

HEALTH SURVEILLANCE POLICY

Generally

Our health surveillance starts in our Construction Phase Health and Safety Plan. It will detail risks to both our direct employees and our sub contractors. These risks will also be highlighted in our site inductions and as they develop in tool box talks. Sub contractors are expected to detail their risks and how they intend to deal with the issues in their method statements. IMS can then check that they are implemented.

This allows the operatives to be informed of what health risks are on site and what the early symptoms are. This allowing them the opportunity to report any symptoms if they occur.

IMS also put up posters in the welfare facilities to heighten awareness and refer to the Constructing Better Health Contractors Guide, which is attached.

Health Hazards Of Specific Agents

The health hazards associated with hazardous substances can vary from very mild (momentary dizziness or a skin irritation) to very serious, such as a cancer.

Cancer is a serious body cell disorder in which the cells develop into tumours. There are two types of tumour – benign and malignant. Benign tumours do not spread but remain localized within the body and grow slowly. Malignant tumours are called cancers and often grow rapidly, spreading to other organs using the bloodstream and lymphatic glands. Survival rates have improved dramatically in recent years as detection methods have improved and the tumours are found in their early stages of development. A minority of cancers are believed to be occupational in origin.

The following common agents of health hazard will be described together with the circumstances in which they may be found:-

Organic solvents are used widely in industry as cleansing and degreasing agents. There are two main groups – the hydrocarbons (includes the aromatic and aliphatic hydrocarbons) and non-hydrocarbons (such as toluene, white spirit, trichloroethylene and carbon tetrachloride). All organic solvents are heavier than air and most are sensitizers and irritants. Some are narcotics, while others can cause dermatitis and after long exposure periods liver and kidney failure. It is very important that the hazard data sheet accompanying the particular solvent is read and the recommended personal protective equipment is worn at all times.

Solvents are used extensively in construction in varnishes, paints, adhesives, strippers and as thinners. They are at highest risk when used as sprays. One of the most hazardous is dichloromethane (DCM) also know as methylene chloride. It is used as a paint stripper normally as a gel. It can produce narcotic effects and has been classified as a category 3 carcinogen in the European Community. The minimum personal protective equipment requirements are impermeable overalls, apron, footwear, long gloves and gauntlet and chemically resistant goggles or visor. Respiratory protection equipment is also required if it cannot be demonstrated that exposure is below the maximum exposure limit.

Carbon dioxide is a colourless and odourless gas which is heavier than air. It represses the respiratory system, eventually causing death by asphyxiation. At low concentrations it will cause headaches and sweating followed by a loss of consciousness. The greatest hazard occurs in confined spaces, particularly where the gas is produced as a by-product.

Carbon monoxide is a colourless, tasteless and odourless gas which makes it impossible to detect without special measuring equipment. As explained earlier, carbon monoxide enters the blood (red cells) more readily than oxygen and restricts the supply of oxygen to vital organs.

At low concentrations (less than 5%), headaches and breathlessness will occur, while at higher concentrations unconsciousness and death will result. The most common occurrence of carbon monoxide is as an exhaust gas either from a vehicle or a heating system. In either case, it results from inefficient combustion and possibly, poor maintenance.

Isocyanates are volatile organic compounds widely used in industry for products such as printing inks, adhesives, two-pack paints (particularly in vehicle body shops) and in the manufacturer of plastics, polyurethane products). They are irritants and sensitizers. Inflammation of the nasal passages, the throat and bronchitis are typical reactions to many isocyanate, very small amounts of the substance often provoke a serous reaction similar to an extreme asthma attack. Isocyanates also present a health hazard to fire fighters. They are subject to a workplace exposure limit (WEL) and respiratory protective equipment should normally be worn. Two pack polyurethane paints and varnishes are used in construction as surface coatings.

Asbestos appears in three main forms – crocidolite (blue), amosite (brown) and chrysotile (white). The blue and brown asbestos are considered to be the most dangerous and may be found in older buildings where they were used as heat insulators around boilers and hot water pipes and as fire protection of structure. White asbestos has been used asbestos cement products and brake linings. It is difficult to identify an asbestos product by its colour alone – laboratory identification is usually required. Asbestos produces a fine fibrous dust of respirable dust size which can become lodged in the lungs. The fibres can be very sharp and hard causing damage to the lining of the lungs over a period of many years. This can lead to one of the following diseases:

- Asbestosis or fibrosis (scarring) of the lungs.
- Lung cancer.
- Mesothelioma – cancer of the lining of the lung or, in rare cases, the abdominal cavity (this is confined to blue asbestos).

If asbestos is discovered during the performance of a contract, work should cease immediately and the employer be informed. Typical sites of asbestos include ceiling tiles, asbestos cement roof and wall sheets, sprayed asbestos coatings on structural members, loft insulation and asbestos gaskets. Asbestos has its own set of Regulations (Control of Asbestos at Work Regulations 2002). These cover the need for a risk assessment, a method statement covering the removal and disposal, air monitoring procedures and the control measures (including personal protective equipment and training) to be used.

Lead is a heavy, soft and easily worked metal. It is used in many industries but is most commonly associated with plumbing and roofing work. Lead enters the body normally by inhalation but can also enter by ingestion and skin contact. The main targets for lead are the spinal cord and the brain and the blood and blood production. The effects are normally chronic and develop as the quantity of leads builds up. Headaches and nausea are the early symptoms followed by anaemia, muscle weakening and (eventually) coma. Regular bloody tests are a legal and sensible requirement as are good ventilation and the use of appropriate personal protective equipment. High personal hygiene standards and adequate welfare (washing) facilities are essential and must be used before smoking

or food is consumed. The reduction in the use of leaded petrol was an acknowledgement of the health hazard represented by lead in the air. Lead is covered by its own set of regulations – the Control of Lead at Work Regulations 2002. These regulations require risk assessments to be undertaken and engineering controls to be in place. They also recognise that lead can be transferred to an unborn child through the placenta and therefore, offer additional protection to women of reproductive capacity. Medical surveillance, in the form of a blood test, of all employees, who come into contact with lead operations, is required by the regulations. Such tests should take place at least once a year. Lead is used in construction by roofers as a roofing and guttering material and it is also used (to a lesser extent these days) by plumbers.

Silica is the main component of most rocks and is crystalline substance made of silicon and oxygen. It occurs in quartz (found in granite), sand and flint which are present in a wide variety of construction materials. Harm is caused by the inhalation of silica dust which can lead to silicosis (acute and chronic), fibrosis and pneumoconiosis. The dust which causes the most harm is respirable dust which becomes trapped in the alveoli. This type of dust is sharp and very hard and probably causes wounding and scarring of lung tissue. As silicosis develops, breathing becomes more and more difficult and eventually as it reaches its advanced stage, lung and heart failure occur. It has also been noted that silicosis can result in the development of tuberculosis as a further complication. Hard rock miners, quarrymen, stone and pottery workers are most at risk. Health surveillance is recommended for works in these occupations at initial employment and at subsequent regular intervals. Prevention is best achieved by the use of good dust extraction systems and respiratory personal protective equipment.

Cement dust and wet cement are important construction materials and also hazardous substances. Contact with wet cement can cause serious burns or ulcers which will take several months to heal and may need a skin graft. Dermatitis can be caused by skin contact with either wet cement or cement powder. Cement powder can also cause inflammation and irritation of the eye, irritation of the nose and throat and possibly chronic lung problems. Manual handling of wet cement or cement bags can lead to musculoskeletal health problems and cement bags weighing more than 25kg should not be carried by a single worker. Personal protective equipment in the form of gloves, overalls with long sleeves and full length trousers and waterproof boots must be worn on all occasions. If the atmosphere is dusty, goggles and respiratory protection equipment must be worn. Finally adequate welfare facilities are essential so that workers can wash their hands at the end of the job and before eating, drinking or using the toilet.

Wood dust can be hazardous, particularly when it is hard wood dust which is known, in rare cases, to lead to nasal cancer. Composite boards, such as medium density fibreboards (MDF) are hazardous due to the resin bonding material used which also can be carcinogenic. Wood dust is produced whenever wood materials are machined, particularly sawed, sanded, bagged as dust from dust extraction units or during cleaning operations, especially if compressed air is used. The main hazards associated with all wood dusts are skin disorders, nasal problems, such as rhinitis and asthma. There is also a hazard from fire and explosion. A COSHH assessment is essential to show whether the particular wood dust is hazardous. When the wood dust is created inside a woodworking shop a well-designed extraction system is essential. Personal protective equipment, overalls and eye protection may also be necessary as a result of the assessment. Finally good washing and welfare facilities are also essential.

Tetanus is a serious, sometimes fatal disease caused by a bacterium that lives in the soil. It usually enters the human body through a wound from an infected object, such as a nail, wood splinter or thorn. On entering the wound, it produces a powerful toxin which attacks the nerves that supply muscle tissue. It is commonly known as lockjaw because after an incubation period of approximately a week, stiffness around the jaw area occurs. Later the disease spreads to other muscles including the breathing system and this can be fatal. The disease has been well controlled with antitetanus

immunization and it is important that all construction workers are so immunized. Booster shots should be obtained every few years. Any flesh wound should be thoroughly cleaned immediately and an antiseptic cream applied.

Hepatitis is a disease of the liver and can cause high temperatures, nausea and jaundice. It can be caused by hazardous substances (some organic solvents) or by a virus. The virus can be transmitted from infected faeces (Hepatitis A) or by infected blood (Hepatitis B and C). The normal precautions include good personal hygiene particularly when handling food and in the use of blood products. Hospital workers who come into contact with blood products are at risk of hepatitis as are drug addicts who share needles. It is also important that workers at risk regularly wash their hands and wear protective disposable gloves.

Leptospirosis or Weil's disease is caused by a bacterium found in the urine of rats. In humans the kidneys and liver are attacked causing high temperatures and headaches followed by jaundice and in up to 20% of cases, it can be fatal. It enters the body either through the skin or by ingestion. The most common source is contaminated water in a river, sewer or ditch and workers such as canal or sewer workers, are most at risk. Leptospirosis is always a risk where rats are present, particularly if the associated environment is damp. Good impervious protective clothing, particularly Wellington boots, is essential in these situations and the covering of any skin wounds. For workers who are frequently in high risk environments (sewer workers), immunization with a vaccine may be the best protection. It is important for construction workers to be aware of this hazard when working beside or over rivers canals or streams.

Legionella is an airborne bacterium and is found in a variety of water sources. It produces a form of pneumonia caused by bacteria penetrating to the alveoli in the lungs. This disease is known as Legionnaires' disease, named after the first documented outbreak at a State Convention of the American Legion held at Pennsylvania in 1976. During this outbreak, 200 men were affected, of whom 29 died. That outbreak and many subsequent ones were attributed to air-conditioning systems. It is most common in those over 45 years of age and rare in the under 20's and men seem more susceptible than women. The legionella bacterium cannot survive at temperatures above 60°C but grows between 20°C and 45°C, being most virulent at 37°C. It also requires food in the form of algae and other bacteria. Control of the bacteria involves the avoidance of water temperatures between 20°C and 45°C, avoidance of water stagnation and the build up of algae and sediments and the use of suitable water treatment chemicals. This work is often done by a specialist contractor.

The most common systems at risk from bacterium are:-

- Water systems incorporating a cooling tower.
- Water systems incorporating an evaporative condenser.
- Hot and cold water systems and other plant where the water temperature may exceed 20°C.

An approved code of practice (Legionnaires' disease – the control of legionella bacteria in water systems) was produced by the HSE in 2000. Where plant at risk of the development of legionella exists, the following is required:

- A written 'suitable and sufficient' risk assessment.
- The preparation and implementation of a written control scheme involving the treatment, cleaning and maintenance of the system.
- Appointment of a named person with responsibility for the management of the control scheme.
- The monitoring of the system by a competent person.
- Record keeping and the review of procedures developed within the control scheme.

The code of practice also covers the design and construction of hot and cold water systems and cleaning and disinfection guidance. There have been several cases of members of the public becoming infected from a contaminated cooling tower situated on the roof of a building. It is required that all cooling towers are registered with the local authority. People are more susceptible to the disease if they are older or weakened by some other illness. It is therefore important that residential and nursing homes and hospitals are particularly vigilant. The most common cause of isolated outbreaks of legionella are showerheads particularly when they remain unused for a period of time. Showerheads should be cleaned and descaled at least every three months.

WORKPLACE EXPOSURE LIMITS

One of the main purposes of a COSHH assessment is to control adequately the exposure of employees and others to hazardous substances. This means that such substances should be reduced to levels which do not pose a health threat to those exposed to them day after day at work.

This limit is set for substances which may cause serious health problems and must not be exceeded and should be reduced to as low as is reasonably practicable.

Is the level at or below which little health risk is likely to occur to persons exposed to the hazardous substance. If the level is exceeded, then steps should be taken to reduce the exposure. Work need not cease when the WEL is exceeded provided that reasons are given and that the exposure levels will be reduced as soon as is reasonably practicable.

COMPANY HEALTH SURVEILLANCE PROCEDURE/POLICY

We confirm that IMS use the leaflet HSE INDG304 as guidance notes, to relay health surveillance to our employees. Over our company's 10 year existence, time lost through illness is negligible.

We employ specialist subcontractors for works with lead and asbestos (See section 9 for specialist subcontractor literature of one of our contractors), but have trained foreman to risk assess all activities and provide method statements, so that the activities have a safe system of work and do not affect any other operatives or indeed the public.

We are a small general building company, that only carry out basic building works. Our main areas of health surveillance are as follows, which are all covered further on in this section of the policy:-

- Noise control.
- Dust control.
- Works with cement/wet trades.
- Hand arm vibration.
- Confined spaces.
- Protection from the sun.

All the above are controlled by risk assessments and toolbox talks and using the appropriate PPE, method statements and restricted in time to exposure.

In line with our Health and Safety Policy, IMS recognises and accepts its duties and responsibilities to ensure, so far as is reasonably practicable, the health, safety and wellbeing of its employees and others who may be at risk from its activities. The purpose of this policy is to promote the health and wellbeing of all employees to enable them to achieve their full potential at work.



This document is intended to be a framework, with Service Units supplementing it by having in place their own procedures and guidelines, which reflect the principles of this policy and the individual needs of their Service Units.

All Directorates and Services within IMS must be able to demonstrate compliance with this policy via audit.

Serious and deliberate violation of our Health & Safety Policy, health and safety rules and standards will be viewed as gross misconduct under the Disciplinary Policy of IMS.

Managers may choose to delegate their duties but cannot delegate their responsibilities.

Signed.....*C. Meadows*..... Charles Meadows (Director) Date.....*28/4/23*.....