Ability of the organisation's managers to produce and implement a health and safety policy to control health and safety risks
- Communication and consultation arrangements for involving the organisation's employees
- Training system and competence of employees
- Health and safety risk control system
- Health and safety measures and procedures
- Performance management system
- Monitoring and inspection of arrangements
- Accidents recording and investigation system
- Compatibility with the organisation's main management system.

The audit can use a scoring system – for example, measuring the percentage of compliance against a pre-set standard.

Below is an example of the difference between an inspection and an audit

Inspection: light bulb missing Action: replace the bulb Audit: light bulb missing

Question: is there inadequate lighting? is there a system to assess lighting level? Why has it not been followed?

Action: determine the root cause and put in place a system by which light bulbs are replaced when broken and lighting is inspected regularly so that lighting is adequate at all times.

### Legal Requirements

The management of health and safety at work regulations 1999 requires every employer to make arrangements for the effective planning, organisation, control, monitoring, (including audits) and review of the preventives and protective measures for health and safety of his employees and others. The appropriate arrangements depend on the nature of the activities and size of the business. Where there are five or more employees, the employer must record the arrangements.

The provision and use of work equipment regulation 1998 says that every employer must inspect work equipment after installation and before being put into service for the first time to ensure that it has been installed correctly and is safe to operate. Employers must also inspect work equipment exposed to extreme conditions at the suitable intervals and record the result of such inspection.

### What is Health Surveillance?



Many organisations now actively promote the health of their employees in addition to taking preventive and precautionary measures. Some employers provide advice and assistance on topics such as smoking, diet and exercise.

Others have introduced general health screening even if the employer is not required to do so. A programme of health surveillance is required by law in certain circumstances, such as where substances hazardous to health or radiation are involved.

#### **Key Words and Phrases**

**Environmental Monitoring** – test to determine whether the work environment is safe and healthy for workers.

**Health Surveillance** – the systematic monitoring of the health of any worker who may be exposed to harmful substances or harmful work activities.

**Medical health screening** – medical test to determine the health status of individuals at work.

### **What is Health Surveillance?**

Health surveillance involves the systematic monitoring of the health of any worker who may be exposed to harmful substances or harmful work activities. The purpose of the surveillance is to identify adverse health effects or inadequate health and safety controls.

### **Types of surveillance**

Generally, there are two types of health related surveillance at work- medical health screening and environmental monitoring.



Medical health screening slows early detection of specific work related illnesses. It enables employers to prevent ill health and evaluate the need for changes that reduces the risk of the disease.

Various techniques of medical health screening are used including:

- Biological monitoring- testing employees for harmful substances in the body
- Eyesight and hearing test
- Lung capacity test chest x-rays
- Manual dexterity assessments- for example, test to determine whether a person has repetitive strain injury or back damage
- Physical examination- for example, hairdressers can identify skin irritation by observing symptoms and reporting them to their supervisors
- Interview

Environmental monitoring can assist a health surveillance system by linking environmental result to medical results.

Such monitoring includes:

- Environmental sampling – for example, the measurement of harmful substances in the air
- The use of noise dose meters - meters that indicate the level of noise to which an individual is expose to in the office.
- The use of breathing zone air monitors – similar to noise dose meters, but for measuring the amount of a harm substance being breathed in by an employee.

### **Why Monitor Employees' Health?**

The main aim of monitoring the health of employees is to protect them from harm, but individual privacy must also be considered. Health surveillance should be used only where it is likely to benefit those at risk, because it provides essential information on the effectiveness of control.

Health surveillance is normally used in order to:

- Measure the body's absorption of toxic substances
- Look for adverse effects on the body at an early stage
- Identify from clinical and personal records any work-related diseases in groups of employees
- Identify and protect employees who have greater risk of poor health than others before they start a job that may expose them to harmful substances or other health hazards. It is common for employees in some organisations to wear Personal Protective equipment in a situation where hazards cannot be controlled by other methods.

Employers can use health surveillance procedures to identify workers who may have adverse health symptoms and to find out whether the workplace health and safety precautions are adequate. If the measures are inadequate, then health surveillance should indicate which other measures need to be introduced. Some common symptoms of work related illness are easily confused with non-occupational illness. Expert diagnosis is needed to pinpoint work related causes. This can be a complex and lengthy process.

### **When to Monitor Employees' Health**

Employers must ensure that their employees are provided with health surveillance appropriate to the risks to their health and safety that have been identified by a risk assessment.

The following criteria should be used to decide whether health surveillance should be introduced.

- There is an identifiable disease or adverse health condition related to the work
- Valid techniques are available to detect the disease or condition
- There is a reasonable likelihood that the disease or condition may occur under the particular conditions at work
- Surveillance is likely to increase the protection of the health of the employees concerned.



### **Monitoring at different stages**

Health surveillance can be done at different stages of an employee's employment – at recruitment or before transfer to a job with health risks, for example. It can also be done during work involving a risk to health and even after the exposure to the health hazard has stopped.

Surveillance can also help to predict whether someone is likely to be at risk from developing work-related diseases from harmful substances used in the workplace. For example, where a person is susceptible to skin conditions, some substances can make the condition worse. Health surveillance may help to prevent this exposure occurring.

Information from monitoring health can set a baseline for later comparison with the results

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of surveillance carried out over a long period. For example, a hearing test at the beginning of an employment contract involving noisy work establishes the state of the employees hearing abilities at that time. It can be used to compare with later hearing test to establish whether there has been any deterioration in hearing ability.

Surveillance after exposure has stopped is useful to detect long term ill health effect such as mesothelioma (cancer of the lining of the lungs, usually due to asbestos exposure). This can help to detect the disease at an early stage, so that, should it occur, appropriate treatment can be given

### Biological Monitoring

Biological monitoring is used to find out if a substance is being absorbed into the body. The technique is typically used to monitor lead or pesticide levels in the blood. Results can suggest whether existing controls are adequate and can help to identify employees who are over- exposed and need to be given additional protection or moved from the job.

Surveillance can also help to identify insufficient control of a harmful substance – for instance, where ventilation controls are inadequate to deal with airborne lung allergens, such as those in wool-processing workshops.

### Harmful Substances

Where harmful substances are in use, there must be a health surveillance programme. This is required by law for asbestos, lead and ionising radiation, for example. Employees working in compressed air or diving operations must also receive health surveillance.

### Some Important Precautions

There are some issues which employees should know before they participate in a health surveillance programme and there should be certain safeguards for privacy in place.

- Employees should give their consent to participating in the programme, or it should be a clear, prior condition of employment that they must take part.
- Employees should be given information about the possible consequences of surveillance- for example, the possibility of discovering adverse effects. (Supervisors or managers can be trained to recognise the symptoms of some conditions that may indicate health problem in their particular workplace- for example, skin condition such as redness, itching and soreness from substances which can damage the skin.
- The programme must be under the direction of a competent person- for example, an occupational health doctor or occupational hygienist.
- The information obtained from the programme must remain confidential but should be available to the individual employee at any time.
- Details should be passed on to third parties, such as the health and safety executives, local authority or court, only with the written consent of employee
- Employees cannot be dismissed because they are at high risk of developing work-related diseases, unless there is detailed and thorough medical assessment and they have been given a full explanation of what has happened. Job redeployment should be considered first.
- There should be a system of quick referral for medical advice and treatment in the event that adverse effects are detected, so that treatment can be given at the earliest stage possible.





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### Health Surveillance Records

Sickness records are an important source of information in health surveillance and can be an early indication that something is wrong in the workplace. The details included in health surveillance records are likely to be:

- The name of the employee
- Sex of the employee
- Date of birth of the employee
- Employee's address and other contact details
- Employee's national insurance number
- Date the employee started his or her current employment
- Current health surveillance details, including the type, frequency and result of test
- Details about the employee's previous job that involves exposure to harmful substances
- Dates of previous health surveillance
- Comments made concerning previous health surveillance
- The name of the competent person carrying out the health surveillance

More detailed records can be kept for at least 40 years from the date of the last entry.

### Managing a 'Return to Work'

Managing an employee's return to work after illness can help to create good relations with workers, reduce profit losses and increase productivity.

Organisation should record and monitor sickness absence, the reason for absence and the time taken off.

Managers or supervisors should keep in contact with people on sick leave and consider arranging to visit workers who have been off work for some time to discuss their progress and when they hope to return to work. When an employee is ready to return to work, managers should discuss the return and any circumstances or practices that could continue to have adverse effect on the person's condition. (This should be based on the advice of a suitably qualified occupational health staff). Managers should ensure that employees returning to work after long term sickness absence are not subjected to excessive demands during their planned return. This can be done through an informal interview at their home or on their return to work.

### Taking it Further

You can get advice and practical help about health surveillance from an occupational health adviser or from the Employment Medical Advisory Service which is part of the Health and Safety Executive.

### Legal Requirements

According to the management of health and safety at work regulations 1999 every employer must ensure that employees are provided with health surveillance appropriate to the risks to them that have been identified by a risk assessment.

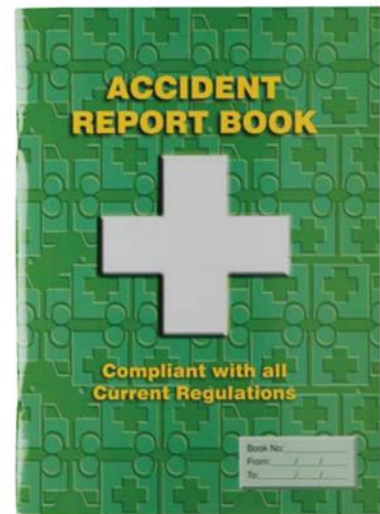
There are many sets of regulations that require specific health surveillance of employees who work with hazardous substances. Example include the control of substances hazardous to health regulations 2002; the control of asbestos regulations 2006; the control of lead at work regulations 2002; the ionising radiations regulations 1999; the control of noise at work regulations 2005; and the control of vibration at work regulations 2005.

### Accidents and ill Health Reporting

Recordings and reporting accidents, ill health and dangerous occurrences can help organisations to reduce accidents and ill health in their own workplace and in others around the country.

There are legal requirements to report some types of injuries and illnesses. The health and safety executives analyses these reports and uses the results to help shape national policy on health and safety at work and priorities for action. The better backs campaign for example was based on reported accident information.

Under social security legislation there are also requirements to keep records of accidents at work.



#### Key Words and Phrases

**Accident** – any unplanned event that results, or could have resulted, in personal injury or ill health; damage to, or loss of, property, plant or materials; damage to the environment; or loss of business opportunities.

**Dangerous occurrence** – a hazardous incident that arises out of, or in connection with, work and is specified in RIDDOR.

**Reportable accident** – an accident that must, by law, be reported to the enforcing authorities. Such accidents are those resulting in death, major injury, injuries that cause an employee to take more than three days off work and dangerous occurrences.

**Reportable DISEASE** – a disease that arises out of, or in connection with, work and is specified in RIDDOR.

**RESPONSIBLE person** – an employer, the duty manager, a self-employed person, the owner of premises or a vehicle, or the person in control of the premises at any one time.

**RIDDOR** – the reporting of injuries, diseases and dangerous occurrences regulations 1995.

### Why Report & Record Accidents & Ill Health?

There should be an effective system for reporting and investigating accidents and ill health in all organisations. The procedures should be clearly established in writing and all staff should be trained in the system.

The principal objectives for the system should be to:

- Enable prompt remedial action to be taken
- Prevent a similar occurrence in the future
- Ensure compliance with legislation
- Comply with a company instruction, usually in the health and safety policy
- Detect trends
- Assist decisions making, planning and resource allocation.

### Failure to report and record Ill Health

Many accidents and incidences of ill health go unreported and this can affect the health and safety performance of an organisation, as well as its compliance with the law.

A failure to report accidents or ill health can starve the organisation of an essential source of information which could be used to shape changes in work practice.

Employees may be reluctant to report accidents or ill health for a number of reasons – for example, they may:

- Think that the accident or incident is too trivial
- Not appreciate the benefits of reporting accidents and ill health
- Not relate ill health to work
- Worry that reporting wastes time
- Fear a reprimand by the manager or supervisor
- Believe there is pressure from managers to keep down the number of reported accidents
- Not want to admit errors for fear of appearing incompetent
- Not want to fill in forms
- Worry that they will lose pay or their job.

### Encouraging good practice and legal compliance

Managers, supervisors and safety representatives have a crucial role to play here. They can encourage staff to report accidents by:

- Removing any fear of reprimand from employees who do report accidents or ill health
- Running appropriate training sessions and providing regular reminders
- Setting up a reporting system that gives all reports of accidents and ill health equal importance
- Investigating all accidents or incidence of ill health
- Taking immediate remedial action and longer-term measures in the light of the hazards and their risks identified by investigation.
- Including accidents and ill health in safety meeting agendas
- Informing employees of the outcomes of anything they reported.

### Legal Reporting Requirements

Some accidents and ill health must be reported to the enforcing authorities. These are reportable accidents or reportable diseases as defined by the reporting of injuries, diseases and dangerous occurrences regulations 1995, sometimes referred to as RIDDOR.

Employers must report the accidents, diseases and dangerous occurrences specified in the regulations.

Examples include:

- The death of an employee, self-employed person or a member of the public
- A major injury to an employee or a self-employed person
- Accidents that result in a member of the public being taken to hospital
- Injury to an employee or self-employed person that prevents them from doing their normal work for more than three days
- A reportable disease related to work
- A **dangerous occurrence** – an incident arising from, or in connection with, work and which is specified in RIDDOR, such as the collapse of a scaffold more than 5m high or the failure of a load bearing part of fairground equipment

### **Types of Major injuries to Report**

Examples of a major injuries include:

- Any injury to a feature other than the fingers, thumbs or toes
  - Any amputation
  - Dislocation of the shoulder, hip, knee or spine
  - Loss of sight (whether temporary or permanent)
  - A chemical or hot metal burn to the eye or any penetrating injury to the eye
  - Any injury resulting from an electric shock or electrical burn (including any electrical burn caused by arcing or arcing products) leading to unconsciousness or requiring resuscitation or admittance to hospital for more than 24 hours
  - Any other injury:
    - Leading to hypothermia, heat-induced illness or to unconsciousness
    - Requiring resuscitation
    - Requiring admittance to hospital for more than 24 hours

### **Over three day injury**

An over three day injury is one that is not a major injury, but results in the injured person being off work for more than three calendar days. This means three consecutive days, but does not include the day of the accident. Non-working days should be counted in the three consecutive days.

It is important to note that an accident includes physical violence to a person at work and should be reported if it results to death, major injury or an over three day injury.

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### **Dangerous Occurrences**

A dangerous occurrence is an occurrence arising out of, or in connection with, work and which is specified in RIDDOR. Examples of dangerous occurrences are:

- The collapse, overturning or failure of a load bearing part of any lift or hose, crane or derrick, mobile powered access platform, access cradle or window cleaning cradle, excavator, pile-driving frame or fork-lift truck.
- Electrical short circuit or overload attended by fire or explosion which results to the stoppage of the plant involved for more than 24 hours or which has the potential to cause death.
- Plant or equipment coming into contact with overhead power lines
- Accidental discharge of a biological agent that is likely to cause severe illness.

### **Diseases**

Specified diseases include:

- Certain poisoning
- Some skin diseases such as occupational dermatitis, skin cancer, chronic ulcer and oil folliculitis/ acne
- Lung diseases including occupational asthma, farmer's lung, pneumoconiosis, asbestosis and mesothelioma
- Infections such as leptospirosis (Weil's disease), all types of hepatitis infection, tuberculosis, anthrax infection, legionellosis and tetanus
- Other conditions such as occupational cancer, certain musculoskeletal disorders, decompression illness and hand/arm vibration syndrome.

Such diseases must be diagnosed by a doctor and the employee must be engaged in the work activities specified in RIDDOR.

### **Reporting an Accident Involving a Member of the public**

An accident involving a member of the public that arises from, or in connection with, work activities must be reported to the incident contact centre if the member of the public is killed or is taken to hospital directly from the accident scene.

How do you determine whether an accident arises out of, or in connection with, work? You need to consider the following three issues:

- The way the business is run – how it is organised, supervised or performed by an employer, or any of its employees, or by a self-employed person.
- The plant or substances used to carry out the work- for example, lifts, air conditioning plant, any machinery, equipment or appliance, gas installation or substance used in the premises or in any process in the workplace
- The condition of the work premises, or any part of them – this includes the state of the structure or fabric of a building or an outside area forming a part of the premises, and the state and design of floors, pavements, stairs, lighting and so on.

### Examples – Reportable Accident

The following three accidents are reportable because they arose in connection with work.

1. A shopper is injured using a shop escalator. The design or condition of the escalator is the cause of the accident.
2. A resident in a nursing or residential care home trips and falls over an obstruction, such as an electrical cable lying across the floor.
3. A member of the public who is visiting a factory is overcome by gases that escaped accidentally from a process being carried out and is taken to hospital.

### Examples – Non Reportable Accident

The following three accidents are examples that may be reportable.

1. A child falls off a safe piece of play equipment while being supervised by the parents.
2. Death by natural causes of a patient/resident in a nursing residential care home
3. A person in an ice rink, using his or her own ice skaters, falls while skating on the ice.

### Who must make the report?

The duty to report/notify accidents, ill health, deaths and dangerous occurrences falls upon a responsible person. That person may be the employer, the duty manager, a self-employed person, the owner of premises or a vehicle, the person in charge of the premises or the process at the time of the accident or incident. Supervisors may also be given the duties of a responsible person.

A reportable injury of a travelling employee, such as a postman, delivery driver, refuse collector or service engineer, has to be reported by that person's employer if the accident causing the injury happened while he or she was working away from base.

### Accident Records

Employers must keep records of accidents, ill health and dangerous occurrences at work. They can do this in several ways, such as by:

- Using an amended accident book BI 510 (which has perforated, tear-out forms to comply with data protection legislation)
- Keeping photocopies of completed F2508/F2508W forms
- Storing information about each accident on a computer.

Accident records should be readily available to inspectors and to employees concerned. Safety representatives have the legal rights to inspect and take copies of accident records.

Records of injuries/conditions, dangerous occurrences and diseases must be kept for up to three years. They should include the following information:

- Name of the person who was injured or ill
- Date and time of accidents or illness notification
- Location of accidents
- Details of any witnesses
- The activity, equipment or substances involved
- Environmental conditions – for example, floor condition, lighting, ventilation and space available
- What was done and how
- The training, skill and general health of the person injured or ill
- Previous similar incidents
- Witness comments
- Supervisor's comments
- Any treatment given
- Action taken in the short term and long term
- If and when notified to the enforcing authority

### Legal Requirements

The reporting of injuries, diseases and dangerous occurrences regulation 1995 requires that a responsible person must notify and send the report to the health and safety executive of accidents that result in fatality or major injury, or when an employee is absent from work for more than three days as a result of work-related accident. Certain specified diseases and dangerous occurrences must also be reported.

Separate legislation requires records to be kept of all accidents and incidents at work.



### When to Carry out Accident Investigations

No one wants an accident to occur in their workplace and responsible employers do everything possible to ensure that none occurs. But what should you do if, despite all your best effort, something does go wrong and an accident occurs?

An accident investigation is an opportunity to find out what happened and to introduce changes aimed at preventing a similar accident.

#### Key Words and Phrases

**Accident** – any unplanned event that results or could have resulted, in personal injury or ill health; damage to, or loss of, property, plant or materials; damage to the environment; or loss of business opportunity.

**Incident (near-MISS or near-MISS accident)** – an unplanned event that does not result in personal injury, death or damage, but has the potential to do so.

**Representative of employee safety** – an employee elected by non-union employees to represent them on health and safety matters.

**RIDDOR** – the reporting of injuries, Diseases and Dangerous Occurrences Regulations 1995

**Safety representative** – an employee elected by a trade union member to represent them on health and safety issues.

**Safe system of work** – a set of procedures for carrying out task safely.

### Why Investigate Accidents?

A detailed investigation of an accident or a near-miss should be carried out as soon as possible, so that remedial action can be taken to prevent further accidents. The investigation should aim at establishing the:

- Sequence of events that led to the accident
- Unsafe acts or conditions
- Root cause of the accident

Accidents and ill health can indicate that risk control measures have failed. A full investigation can reveal a weakness in the controls that need to be remedied.

Organisations should investigate all accidents and incidents, as the information gained can help to protect employees and others. Data obtained in the investigation can then be used to develop safe system of work and safety strategies to ensure compliance with legislation. An investigation will also reveal whether a company health and safety policy and procedures have been followed.

Staff morale can be damaged by an accident. An investigation followed by rapid implementation of corrective measures can help to restore confidence and commitment because it demonstrates the employer's determination to maintain high standards of health and safety in the workplace.

### Who Should be Involved?

Accidents should be investigated by people such as the organisation safety officers/advisers, if there is one, a safety representative (or representative of employee safety), a manager and the supervisor of the job involved. You may be one of the people involved in drawing up the report.

Employees who were involved in an accident, or were witnesses, may be reluctant to give as much information as they could for fear of being blamed. Including safety representative/representatives of employees' safety in the investigation team can give employees the confidence to co-operate fully. Witnesses include anyone who was hurt or who saw the incident and anyone who was, or might have been, involved in any part in a chain of events that could have contributed to the accidents.

Whoever is involved in the investigation should be competent to do the investigation and should have the skill and experience to:

- Explore the possible cause and question the people involved
- Understand the relevant records and documents
- Avoid bias, deal fairly with conflicting views and not make premature or unsound judgements
- Gain respect and confidence
- Recognise the significance of all the likely contributing factors
- Have the authority to make recommendations.

People from outside the organisation may also want to investigate the accident – for example, a health and safety inspector from the health and safety executive or an environmental health officer from the local authority.

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If a civil claim for compensation is made against the organisation, the company's insurer will also need to carry out their own enquiries.

If a death occurs, the police (coroner or a procurator fiscal) may be called in to organise an investigation if there is likely to be an inquest or a sudden death investigation. Employers and employees have legal duties to co-operate fully with these officers.

### **What May Be Involved?**

An investigation is shaped by the circumstances of the accident, but there are many common features and steps you should consider.

### **Dealing with an accident**

The first priorities are to give first aid and make the immediate area safe. Someone should access the scene of the accident to prevent further accidents from happening. For example, if the injured person slipped on a wet floor, the area should be 'out of bounds': if the accident involved a machine, it should be switched off; or if a fire has broken out, people should be evacuated from the building.

If the injury is such that medical attention is needed, then an ambulance should be called. Someone should wait for the ambulance and direct it to the scene of the accident. Someone should note the details of the injured person if possible. If it is not possible then, the paramedics should be asked to inform the injured person to contact their employer when they can.

If the accident comes within the scope of RIDDOR, a request must be submitted in accordance with the regulations. A report should also be submitted to the appropriate job holder in the company or organisation.

### **Investigating an accident – Step 1**

The first step in the investigation is to gather information by inspecting the area where it happened, noting the physical and the environmental conditions and any damage caused. You should decide whether the condition of the premises or area where the accident happened is a factor in the accident. If not, does it involve equipment or harmful substances? Look at the work procedures if you suspect that they have not been followed. Were any controls not in place or tampered with? Were the work procedures adequate to prevent accidents from happening?

Consider whether an employee or several employees contributed to the accident. Were they playing around? Were they competent to do the job? Had they been adequately trained, and are the training records up to date? Had the health and safety risks been adequately explained? Had they been given sufficient information to carry out the task? Was the employee under the influence of alcohol or drugs or under stress? Alternatively, the investigation could be organised by looking at the typical factors involved in accidents such as occupational factors, environmental factors, human factors and the organisational factors.

Decide whether photographs or measurements of the position of relevant objects would be useful. Consider taking samples of substances or articles involved.

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### Step 2

The second step is to interview any witnesses, including the injured person if possible, and anyone else who could give relevant information.

Emphasize that the interviews are confidential. It is important not to attribute blame and to bear in mind that there is rarely only one cause of an accident. If a health and safety enforcement officer visits the premises to investigate the accident, he or she should be given as much co-operation as necessary to assist in his own investigation.

### Step 3

The third step is to analyse the information gathered and to discuss possible conclusions with other members of the investigating team and, if necessary, to review the working procedures and risk assessment for the activities involved in the accident. Was the work procedure followed and was the risk assessment adequate? Did it foresee the accident? Were the controls identified by the risk assessment followed or not?

### Step 4

The fourth step is to compile a written report containing all the facts and any proposals for improving conditions, procedure or policies in the health and safety management system. Identify any control measures that are necessary to prevent a similar accident. Set priorities and timescales for improvement and establish how changes will be monitored and success judged.

### Step 5

The fifth step is to implement the recommendations of the investigating team. It is likely that a supervisor will be given the responsibility of implementing the action plan and reporting back to management once all actions have been completed. The measure taken will need to be checked and used as a help to make a checklist covering the important points.

#### Example of an Accident Investigation

A worker suffers an electric shock from a defective electric drill. Once the worker has been treated and as soon as it is safe to do so, the drill should be inspected by a competent person who can determine where the drill was faulty, and if so, what that fault was.

An attempt should also be made to find out what led to the electric shock occurring. Was there a design fault in the drill? Was the drill over-used and poorly maintained? Was it due to someone interfering with the drill's safety controls?

The following list has suggestions for some of the questions that could be asked during the investigation.

- Why did the drill give the worker a shock?
- If the drill is found to be defective, why was the problem not found during the regular maintenance inspection?
- What was the condition of the area of the workplace in which the worker was working?
- Was the worker trained to use the drill?
- Was the worker told not to use the drill by a supervisor, manager or someone responsible for its maintenance?
- When was the drill last inspected and who inspected it?
- Was the supervisor or manager aware of the condition of the drill?
- Who was responsible for ensuring that the drill was maintained?
- Were the maintenance and inspection records updated?

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Depending on the answers to these questions, the solutions could be one or more of the following actions:

- better maintenance procedures
- improved training and instruction
- clearer individual responsibilities
- better communication
- drill replacement
- Drill repair.

If we look back to the cause of the accident, we can see that the unsafe act was using the defective drill and the unsafe condition was the defective or damaged drill.

### Legal Requirements

There is no legal requirements to investigating accidents or incidents, but there is guidance on investigating accidents that gives reasons for and benefits of doing so. (See Investigating accidents and incidents – a workbook for employers, safety representatives and safety professionals HSG 245.)

The Management of Health and Safety Work Regulations 1999 requires employers to review their health and safety arrangements at intervals. Following an accident, employers should review their arrangement by investigating the accident and implementing the findings.

An accident investigation would help to inform that review.

Training is an essential part of health and safety management and control. It prepares employees, through the means of information, instruction and practice, to achieve a desired skill, knowledge or competence.

Training is very effective in reducing the likelihood of injury because the employee is made to be aware of the hazards, risks and controls involved in work activities. Trained employees make fewer mistakes and they often do a better job all round.

Managers, supervisors and safety representatives are often in a position to influence the type and extent of the health and safety training provided for employees, and some are qualified to provide the training themselves.

#### **Key Words and Phrases**

**Information** – verbal or written advice, which should be in a style and at a level that is easily understood by the employees to whom it is being addressed.

**Instruction** – guidance or direction regarding a specific procedure or action.

**Performance indicators** – measurements used by an organisation to define and measure progress towards the organisation's health and safety goals.

**Training** – preparing a person to achieve a desired skill, knowledge or competence through the means of information, instruction and practice.

**Training NEEDS** – the type and extent of training the workforce or an individual employee requires.

### What Is Training?

**Training** can be described as the process of preparing someone to achieve a desired level of skill, knowledge or competence. This is usually achieved by giving information, instruction and practice.

**Instruction** is giving guidance or direction regarding a specific procedure or action.

**Information** is a verbal or written advice, which should be in a format and style that is easily understood by the intended listener or reader.

### Why Provide Training?

One of the underlying causes of accidents is lack of training for employees and others who may be affected by work activities.

So it is essential that employers provide well timed, good quality, appropriate and focused information, instruction and training for employees, and any others affected by the work activities. The benefits can include:

- a reduction in ill health in the workplace
- reduction in accidents
- reduction in costs of accidents and insurance
- an increase in Productivity
- The hazards identified in the workplace
- an improvement in the response to fire drills and emergency alarms
- customer satisfaction
- The organisation's reputation as a good employer.

### Responsibilities for Training

Employers must provide information, instruction and training for employees and people who may be affected by their business. Managers are usually accountable for this. They usually decide on the scope and type of training needed by the organisation. Supervisors and safety representatives are in excellent positions to influence the provision of training. They can advise managers about the type and scope of the training, and they can often plan and organise the training courses. Some may be able to run courses themselves.

You may be involved in assessing the organisation's or an individual employee's training needs, training is required to enable employees to work as safely as possible.

### Which level of training is needed?

Legislation sometimes specifies the type and level of training, instruction and information to be provided – for example, for first aiders.



### **New Employees**

Training should be given after someone has been appointed and when employees are exposed to new or increased risks.

The current knowledge, skills and experience of employees will also influence the type and level of training to be provided. For instance, a supermarket shelf-stacker who has received induction training on manual handling and who has been working in the shop for four years will not need a full course of instruction about manual handling, but may need a refreshing course or, if the method of moving goods changed, a training course that deals with the new method.

Training is very important in achieving competence and refresher training has an important role to play in maintaining that competence.

### **Instruction and Training**

The provision of instruction and training is a continuous process, not a one – off exercise. Provision is made for new employees, existing employees and employees with new responsibilities. If you have the responsibility for instruction and training you must also take into account the impact of new processes, new ways of working and new equipment.

### **The type of Training**

When deciding what kind of training should be given you must first decide whether training is the best or most appropriate way of reducing risk. Purchasing newer equipment with more built-in safety features might be a better solution. Once you have identified who is to be trained, ask yourself whether training is the most appropriate method of improving employee's knowledge. Would giving information or instruction be more appropriate?

### **Designing the Programme**

You then need to decide which subjects the employee needs to learn about which skills they need to practice and who will run the training course. You can then create a programme of training yourself or devise it with the appointed trainer.

You need to decide who the target group is and what they need to know. You also need to decide on the most suitable training techniques to accommodate different learning styles – the way people learn most easily. Is the training going to use visual and physical training aids? Are you going to use interactive techniques to consolidate learning? Could you incorporate actual and relevant examples such as reporting forms, risk assessments and legislation. Finally, you need to break the training into manageable segments.

### **Evaluation, Monitoring and Review**

When training has been completed, you need to evaluate the quality of training and decide whether it has fulfilled your expectations. You need to monitor the effect of the training on the job and on the health and safety standards of the workplace – the accident and illness rates, for example. From time to time, you also need to review the whole training provision. This might be annually, whenever there are changes in processes or materials, after an accident or near-miss or at the request of the safety committee.

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### Methods of Training

There are several methods of training and you must decide which is best in the circumstances. Examples include the following.

- One- to -One training – an experienced person, such as a supervisor, trains one person in a particular subject or skill.
- Learning from an experienced person at work – in the past this might have been referred to as the 'sitting by Nellie' method. The disadvantage is that bad habits can be passed on if the experienced person is not alert to the responsibility of helping the trainee.
- Mentoring, in which employees are paired up with an experienced and usually more senior employee such as a supervisor.
- Formal training by a qualified trainer at the workplace or at a college or learning centre.
- Role- play where people engage in a hypothetical situation and play the part of the people involved.
- Report writing – projects where the learners are given a subject to study or investigate and are required to compile a report on their findings
- Study or discussion groups where the learners are given a scenario of an accident and asked to discuss the health and safety issues around the facts given in the scenario
- Distance learning course – some educational organisations and publishers provide learning materials such as specially designed books, CD ROMs, DVDs and internet sites. The student studies at his or her own pace rather than attending a training course with a tutor. Some of these could be interactive, involving the learner in answering questions to which the computer can respond with answers. A tutor or advisor marks the answers and provides email or telephone support.
- Case studies – the learners are given a set of facts about a real or imaginary case involving health and safety and are asked to present reports outlining all the health and safety matters involved – for example, the legislation applying to the case, the interaction of the facts and the conclusions, which could include the option for improvement of health and safety standards and any enforcement action that could be taken.

### Evaluation

In deciding the type of training method, we should consider the capabilities of the employees and the cost and likely effectiveness of each method. The capabilities of the employees can be assessed during recruitments, at work and by discussion with them.

The cost and effectiveness of each type of training method can be gauged by experience and with reference with colleagues who have used the methods in their own training courses. You can, of course evaluate the training method by asking employees to give their own opinions on the methods, and the managers should measure health and safety performance over time and decide whether the methods used were successful also by comparing performances before and after the training courses.

All training programmes should be evaluated after they have taken place. You can do so by asking yourself a number of questions immediately and sometimes after the training, say six months later. The questions could include:

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- To what extent were the identified training needs objectives achieved?
- To what extent were the learners needs achieved?
- What specifically did the learners learn or what were they reminded about that proved to be useful?
- What commitment have the learners made about how they are going to implement what they learnt when they return to work?
- How successful were the trainees in implementing their action plan?
- To what extent were they supported by their line managers?

When you have the answers to these questions you will be in a better position to assess whether the training programme has been successful. This needs to be measured against the company's health and safety performance indicators to see whether the training has improved the health and safety performance of the organisation.

### Information

Information can be verbal, printed (text and/or illustrations) or in other forms of visual materials, including computer based material, video and DVD. It is important that the person who needs the information can understand it easily.

Information can be given to employees through the use of safety notices and signs, safety bulletins or newsletters, noticeboards or a network of safety representatives. If you have responsibilities for providing health and safety information in the workplace, you must decide first of all who needs information on health and safety matters – for example, employees, visitors or members of the public.

Secondly, you need to identify what information should be provided – for example, precautions for reducing risks, emergency evacuation procedures or how to use work equipment safely.

Thirdly, you must decide when it is appropriate to provide the information, for instance when staff takes on new responsibilities.

Finally, you need to decide how the information is to be provided – for example, on a poster, in a leaflet, through conversation or presentation or by a computer. The information must be easy to understand and the people receiving it need to know why they are receiving it.

### Common types of Health and Safety Information

Some of the information that is commonly distributed in the workplace includes:

- The health and safety policy
- Safety responsibilities
- Safe system of work
- Hazards in the workplace
- Controls in place to protect employee from injury and ill health
- Changes in procedures, equipment and so on
- Where information, instruction training can be obtained
- Feedback on how well the staff have complied with health safety work practices.

### Induction Course – What to Include

The best time to give general health and safety training is before the employee starts work. This can be done in an induction course which is often carried out informally.

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Supervisors are often directly involved with induction training and they can ensure that the training establishes good working practices. The health and safety issues that should be covered include:

- Fire safety – emergency evacuation procedures
- Where to get health safety information
- Accident and hazard reporting procedures
- The organisation's health and safety policy
- First aid facilities
- Employer/employee communication and representation, including safety representatives and safety committees
- Information on who is the enforcing authority.

### **Records**

You should keep records of the training given to employees. There should be enough information to identify the employee: the nature of the training completed, including refresher training: and a copy of details of any certificate obtained.

### **Legal Requirements**

Under the Health and Safety at Work etc. act 1974, employers must provide information, instruction, training and supervision that ensures, so far as is reasonably practicable, the health and safety of employees at work.

The management of Health and Safety at work Regulations 1999 requires every employer to provide employees with adequate and suitable health and safety training. The training should be after recruitment and when employees are exposed to new or increased risks because of new responsibilities, the introduction of new work equipment or new technology or the introduction of a new system of work. The training must be repeated periodically and must take place during working hours.

Several other pieces of legislation include specific requirements to train employees. For example, under the control of substances hazardous to health regulations 2002 employers whose work exposes an employee to a substance hazardous to health must provide that employee with suitable and sufficient information, instruction and training. The same principle applies to legislation including the provision and the use of work equipment regulations 1998, the Ionizing Radiation Regulations 1999 and the control of Vibration at Work Regulations 2005.

## Revision Question

Do the following quiz to evaluate your performance of study and review with your course tutor.

Good starting for you: -)

1. List the five (5) steps involved in carrying out risk assessment in the workplace?

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2. Define the following terms:

-Active monitoring

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-Health surveillance

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Training and factors to consider

3. List two (2) types of health and safety-related surveillance at workplace?

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