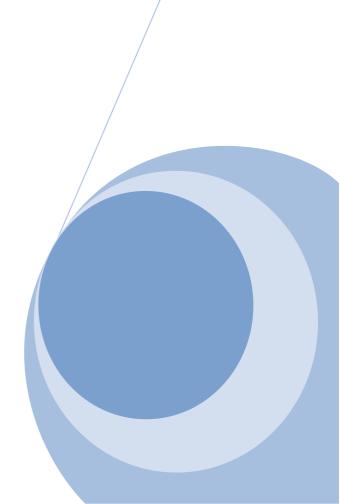
Mantra Interiors Ltd Health and Safety Policy

Paul Lane 12/30/2020



MANTRA INTERIORS LIMITED

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1. ENVIROMENTAL POLICY
2. HEALTH AND SAFETY POLICY



Mantra Interiors Limited Health and Safety Document

To Whom It May Concern:

Mantra Interiors Limited is committed to preventing accidents and ill health at their workplace and their associated construction sites, where both directly employed staff and their nominated sub-contractors operate.

The following document provides essential information targeted at encouraging staff and contractors to work in a good safe and environmentally secure surrounding, without causing risk to others.

The purpose of the following document is to impress on all staff and others working in and around the business place of **Mantra Interiors**, to carry out their day to day business in a safe and business like manner. The document does not replace the formal health and safety instructions from Managers and Supervisors.

Mantra Interiors encourages the understanding of this Health and Safety document and recommends a familiarisation of the contents.

It is a **Mantra Interiors** company requirement, that compliance of the enclosed Health and Safety procedures is administered and adhered to at all time by both directly employed staff and nominated sub-contractors acting for the interest of both clients and **Mantra Interiors Limited.**

Signed ... Paul W. Lane...... Mr. Paul Lane

For and on Behalf of Mantra Interiors Limited



Environmental Policy



Mantra Interiors Limited is committed to operational excellence in all we do including continuous efforts to improve environmental performance.

We will adopt and aim to apply the principles of "sustainable development" that is, development which meets the needs of the present, without compromising the abilities of future generations to meet their own needs.

We recognise our responsibility to:

- Minimise waste by following the priority order of reduce, re-use, recycle, compost, incinerate and landfill.
- Implement technologies to use energy resources efficiently.
- > Strive to surpass conformance to the law, compliance being the minimum standard by which we rate our performance.
- ➤ Use company resources to promote environmental knowledge and awareness to those involved in our business, including employees, customers, regulators, suppliers, neighbours and competitors.
- Review and improve the environmental impact of materials used in our products and processes.
- Minimise pollution produced in all parts of the business, and aim for "pollution-free" processes.
- Adopt an environmentally sound transport strategy.
- Expect similar environmental standards to our own from all third parties involved with our business suppliers, vendors, contractors
- Assist our clients to use our products and services in an environmentally sensitive way.
- > Include environmental consideration in investment decisions.

Mr Paul Lane

Mantra Interiors Limited



Health and Safety Policy



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Policy Statement

Our policy is to provide and maintain safe and healthy working conditions, equipment

and systems of work for all our employees and to provide such information, instruction

and training as they need for this purpose.

Appropriate preventive and protective measures are and will continue to be

implemented following the identification of work-related hazards and assessment of the

risks associated with them.

We also accept responsibility for the health and safety of other persons who may be

affected by our activities.

We will provide adequate money, time and other resources necessary to ensure that our

legal obligations for health and safety are met.

The allocation of duties for safety matters, the identification of competent persons

appointed with particular responsibilities and the arrangements made to implement this

policy will vary according to the individual project

This policy will be kept up to date, to reflect the changes in the nature and size of the

business/project. To reflect this, the policy and its effectiveness will be reviewed

annually.

Policy Objective

Each level of management will take all reasonable steps to provide and maintain:

a. Plant equipment and systems of work that are safe.

b. Safe arrangements for the use, handling, storage and transport of

materials and substances.

- c. Sufficient information, instruction, training and supervision, to enable all employees to avoid hazards and contribute positively to their own, and other persons, safety.
- d. A safe place of work and safe access and egress from it.
- e. A healthy working environment.
- f. Adequate welfare facilities.

Responsibility for Carrying out the Policy

Management

Management and supervisory staff have the responsibility of implementing the policy throughout. The Company and must ensure that health and safety considerations are always given priority in the planning and day-to-day supervision of work.

Employees and Sub-Contractors

All employees and sub-contractors are expected to co-operate with The Company in carrying out this policy and must ensure their own work is carried out without risk to themselves or others.

Monitoring

Each operative shall take steps to monitor the effective operation of the policy within their own area of work.

Directors will monitor and review health and safety for The Company and consider the implications of any legislation and codes of practice.

Directors will ensure that competent advice on matters of health and safety is provided and will indicate whether this advice is from internal or external sources.

This policy will be circulated to all employees. It will be reviewed annually and modified as necessary, with any amendments brought to the attention of all employees.

Signed

Mr P Lane

For and on Behalf of Mantra Interiors Limited



The Policy in Practice

The policy statement reinforces Mantra Interiors Limited's determination to care for the health and safety of people involved in The Company's activities and to ensure that we exercise equal care for the health and safety of everyone else who may be affected by our activities.

Specifically, Mantra Interiors shall:

- a. Carry out any duties and obligations imposed by the Health and Safety at Work etc. Act 1974, any other relevant legislation and approved codes of practice, improving on the performance standards they specify where it is reasonably practical and economic to do so, and cooperate fully with the relevant enforcement authorities and non-statutory bodies.
- b. Assess the health and safety aspects of its activities.
- c. Provide an organisational structure and management system to enable The Company to carry out its activities with due regard to health and safety.
- d. Require all its employees to work safely and with due consideration for the health and safety of others, as a condition of their employment.
- e. Require contractors who undertake work for The Company to apply the same standards of health and safety as The Company itself.
- f. Aim to make continuous improvements in its safety management so that accidents are reduced.
- g. Foster an understanding of health and safety issues relating to its business among staff, suppliers, customers etc.

The Law

The Health and Safety at Work etc Act 1974 is the law which determines everyone's responsibility for health and safety at work.

The Act covers all places of work and aims to minimise every hazard so that employees and the public are protected from dangers arising at work.

Under this legislation, all employees have a responsibility for their own safety at work and therefore must:

- a. Take responsible care of themselves and other people who may be affected by their acts or omissions.
- b. Perform any necessary duty which is required by law.
- c. Not misuse anything which is required by law.
- d. Not misuse anything which is provided as a health or safety service.

Neglect of these responsibilities could constitute a criminal offence.

Employers also have many responsibilities under the law. In particular they must:

- a. Make sure that the working environment is safe.
- b. Provide and maintain equipment, premises and working practices which are safe and do not endanger health.
- c. Make sure that handling, storing and transporting of objects and substances are carried out safely.
- d. Provide safety information, instruction, training and supervision as necessary.
- e. Provide and maintain a safe access and exit to any place of work.

If The Company neglects these responsibilities it may be committing a criminal offence.

General Responsibilities of Personnel

Managers and supervisors

- a) All managers and supervisors are responsible for the implementation of the Mantra Interiors Limited Health and Safety Policy, ensuring that it is complied with by all employees and sub-contractors.
- b) Managers and supervisors will ensure that adequate training is given to employees to comply with The Company Policy.
- c) At the planning and tendering stage, they will ensure that the following points are taken into account:
 - i. Incorporation of safe working methods and necessary plant and equipment to avoid injury.
 - ii. The identification of hazards on site and precautions to be taken on materials to be used.

- iii. The drawing up and following of method statements for high risk activities.
- IV. The provision of adequate welfare facilities.
- d) Managers and supervisors should set personal examples when visiting sites by wearing appropriate protective clothing.

Site employees

- a) Employees must read and understand The Company's Health and Safety Policy and carry out their work in accordance with its requirements.
- b) Employees must work in a safe manner at all times and where possible remove site hazards themselves.
- c) Employees are required to wear the required protective clothing or equipment, especially hard hats and safety footwear.
- d) Any accident or injury must be reported to a supervisor or contract manager and the main contractor on site.
- e) All employees must be familiar with the site first aid arrangements and fire precautions.

Sub-contractors

- a) The general responsibility of the Main Contractor does not relieve a sub contractor of his obligations under Health and Safety Regulations and Codes of Practice. The sub-contractor must ensure his work does nor impair the safety of other persons not in his employ.
- b) It is the responsibility of each sub-contractor to see that he and his employees are fully conversant with current regulations, in addition to complying with the safety regulations which may be specified by the MANTRA INTERIORS LTD Health and Safety Director or Site Management.

- c) Sub-contractors are required to read this document, and then pass it on to the person they nominate to supervise the work they carry out on site. The sub-contractor's own Health and Safety Policy must be available on site while work is being carried out.
- d) Sub-contractors must carry out assessments under the Control of Substances Hazardous to Health (COSHH) Regulations to identify possible risks to their employees and others, and submit them to MANTRA INTERIORS LTD. See also Risk Assessment and Working Methods Statements, Page 13.
- e) The sub-contractor must ensure that his employees are trained and competent to carry out the work they are employed to do, and have the necessary protective, clothing and equipment.
- f) Any accident or injury to a sub-contractor's employee must be reported to the main contractor and MANTRA INTERIORS LTD site representative.
- g) It is the responsibility of the sub-contractor to ensure his working areas and access routes are kept clear of rubbish and waste material at all times.

General Responsibilities of all Employees

All employees must ensure that their work is carried out so that accidents and ill-health to themselves and others are avoided. They must also co-operate with The Company to ensure that work is carried out in accordance with current health and safety regulations and Company guidelines, and must not misuse or interfere with anything provided for health and safety.

Protection of the Public and Client's Staff

Where there is possible risk to the public and staff employed by the clients, MANTRA INTERIORS LTD and subcontractors must:

- a) Take precautions for the public and clients' staff safety when planning and carrying out work.
- b) Provide adequate protection of the work area fencing, guard rails and warning notices, for example.
- c) Secure or immobilise plant, materials and equipment at the end of the working day.
- d) Adequately fence off the working area at the end of the working day.

Role of the Health and Safety Director

The Company Health and Safety Director will:

- a) Assist management in the preparation, promotion and review of The Company Health and Safety Policy.
- b) Give advice to management on:
 - i) Legal requirements affecting health, safety and welfare.
 - ii) Prevention of injury and damage.
 - iii) Provision, selection and use of protective clothing and equipment.
 - iv) New working methods, equipment or materials which could reduce risks.
 - v) Changes in legislation.
 - vi) Planning of new work.
- c) Carry out regular inspections of sites and workplaces.
- d) Assist management in notifying the Health and Safety Executive of new sites, major injury accidents and dangerous occurrences.
- e) Liaise with the Health and Safety Executive.
- f) Provide training on health and safety.
- g) Liaise and assist sub-contractors working for The Company on health and safety matters.
- h) Maintain statutory registers for The Company.
- i) Be available to any employee or sub-contractor for consultation and advice on health and safety matters.

Administration

When a new site is set up, there are obligations to:

- a) Notify The Company Health and Safety Director.
- b) Ensure that notices and information are displayed on site.
- c) Ensure registers in an accident book are available where necessary.
- d) Ensure adequate welfare facilities, first aid arrangements and fire precautions. Obtain a copy of Shared Welfare Facilities F2202 Part A from the main contractor.

Reporting of accidents, injuries and incidents

All employees and sub-contractors have a legal obligation to report any accidents, injuries or incidents involving any person (including members of the public and client's staff) at Mantra Interiors Limited sites and workplaces, no matter how trivial that incident, injury or accident.

If any person suffers an accident, injury or incident at work:

- a) Seek immediate first aid treatment if necessary.
- b) Report all accidents, injuries and incidents to the site supervisor or manager of the premises and ensure that details are recorded in the site accident book.
- c) Notify the supervisor or manager in charge.
- d) Sub-contractors working on site for Mantra Interiors should follow points a) to b) above and pass the form to the Mantra Interiors supervisor or contract manager.
- e) Important: If the accident or incident results in a fatality, or a major injury or dangerous occurrence as defined by the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR,) The Company Health and Safety Director must be informed immediately so that a full investigation of the incident can be arranged. The Health and Safety Executive must also by law be informed without delay. The main reasons for investigating incidents are to:
 - i) Prevent recurrence.
 - ii) Comply with legislation.

New Employees

New employees must as soon as possible:

- a) Be made aware of The Company Health and Safety Policy.
- b) Be made aware of any specific health and safety precautions and procedures.
- c) Be issued with appropriate protective clothing and equipment before commencing work on any job which requires these items.

New employees under 18 years of age

Young persons under 18 must:

- a) Be informed of the legal restrictions on the work they are permitted to do.
- b) Be advised of the machines they can operate only under direct supervision.
- c) Notify the local careers officer of their employment.

Risk assessment and method statements

The Management of Health and Safety at Work Regulations 1992 impose a duty on The Company, contractors and sub-contractors to undertake suitable and sufficient risk assessments of their operations. The results of risk assessments must be in writing and they must detail foreseeable hazards, personnel affected, the degree of risk and precautionary measures to be taken to eliminate or effectively control any risks.

Copies of any risk assessments made by contractors or sub-contractors will be provided to the Mantra Interiors Limited site manager on request. If any assessment is revised following a review of the site, then the revisions must be brought to the attention of the site manager and a revised copy of the assessment provided if requested.

A comprehensive, written Safe Working Method Statement will be provided to the site manager when identified as necessary by a risk assessment. This statement must detail the sequence of works and any safety measures required to ensure the activity is conducted safely and with minimum risk.

No works or activities requiring a Safe Working Method Statement will be started before consideration of the statement by the site manager. Any revisions to such a statement will be notified as soon as possible to the site manager.

Health and Safety Training and Inspections

Mantra Interiors Limited undertakes to provide adequate health and safety training for all employees, to enable them to carry out their work in a safe manner, without risk to health.

Sub-contractors must also ensure that all personnel under their control have been given training which satisfies statutory health and safety requirements. Sub-contractors will make available to Mantra Interiors for inspection, any records they make regarding the health and training of relevant personnel.

Site managers and sub-contractors are encouraged by Mantra Interiors to carry out regular tool-box talks for their personnel, for the proper familiarisation with tools and equipment in current use.

The Company continually monitors all activities being carried out by its staff and has a policy of carrying out regular health and safety inspections of its sites and workplaces. Sub-contractors are strongly encouraged to make similar inspections and make copies of their reports available to Mantra Interiors Limited.

Any defects, hazards and unsafe practices identified must be reported in writing to the site manager and remedied as soon as possible, with appropriate personnel made responsible for the remedial action and target dates set for completion.

The Company may, at its discretion, carry out a thorough, in-depth health and safety audit of any work being carried out on its behalf by its own personnel or by subcontractors.

Immediate steps should be taken to remedy any defects or shortcomings found **in** such an audit and The Company advised in writing of the intended remedies and the timescale for implementation.

Safety Supervisor

In consultation with relevant sub-contractors, a safety supervisor will be appointed for

each site where deemed applicable by The Company Health and Safety Director. A safety supervisor will be suitably experienced, adequately trained and have sufficient

time to allow him to effectively carry out his duties.

The safety supervisor will oversee the safe conduct of operations on the site and liaise

with all personnel to ensure that all necessary precautions and requirements and

prohibitions are being complied with.

The Working Environment

Lighting, noise, temperature and humidity are all factors which contribute to a safe - or

unsafe - working environment. An imbalance in anyone of these can affect people's

comfort and lower safety standards.

Lighting

Bad lighting at work can cause eye-strain, fatigue and headaches. The natural or

artificial lighting provided must be suitable and sufficient for the work being carried out,

whether in the office or out on site.

Noise

Excessive noise can be produced by tools in use, machinery, traffic, people talking and

any manner of work activity. Low levels of noise can cause annoyance and distraction,

but prolonged exposure to high levels, usually from machinery, may result in temporary

or permanent hearing loss.

There are many ways of reducing the effects of noise at work, such as isolating,

insulating or silencing the source. Suitable hearing protection must be worn in

designated areas and especially where powered tools are in use.

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Temperature

The Company has responsibility to ensure that a reasonable temperature is maintained in its buildings. The Workplace (Health, Safety and Welfare) Regulations 1992, require that places of work such as offices should normally be at least 16 °C/60.8 °F.

Humidity

Humidity is the amount of moisture in the air and will vary upon air temperature and pressure. It should be controlled within the workplace by the use of heat, ventilation or humidifiers as appropriate.

Office Safety

Legal provision for the safety of people who work in offices are made in the Offices, Shops and Railway Premises Act 1963, the Fire Precautions Act 1971 and the Health and Safety (First Aid) Regulation 1981.

First Aid

Prompt first aid may save a life, or make an injury less serious. All employees and sub contractors should:

- a) Know the location of the building's or the sites first aid box.
- b) Know which people in the building or on site are qualified first aiders and where they are located.

When involved in dealing with an injured person, take care not to become a casualty yourself. Use protective clothing and equipment where necessary. Make safe any equipment which may have caused the injury and switch off any power source involved, particularly if the casualty has been electrocuted.

If calling an ambulance, ensure that full details of the accident and the number and nature of the casualties has been given to the ambulance control.

The Company's policy on the reporting of accidents and injuries as detailed on page 12.

General Office Safety Advice

Any accident or damage to furniture, equipment or machinery, however minor, should be reported to your supervisor. Do not try to use repair or maintain anything for which

be reported to your supervisor. Do not try to use, repair or maintain anything for which

you have not received full instructions or training.

Worn treads, missing or damaged handrails, damaged floor coverings or inadequate

lighting levels must be reported to your line manager.

An organised, tidy workplace is a basic requirement for ensuring health and safety.

Hazards can be reduced by keeping floors, passages and stairs clear of goods,

obstructions and trailing electrical leads.

All rubbish must be cleared away regularly. Broken glass or other sharp objects must be

disposed of carefully and never left exposed in a wastepaper bin. Particular attention

must also be paid to the storage of paper and other flammable materials.

Top drawers of filing cabinets or workstations should never be overloaded and only one

drawer should be opened to prevent the cabinet tipping over.

Unsuitable items such as boxes and chairs should not be used to gain access to high

shelves. "Kick stools" or secure stepladders should be used.

Spilt liquids, especially hazardous substances and liquids spilled near electrical

equipment, should be cleared up immediately.

Display Screen Equipment

The Health and Safety (Display Screen Equipment) Regulations 1992 place a

responsibility upon The Company to safeguard the health and safety of its workforce

when using display screen equipment.

The term display screen equipment covers a wide range of electronic display equipment

which is usually part of a computer system. The most common form of display

equipment is found on personal computers or computer terminals, often called a visual

display unit (VDU) or visual display terminal (VDT.)

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Those using display screen equipment should pay attention to the following advice:

- a) The chair should properly support the back, to avoid posture problems. The back of the chair and the seat height should be adjustable. A foot support should be available.
- b) The forearms should be approximately horizontal when the keyboard is in use. There should be minimal extension, bending or deviation of the wrists. The keyboard should be adjustable and the key tops legible.
- c) There should be no direct or indirect glare or reflections on the screen from natural or artificial light. The screen should have an adjustable, readable and stable image.
- d) The angle and height of the screens should allow for a comfortable head position.

Fire Safety

Good fire precautions are everyone's responsibility and everyone should be alert to the dangers of fire. Fire can disrupt or destroy life and seriously affect the activities of a company. It is in everyone's interest to act in a fire-safe manner and not increase the risk of fire.

If you discover a fire, smoke or excessive heat

- Warn others in the building or on site. Shout "fire!" as loudly as possible and operate the fire alarm if there is one. Make sure the immediate area of the fire is evacuated.
- Call the fire brigade from a safe place do not assume that someone else will do this. It does not matter if the fire brigade receives more than one call about a fire. If the fire is put out when the fire brigade arrives, it will not be considered to be a false alarm.
- Use the appropriate fire extinguisher, or a fire hose reel if available and suitable, to attack the fire only if you feel confident to do so and only if the fire has not reached such proportions as to put you at risk. Consider that smoke and fumes can be more dangerous than actual flames. Do not enter smoke-filled rooms.

Always fight a fire with someone else if possible. Never let a fire or smoke get between you and your route to a safe place. If a fire is, or becomes beyond control by an extinguisher, make your way to safety and leave it to the fire brigade. If the fire is in a building, close all doors when leaving to slow down the spread of flames.

Remember - people are more important than property. Do not take risks unless life is threatened.

When fighting a fire before the arrival of the fire brigade, it is important that the correct fire extinguisher is used. Foam and water extinguishers can cause injury to the user when used on live electrical equipment for example.

The label on the extinguisher will state any limitation to use. The chart below shows which colour-coded extinguisher should be used on which type of fire.

Which fire extinguisher to use:

Fire extinguishers are colour-coded to denote their uses. The correct extinguisher must be used for each type of fire. Use of the wrong type of extinguisher may spread the fire and cause harm to the user.

The colours are: Water - Red; Foam - Cream; Dry Powder - Blue; Carbon Dioxide(CQ2) - Black.

This table gives a guide as to their correct use:

Type of Fire	Water	Foam	Powder	CO ₂
Paper, wood, textiles or fabric	✓	✓	•	•
Fats and flammable liquids	х	✓	✓	✓
			Note 1	Note 1
Live electrical equipment	x	x	✓	✓
Vehicles	х	✓	•	✓
		Note 2		Note 2
Running liquids	х	√	✓	•
		Note 1		

- ✓ Correct extinguisher, safe to use.
- x Incorrect extinguisher, unsafe to use.
- Extinguisher not recommended, as it would be inefficient, but presents no danger to user.

Note 1: For small quantities only.

Note 2: Extinguisher with flexible hose only.

If you should hear a fire alarm

If you hear a fire alarm, or someone shouting a fire warning, you must obey it at once. All persons not involved in an initial attack on the fire must leave the building or site by the nearest useable emergency exit or escape route.

If there is a designated assembly point, go straight to it, without stopping to collect personal belongings. Do not return to your place of work until instructed to do so.

Points to Remember

- a. Fire doors are provided to slow down the spread of fire and smoke. They should never be propped open or obstructed.
- b. Open cable holes through floors and walls provide an easy passage for fire and smoke from one part of the building to another. They should be properly fire-stopped.
- c. Escape routes and emergency exits obstructed with boxes, rubbish, etc. can slow down or prevent escape.
- d. Combustible material in escape routes could ignite and prevent the escape route from being used.
- e. Signs that show escape routes, fire alarm call points or fire extinguishers should not be obscured.
- f. Clear desks and tidy rooms reduce the risk of fire spreading.
- g. Potentially hazardous materials and flammable liquids both in the office and on site should be stored safely.
- h. Obstructed openings for the ventilation of electrical equipment could lead to overheating.
- i. Ashtrays should not be emptied into wastepaper bins.

Safe Use of Electrical Equipment

The safe use of electrical equipment and powered tools, both in offices and on site, is vital to prevent the risk of electric shock or fire. Always ensure that you have received adequate training and instruction in the use of equipment before operating it. Electrical equipment and powered tools should be used only for their intended purpose.

New electrical equipment must be properly tested and labelled accordingly before it is used. Portable equipment must be tested at least once year by a qualified person. Other equipment must be tested periodically but at periods not exceeding five years. Any equipment bearing an out-of-date test label or no label at all, must be reported to your supervisor and taken out of use until it is properly tested.

Multi-way adaptors must not be used, as overloaded sockets are a fire risk. Place equipment as near as possible to the electrical source, which reduces the risk of a trailing lead becoming a tripping hazard.

Examine equipment to ensure that obvious defects are reported immediately. Look out for worn or damaged cables, broken switches, plugs or sockets and signs of overheating, such as melted plastic or scorch marks.

Where possible, electrical equipment must be switched off after use and the plug removed from the socket.

Never stand containers of liquid on or near electrical equipment, as they could spill over and put the user in danger of a^- electric shock. If a spill does occur and liquid gets into electrical equipment, switch off at the socket until the spillage has been cleared up and the equipment checked by a qualified person.

Hired equipment must not be used if it has not been satisfactorily examined and tested with regard to current regulations.

Use of Company Vehicles

Staff using a company vehicle are responsible for ensuring the vehicle is roadworthy. The vehicle should be regularly inspected for obvious defects. Any defect should be notified to the appropriate supervisor and rectified without delay.

Check the lights, tyres, oil, water, windscreen wipers and washer reservoir etc., at least once a week.

Drive in a safe manner at all times and be particularly careful when driving on sites to consider the condition of temporary access roads or roads that are under construction and being used for access.

Ensure before reversing that there are no obstructions or people behind the vehicle. Park safely, not blocking corners or junctions where pedestrians will have to go into the road to walk around the vehicle.

Do not use a mobile phone while driving, unless you have a hands-free facility. Talking on a mobile phone handset while driving can make you liable to prosecution for careless driving.

Notify The Company of any accidents or damage to your vehicle, changes to your driving licence details or any traffic offences you are involved in.

When Carrying Plant or Materials

Ensure that your vehicle is kept clean and free from loose materials and rubbish. You must also ensure that all tools and equipment are secured in the vehicle.

Ensure that there are no materials or equipment in the back of the vehicle which could endanger the driver or passenger in the event of an emergency stop.

Do not overload your vehicle, or load it in such a way as to affect the handling of the vehicle. Take particular care when using roof racks. Ensure that the roof rack is suitable for the job, that it is securely fixed to the vehicle and that materials carried on it are properly secured.

Hazards to health

The Control of Substances Hazardous to Health Regulations 1988 (COSH H)

Most MANTRA INTERIORS LTD employees and sub-contractors will have cause to use substances or materials which contain potentially harmful substances. In the office,

these include aerosol sprays, correction fluids, solvents and photocopiers which emit fumes. On site, harmful substances include liquefied petroleum gas (LPG,) welding gases and fumes, refrigerant gases, dusts, cement, mineral fibre, wood dust, carbon dioxide, solvents, adhesives, paints, lubricating oils, acids, alkalis, cleaning fluids and microbiological risks which can lead to Legionnaire's Disease.

All such risks must be assessed with regard to COSHH. These regulations apply to everyone at work and lay down the essential requirements and a sensible step-by-step approach for the control of hazardous substances and for protecting people exposed to them.

COSHH assessment must look at the chemical properties of substances in the context of their intended use. This is because some substances may be safely used in some circumstances, for instance, some solvents can be used safely in the open air, but not in poorly ventilated areas.

Managers, supervisors and sub-contractors are responsible for ensuring that hazardous substances are assessed and that users are made aware of the hazards involved and the precautionary methods that need to be taken.

Manufacturer's instructions should be read before use and must always be followed. Substances must be used only for their intended purpose. Empty containers should be disposed of safely, as directed by the manufacturer's instructions. Users should read these instructions carefully and use the product only as directed.

When handling chemicals, great care should be exercised to ensure they do not contact the skin, eyes or clothing. Protective clothing and gloves should always be worn if necessary. In the event of contamination, the supplier's first aid instructions on the product safety data sheet should be followed and medical advise urgently sought. Food should never be kept or consumed where chemicals are in use or stored.

Only the minimum quantities of chemicals required should be kept and these should be stored in suitable cabinets. They should be properly labelled and in the containers supplied by the manufacturers.

Any person using potentially hazardous substances should know about the substances they are using and ask advice if they are uncertain.

The Risk from Lead

The Control of Lead at Work Regulations 1980 dictate that any work which involves the use of or contact with lead in any form must be planned and carried out in accordance with the Approved Code of Practice.

Where work with lead or lead-based products is being carried out, the regulations require an assessment to be made to consider the risks and what precautions need to be taken.

Processes which need to be considered are: gas cutting and welding; lead burning; painting with lead based paints; lead jointing for cables and pipes; handling sheet lead; disc cutting or grinding painted surfaces.

Where there is any work with lead or lead-based products, contact The Company Health and Safety Director for guidance on what precautions may need to be taken.

Asbestos

Under the Control of Asbestos at Work Regulations 1987 and the Asbestos (Licensing) Regulations 1983, asbestos removal can be carried out only by licensed contractors.

Asbestos dust is highly dangerous to health and special precautions must be followed when handling any form of asbestos material. This applies not only to the removal of insulation or sprayed coatings, but also to drilling and cutting of asbestos-based materials.

Important precautions to take:

- a. On refurbishment work, carry out a full survey of the site to establish if asbestos or other hazardous substances are present in any form. This must be done at the planning stage, before any work starts. Subcontractors must notify The Company of any asbestos discovered.
- b. If, while working on site, you come across material you believe could be asbestos, work which might cause its disturbance must stop and the

Mantra Interiors Limited Health and Safety Director must be notified immediately.

c. Special precautions must be taken before cutting or drilling any asbestos cement products. Guidance should be sought from Mantra Interiors Limited Health and Safety Director before work commences.

Legionnaires Disease

Legionnaire's disease appears as a form of pneumonia and is caused by inhaling fine water droplets containing the legionella bacteria into the lungs. The bacteria can proliferate in the presence of sludge, scale, rust and algae, and favours water temperature in the range of 20 °C to 45 °C.

Legionella tends to be found in large complex water systems such as those in hotels, office blocks, large shops and factories. It can be found in the hot and cold water services, air conditioning and industrial cooling systems and humidifiers.

It is important to ensure all parts of a system are cleaned and disinfected twice a year. Where possible, hot and cold water services should be circulated at temperatures below 20°C or above 50°C.

Regular water treatments for air conditioning and industrial cooling systems are important, including the use of: scale and corrosion inhibitors; dispersants; biocides and disinfectants.

Where undertaking maintenance and cleaning, in addition to the precautionary measures stated above, risks can be minimised by chlorinating cooling towers and evaporative condensers before draining. When chlorinated water used to disinfect an installation is discharged into the sewer, the authority responsible for the sewer must be informed. When using high pressure water spray to clean, special clothing and positive pressure respirators must be worn.

Polychlorinated Biphenyls - PCBs

PCBs were used as dielectric filler fluids in electrical transformers and capacitors are still used in some refrigeration and heating equipment. PCBs may be encountered in demolition and maintenance work.

Contact with skin can cause a rash called "chloracne," and even lead to liver damage. PCB vapour is toxic and if PCBs are involved in fires, highly toxic thermal breakdown products may be given off.

The presence of PCBs in older equipment must always be suspected and investigated. If electrical equipment is leaking and you suspect the leak may be a PCB, contact The Company Health and Safety Director immediately. Equipment containing PCBs must be checked regularly for leaks. Work with PCBs should be carried out in and open or well ventilated area. No item of protective clothing should be made of rubber or neoprene. A suitable respirator should be worn.

PCB waste is subject to the Control of Pollution (Special Waste) Regulations 1980 and must be disposed of by a licensed waste disposal contractor.

Noise

All relevant requirements of the Noise at Work Regulations 1989 must be complied with.

Where plant or machinery is brought onto a site, the supervisor or sub-contractor responsible for it will ensure that noise levels generated by the plant or machinery are as low as reasonably practicable.

Where excessive noise levels are anticipated, the supervisor or sub-contractor will undertake noise level assessments or surveys and record the results. A copy of such a report will be provided to The Company on request.

Where a sub-contractor anticipates the generation of excessive noise levels from his operations, he will advise The Company site manager accordingly, so that all practicable precautions can be taken to protect affected persons.

The Company and sub-contractors will provide suitable ear protection to personnel under their control in accordance with the regulations.

Where ear protection zones have been identified on site, The Company and sub contractor will ensure that personnel under their control are issued with and use suitable ear protection when working in these zones.

Manual Handling Operations

Lifting any size of object the wrong way can cause a back injury. The most effective way of avoiding a bad back is to avoid manual handling where possible. Always use lifting and handling aids where available and practicable.

When you cannot avoid moving things by hand, use proper lifting techniques. The following guidelines will help prevent injury.

- a. Never attempt to move something that is too heavy for you.
- b. Seek help if the load is heavy or awkward.
- c. Before lifting or moving a load, always consider its size and shape, the height at which you have to lift it, and your own capabilities.
- d. Think about where you are going to move the load to you may need help to open doors, call lifts, etc.
- e. Before handling, look for protruding sharp edges, notches, grease or anything that may weaken your grip or injure your hands.
- f. If possible, wear appropriate gloves.
- g. Make sure' you have enough space to carry out a good lift.

When you are ready to move a load, follow these basic steps:

- a. Place your feet close to the load and settle into a comfortable and well-balance position to provide a firm base for the lift. Lower your body and bend your knees in a smooth action. The angle between your thigh and calf should not be less than 90° because this gives your body better mechanical advantage.
- b. Tilt the object to the point of balance, testing its weight; this also enables you to reach the bottom corner. Ensure that your hands and fingers are in contact with as much of the load as possible.
- c. On lifting, always raise your head first; this straightens your back and allows your legs to take the strain. Move upwards in a smooth continuous action. Never lift and twist at the same time.

Protective Equipment

Mantra Interiors Limited employees and sub-contractors may often be required to use protective clothing and equipment for the job they are doing. It is the responsibility of The Company, or the sub-contractor, where applicable, to provide such protection as is necessary.

The Law also requires employees to wear and take care of the clothing and equipment issued to them.

The Company or the sub-contractor where applicable, has a responsibility to assess work activities to establish whether they require personal protective equipment to limit the risk of potential injury and to provide suitable protection as necessary. There is also an obligation for The Company, or sub-contractor, to provide information, instruction and training in the effective use, maintenance and storage of such equipment.

Employees are required to provide the following items:

- > Eye protection where a foreseeable risk of eye injury could occur.
- Ear protection when working in areas where the noise level is above 90dB(A.)
- > Respirators and suitable protective clothing for persons working where asbestos, high levels of dust or fumes exist.
- Safety belts, harnesses and nets where it is not practicable to provide a working platform.
- Protective footwear when working on building sites.
- Industrial gloves to protect hands from injury when handling tough or sharp materials or corrosive liquids.
- Safety helmets for working on building sites.

Before using any protective clothing or equipment:

- Make sure it is clean.
- Make sure there are no pieces missing and that it is in working order.
- Make sure it was designed and issued for the job in hand.
- Make sure you know the correct method and use and that the equipment fits properly.

After use:

- Clean the equipment properly.
- Check for missing pieces and that it is in working order.
- > Store in the correct place and in the correctly manner.

Hard hats must be worn on site:

- In designated "hard hat areas."
- As directed by site management.
- Where there is a possible risk of injury to the head.

Always make sure that your safety helmet is not damaged or faulty and that the headband is correctly adjusted.

Do not paint your helmet, put stickers on it or leave it in the rear window of a vehicle, as paints, adhesives, solvents and the sun's heat through a car window will all reduce a helmets protective ability.

Helmets should be replaced after receiving a severe impact, where deep scratches or visible cracks appear and in accordance with the manufacturer's advice (usually after about two years of use.) The date of manufacture can be found inside the helmets shell.

Any person with doubts on the use of protective equipment should contact their manager or supervisor for advice before using the equipment.

General Site Safety

General Access

The law requires that safe means of access and egress must be provided and maintained as far as is reasonably practicable at every place where persons are expected to work, at all times. These include:

- Access and egress points into buildings under constructions must be agreed and clearly defined.
- > Staircases and passageways must be kept clear of obstructions at all times.
- Lighting levels must be adequate.
- Provision of suitable working platforms, full boarded with toe boards and handrails.
- Adequate means of escape in the event of fire.
- ➤ Use of rigid guardrails around excavations, openings in floors and roof edges where persons can fall.
- > Openings in floors should be securely covered with warning notices displayed on the potential hazard beneath.
- > Special attention should be paid to working in confined spaces to ensure rescue can be achieved easily in the event of an accident.

Scaffolding

The use of scaffolding is governed by Health and Safety Executive Guidance Note GS15 "General Access to Scaffolds."

Never use scaffolding without authorisation. Scaffolding must be checked weekly and the results of the check recorded. Defects to look out for include:

- Components moved and not replaced. Missing toe boards or guard rails.
- Split, knotted or loose boards.
- Overlapping or protruding boards, gaps between boards. Obstructed walkways.
- Bent or rusty tubes. Inadequate bracing.
- Uneven foundations or missing box plates.

Guard rails or toe boards must never be removed.

Mobile Towers

The use of mobile towers is governed by HSE Guidance Note GS42 "Tower Scaffolds." Mobile scaffolds are structures that can be readily moved from place to place and are



normally used for lightweight work. The maximum height of a mobile scaffold should not exceed three times the minimum base width for outside use and three and a half times for inside use. Outriggers or ties must be used when exceeding these ratios. Guard rails and toe boards must be fixed.

Points to observe when working on mobile scaffolds are as follows:

- > Do not try to increase the height by working off boxes or steps on top of the scaffold. This will raise the centre of gravity and the whole scaffold may topple.
- Use only on firm level ground.
- > Prevent movement by locking or chocking the wheels and ensure that the wheels are firmly fixed to the upright.
- Access to the platform must be by the narrow side of the tower via ladder or integral ladder sections.
- Move by pushing at the base only. Never move a tower when there is a person or materials on the platform.
- Beware of overhead electric cables or other projections when moving or using the scaffold.
- > Do not work on a mobile scaffold unless you are sure it is safe. If in doubt, consult an appropriate person a foreman, safety officer or scaffolder, for example.

Ladders

The use of ladders is governed by HSE Guidance Note GS31 "Safe Use of Ladders, Stepladders and Trestles".

Working from a ladder is inherently dangerous, particularly if both hands are required to do the job. Work to the following key safety rules:

- a. Make sure the ladder is not defective. Check its rungs and stiles for warping, cracking or splintering and the condition of the feet.
- b. Always stand a ladder on a firm level base.
- c. Set a ladder at the correct angle. One metre out for every four metres of height.

- d. Secure a ladder by tying it at the top. If unable to do so, secure the ladder at the bottom by tying off to a secure point, or get someone to foot it correctly.
- e. Never use a ladder which is not long enough for the job. All ladders must project at least 1.1 metres (3 feet 6 inches) above any landing place.
- f. New ladders should be treated with clear wood preservative. Ladders must not be painted or treated with any preservative that conceals defects.
- g. When using ladders, look out for nearby overhead electric cables.

Stepladders, Trestles and Staging

HSE Guidance Notes GS31 covers the use of stepladders, trestles and staging.

Associated hazards are:

- a. The failure to place the equipment on a firm level base,
- b. Unsafe use of equipment, on a scaffold platform, roof or other hazardous position, for example.
- c. Overloading leading to overbalancing or collapse.
- d. Excessive span of scaffold boards when used with trestles (must not exceed 1.5 metres when 38mm thick boards are used.)
- e. Overhang of boards or staging at support.

Powered Mobile Work Platforms

Legal Provisions are detailed in HSE Booklet HS (G) 19 "Safety in Working with Power Operated Mobile Work Platforms."

No person should attempt to operate a working platform unless he has received adequate training in the safe operation and use of the working platform and is considered by The Company or sub-contractor to be qualified and competent for that purpose.

Common dangers associated with the use of working platforms are:

- > Persons, tools or materials falling from the platform.
- Persons becoming trapped in the working platform mechanism.

- Persons becoming trapped between the platform and fixed obstructions.
- Overturning due to overloading, gradients, wind, travelling with the platform raised over unsuitable terrain, outriggers not in use and the forces of acceleration.
- Collision with buildings or other fixed objects, other appliances or vehicles.
- Failure of the supporting structure or powered operating mechanism.
- Inadvertent movement due to, for instance, misapplication of the controls or brake failure.
- Persons becoming stranded on the platform while in a raised position, perhaps due to power or control circuit failure.
- Contact with live electrical conductors.
- Persons being struck by a moving working platform or the jib slewing.
- Accidents associated with use during the hours of darkness.

Roof Work

Working on roofs is covered by HSE Guidance Notes HS (G) 33.

A substantial number of fatal and serious accidents occur each year involving persons working on roofs. Almost one in five construction deaths occur during roof work. It is important that any roof work is pre-planned, that the particular hazards are considered and a safe method of work is established.

Factors that should be considered when working on roofs are:

- Roof work should be undertaken only by properly trained employees.
- > There should be safe access to the roof.
- > Guard rails and toe boards should protect the edge.
- All openings and skylights should be securely covered or fenced off.
- Where safety harnesses are used in place of edge protection, suitable anchorage points must be provided which are capable of sustaining the anticipated shock load.
- The movement of plant and equipment on to the roof must be carefully planned. If guard rails are removed to get plant and equipment on to a roof, a safety harness must be worn by any employee working on the edge.

Plant and Working on Site

Site Plant, Machinery and Equipment

All plant and equipment taken on site must be safe, in good working order and fitted with necessary guards and safety devices, with any certificates available for checking.

No power tools or electrical equipment working at more than 110 volts may be taken on site. All transformers, generators, extension leads, plugs and sockets must be certified to the latest British Standard for industrial use.

Employees and sub-contractors should use equipment only if they have been properly trained and received adequate instruction in its safe use. Only the correct tolls and equipment for the job should be used.

Any defects or faults in plant and equipment should immediately be reported to a manager or supervisor.

All plant and equipment should be individually marked with its own serial number, annually inspected and tested with the details recorded in a register.

Transport and Storage of Compressed Gases and Fuels

The Classification, Packaging and Labelling of Dangerous Substances Regulations 1984 and the Road Traffic (Carriage of Dangerous Substances in Packages etc.) Regulations govern compressed gasses and fuels.

Relevant Transport Emergency Cards (TREMCARDs) and Gas Data and Safety Sheets must be carried for gasses being carried in a vehicle.

Cylinders should be properly loaded and secured so that they cannot move about and do not project beyond the sides or end of the vehicle. Propane cylinders should be carried and secured upright.

All cylinders must be properly labelled. Cylinders must be checked for leaks of gas at the start and finish of the journey. Where possible, an open vehicle should be used. If a closed van or car has to be used, it should be properly ventilated at all times, with at least a window open.

Toxic gas cylinders (painted or having yellow markings) must not be carried in a closed vehicle unless they are in a ventilated compartment separate from the driver.

Persons transporting or handling cylinders, must not smoke or ignite flammable materials. Cylinders with equipment attached to the valve must not be transported unless the cylinder is properly secured and the valve turned off. Caps and plugs must be fitted where applicable.

If a leak is suspected while in transit, the driver must stop, park in a safe place, check, and if necessary phone BOC for assistance. Phone the fire brigade if you suspect an emergency is imminent.

If a fire or serious leak develops, take immediate steps to safeguard the lives of persons nearby, by moving them a considerable distance from the vehicle, behind substantial cover if possible. Think carefully before tackling any fire if the cylinders are directly involved. There will be a serious risk of explosion, even if the contents are non-flammable.

See further instructions under the **Leaking cylinders and fires involving cylinders** section (page 38)

Storage of Gas Cylinders

Cylinders should, if possible, be stored in a purpose built compound, which should be well ventilated, preferably in the open air. The site should be free from fire risk and away from sources of heat and ignition. Access should be restricted to authorised persons.

The compound should be clearly marked as a cylinder store and appropriate statutory hazard warning signs displayed (flammable, oxidant, compressed gas, for example.) Smoking and the use of naked flames either inside or in the vicinity of the cylinder store should be prohibited.

Cylinders should be stored vertically and properly secured to prevent toppling. Valves



should be tightly closed and, where appropriate, valve outlets should be capped or plugged. Valve guards or caps should be in place and properly secured.

Cylinders stored in the open should be protected against rusting and extremes of weather. It is advisable to stand cylinders on open galvanised steel grid work, to reduce

corrosion of the cylinder base.

Full and empty cylinders should be stored separately, with full cylinders arranged so that

the oldest is used first.

Gas cylinders should be segregated in the storage area according to the various categories (toxic, flammable, etc.) Cylinders containing oxygen and oxidants should be separated from flammable gases by a minimum distance of 3 metres (10 feet,) or by a fire reducing partition.

Do not mix cylinders in the full cylinder store. Store full cylinders of different gases

separately, each in a well marked place.

The amounts of flammable or toxic gases in storage should be kept to a minimum. Cylinders containing flammable gases should be stored away from other combustible materials. Cylinders held in storage should be periodically checked for general condition and leakage.

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Liquefied Petroleum Gases (IPGs)

Legal provisions for the use of LPGs are made in the Highly Flammable and Liquefied

Petroleum Gases Regulations 1972 Guidance Notes: CS4 and CS6.

The term liquefied petroleum gas covers butane (blue cylinders) and propane (red cylinders.) Most appliances can be used with either gas but, because of different

operating pressures, the correct regulator must be used for each gas.

Precautions to remember when using LPGs:

- > Only cylinders in actual use should be taken into work areas.
- Always use cylinders in an upright position.
- Only the correct equipment should be used correct pressure regulator, hoses to BS 3212 secured with proper hose clips.
- Always check equipment for leaks and general condition before use, any faulty equipment should be taken out of use immediately.
- Ensure there is adequate ventilation.
- ➤ LPG is heavier than air, so any leakage will accumulate at low levels, particularly in basements, pits, trenches and tunnels.

Oxy-Acetylene Welding and Brazing

The main dangers of oxy-acetylene welding and cutting are fires, explosions, fumes and burns. Protect yourself and others against the hazards.

When using oxy-acetylene welding equipment the following precautions should be taken:

- On site, cylinders in use should be secured and transported in a cylinder trolley. Cylinders must be kept upright.
- ➤ Use only hoses to British Standard BS 5120, blue for oxygen and red for acetylene, with the correct fitting.
- > Flashback arresters must be fitted.
- Regularly check all equipment for faults, using soapy water to test for leaks.
- Any faulty equipment must be taken out of use immediately and repaired or replaced. Hose assemblies must be tested to BS 1389: 1986 after repair.
- ➤ Do not use hoses longer than necessary, especially when two or more standard lengths are coupled together. Where hoses are connected, use only recommended couplings and dismantle them when the job is complete.
- Hoses should not be positioned under the welding and cutting areas where hot metal could fall on them, or coiled around the cylinders or regulators when in use. Fire in a coiled hose is difficult to extinguish.
- Wear protective clothing goggles with double lenses to BS 679 and leather gloves/gauntlets.
- Keep hoses clear of walkways.

When welding in confined spaces, ensure that there is adequate ventilation.

Acetylene cylinders can degenerate to a dangerous condition without the user being aware that there is a problem until the cylinder starts to glow with heat. Knocking the casing, or dropping the cylinder can cause a chain reaction inside which can result in a serious explosion. See further instructions on cylinder incidents under the **Leaking cylinders and fires involving cylinders** section (Page 38).

Metal Arc Welding

Metal arc welding has many of the dangers of oxy-acetylene welding with the added hazard of radiation and electricity. Protect yourself and other by using the approved protective clothing and screens.

Precautions to be taken when metal arc welding are:

- Face shields and protective clothing must be worn by operators and anyone assisting during welding.
- > Erect screens around the work area and display notices to warn passers-by.
- All equipment must be properly insulated.
- Check leads and couplings regularly use approved cable couplings.
- ➤ Keep leads clear of walkways and away from flammable liquids and gases.
- When welding in wet weather, keep leads dry.
- Primary leads should be armoured and kept as short as possible.
- The return current cable connecting clamp for electric welding should at all times be connected to the work piece as close as possible to the actual weld. Return paths via pipe hangers, steelwork or structures must not be permitted.
- When welding in confined spaces, see that adequate ventilation is provided.
- Use an exhaust ventilation system if necessary.

Leaking Cylinders and Fires Involving Cylinders

The fire brigade should always be called to fires involving cylinders and to leaking cylinders which cannot be turned off, whether their contents are flammable or not and however minor the incident appears. Give the fire brigade details of the types of cylinders and numbers of cylinders involved.

People in the area should be evacuated to a considerable distance from the incident in the event of a leak or fire.

Should flammable gas leaking from a cylinder ignite, an attempt should be made to extinguish it using a CO₂ extinguisher, or a dry powder extinguisher if no CO₂ extinguisher is available. The leak should be stopped if possible, without putting anyone at risk. Care should be taken not to breathe in the leaking gas.

If a leak of flammable gas cannot be stopped after the fire is out, precautions should be taken to ensure no source of ignition re-ignites the gas. Sources of ignition include smoking, electrical switches and equipment, internal combustion engines and sparks caused by welding.

If possible, move affected cylinders to a safe position in the open air, but away from drains and other excavations where gas might collect. Cylinders involved in fire should be cooled by hosing down with large quantities of water, even after any leak has been extinguished.

Particular care must be taken with acetylene gas cylinders whose contents can decompose rapidly without any external signs of heating, such as glowing metal showing until there is extreme danger.

Fire Precautions when welding and brazing

Make sure the area is free of combustible materials. Use fireproof blankets to cover materials which cannot be moved. When welding, ensure that a dry powder fire extinguisher (coloured blue) is near at hand.

On completion of all "Hot Works" the area should be checked after 30 minutes to ensure that that nothing is smouldering.

Refrigerant Gases

Fluorinated refrigerants must be treated with respect to avoid hazards associated with their use and handling. Heavy concentrations of refrigerant within a confined area can displace enough oxygen to cause suffocation. Refrigerants will decompose at high temperatures, producing highly toxic acid products. If you detect a strong, irritating odour, warn others, leave the area immediately and report it.

Avoid spilling liquid refrigerant on the skin or getting it into your eyes. Wear safety goggles.

When working on refrigerant systems:

- > Do not discharge refrigerant in the atmosphere.
- > Do not use refrigerant to clean coils.
- > Do not leak test using pure refrigerant use nitrogen with a trace of refrigerant.
- Fit liquid and suction line isolating valves when replacing components or installing equipment.
- Decant any refrigerant removed from a system into an empty container marked "CONTAMINATED."
- Before undertaking any brazing work on a system, ensure all the refrigerant is removed and that the work area is well ventilated.

When decanting gas from a large to a small cylinder, the small cylinder must be weighed during the process to ensure it is not over-filled. Never charge a cylinder beyond the weight stated on the cylinder.

Pressure Testing

Legal aspects are covered by the HSE publication "Safety in Pressure Testing."

Consider these points when undertaking pressure testing:

- Hydraulic testing using liquid, usually water, is the safest test method.
- > Examine all leaks while filling the system.
- ➤ When the system is full, gradually raise the pressure and seal, re-examine the system for leaking valves or joints.



- ➤ Keep unauthorised persons clear of the area undergoing tests and post warnings where necessary.
- Use only the proper components on the equipment and never attempt to lash up connections.
- Wear safety helmets and eye protection when carrying out pressure testing.

Additional precautions to be taken when hydraulic testing are:

- Check that adequate drain cocks are available on the system to be tested.
- > Do not, if possible, test in frosty weather.
- Check that all high points have been vented and that vents are closed systematically.

Electrical Installation and Equipment

Legal provisions are covered in Guidance Notes - GS24 "Electricity on Construction Sites," PM32 "Safe Use of Portable Electrical Apparatus" and the Electricity at Work Regulations 1989 IEE Regulations.

Important considerations when using electrical equipment and undertaking electrical installation:

- Several different voltages may be available at anyone site, but portable tools and lighting must work at 110 volts. Sockets and plugs should be such that equipment cannot be connected to the wrong power supply. Plugs and sockets must conform to BS 4343.
- An RCD should be fitted to the temporary supply on building sites used to supply portable electrical equipment.
- ➤ Before use, check that cables are not cut or frayed and that they are properly clamped at the equipment and plug.
- Check that the equipment is in good condition, with no cracks or pieces missing from the casing.
- Transformers must conform to BS 3535 and care should be taken to ensure that they are not overloaded.

- ➤ Use of long trailing leads should be avoided wherever possible. Where a cable lies on the ground, it should be safely routed. It should be clearly marked and care taken to protect it.
- Where possible, power and lighting circuits should be kept separate.
- Any temporary electrics which will be in position for more than three months are subject to examination in accordance with IEE Regulations.
- All electrical work should be carried out by a competent electrician. Inexperienced persons should not tamper with electrical connections.
- All cables should be of a type suitable for the duty required. Damaged cables should never be used.

In case of electrical shock, turn off the power immediately. If it is not possible, do not touch the victim. Use rubber, wood, cloth, folded newspaper or material you are certain is non-conductive - all of which must be dry - to try and separate the victim from the power source. Call the ambulance and any available first aiders.

Abrasive Wheels

The use of abrasive wheels is governed by the Abrasive Wheel Regulations 1970 and the Protection of Eyes Regulations 1974.

A person changing a wheel or disc must be trained and properly appointed, with their name entered in the Wheel Register F2346 held by The Company's or sub-contractor's Health and Safety Officer.

Precautions to take while using abrasive wheels:

- Check that the machine and wiring are in good condition.
- Guards must be correctly fitted.
- Wear eye protection plus a dust mask or respirator where necessary.
- Keep the floor or area around the machine or where the tool is used clear and tidy.
- Ensure that other persons stand clear of the operation.

The law does not permit persons aged under 18 to change an abrasive wheel or disc.

Pipe Threading Machines

Legal provisions are set out in HSE Guidance Note PM1 "Guarding of Portable Pipe Threading Machines."

On pipe threading machines where the pipe revolves, the whole length of the revolving pipe should be guarded. On machined where the die rotates and the pipe remains stationary, the rotating die head must be guarded.

A pipe threading machine must never be left unattended while it is running. If the machine is to remain out of use for some time it must be disconnected from the power supply.

The machine foot operated control switch should be in good working order. There should be adequate working space around the machine. Always keep the floor clean and free from grease, off-cuts and swarf.

Cartridge Operated Tools

HSE Guidance Note PM14 covers the legal aspects.

Only persons over 18 years of age who have been trained and obtained a certificate can use cartridge tools. Points to remember:

- > Eye protections and ear defenders must always be worn.
- Always check the material into which the fixing stud is to be fixed.
- Make sure the protective guard is correctly fitted.
- Never leave unexploded cartridges lying about.
- Always unload when not in use.
- All cartridges must be kept under lock and key in a cool, dry place.

Should a cartridge misfire, the firing mechanism should be re-triggered without withdrawing the equipment from the workface and the tool fired again. If it still fails to fire it should be removed from the workface after 30 seconds and removed from the tool in accordance with the manufacturer's instructions. The faulty cartridge must be returned to the supplier in a properly stored metal box.

All cartridge tools should be thoroughly cleaned and lubricated after each period of use and returned to the manufacturer for overhaul at least once per year.

Hand Tools

Many accidents involving hand tools result from:

- Misuse of the tool.
- > The wrong tool for the job.
- Defective tools.
- > Flying particles.

Make sure you have the right tool for the job. Never leave a defective tool about for others to use.

Lifting Appliances

When ordering lifting equipment, state the weight of the load to be lifted, the height of the lift, the maximum radius and specify that a test certificate and examination certificate are provided.

When a crane comes on site, complete with driver, it becomes the hirer's responsibility. The drivers comes under direct responsibility of the hirer and should carry out the instructions given. The certificates of test and examination (and insurance) should be examined by the hirer before work commences. The driver/operator must be certificated.

Where cranes are being used and the load is not in the operator's vision, a competent banks-man must be nominated by the hirer to be in charge of the operation at all times, to ensure the load is properly slung and to give the correct signals to the driver. These people must be over 18 years of age.

Lifting Equipment

All slings and lifting gear must be clearly marked with the safe working load and identification number. Slings, wire ropes or chains must not be knotted to shorten them.

All slings, ropes and chains must be examined every six months. When not in use, slings, ropes and chains should be properly stored.

All equipment should be checked before use and any found faulty immediately withdrawn from service.



Lifting eyes should be supplied where possible. The lifting instructions or precautions provided by the manufacturers of the equipment to be installed must be followed.

Hoists

Personnel must never ride on hoists. A proper signalling system should be established with the hoist operator before using the hoist. The gates into hoist wells must be closed when the hoist is not at that level.

Radiography and Other Non-Destructive Testing

Where radiography, ultrasonic or other non-destructive testing is being carried out on site, employees and sub-contractors must comply with the requirements of all relevant legislation and codes of practice.

Where a statutory requirement exists, a suitably-qualified and experienced radiation protection advisor must be appointed in writing to ensure observation of the lonising Radiation Regulations 1985. The supervisor should supervise all radiography work.

All persons using ionising radiation must be made aware of the rules and regulations governing radiation.

Radiography areas must be clearly identified by the erection of suitable barriers, warning notices and flashing lights. Audible warnings by horn must be given before a radioactive source is exposed. All site personnel not involved in the testing must be clear of the affected area before testing commences.

Any incident resulting in the over-exposure of personnel must be reported to The Company Health and Safety Director immediately for investigation and notification to the relevant authorities.

In the event of loss, damage or malfunction of an isotope, the site must be evacuated and the fire brigade called to institute suitable emergency procedures.

General Hazards on Site

Site Tidiness

Tidiness is the foundation stone of safety. Untidiness is the largest single cause of accidents. Most accidents on site are caused by people tripping, slipping or falling over materials and equipment left lying around.

Help improve site tidiness by:

- Not leaving rubbish lying about clean up as you go along.
- Keeping gangways, aisles and stairways clear.
- Wiping up spilt oil, grease and liquids from floors.
- Keeping access to stores clear.
- Picking up all off-cuts of tube, cable, ductwork and lagging etc.
- Stacking and storing material correctly.
- Establishing a rubbish disposal point for the site or work area.
- Knocking down or removing protruding nails and screws.

Responsibility for tidiness at work rests with both employer and employee. Everyone has a duty of care in respect of himself and others. If someone suffers an injury as a result of your untidiness, you as well as your employer could be prosecuted.

Fire Prevention

Fires on site are most commonly caused by careless disposal of cigarette ends and matches, children trespassing, welding and brazing. Other causes include faulty electrical and welding equipment, defective heating appliances, and uncontrolled rubbish burning. The most vulnerable areas are site huts, material stores and plant and equipment.

Keep adequate and suitable fire extinguishers on site, clearly marked, properly maintained and suitably located. Notices should be displayed explaining the procedure to be followed in case of fire.

Welfare on Site

Toilets, washing facilities and drying areas are provided where required by the Construction (Health and Welfare) Regulations 1966.

Facilities may also be provided for eating meals and resting during breaks.

Where such facilities exist, they should be kept clean and tidy and any defects reported immediately to a supervisor or the site manager.

Housekeeping and Waste Disposal

All employees and sub-contractors have an obligation to keep work, storage and welfare areas tidy and clear of hazards.

All excess materials, debris, rubble, off-cuts and other waste must not be allowed to accumulate or prevent safe access to any part of a site. All such debris and refuse should be taken to a suitable disposal area agreed between the site manager and sub contractors.

Hazardous waste must be handled and disposed of in accordance with all relevant regulations. Sub-contractors are responsible for their own hazardous waste unless otherwise agreed with The Company.

Hazardous waste must be safely stored, disposed of at the end of each shift, or more regularly if so required by regulations or Company Policy.



