

**CONTRACTORS SAFETY PRACTICE MANUAL AT UNIVERSITY  
MALAYA OF MEDICAL CENTRE (UMMC), KUALA LUMPUR  
(ENGLISH VERSION)**

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**GENERAL SAFETY REQUIREMENTS**

Health \* Safety \* Security \* Fire \* Hygiene

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## 1.1 General Safety Requirements

### Health and Safety Management

The contractor where appointed should note that, in accordance with conditions of contract, he is responsible for the safety of site operations. The contractor shall comply with all the requirements described herein without detracting from his responsibilities under the contract.

The contractor shall throughout the progress of the works comply with his duties under all approved manual and all relevant health and safety legislation. Where no specific legislative requirements exist, the contractor shall comply with guidance provided by contractors safety practice manual at UMMC or industry standards as a minimum standard of safety.

The contractor shall be responsible for ensuring compliance with this document throughout the project including the activities of his appointed sub contractors or temporary visitors.

The contractor shall submit with any tender, or if there is no tender required prior to any works commencing, the following:

- University of Malaya Medical Centre (UMMC) Safety Policy Document
- Details of any prohibition or improvement notices and prosecutions by the enforcing authorities, during the last 5 years.
- Risk Assessments and method statements
- Copies of employers liability and public liability insurance certificates

## 1.2 Training

The contractor shall ensure that all employees (including sub-contractors) are adequately trained to carry out their particular duties or tasks including driving plant and operating equipment.

## 1.3 Risk Assessment

Before any work commences on site the contractor shall nominate a competent person to be responsible for co-ordinating risk assessments of all operations where risk is foreseeable and ensuring that appropriate control measures are established and incorporated into safe systems of work. The contractor shall use these safe systems of work as the basis for the health and safety method statements. All method statements shall be developed in reasonable time to allow co-ordination of hazardous works.

The objective of risk assessment is to highlight project related hazards and to develop methods to deal with those hazards.

These assessments shall be in writing and include but not restricted to the following activities:

- Major Construction Elements
- General public and third party safety
- Location of site access/egress
- Vehicle movements on and off site
- Vehicle, Machinery and equipment hazards within the site
- Vehicle/Pedestrian segregation
- Temporary services distribution
- Siting of static plant and equipment
- Scaffolding
- Trench/Ground works
- Hazardous Chemicals
- Services Clearances
- Construction Materials
- Storage, use and disposal of substances hazardous to health
- Noise
- Working at heights
- Excavation and underground services
- Manual Handling
- Use of portable hand tools
- Emergency procedures including evacuation routes
- Fire
- Materials storage
- Site hoarding
- Contaminated ground
- Lifting new elements of structure

All risk assessments shall be reviewed and revised as necessary to accommodate any changes in methods of working, plant, equipment, material and/or site development. The management team will be available to liaise on all matters of health and safety relevant to these risk assessments.

#### **1.4 Housekeeping**

Housekeeping is of paramount importance. Contractors shall set down and make available to the management team their system for maintaining a clean, tidy and safe site. Contractors shall ensure the site is continuously monitored to ensure standards are maintained. The use of skips and disposal arrangements shall be agreed with the University of Malaya Medical Centre (UMMC).

### **1.5 Permits to Work**

The contractor shall ensure that when working within University of Malaya Medical Centre (UMMC) all "Permits to Work" or authorizations have been obtained from the Project Owner (UMMC) for the type of work covered in the following clauses of this document.

- Hot work permit
- Confined spaces
- Electrical equipment
- Excavations and openings
- Working at Height

Where the assessment conducted identify high risk activities which demand the strict application of an approved safe system of work, the contractor shall devise and operate appropriate control measures which may include a "permit to work" system under the direct supervision of an appointed competent person.

### **1.6 Working on or in the vicinity of high temperature Hot Water (HTHW) Systems.**

The contractor shall conform to the requirements of engineering instruction when engaged in working on or near or where works affect the HTHW or steam installations under the control of University of Malaya Medical Centre (UMMC). All work must be carried out by competent persons.

### **1.7 Working in the vicinity of Sprinkler system.**

The contractor shall comply with the requirements of the contract Engineers instruction when working on or near or where works may affect any sprinkler system.

### **1.8 Protection against Noise.**

Sources of noise should be eliminated where practicable. Contractors are responsible for providing and ensuring the use of suitable hearing protection by their employees and their sub-contractors.

### **1.9 Protection against fire.**

#### **General.**

Contractors must conform to the requirements of Fire Safety Standards for University of Malaya Medical Centre (UMMC)

The fire risk assessment and emergency procedures shall be discussed with the Project Owner(UMMC) and fire precautions shall be agreed prior to commencement of works.

The contractor shall ensure that operatives on site are familiar with the risk assessment and emergency procedures.

Adequate means of extinguishing fires as detailed in the hot work permit shall be provided by the contractor, to the approval of the Safety Officer or OSHE Unit

The contractor shall ensure that all site staff are adequately briefed and instructed on fire safety arrangements for the site and may be required to present proof.

The use of petrol driven plant (excluding staff cars) or equipment shall be prohibited at all locations on the site unless written permission is granted by University of Malaya Medical Centre (UMMC).

All combustible materials shall be stored in a position and in a manner approved by the Safety Officer.

#### **Access for Emergency Services.**

Areas should be set aside for the access of fire fighting equipment or other like appliances including ambulances and shall be maintained; kept clear of obstructions at all times and marked/signed accordingly.

#### **Hot Working**

Hot working includes all types of welding work involving the use of bitumen heaters and thermic lance equipment and any work involving naked flames or sparks.

Prior to any hot work being carried out by the contractor a correctly endorsed Hot Work permit shall be obtained from The Safety Officer. The permit will carry endorsements as to the type of fire fighting equipment to be provided by the contractor, and the authorizing person will enter the starting and completion times. Upon the completion of the work the permit must be returned to The Safety Officer for cancellation.

## **Site Welding**

No welding shall be carried out in the site without prior approval from the contract engineers through The Safety Officer which shall not be given until all conditions stipulated by the Hot Work permit have been met. The contractor shall give reasonable notice of his requirements to carry out welding on the site.

The contractor shall ensure that any welding operations are screened or carried out in such a way as to prevent the flashes from the process affecting any persons immediately adjacent to the operation, including any persons who have gained unauthorized access, from the affects of "arc eye".

## **1.10 Hazardous Substances and Materials**

### **General**

The contractor shall ensure that risk assessments have been undertaken by a competent person for all products intended for use during the works or materials evolved during the work and that written procedures for the handling, application, storage and disposal of hazardous products have been prepared.

The Security Officer must be informed in writing of all substances intended for use on site which are classified as toxic, very toxic, corrosive, flammable, highly flammable or explosive

### **Asbestos**

On discovering any asbestos the contractor shall immediately notify the Safety Officer. NO ATTEMPT SHALL BE MADE TO REMOVE THE ASBESTOS. It shall be left undisturbed until further instructions are given by the Managing Director of University of Malaya Medical Centre (UMMC). In addition, notices warning others of the presence of the asbestos should be posted.

### **Design and Planning.**

Where hazardous substances have been specified the designer must evaluate to see if:

- They are strictly necessary for the process.
- They can be substituted for a safer alternative substance.
- An alternative method or process can be used to eliminate or reduce the hazard.

If it is not possible to adequately eliminate or control exposure to a hazardous substance then the contractor will need to ensure that suitable and sufficient personal protective equipment is provided to all affected employees and that they are adequately instructed on how, why and when it is to be used. The potential effects to other persons must also be considered by the contractor.

### **Hazardous Material Assessments.**

A material assessment shall be carried out for every substance brought onto site, copies of assessment and material data sheets shall be readily available for the Safety Officer or OSHE Unit to examine. A suitable and sufficient risk assessment should be made.

When necessary, an operating procedure shall be produced for the safe handling, storage and use of a particular substance. A copy shall be given to the Safety Officer or OSHE Unit

All personnel shall be informed of any potential health hazards associated with any substance they may use or handle. The contractor shall ensure that correct use is made of the appropriate safety equipment provided by him.

All personnel shall have sight of the assessment which shall be available in the event of an incident that requires first aid medical treatment or fire fighting.

### **Community Effects.**

The contractors materials risk assessment, selection procedure and exposure control measures must adequately consider the possible effects of products such as fumes, sprays or dust etc. both on and off the site. Examples would be the use of solvent based paints and adhesives.

### **Handling.**

After handling hazardous substances personnel shall wash their hands prior to eating, drinking and smoking.

Personnel shall not eat, drink or smoke in the proximity of stored hazardous substances.

### **Explosives.**

The bringing of explosives on to site is strictly forbidden.



**Waste Arising.**

The contractor shall be responsible for the safe disposal of waste arising from construction activities under his management and for ensuring that disposal is carried out in accordance with the legislation relevant to the waste category involved.

Waste materials likely to present a hazard to site personnel shall be disposed of as soon as practicable or on the request of University of Malaya Medical Centre (UMMC).

Access to and from tips must have local authority approval and evidence available to the Safety Officer plus authorization to use the tip.

All waste arising to be segregated as appropriate.

The contractor shall be responsible for any damage or contamination caused by waste under his control and shall bear the full cost of any remedial measures that the responsible authorities or University of Malaya Medical Centre (UMMC) may direct.

The contractor shall ensure strict compliance with Waste Disposal Regulations.

**1.11 Contractors General Plant and Equipment.**

The contractor shall ensure that employees are trained, competent and authorised to drive or operate any plant or equipment that they may use, whether regularly or on an occasional basis. Training records should be maintained and may be requested by University of Malaya Medical Centre (UMMC). Such equipment shall include, but not restricted to:

- Dumpers
- Forklift Trucks
- Lorries
- Hoists
- Cranes
- Excavators
- Mobile elevating work platforms
- Hand tools

Documentary evidence of such authorisation shall be provided as required.

Only training which is specific to the actual plant or equipment to be used will be considered acceptable.

All equipment provided shall be in good order and suitable for the use for which it is intended for. The contractor shall ensure that site plant and equipment is inspected and thoroughly examined at regular intervals by person(s) who are appropriately skilled and authorised to do so and that records of such inspections/examinations are maintained in a register which may be available for examination by University of Malaya Medical Centre (UMMC) upon request. When selecting equipment the contractor shall take into account the working conditions and potential site hazards.

All construction plant shall be maintained in such a manner that smoke is not emitted.

### **1.12 Accident Treatment/Accident Reporting/First Aid Facilities.**

The contractor shall provide adequate first aid facilities as may be required or permitted by University of Malaya Medical Centre (UMMC).

Key personnel are to be trained first aiders and have a current training certificate. Trained first aiders should be clearly identifiable. First Aid stations should be clearly marked and regularly checked by the contractor. Where the treatment of an injured or sick person requires the use of a first aid room the facilities provided by and for University of Malaya Medical Centre (UMMC) be used. The above first aid facilities are to be made available to all persons working on or visiting the site.

The contractor shall report all accidents to the Project Owner (UMMC). All serious or potentially serious accidents/incidents are to be thoroughly investigated by the contractor and written reports produced indicating the proposed remedial actions. The contractor shall give a copy of all reports to Director, University Malaya of Medical Centre

### **1.13 Abrasive Wheels.**

The contractor shall take all necessary precautions to avoid the risk of fire due to flying sparks.

The contractor shall also ensure that no person in the area is exposed to the risk of eye or other injury from sparks, dust or other flying debris.

### **1.14 Excavations and Openings.**

All excavations and openings shall be maintained with adequate structural support, access and egress and provision of fences and handrails.

Lights shall be used to mark the edge of excavations and openings at night.

Services clearance must be obtained before any excavation commences.

### **1.15 Confined Spaces.**

Contractors are responsible for the supply of all safety equipment including all portable gas detection devices, escape breathing apparatus, harnesses and other escape equipment and safety equipment must be in good order.

Contractors must be familiar with the system of clarification, the appropriate procedures that apply and follow a safe system of work in order that danger both to themselves and others is avoided. A permit to work may be required.

Contractors staff who enter a confined space must be formally trained and hold an up to date certificate of competence.

### **1.16 Electrical Equipment.**

Supplies to portable, electrical powered tools and temporary site lighting must be 110v.

The contractor shall produce an electrical safety plan and ensure that only equipment designed for operating at the supply voltage is used on site. Where supplies greater than 110v have to be used the need must be fully justified, supported by a full method statement, before permission is obtained from the Project Owner (UMMC). The tool shall be protected by an RCD and regularly checked and documented by a competent person.

The contractor shall ensure that all tools and distribution equipment including cables, plugs etc. are complete and examined for signs of damage or wear prior to use.

Trailing cables across operational or public areas are not permitted. Worn or damaged equipment shall not be used. Any non compliant equipment found on site must be immediately removed. All 110v distribution equipment and cables, including lighting festoons must be routed and adequately supported to avoid creating hazards on site or damage to the cable or equipment.

### **1.17 Cranes, Hoists, Platforms etc.**

The contractor shall ensure that all lifting equipment is of an approved type and used in the approved manner. A current copy of the examination and insurance certificates shall be kept on site and made available to the Safety Officer upon request.

Each item of lifting equipment shall be marked with its safe working load (SWL) which shall not be exceeded and also with its unique identification marks. All

lifting equipment shall be maintained in a safe condition and when not in use stored as safe as possible.

The contractor shall ensure that lifting equipment and plant is tested, inspected and examined at specified intervals by an insurance University of Malaya Medical Centre (UMMC) inspector who is trained and authorised to do so and that records of the examination are maintained in the relevant statutory register.

Any lifting equipment showing signs of wear or damage to safety critical parts shall be taken out of service immediately.

Only authorized banksman shall give approved signals to crane or plant operators. The contractor shall ensure that the crane or plant operator accepts signals only from an authorised banksman. The authorised banksman shall be readily identifiable. (*banksman – 'mean a crane driver's helper, who signals instructions to the driver for the movement of the crane and its jib*)

Lifting Tackle, ropes etc. shall be of an approved type to the relevant British Standard.

Any chain or strap etc. used for restraining load shall not be used if showing signs of wear or damage.

The contractor shall ensure that any temporary platform shall be securely attached or fixed. It shall have handrails, intermediate guard rails and toe boards to prevent persons or materials falling from the platform. If the platform is attached to hydraulic or rope operated plant then in the event of a hydraulic power failure a "fail safe device" shall be fitted to the item of plant.

### **1.18 Working at Heights.**

A safe working platform with secure edge protection, intermediate guard rails and safe means of access shall be installed. In instances where this cannot be achieved alternative arrangements must be made to prevent persons or materials falling to the ground.

Crawling boards and similar safety equipment shall be used on fragile roof surfaces.

Adequate containment measures shall be included to ensure that tools or materials cannot fall, or barriers are to be erected to keep people away from areas where overhead work is being carried out.

The contractor shall ensure that fixed scaffolds and mobile scaffold towers comply fully with all statutory requirements before and during use.

### **1.19 Compressed Gas Cylinders.**

All such cylinders must be supported at all times. Only trained and authorised personnel may use compressed gas.

Flammable gases and oxidizing gases must be kept strictly separate.

### **1.20 Welfare Facilities.**

The contractors employ anyone (however short the period) must 'so far as is reasonably practicable', provide adequate and appropriate welfare facilities for them while they are at work. This means the contractors must provide such facilities unless it is clearly unreasonable in terms of time, trouble, cost and physical difficulty.' Welfare facilities' are those that are necessary for the well-being of your employees

The companies drinking water facilities are available to the contractor.

The companies washing and toilet facilities are available to the contractor.

The staff canteen facilities for consuming packed lunches may be available to the contractor.

Contractors are expected to provide their own first aid equipment, although first aid facilities are available should they be required.

Work outside normal working hours and at weekends may require special arrangements.

Contractors are advised to inform their employees where the first aid facilities are located.

### **1.21 Alcohol**

No alcohol shall be consumed by contractors personnel at any time. Those persons reporting for duty and believed to be under the influence of alcohol shall be refused entry.

It is the contractors responsibility to ensure all his employees are made aware of this requirement and to enforce compliance.

Failure to comply with these requirements will result in the immediate removal of the offending employee from the contract. Repeated non compliance with these requirements may lead to termination of the contract.

### **1.22 Smoking.**

Smoking is only permitted in authorised areas. **IF IN DOUBT - DO NOT SMOKE.**

### **1.23 Safety Harnesses.**

The contractor shall make safety harnesses and suitable training available for all employees who work where there is a risk of falling more than 1.8 meters and a safety barrier or cover or crawling boards cannot be practicably provided.

### **1.24 Non English Speaking Personnel.**

The contractor shall ensure that all Non English speaking or Non English employees fully understand the site safety requirements and their duties covering safety, health and welfare whilst on site. This shall include any emergency procedures i.e. fire drill. The language needs of non English speaking personnel must be adequately catered for during induction, other training and supervision.

### **1.25 Testing, Commissioning and Maintenance of Temporary Plant and Services.**

As with all other aspects of construction and installation work the contractor is required to conduct risk assessments and develop measures to eliminate or adequately control risks.

The contractor shall appoint an authorised person who will be responsible when appropriate for issuing a permit to work prior to any commissioning or maintenance operations. The permit to work system will ensure that all operations follow a strict safe system of work.

Prior to any plant, equipment or service being placed into use, the contractor shall ensure that the plant, equipment or service is not used for purposes other than those it has been specifically designed for.

All moving plant shall have an audible warning that operates automatically when in reverse, and a flashing yellow hazard warning beacon.

The contractor shall provide a banksman whenever plant or equipment is being moved in the vicinity of other personnel or there is a possibility of personnel being in the vicinity or when the operator does not have a clear view around his item of plant or equipment.

### **1.26 Personal Protective Equipment.**

The contractor shall ensure that risk assessments are carried out to identify those aspects of the work for which personal protective (PPE) is to be prescribed. The contractor shall select PPE appropriate to the work hazards identified. Adequate arrangements are to be made for the storage, cleaning, maintenance and replacement of PPE.

Once a risk has been identified for which PPE has been prescribed and selected, the contractor must take all reasonably practicable steps to ensure that it is used correctly by the relevant persons. This will require the provision of information, instruction and training to staff.

Re assessment of all PPE provided shall be made at regular intervals as methods of working or working conditions change to ensure that the appropriate PPE is being used.

### **1.27 Appointments by the Contractor.**

The contractor shall ensure that the following duties are fulfilled only by appointed persons who have achieved an appropriate or statutory level of competence through experience and relevant training. Records should be maintained to document the names of appointed persons and their training achievements. Where appropriate approved schemes for the certification of competence should be considered.

The following list of appointed duty holders is not exhaustive. The contractor may extend the policy as appropriate;

- Risk Assessment Co-ordinator
- Safety Supervisor
- Material Assessments
- Noise Assessments
- Scaffold Erection and Statutory Inspection
- Lifting Appliance inspections
- Excavation Inspections
- Temporary Workers Co-ordinator
- Crane Driving
- Banksman / Slinging
- Hoist operation
- Use of Cartridge Appliances
- Driver/Operators of Major plant
- Fitting of Abrasive Wheels
- Gas Detection Equipment Supervisor
- First Aiders

- Demolition Operatives
- Woodworking Equipment Operatives

### **1.28 Manual Handling.**

Where manual handling operations may cause an injury at work a risk assessment shall be carried out.

### **1.29 Re- use of Metal Drums.**

Serious danger exists from cutting into empty metal drums. Metal Drums are not to be re-used without adequate purging and gas freeing procedures being strictly followed.

### **1.30 Emergency Procedures.**

The contractor shall ensure that emergency procedures are provided for the work site and that all staff understands their actions in the event of an emergency. All procedures must be cleared with University of Malaya Medical Centre to ensure that they do not conflict with company arrangements.

Emergency procedures must be reviewed and updated as major project works progress.

When calling Emergency Services the contractor is to follow the requirements of University of Malaya Medical Centre's safety notices/instructions.

### **1.31 Provision and use of Work Equipment.**

The contractor shall ensure that all work equipment identified for use during the project (including but not restricted to construction plant) is designed, selected, procured, used and maintained so as to enable the task to be safely completed.

The general requirements are that each employer must ensure that:

Equipment is selected to be suitable for the intended purpose, particularly with regard to the site conditions in which the equipment will be used.

Appropriate maintenance is carried out and any associated logs kept up to date.

Specific Health and Safety risks associated with the equipment are considered and where appropriate:

Use of the equipment is restricted to competent, nominated persons.



Maintenance/Service is restricted to designated persons with the appropriate competence.

Persons who will use, supervise and manage equipment receive information and instruction on training to cover the conditions and circumstances in which the equipment may be safely used.

The methods by which the equipment is to be used including operating procedures.

Actions to be taken in the event of abnormal situations including emergencies.

### **1.32 Hygienic Maintenance.**

It is most important for all contractors, especially those engaged in maintenance operations who may be required to work in areas where computing equipment is being handled, to recognise that the way they organise and conduct their work can present a threat to the product. The threat arises from several sources:

Accidental contamination of the product or equipment by foreign bodies for example: flakes of paint, dust, nuts, bolts, screws, gaskets and "O" Rings etc.

Accidental contamination by failure to operate according to a reasonable of practical hygiene.

Use of unsuitable materials to lubricate or otherwise treat the surfaces of equipment.

It is therefore essential that due consideration is given to the way the work is to be done before starting, so that adequate precautions are taken to prevent contamination from all foreseeable sources.

### 1.33 Compliance

Implementation of the elements described in Contractors Safety Practice Manual appointed by the management of University of Malaya Medical Centre shall be subjected under the act / regulations / guidelines of related field as below;

- a. Occupational Safety and Health Policy at UMMC
- b. Occupational Safety and Health Act 1994
- c. Factory Machinery Act 1967
- d. Environment Quality Act 1974
- e. Uniform Buildings by Law 1981984
- f. Petroleum (Safety Measures) Act 1984
- g. Guidelines on Occupational Safety And Health Act 199 (Act 514), DOSH Malaysia
- h. Guidelines on the Use of PPE Against Chemical Hazards, DOSH Malaysia
- i. Guidelines For Public Safety And Health At Construction Sites, DOSH Malaysia
- j. Guidelines for the Prevention of Falls at Workplaces , DOSH Malaysia
- k. Guidelines On First-Aid In The Workplace, DOSH Malaysia
- l. Others related;