

# Appendix 1

## HSSE Management Requirements (Including UEM Life Saving Rules)

# **HEALTH, SAFETY, SECURITY & ENVIRONMENT MANAGEMENT REQUIREMENTS**

**(INCLUDING UEM LIFE SAVING RULES)**

## UEM EDGENTA BERHAD

### HEALTH, SAFETY, SECURITY AND ENVIRONMENTAL GENERAL REQUIREMENT

Rev 01

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## 1. OBJECTIVES

### 1.1. The objectives of the Health, Safety, Security and Environmental (HSSE) requirements are to ensure that:

- a) adequate preventive measures are taken by the Contractor to minimize risk of incidents which could endanger the life of personnel, cause damage to properties and environment;
- b) all incidents, no matter how trivial, must be reported to the immediate supervisor and the Employer's representative;
- c) any work carried out by the Contractor's personnel must be in accordance with the approved Permit to Work wherever applicable;
- d) the Contractor's personnel are issued and equipped with approved personal protective equipment suitable for the task being carried out and adequate first aid facilities are available at all times;
- e) the Contractor's machinery, tools and equipment, facilities and other items associated with or utilized in the work are safe and/or certified for the intended operation; and
- f) the Contractor maintains a proper and good housekeeping at all time during the course of work.

### 1.2 Additional Provisions for Compliance with HSSE Management Requirements

These Additional Provisions shall specifically apply to HSSE matters only. For any inconsistencies between the terms of the contract and the terms herein, the terms stated herein shall take precedent on HSSE matters only.

#### 1.2.1 Suspension

- i. The Employer shall have the right, to suspend the work or any part thereof to the extent as determined by the Employer, for any of the following reasons:
  - a) in the event of default/non-compliance on the part of the Contractor; or
  - b) in the event that suspension is necessary for the proper execution or safety of the work, or persons; or
  - c) any other reasons deem fit by the Employer.
- ii. Upon receipt of any such notice, the Contractor shall, unless instructed otherwise:
  - a) discontinue the work or the part of the work as specified by the Employer, on the date and to the extent specified by the Employer;
  - b) properly protect and secure the work as required by the Employer;
  - c) take all reasonable measures to minimize the costs and losses of the Employer and the Contractor, including placing no further orders and making no further subcontracts with respect to the suspended portion of the work other than as specified in the notice;
  - d) promptly make every reasonable effort to obtain suspension upon terms satisfactory to the Employer of all outstanding orders and subcontracts to the extent they relate to the execution of the portion of the work suspended;
  - e) not remove from the worksite any construction equipment or materials without the prior consent of the Employer; and

- f) continue to perform all unsuspending parts of the Contract.
- iii. In the event of default on the part of the Contractor and before the suspension of the work by the Employer, the Employer shall give notice of default to the Contractor or giving details of such default.
- iv. If the Contractor, upon receipt of such notice, does not commence immediately or proceed with action satisfactory to the Employer to remedy such default within the period stated in the Employer's notice, the Employer may issue a notice of suspension.
- v. Unless the suspension arises as a result of default on the part of the Contractor, the Contract Price and programme shall be adjusted in accordance with the agreed schedule of rates and program approved by the Employer.
- vi. If suspension is due to default on the part of the Contractor, any additional costs incurred by the Employer resulted from the suspension shall be recoverable by the Employer from the Contractor.
- vii. The Employer may, by further notice, instruct the Contractor to resume the Work to the extent specified.
- viii. In the event of any suspension, the Employer and the Contractor shall meet at not more than seven (7) days intervals with a view to agreeing a mutually acceptable course of action during the suspension.

#### 1.2.2 Health, Safety, Security and Environmental (HSSE)

- i. The Employer places utmost importance on health, safety, security and environmental issues and requires that the Contractor subscribes to and actively pursues the highest standards of HSSE performance. The Contractor confirms that it (together with its subcontractors and their affiliates) have adequate written HSSE policies as per the Employer's requirements.
- ii. The Contractor shall take full responsibility for the adequacy, stability and safety of all of the Contractor's operations and methods necessary for the performance of the work and shall comply to the provisions of Appendix 1 and AA. The Contractor shall collaborate with the Employer in establishing HSSE interface arrangements and the production of an HSSE interface document.
- iii. Failure to meet the requirements of Appendix 1 and AA or to the Employer's satisfaction will be regarded as due cause for the Employer, by giving notices, to terminate all or any part of the Work or the Contract in accordance with Clause **[to be inserted as per clause no. for termination of the respective contract]** of the Conditions of Contract (Termination).
- iv. The Contractor shall provide immediate response to any emergencies occurring at the worksite and shall immediately take such action as may be necessary to protect life and make safe property where such is in imminent peril.
- v. The Employer may instruct the Contractor to remove from the worksite any person engaged in any part of the work who in the opinion of the Employer has not complied with the relevant safety procedures described in Appendix 1 and AA or involved/acted in any conduct likely to be prejudicial to the HSSE.
- vi. Any such person shall be removed forthwith from the worksite. Any person removed for any of the above reasons shall not be engaged again in the work or on any other works of the Employer without the prior written approval of the Employer.
- vii. The Contractor shall provide a suitable replacement for any such person within twenty-four (24) hours or such longer time as may be agreed by the Employer. Any costs incurred in connection with such replacement of the Contractor's or any of its Subcontractors' personnel shall be for the Contractor's account.

- viii. The Employer reserves the right to audit, at its discretion, the Contractor's HSSE performance with regards to the provisions of Appendix 1 and AA. The Employer shall provide the Contractor with notices if the HSSE performance of the Contractor do not comply with the provision of Appendix 1 and AA to the Employer's satisfaction. If the Contractor continues with the failure to comply with the provisions of Appendix 1 and AA and to the Employer's satisfaction, the Employer, at its discretion, reserves the right to provide the HSSE services on behalf of the Contractor, at cost plus 15 percent which shall be back-charged to the Contractor and deducted from their next invoice payment. The Employer shall also reserve its right to terminate all or any part of the Contractor's Work or the Contract in accordance with Clause [to be inserted in accordance with the clause no. for termination of the respective contract] of the Conditions of Contract (Termination).

## **2. GENERAL HEALTH, SAFETY, SECURITY & ENVIRONMENTAL (HSSE) REQUIREMENTS**

### **2.1. The Employer's HSSE Policy**

- 2.1.1. The Employer is committed to maintain safe and healthy working conditions for its employees, the Contractor's employees and the general public and shall ensure that its work practices and procedures meet or exceed all applicable legislation(s) related to HSSE. The Employer expects the Contractor and Subcontractors to actively contribute to the Employer's HSSE programmes.

### **2.2. Contractor HSSE Policy**

- 2.2.1. The Contractor shall acknowledge the Employer's strong commitment to HSSE and affirm that it has an HSSE Policy which is at least of a standard comparable to the Employer's HSSE Policy and which has been updated and signed by the Contractor's top management.
- 2.2.2. The Contractor shall affirm that its HSSE Policy is widely disseminated and understood among its and its subcontractor's employees.

### **2.3. Compliance to Laws/Regulations/Employer Requirements**

- 2.3.1. The Contractor shall comply with all the following applicable acts and regulations, guidelines and best practices but not limited to:
  - a) Occupational Safety and Health Act, 1994;
  - b) Factories and Machinery Act 1967;
  - c) Environmental Quality Act 1974
  - d) Maritime laws and guidelines;
  - e) Other related laws and regulations;
  - f) the Employer's procedures and guidelines; which are applicable to the works being carried out.
- 2.3.2. The Contractor shall comply at all times with the requirements as set forth by the Employer in its Health, Safety, Security and Environment HSSE policy, operating standards, any special instructions, and all requirements stipulated by the Employer. These requirements are intended to supplement any known or ought to be known laws and regulations applicable to the works being carried out.
- 2.3.3. The Contractor shall take all necessary HSSE precautions related to or arising out of the performance of the Contractor in order to protect the work, the personnel, environment and asset of the Employer.
- 2.3.4. The employer has the right to audit the contractor at their work location, office or yard.



## **2.4. Contractor's Responsibilities**

For the purpose of this document, 'competent person' shall be defined as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

2.4.1 The Contractor agrees to accept all responsibilities for the health and safety of its workers and its sub-contractor's workers; to meet the intent of the Employer's Health, Safety, Security and Environment HSSE policy; to provide supervisors that are qualified and competent in Health, Safety, Security and Environment HSSE matters; to provide direct supervision of new or untrained workers, as necessary to support safe work; and to explain the Health, Safety, Security and Environment HSSE regulations to all employees at the site and ensure that they comply with them.

- The Contractor shall take accident prevention methods to prevent incident or serious incident at the site.
- The Contractor shall be further responsible to ensure that all its or its subcontractors adhere to the requirements specified herein.
- The Contractor shall be required at all times to co-operate with the Employer and to rectify immediately any matters brought to the Contractor's attention. Failure to rectify any substandard act or condition shall entitle the Employer to make other arrangements and shall allow the Employer to deduct any associated cost from the contract sum.
- The Contractor shall be responsible to maintain all safety records and checklists.
- The Contractor shall be responsible to ensure all workers involved in the work possess valid work permits, passes or licenses issued by the relevant authorities.

## **2.5. Site Registration to Department of Occupational Safety and Health (DOSH)**

2.5.1 The Contractor shall notify DOSH for the building operation or works of engineering or construction not later than seven (7) days from the date of site possession. The Contractor is to fill in the necessary form and furnish documents as required by DOSH. A copy of full submission to DOSH shall be copied to the Employer.

## **2.6. Protection of Employees, Assets and Environment**

2.6.1. The Contractor shall protect the safety and health of its workers and other people working near the worksite from potential hazards created by that worksite. The Contractor, without cost to the Employer, shall take all necessary precautions to protect its employees, workers, subcontractors, invitees, asset and environment in and around the work area.

## **2.7. Right to Stop Work**

2.7.1. The Employer's representative shall have the right to prohibit commencement of any works or stop any works in progress if the personnel, environment, equipment and/or asset are considered at the Employer's discretion to be of imminent danger and/or non-compliance with any applicable rules, regulations and procedures.

2.7.2. Stoppage of the work shall be at the Contractor's expense until the Contractor has satisfactorily rectified such unsafe acts and condition. In the event of serious or repeated infringements, the Employer may terminate the contract without compensation and/or impose the applicable penalties.

## **2.8. Non Conformance Reports**

- 2.8.1. The Contractor is to respond formally to any Health, Safety, Security and Environment instructions, Non Conformance Report (NCR), site instruction, etc. highlighting areas of non-compliance issued by the Employer within the time frame stipulated.
- 2.8.2. Should the Contractor fail to close out any NCRs as required, or if the non-compliance is deemed a serious enough threat, then the Employer may at its discretion, instruct the associated works to be and/or suspended for indefinite time until such times as the Contractor is compliant, in which case the Contractor shall have no recourse to claim for any costs or extension of time associated with the work stoppage.
- 2.8.3. Furthermore, should there be any unclosed NCRs at the time of the monthly evaluation for the Contractor's interim progress claim, the Employer reserves the right not to certify works associated with the NCR until such time as the NCR is closed out.

## **2.9. Non-Conformance Corrective Action Plan**

- 2.9.1. A systematic non-compliance corrective action procedure of Health, Safety, Security and Environment consist of written procedure, action flow chart and standard form must be established and strictly implemented to track down the Non-Conformance and to take immediate and followed up action in order to close the NCR.

## **2.10. HSSE Meetings with the Employer**

### **2.10.1. Kick off Meeting**

An important part of the HSSE policy is a meeting between the Contractor and the Employer specifically on the subject of HSSE, to be held before the commencement of work on site. At this meeting, the Contractor shall present a detailed method statement incorporating safe systems of work and explain how HSSE will be managed and controlled throughout the duration of the works.

### **2.10.2. Execution Meetings**

HSSE matters shall be the first subject on the agenda in all site meetings held between the Employer and the Contractor.

## **2.11. Risk Management and Hazards Identification**

- 2.11.1. The Contractor shall make an initial assessment of the HSSE risks involved in the execution of the works. The focus of the assessment should be to evaluate the inherent hazards in conducting the work and the potential adverse consequence of an accident to the workforce, the public and the environment the Employer's assets and reputation.
- 2.11.2. The Contractor shall take appropriate measures to prevent incidents from occurring and to minimize the consequence of an event should it occur.
- 2.11.3. The Contractor shall conduct HSSE inspections and audits to ensure that such preventive measures are carried out. The Contractor shall promptly conform to all recommendations made pursuant to the said inspections and audits.
- 2.11.4. In managing risk, the Contractor shall demonstrate to the Employer that its organization is committed to manage, control and mitigate all risks and effects through development and implementation of the following programs;
  - 1. Hazard and Effects Register (HER) for Worksite activities
  - 2. Job Hazard Analysis for Worksite activities

2.11.5. The Contractor shall provide details of method on how communication and awareness with respect to the identified hazards will be carried out.

## **2.12. Competent Safety Personnel**

2.12.1. **Safety & Health Officer (SHO).** The Contractor shall at their own cost, provide such numbers of qualified Safety and Health Officers (SHO) during execution of the works in accordance with Occupational Safety & Health Act 1994 and SHO shall discharge his/ her duties and responsibilities as stipulated under the Occupational Safety & Health (Safety and Health Officer) Regulations 1997 or equivalent certified safety officer recognized by international bodies.

2.12.2. **Site Safety Supervisor (SSS).** The Contractor shall at their own cost, provide such numbers of qualified Site Safety Supervisor (SSS) during execution of the works in accordance with the Factories & Machinery Act (Building Operations and Works of Engineering Constructions) (Safety) Regulations 1986.

2.12.3. The Contractor shall file the resume of the proposed SHO / SSS and shall be made available upon request.

2.12.4. The SHO/ SSS will be responsible to provide guidance and advice pertaining to Health, Safety, Security and Environment HSSE requirements of the works. He / she shall guide the Contractor's management on hazard assessment and preventive measure. In addition to ongoing monitoring of the site, the Contractor's SHO / SSS shall also perform a formal inspection of the site at least once every week to identify and rectify any hazardous condition.

2.12.5. The Contractor's SHO / SSS must not be involved or be assigned to other part-time work other than his / her assignment on the particular project.

2.12.6. The Contractor shall ensure that competent personnel are fully trained, certified and authorised to carry out the task of operating all machinery, equipment and tools. The Contractor shall provide an adequate level of technical and HSSE related training conducted by a recognized training institution for all relevant HSSE training and able to identify and assess the potential hazard.

2.12.7. The Contractor shall ensure their employees and the sub-contractors' personnel are medically fit for works and possess the experience and skills required to perform the tasks.

## **2.13. HSSE Awareness**

2.13.1. The Contractor shall be responsible for maintaining and enhancing the HSSE awareness among its employees and its subcontractor's personnel, which includes but not limited to HSSE induction, toolbox meeting, HSSE campaign, HSSE walkabout, hygiene inspection and emergency drills.

## **2.14. Personal Protective Equipment (PPE)**

2.14.1. The Contractor shall at its own cost, supply its personnel and its subcontractor's personnel employed in connection with the works with adequate PPE and maintain enforcement on the use of such PPE. The Contractor shall provide all PPE in accordance with DOSH approve standards.

2.14.2. The Contractor and its subcontractors shall not charge its personnel for such PPE. The Contractor shall conduct training on the proper usage of PPE.

### **2.14.3. HEAD PROTECTION**

#### **Selection**

- a) Helmet shall be of an appropriate shell size for the wearer and have an easily adjustable headband and chin strap.

- b) Accessories such as earmuffs and face shields can be fitted to safety helmets and care shall be taken when fitting them that the shell is not weakened or their performance impaired.

### **Use**

- a) Safety helmets shall be worn at all times at work sites, at any time where there is a potential risk of head injury, and at any time when the appropriate sign is displayed at the work place.
- b) Safety helmet, which has been subjected to a heavy blow, shall be replaced immediately, even if there is no sign of damage.
- c) Safety helmets shall not be painted or decorated with adhesive stickers except with Employer's logo or other stickers required by the Contractor's HSSE Department. Safety helmets color identification shall follow the Employer's HSSE Department's requirement.

#### **1. Discipline Stickers**

- a. DOSH Registered Scaffold – 2mm each Double Strike Dark Green Luminous.
- b. Trained Scaffold – 2mm Single Strike Dark Green Luminous
- c. Safety helmets shall not be worn back-to-front, dropped, thrown, used as seats or supports, used for carrying objects or subjected to any other form of abuse.

### **2.14.4 EYE PROTECTION**

#### **Selection**

- a) Safety glasses must incorporate side shields to give lateral protection to the wearer. The lenses are made of tough optical quality plastic such as polycarbonate. Dark glasses are ban from site. Only clear or light tinted glasses are allowed to be used.
- b) Safety visors are normally heavier and designed with a frameless, one piece moulded lens. Vision correction is not possible as the lens cannot be interchanged. Visors may be worn over prescription glasses.
- c) Safety goggles give complete enclosure of the eyes for total eye protection. The lenses are normally made of toughened glasses or wide vision plastics, usually replaceable.
- d) Safety goggles cannot be worn over prescription glasses.

#### **Use**

- a) Safety glasses / goggles shall be worn at all times at work sites, at any time where there is a potential risk of eye injury, and at any time when the appropriate sign is displayed at the work place.
- b) Safety glasses / goggles, which have been subjected to a heavy impact or with vision blurred, shall be replaced immediately.
- c) Sunglasses are not a substitute for approved eye protection as the lenses and frames do not conform to the same standards of impact resistance as safety glasses / goggles.
- d) Safety glasses with dark lenses shall only be used for gas cutting work or similar activities. Other than that, employees are required to wear clear safety glasses / goggles at all times.

## 2.14.5 FOOT PROTECTION

### Selection

- a) The selection of protective wear depends primarily on the hazard(s), but comfort and durability shall also be considered. The choice shall therefore be made on the basis of suitability for protection, compatibility with the work and the requirements of the user.
- b) Safety footwear is available in many styles, with special soles to resist oil, abrasion, heat, and other abuses to which any footwear may be subjected. Soles can also be spark resistant for wear when handling explosives or non-conductive for walk around electrical hazards.

### Use

- a) Safety footwear must be worn at all times at the work sites with the exception of inside the site office / cabins.
- b) Shoes with abnormally high heels should not be worn at the work sites.
- c) Care must be taken to avoid contaminating the lining or inside of the footwear.

## 2.14.6 HAND PROTECTION

### Selection

- a) Gloves must be capable of giving protection from hazards, be comfortable and fit the wearer.
- b) The choice of protection shall be made on the basis of suitability, compatibility with the work and its ability to resist abrasion and other industrial wear and tear.
- c) Leather gloves are to protect against penetration and abrasion and also against sparks and hot-slugs during hot work activities. It is also being used for handling heavy objects such as equipment, rigging and lifting, and any fitting activities.
- d) Cotton gloves are meant for general-purpose activities and shall only be used to protect against minimal risk of safety.
- e) Chemical gloves are available in a range of materials including natural rubber, neoprene, nitrile, etc. The degrees of protection against chemical permeation depend on the glove material, its thickness and method of construction.

### Use

- a) The wearing of gloves during the operation or maintenance of rotating machinery is strictly prohibited.
- b) When wearing gloves, avoid touching other exposed parts of the body, equipment or fittings as contamination may be transferred to them.
- c) Used gloves shall be worn without touching the skin by sliding the hands into the gloves as far as they will go and then using the joint of the thumb to hold one glove secure while wriggling the finger into position.
- d) Care must be taken to avoid contaminating the lining or inside of the gloves.

## 2.14.7 BODY PROTECTION

### Selection

- a) Clothing used for body protection includes coveralls and jackets to protect against extreme temperature, chemicals and other hazardous substances.
- b) Those working with chemicals and hazardous materials are required to wear chemical suits suitable for the job as per USECHH (Use and Standard of Exposure Chemical Hazardous to Health) regulation 2000. Refer to the Safety Data Sheet for proper selection.
- c) Other employees not exposed to the above hazards will need minimal protection according to the nature of work.
- d) Personnel working with rotating equipment or machinery must not wear loose, ragged or baggy clothing.
- e) Personnel working must wear reflective vests as required by the Employer's HSSE Department.

## 2.14.8 HEARING PROTECTION

### Selection

- a) Earplugs can be worn conveniently and effectively with no interference from glasses or helmets and should not restrict head movement.
- b) Earmuffs provide better hearing protection and easily acceptable at the beginning of any hearing conservation program.

### Use

- a) Ear plugs/muffs shall be worn at any time at the high noise area (of more than 82 dBA), and anywhere when the appropriate sign is displayed at the work place.
- b) Such activities include grinding, gauging, working around the air compressor, blasting, marking, etc.

## 2.14.9 RESPIRATORY PROTECTION

### Selection

- a) Before selection can be made, an assessment shall be made to identify any potential sources of breathing hazard in the planned scope of work and to identify method of work or type of substance can be used to reduce, or eliminate, the hazard.
- b) Once these actions have been taken, the type and quantity hazard exposed, the method and duration of work examined, and the advantages and disadvantages of the various types of respiratory equipment, the selection of appropriate equipment can be made.
- c) Before any work that involves the use of respiratory equipment, wearers and supervisors shall be informed of the breathing hazards likely to occur throughout the duration of the work. They shall receive appropriate instructions to enable them to carry out the work safely and shall be trained in the use of respiratory equipment.

### Use

- a) All respirators and associated consumable items shall be stored in a clean and dust free environment, away from sources of direct sunlight and extremes of heat and humidity.

- b) The simplest form of respiratory devices is the filter mask, which is shaped to cover the nose, mouth and chin and is supplied with adjustable straps that fit around the head.
- c) The advantage of this mask is that it is light and easy to wear but offer limited protection against smaller air borne particles. This type of mask is suitable for working generally around the work area especially when there are airborne particles from adjacent blasting and painting activities.
- d) A cartridge type respirator has a rubber or neoprene mask with head straps and threaded attachments for fitting filters or cartridges.
- e) The advantages of this respirator are that it can be used for many breathing hazards when fit with different filters or cartridges.
- f) Air-fed hoods and helmets are a simple type of breathing apparatus consists of simple hoods of clear plastic material that cover the whole head to the shoulders. The air supply will be direct from a compressor, which is capable of supplying breathing quality air.
- g) These air-fed hoods / helmets provide head protection and a limited amount of hearing protection. It is normally used for working in a high air borne particles concentration i.e. blasting and/or painting activities.
- h) Self-contained breathing apparatus consist of a full-face mask fitted with a demand valve, which allows a supply of air to be breathed by the wearer when he inhales. The air supply to the demand regulator comes from a compressed gas cylinder that is attached to the back plate carried by the wearer's back.

#### **2.14.10 FALL PROTECTION**

##### **Specification**

Full body harness, lanyards and lifelines are required to be worn when there is a risk of fall (2 meter or more in height) where safe working platform not provided.

##### **Selection**

- a) Ideally, the choice of protection system is to remove the risk of falling by providing fixed barrier or guardrails.
- b) Safety belts must not be used for fall protection.

##### **Use**

- a) Employees required to wear harness must be trained in how to properly wear the full body harness.
- b) The lanyard must be fastened to full body harness and secured to substantial overhead objects.
- c) The anchor point must not allow a fall via lanyard of more than five feet.
- d) Lanyards and full body harness must not be used for any other purpose than fall protection.

#### **2.15. Permit to Work (PTW)**

2.15.1. The Contractor shall implement the Employer's PTW System & procedures. The Approving Authority of the Employer shall approve the permit.



2.15.2. All life critical / high risk activities shall use PTW system. The Employer reserves the right to impose PTWs to any construction activities that deem to him/her is a high-risk construction activity. Life critical / high risk activities are:

- i) Working at heights
- ii) Lifting
- iii) Scaffolds (Erection, Using and Dismantling)
- iv) Confined space
- v) Hot works
- vi) Deep Excavation

2.15.3. The Contractor also shall apply safe work permit from the relevant authorities before commencing with any works which may pose danger to the public and to notify the Employer prior to commencing the work.

2.15.4. The Employer reserves the rights to stop any work under this category that is underway without proper contractor permit in place and the Contractor shall have no recourse to claim for any extension of time as a result of work stoppage.

## **2.16. Emergency Response Preparedness (ERP)**

2.16.1. The Contractor shall establish a written Emergency Response Plan to ensure all personnel are safe from fire and other emergencies.

2.16.2. The plan shall be reviewed and communicated to all employees and ensure related training before implementing the Emergency Response Plan to sufficient number of workers at worksite.

2.16.3. The Contractor shall test emergency response plan drills periodically

## **2.17. Drug and Alcohol**

2.17.1. The use, sale, dispensing or possession of drugs, narcotics and alcoholic beverages is prohibited on the worksite and at any place where the work is performed.

2.17.2. The Contractor shall ensure that its personnel do not at any time, during the performance of the work, partake, brought onto the worksite, or be under the influence of any alcoholic liquor, drug or other intoxicating substance. This prohibition also covers all legal or prescription drugs which may impair an employee's ability to perform his job safely. Employees who are caught using or in possession of drugs shall be discharged from the worksite. The Employer reserves the right to randomly require the Contractor's employee, to undergo drug test at any time. Drugs test may be used in the event of accident investigation. The Contractor undertakes that each and every person engaged by it or on its behalf to perform any element of the work (including the subcontractor) shall be advised of the local laws relating to the importation and/ or possession of drugs.

## **2.18. Safety Induction**

2.18.1. It is mandatory for all the Contractor's employees to attend the safety induction program on his or her first day of work. No employee will be permitted to work on the site or allowed access to the site without first attending the Employer's safety induction programs.

2.18.2. The Contractor's employees will be given name tag / identification pass after attending the safety induction to verify that they have attended the class.

2.18.3. The Employer HSSE will maintain record on all the Contractor's employees who have attended the safety induction.



2.18.4. The Contractor shall implement a mandatory HSSE induction for all its employees its subcontractor and invitees on location. The Contractor shall ensure all its employees; the subcontractor and invitees attended the HSSE induction program.

## **2.19. The Employer's Contractor Training Records**

2.19.1. The Contractor shall at its own expenses provide adequate training to all its personnel to ensure that they have sufficient knowledge and skill to undertake assigned tasks. The Contractor's training records shall be maintained and controlled.

### **2.19.2 Training**

- i. The Contractor shall, at its own costs, ensure that the Contractor's and its subcontractor's employees, servants and agents receive the necessary HSSE training from the Employer's or government or its approved training agencies in accordance with the Employer's requirements.
- ii. The costs of such training shall be deemed to have been included in the Contract Price.
- iii. Notwithstanding the training or courses specified in this Contract, the Employer may require the Contractor's and its subcontractor's employees, servants and agents to attend any other training as it deems fit.
- iv. Where a new training becomes necessary due to statutory or regulatory requirements, the cost thereof shall be wholly borne by the Contractor.
- v. Where a new training is required solely to comply with the Employer's HSSE management system, manuals, policies and standards, the Employer shall reimburse the Contractor a reasonable cost incurred for such training subject to the Employer having pre-approved the cost.

### **2.19.3 Induction Program or Safety Passport**

- i. The Contractor's and its subcontractor's employees, servants and agents are required to possess a valid Induction Program card or Safety Passport for access to all locations requiring the same.
- ii. The Employer reserves the right to refuse entry or passage to the Contractor, its subcontractors, their respective employees, servants and agents in the event that such personnel are not able to produce the valid Induction Program card or Safety Passport
- iii. The Employer reserves the right to require the Contractor, its subcontractors, their respective employees, servants and agents to produce acceptable evidence of identification such as a valid card, passport, identity card or driving license.

## **2.20. Environmental Management**

2.20.1. The Contractor shall develop and implement an Environmental Management Plan (EMP) that details the practice, procedures and counter measure for effective management of environmental impact, as required by the relevant provisions under the Environmental Quality Act, 1974 and its regulations there under or as instructed by the Employer.

2.20.2. The EMP shall address but not limited to waste management (inventories and disposal plan), relevant approval by authorities, implementation of recommended mitigation measures and environmental audit program. The EMP shall be available before the commencement of the project.

2.20.3 For those wastes prescribed as Scheduled Wastes under the Environmental Quality (Scheduled Wastes) Regulation 2005 they shall be properly managed in the handling, labelling, storing, inventories and transport for treatment or disposal at prescribed premises in accordance with the aforesaid regulations.

## **2.21. Liability for Nuisance**

2.21.1. The Contractor shall be solely responsible in carrying out the works and during the progress of the works for any damage, accident, annoyance, nuisance or disturbance that may arise to any existing premises, owners or occupiers of adjoining properties by any of the operations arising from the carrying out of the works under the contract.

2.21.2. The Contractor shall be responsible for restricting his workmen to the site of the works only and shall prevent trespassing into adjoining properties and he shall undertake to reinstate and make good all damages and indemnify the Employer against all claims for damages from the same.

2.21.3. The Contractor shall take into consideration in his completion timeline; complaints from adjacent owners and consequential stoppages of work resulting therefrom.

## **2.22. Security Screening**

2.22.1. The Contractor shall ensure all Contractor's and its subcontractor's staffs have no criminal records and possess valid immigration permits. The Employer reserved the right to screen all Contractor's and its subcontractors' staffs in view to maintain personnel security and good working condition.

## **2.23. HSSE Budget**

2.23.1. The Contractor is to have adequate budget for implementing HSSE rules and regulations. The HSSE budget shall include all items deemed necessary to the success and completion of the work.

## **2.24. Employment of Foreign Workers**

2.24.1. Every effort must be taken by the Contractor to employ Malaysian citizens for the works. If, however foreign workers are to be employed, the Contractor shall be solely responsible for their entry in accordance with the requirement of the relevant immigration laws and regulations. The Contractor shall also be responsible for obtaining necessary work permits from the relevant authorities.

2.24.2. The employment of foreign workers shall comply with the requirements of the Immigration Act 1959/63 and shall employ only legal workers for the execution of the works. The Contractor shall keep a proper register at the site with names, passport numbers, and photocopy of works permits of all foreign workers working and/or residing at the site. The same shall also apply on those who are not employed under the Contractor's payroll but whom have been granted permission to reside at the site e.g. workers of the sub-contractors involved with the works. The register must be updated to reflect the current status of the workers. A duplicate copy of the register including all updated records shall be given to the Employer.

2.24.3. Detailed list of foreign workers shall include the following: -

- Copy of CIDB (registration, no. etc.)
- Copy of Passport / Work Permit
- Full Name
- Nationality
- Age
- Marital Status
- Home Address
- Employer's details

2.24.4. If the Contractor is found to employ any illegal worker on site, the Contractor shall indemnify the Employer against all losses, damages and expenses arising therefrom including but not limited to any legal actions taken by any parties on the same.

2.24.5. The Contractor shall ensure that there is a designated area for its workers to occupy during their non-working hours which shall be properly maintained in hygienic conditions and shall be properly controlled in terms of access by outsiders. No illegal activities e.g. gambling, alcohol consumption etc. is to be allowed on site.

## **2.25. Workplace HSSE Committee**

2.25.1. The Contractors shall establish a HSSE Committee as stipulated in OSH Act 1994. The head of the Contractor's organisation shall be the Chairman of the HSSE Committee, and his HSSE Officer or a person appointed by the Chairman shall be the secretary of the HSSE Committee. Each subcontractor shall have a representative on the committee. The committee shall meet not less than once in three months or on a monthly basis as required by the Employer and attendance during the HSSE Committee meeting shall be compulsory.

2.25.2. Functions of HSSE committee:

- a) To keep under review circumstances in the workplace which affect or may affect the health and safety of persons in the workplace;
- b) To promote co-operation between the employer and the employees in achieving and maintaining safe and healthy working conditions; and
- c) To carry out inspections of the scene of any accident or dangerous occurrence in the interests of the health and safety of the employees.

2.25.3. The contractor's HSSE Committee / Organisation shall be submitted during tender stage or before the award of the contract.

## **2.26. The Contractor HSSE Performance Reports**

2.26.1. The Contractor shall compile and maintain HSSE performance records pertaining to its works with the Employer. These records shall be updated and submitted to the Employer's HSSE Department before the tenth day of the preceding month or after completion of the work if completion of the work awarded to the Contractor is less than 1 (ONE) month.

## **2.27. Site Safety Signage**

2.27.1. The Contractor shall install and maintain on site approved standard safety signage and notices to provide an effective means of communicating information concerning the hazards to the employees or any persons at worksite. The contractor must put proper safety signage at all life critical / high risk activities.

2.27.2. The safety signage shall be:

- a) Waterproof materials;
- b) Of metal or Flute board/corflute plastic with vinyl letters or equivalent;
- c) Printed in letter high enough to be easily read;
- d) Exhibited at a prominent position (building/hoarding).

### **3. SPECIFIC HSSE REQUIREMENTS**

#### **3.1. Contractor HSSE Plan**

3.1.1. The Contractor shall prepare and submit within fourteen (14) days after the award of the contract a Contractor HSSE Plan to the Employer which shall, at least, describes the following (where applicable):

- The Contractor's HSSE Policy and the Employer's HSSE-related policies
- Prevailing laws and regulations
- Contractor's management HSSE visit, inspection and engagement
- HSSE KPI and target
- The Contractor HSSE organization
- HSSE roles and responsibilities including the Contractor and its subcontractor
- HSSE induction
- Weekly mass toolbox meeting
- Weekly/ Monthly HSSE meeting
- HSSE performance reporting
- HSSE risk assessment
- Environmental Management Plan
- The Contractor's HSSE audit program
- Incident Notification, Investigation and Reporting
- Emergency Response Preparedness
- Minimum HSSE Training for employees (e.g. Working at height, Confined Space Training, Chemical handling, manual handling etc)

3.1.2. The Employer's review or comments on such plan shall not relieve nor shall such review and comments to be construed as limiting in any manner the Contractor's obligations to undertake any action which may be necessary to establish and maintain safe working conditions at the location where the works are being carried out.

#### **3.2. Equipment Safety Inspection**

3.2.1. Prior to start of the works, the Contractor is required to inspect the equipment and machinery required in connection with the works including but not limited to lifting equipment and appliances, firefighting, lifesaving appliances, etc. to ensure that works will be performed under safe condition.

3.2.2. In addition, the Contractor shall maintain and perform continuous HSSE inspection throughout the works period and shall promptly implement all recommendations made pursuant to the said inspection. The following inspection frequency shall apply:

- Mechanical equipment such as crane, welding machine, air compressor, etc on quarterly basis.
- Lifting gears such as slings, lifting tackle, etc on a monthly basis.
- Electrical cables, power and hand tools such as grinders etc on quarterly basis.

3.2.3. The Employer shall have the right to conduct its HSSE audit or inspection at the works location or the Contractor's offices or yard. The Contractor shall comply with all recommendations arising from such audit or inspection.

3.2.4. The Contractor shall ensure that all fuel powered and electrical equipment working in the vicinity of flammable vapours is equipped with proper ignition protective devices.

3.2.5. The Contractor shall ensure that only permitted or where applicable licensed personnel by way of previous technical training or certification and familiarization are allowed to operate and /or maintain equipment and machinery.

- 3.2.6. All tools and equipment inspected that requires remedial work (or replacement) shall be carried out at the Contractor's cost.
- 3.2.7. All tools and equipment inspected and accepted for use on the work shall be clearly identified by equipment tagging/ passport system of "Safe For Use". Service and maintenance records must be made available upon request.
- 3.2.8. The Contractor to ensure that inspection to be carried out by qualified and competent authority or personnel and the inspection is recorded and shall be made available upon request.
- 3.2.9. Where third party inspection / certifications are required, approval documents and certificates shall be made available upon request.

### **3.3. Occupational Health & Hygiene**

- 3.3.1. The Contractor shall ensure that all its employees and its subcontractor's employees engaged in the work are medically fit and healthy.
- 3.3.2. The Contractor shall at no cost to the Employer be responsible for the medical welfare of its own and the subcontractor's employees and shall take care of arrangements for medical attendance, treatment or hospitalization if and when necessary and will arrange suitable insurance coverage for such contingencies.
- 3.3.3. In case of emergencies, the Employer may provide for necessary emergency arrangement, the cost of which shall be reimbursed to the Employer by the Contractor.
- 3.3.4. The Contractor shall at its own expense have fully equipped medical facilities throughout the work's execution, as per the latest DOSH's Guidelines on First Aid in the Workplace.
- 3.3.5. The Contractor shall identify and assess the potential risk of high noise area and be responsible in the provision of risk reduction mitigation measures such as but not limited to engineering control e.g. provision of barrier and segregation, administrative control e.g. provision of signage at identified area for its employees, the subcontractor, and visitors.
- 3.3.6. The Contractor shall provide required first aid equipment in accordance with the Factories and Machinery Act 1967 and other applicable legislations.
- 3.3.7. The Contractor shall ensure that its personnel and the Subcontractor's personnel shall maintain a high standard of hygiene in connection with the performance of the work.
- 3.3.8. The Contractor shall keep record on the occupational health documents at the work site and must be made available upon request.

### **3.4. Employee Health & Welfare**

- 3.4.1. The contractor shall provide the necessary facilities as per Factories and Machinery (Safety, Health And Welfare) Regulations 1970 (Revised – 1983)
- 3.4.2. The Contractor shall provide sufficient number of sanitary facilities for its workers. Septic tank/portable shall be regularly serviced to prevent sewage polluting the water waste.
- 3.4.3. The contractor shall provide the necessary facilities as per Factories and Machinery (Safety, Health and Welfare) Regulations 1970 (Revised – 1983).
- 3.4.4. The Contractor shall provide canteen/rest area and other facilities for its employees.
- 3.4.5. The Contractor shall provide prayer room for Muslim workers at site.

### **3.5. Temporary Electricity Supply**

- 3.5.1. The Contractor shall provide and maintain all necessary temporary electricity power supply for the works. The supply shall have sufficient capacity to meet the power requirements for the whole of the works inclusive of all items included as Prime Cost and Provisional Sum as well as the Contractor's plant and equipment.
- 3.5.2. Provide all temporary switchboards, main/sub main reticulation cables, distribution boards, wiring, fittings, metering, protection housing of **TNB's** equipment, protection of the Contractor's equipment, switchgears and transformers including all necessary liaison with **TNB**.
- 3.5.3. The Contractor shall arrange separate and sufficient power supply for testing of mechanical and electrical installations included in the works. The detailed testing requirements shall meet the specialist requirements of each installation.
- 3.5.4. Provide a network of electrical ring circuit on every floor of the building to serve adequate number of 13 Amp. socket outlets for hand tools.
- 3.5.5. If temporary power supply is unavailable from TNB and the available supply is not sufficient to meet the requirement of this project, generator set shall be used subject to the approval of TNB and Chief Electrical Inspectorate of Malaysia. All fuel and replacement parts of the generators are to be borne by the Contractor.

### **3.6. Electrically Powered Portable Tools and Equipment**

- 3.6.1. Only trained and experienced workers shall use portable electrically powered tools and equipment.
- 3.6.2. Electrically powered portable tools and equipment shall be preferably of 240 volts with an appropriate step down transformer or 110 volts centre tapped or 240 volts tools may be used subject to the following conditions:
  - a) They shall be double insulated; and
  - b) The power source shall be equipped with an earth leakage circuit breaker with a trip sensitivity not exceeding ten milli-amps (10mA).
- 3.6.3. The Contractor shall be responsible for and shall remain in direct control of the use of all lights and torches and shall provide suitable lighting for night operations.
- 3.6.4. The Contractor shall ensure only industrial type electrical cables are used for the work. The usage of domestic electrical cables at the worksite is strictly prohibited.

### **3.7. Temporary Drainage**

- 3.7.1. The Contractor shall provide all necessary temporary drainage within and around the site to adequately keep the site free from water including floodwater.

### **3.8. Vector and Pest Control**

- 3.8.1. The Contractor shall carry out rodent and pest control program for their work areas. The program must be carried out by a licensed contractor for vector and pest control.
- 3.8.2. The Contractor shall provide a weekly mosquito's larvae control service in all waterlogged areas of the work site.
- 3.8.3. All excavation and portions of site where water stagnates or accumulates shall be kept dry by pumping, baling or other operations.

- 3.8.4. Allow for taking such precautions as may be deemed necessary or desirable by the **SHO or SSS or HSSE practitioner** for the prevention of breeding of mosquitoes and pay all charges as may be required by the local authority concerned for any dengue control measures taken. The Contractor is required to reimburse the Employer for any fines imposed by the local authority regarding mosquito's prevention matters.
- 3.8.5. The Contractor must refrain from dumping or depositing rubbish, spoils, unused materials, empty bottles, cans and other containers capable of collecting liquids that afford breeding places for mosquitoes. The Contractor will be held responsible for mosquito's nuisance at the site and surroundings arising from non-observance of the provisions of this clause and will be required to employ whatever measure necessary in order to get rid of the mosquitoes at its own expense.

### **3.9. Tools and Equipment**

- 3.9.1. The Contractor shall ensure that all the Contractor's machinery, tools and equipment, facilities, and other items associated with the works whether purchased or rented are maintained in a safe condition and to be operated by competent person.
- 3.9.2. Where applicable, tools and equipment shall only be used for the job they were designed to perform. All guards must be fitted and shall be in good condition at all times.
- 3.9.3. Electrically powered tools and equipment shall meet the Hazardous Zone Classification for Flammable Gases and Vapours requirements and shall be intrinsically safe where applicable.
- 3.9.4. The Contractor shall repair or replace defective tools and equipment at the Contractor's own cost. Appropriate personal protective equipment must be worn at all time when using any tools or equipment.

### **3.10. HSSE Training and Supervision**

- 3.10.1. Prior to the commencement of the work, the Contractor shall at its own expense ensure that its personnel have been given the necessary basic safety, fire fighting, and job related training required by law. Such training shall be carried out at training establishments approved by DOSH, approved Safety Training Institutions or recognized by International HSSE bodies. Certification of training shall be made available upon request.
- 3.10.2. It is a requirement for all the Contractor's employees to attend CIDB Safety Passport (Green Card) if the work fall under Building Operation and Work of Engineering Construction Regulation (BOWEC) as required under Factory & Machineries Act.
- 3.10.3. It is a requirement for all contractor's employees to attend Induction Program or Safety Passport for access to all locations requiring the same.
- 3.10.4. The Contractor shall ensure that first-line supervisors know the safety program and are capable of administering and enforcing it. They shall know the safety aspects of all work under their supervision and be able to pass this information on to others. They shall be able to provide individual or group instruction for their work force if deficiencies in performance are to be improved. They are expected to conduct HSSE meetings and provide answers to any problems raised by their subordinates.

### **3.11. Job Hazard Analysis (JHA)**

- 3.11.1. Prior to performance of works, the Contractor shall implement JHA as part of PTW requirement stating HSSE precaution to eliminate or guard against hazards on a specified job. The JHA methodology shall include the following:
  - Study the job and develop basic job steps
  - Identify the hazards on each job step



- Identify the HSSE precautions to be taken against each job step
- Record the JHA and inform all workers of the hazards and precautions to be taken.

### **3.12. Incident Notifications and Investigation**

- 3.12.1. The Contractor shall take into account the provisions under the Occupational Safety and Health (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Diseases) Regulations 2004 (“NADOOPOD”) when dealing with all incidents within the Employer’s workplace.
- 3.12.2. Any incident involving the Contractor’s or any third-party personnel or equipment, shall be immediately reported to the Employer, irrespective of whether there is injury to personnel, environment or damage to equipment.
- 3.12.3. All incidents that result in or have the potential to cause serious injuries or property damage must be suitably investigated by the Contractor and reported to the Employer. The Contractor shall keep a copy of the report and shall be made available upon request. The Contractor is required to investigate and report major accident to DOSH immediately.
- 3.12.4. Findings and recommendations arising from incident investigation shall be presented to the Employer’s HSSE Committee.
- 3.12.5. The Contractor shall ensure all recommendations are being tracked and implemented. The Contractor shall provide status of action items with evidence of closure.
- 3.12.6. The Contractor shall immediately notify the Employer of any HSSE’s incident involving any employees, servants or agents of the Contractor or its subcontractor, or equipment, or involving any third party.
- 3.12.7. Without prejudice to the generality of the foregoing, incident reporting shall include all near-misses, injuries, accidents, reportable spill, exposure to or leakage of hazardous substances, health incidents including occupational illness, occupational poisoning and non-accidental death, thefts, actual or suspected criminal activity, offences, and work interruptions irrespective of any injury to persons or damage or loss to property.
- 3.12.8. Such immediate notification shall be done by means of radio, telephone or other methods specified by the Employer and shall be followed up by the notices given in the usual manner provided in this Contract.
- 3.12.9. The Contractor shall take steps to maintain and increase the safety consciousness of the Contractor’s and the subcontractor’s employees, servants and agents by means of periodic safety meetings and discussions.

### **3.13. Housekeeping**

- 3.13.1. The Contractor shall ensure that good housekeeping is done on a daily basis and maintained continuously throughout the duration of the work. Proper segregation of wastes between hazardous and non-hazardous wastes shall be performed at a designated temporary dump location to be agreed by the Employer.
- 3.13.2. Access and egress of all exits, fire and safety equipment, and work areas must be kept clear of obstructions at all times. Special attention must be given to maintaining clear walkways, removal slippery and tripping hazards, securing or removing of loose materials at height, and proper storage of materials. All housekeeping shall be at the Contractor’s cost.
- 3.13.3. The Contractor shall ensure that the employees are fully aware of these requirements and the Contractor shall enforce regulations to the satisfaction of the Employer.



### 3.14. Toolbox Meeting

- 3.14.1. The Contractor shall perform daily toolbox meeting prior to the start of shift.
- 3.14.2. The Contractor shall ensure that its appointed works supervisor hold toolbox meeting for about 5-10 minutes daily or prior to each shift. Specific topics shall include hazards relevant to current activities. It will include sharing of incidents, HSSE alert and near misses related to the activities.
- 3.14.3. The toolbox meeting shall be headed by different personnel within the workgroup.
- 3.14.4. The Contractor shall maintain records of attendance and shall submit the same to the Employer upon request.

### 3.15. Air Hose

- 3.15.1. Air hose connection shall be equipped with anti-whipping device to prevent accidental disconnection. Air hose should not be used to clean any part of the body or clothing or use to blow off dirt on the floor. Compressor supplying air shall possess a valid Certificate of Fitness by the relevant authorities and equipped with relief valve. The relief valve shall not be bypassed, modified, and/or tempered with.

### 3.16. Abrasive Wheels

- 3.16.1. The Contractor shall ensure that safety protection in the form of high impact full face shields are provided and utilized by the personnel working with grinding machines and abrasive wheels.
- 3.16.2. When changing discs on a portable grinder it is imperative that a suitable replacement disc is fitted and in the correct manner. Discs shall be braided construction and compatible with the power grinder's revolution per minute (RPM).
- 3.16.3. The Contractor shall ensure only trained and competent personnel are permitted to carry out this task.

### 3.17. High Pressure Water Jetting

- 3.17.1. The Contractor's procedure shall cover safe work practices to protect employees in a place of work from the hazards of High-Pressure Water Jetting equipment and activities.
- 3.17.2. The requirement in the procedure shall be applicable for all activities involving High Pressure Water Jetting activities. In additions other existing procedures e.g. hazard identification and risk assessment may apply.
- 3.17.3. The term High Pressure Water Jetting covers all water jetting processes including those using additives or abrasives where there is energy input to increase the pressure applied to water. The term High Pressure (HP) Water Jetting will be taken to include all pressures up to 20,000 psi (1,400 barg).
- 3.17.4. The Contractor shall follow and refer to some of the additional requirements associated with HP Jetting as described in Factories and Machinery Act 1969, (**Building Operations** and Works of Engineering Construction (Safety) **Regulations** 1986, Occupational Safety and Health Act 1994 (OSHA) and other applicable regulations.

### 3.18. HSSE Inspection

- 3.18.1. Prior to the commencement of works, the Contractor is required to inspect equipment involved to ensure that works will be performed in safe condition. In addition, the Contractor shall maintain and perform continuous HSSE inspection throughout the works' period and shall promptly implement all recommendations made pursuant to the said inspection.

3.18.2. The Employer shall have the right to conduct its own HSSE inspection at location. The Contractor shall comply with all recommendations arising from such inspection.

### **3.19. Hand Tools**

3.19.1. The Contractor shall ensure that all hand tools supplied are in good condition and fit for purpose. Damaged tools which are unfit for use shall be removed immediately from use and shall be scrapped if they cannot be repaired.

3.19.2. The Contractor's employees shall be fully instructed regarding the use of correct tools for any particular job.

### **3.20. Transportation**

3.20.1. The Contractor's personnel travelling to and from work site shall use proper and safe means of transport.

3.20.2. Such transport shall comply with the applicable Malaysian road traffic/transport rules and regulations.

3.20.3. Transportation of the Contractor's personnel in open trucks is prohibited unless the truck is fitted with seats and certified to carry passenger. All speed limits must be at maximum 25km/hours.

### **3.21. General Fire Protection**

3.21.1. Accumulation of trash, oily rags combustible materials or fire hazards of any nature will not be permitted.

3.21.2. The area around welding and cutting operations must be kept free of combustible of all kinds (wood, paper, plastic sheet, cardboard, flammable liquids, etc.) on some jobs it will be necessary to assign one of the workmen to watch for the occurrence of fires.

3.21.3. Fire hydrants, extinguishers, approved fire hoses must be accessible at all times.

3.21.4. Flammable or explosive type material such as fuel, oil, cleaner, etc must be properly contained, clearly identified, separately stored in a fenced-in area and kept clear of work areas. Appropriate warning signs must be provided in such storage areas.

3.21.5. No fuel dumps are allowed on the worksite.

3.21.6. All welding and spark or flame producing operation must be stopped within a radius of 10 meters during any re-fueling operations.

3.21.7. All motors must be stopped when re-fueling.

3.21.8. It is the Contractor's responsibility to supply the necessary fire extinguishers and to refill them immediately after they have been used.

3.21.9. Volatile materials must not be used near an open flame. If such material is to be applied in a vessel, or other poorly ventilated confined areas, only explosion proof lights and connections will be used.

3.21.10. "No Smoking" restrictions must be strictly observed.

3.21.11. Unsafe acts and unsafe conditions shall be immediately corrected by any member of site supervision and management. Any unusual or difficult situations are to be reported to the Employer's HSSE representative.

## **4. CRITICAL ACTIVITIES**

### **4.1. Working at Height**

- 4.1.1. The Contractor shall at its own expenses provide the worker with fall protection devices such as but not limited to full body harness with lanyard.
- 4.1.2. Fall protection device is required when working above 2.0 meters from deck. For working overboard, in addition to fall protection, personnel floatation device shall be used. Personnel using fall protection device shall be trained on its use.

### **4.2. Scaffold**

- 4.2.1. A competent person shall supervise all scaffold works. Copies of the relevant certificates of the competent person shall be extended to the Employer for endorsement. All scaffold workers must wear double lanyard. Scaffolding activities shall be regulated by the standard and guideline which include but not limited to the following:
  - Restriction on the type of scaffolding that can be supervised by the different level of competencies i.e. Basic, Intermediate and Advance.
  - The ratio of competent person to scaffold builders (supervisor to erector) is one to four (1:4) to be maintained. The Contractor shall maintain a proper inspection and record- keeping program for all scaffold structures being erected at location. Independent Scaffold Inspector(s) shall be employed to ensure all scaffold built conformed to acceptable scaffold erection standard.
- 4.2.2. All costs incurred for the employment of the Independent Scaffold Inspector(s) shall be borne by the Contractor. The Employer shall approve the appointment of the Contractor's proposed inspector (minimum intermediate level competency).
- 4.2.3. A safe means of access must be provided for any work to be carried out at a height greater than 2.0 meters. If a suitable permanent access is not available, a well-designed, erected, inspected and maintained scaffold will be provided for a safe means of access and egress and safe working areas. Additionally, safe access to scaffold work platform by ladder must be provided. All scaffoldings shall be constructed in accordance with BS 5973 Code of Practice for Access and Working Scaffolds and Special Scaffold Structures in Steel or its equivalent.

### **4.3. Barricade, Covers and Guardrails**

- 4.3.1. The Contractor shall provide adequate barricades, covers, guardrails or other appropriate warning devices to protect personnel near any hazardous operations or overhead work.
  - Temporary covers for floor openings shall be firmly fastened and clearly identified by warning signs. All elevated work areas, walkways, platform etc. whether permanent or temporary, shall be protected by an approved guardrail (consisting of an upper and intermediate rail and toe board) and shall provide a sturdy working space.

### **4.4. Lifting**

- 4.4.1. All cranes supplied by the Contractor shall have a valid DOSH certification and/or certificate of fitness issued. All cranes used by the Contractor shall be inspected and load tested by Third Party before going into service with a valid certificate. The crane operator shall be a competent person and have a valid certificate from DOSH and/or a valid license in compliance to international regulations.
- 4.4.2. The Contractor shall maintain cranes in a safe condition and make repair or replace unsafe crane for works as per Inspection and Maintenance of Lifting Equipment Procedure for ensuring a safe-operating condition throughout the work. Should there be any doubt to the condition of the crane, the Contractor is required to perform load test at the Contractor's own cost.

- 4.4.3. All cranes shall be load tested after any significant modification or repairs, and certified accordingly.
- 4.4.4. All cranes shall be subjected to a “Thorough Examination” every 15 months from the date of going into service as per FMA 1967. The definition of a “Thorough Examination” can be taken to mean a detailed visual examination carried out as carefully as conditions permit, in order to obtain at a reliable conclusion as to the safety of the crane being examined.
- 4.4.5. Such examination shall be carried out by a qualified third-party surveyor. It may be necessary to supplement the visual inspection by methods of non-destructive testing that determine the condition of any part of the crane without causing any detrimental change in material. Following any examination of a crane, should there be any doubt as to the safety of the crane; the Contractor may be required to carry out another appropriate load test.
- 4.4.6. Any lifting appliance supplied by the Contractor shall be inspected before being used and also shall be subject to a six-monthly inspection by a qualified third party or by a person trained and duly authorized in writing. The Contractor shall note its responsibilities to ensure the safety of the lifting appliances for the duration of the contract.
- 4.4.7. All heavy lifting (more than 1 tonne) shall require the production of a lifting analysis and plan prepared by the Contractor. The Contractor is responsible for ensuring that a competent, authorized operator operates any lifting device and that a signaler is designated to signal the operator as necessary to properly place and control the loads.
- 4.4.8. Prior to performing any lift, crane operator shall visually re-inspect all the lifting appliances e.g. slings, shackles, spreader bar and etc. that going to be used in the lifting has no defects at all. All the lifting appliances, lifting radius and crane capacity shall be as presented and approved in a Lifting Management Plan.
- 4.4.9. No worker shall be allowed under the load. Tag lines must be used and control the load where excessive movement is possible. Proper sign must be posted at appropriate locations to restrict unauthorized entry.
- 4.4.10. Record of inspection shall be kept for the Employer’s review. During high line activities, all personnel must be clear from any of cable under tension.
- 4.4.11. All lifting activities shall be in the presence of rigger man and signalman.
- 4.4.12. No lifting activities to be carried out at night without the approval of the Employer and wind speed of more than 25 knots.

## **5. HAZARDOUS CHEMICALS AND MATERIALS**

### **5.1. Chemicals**

- 5.1.1 All chemical delivered to the work location shall conform to the provisions under the Occupational Safety and Health (Classification, Labelling and Safety Data Sheet) Regulations 2013 (CLASS).
- 5.1.2 The relevant provisions under the Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000 (USECHH) are to be followed.
- 5.1.3 Copies of all Chemical Safety Data Sheet (CSDS) / Safety Data Sheet (SDS) shall be made available at the work location. It shall be kept in a conspicuous place close to where that chemical is used and accessible to the workers.
- 5.1.4 The Contractor shall ensure all requirements for storage, handling and personal protection outlined in the material safety data sheet are followed.

## 5.2. Warning Labels

- 5.2.1. It shall be the duty of the occupier of the worksite in which there is any container of hazardous substances to ensure that, so far as reasonably practicable, every such container is affixed with one or more labels that-
- a) Are easily understood by all persons at work in the worksite.
  - b) Warn of the hazards involved with the hazardous substance in the container; and
  - c) Specify the precautionary measures to be taken when dealing with the hazardous substance in the container.

## 5.3. Safety Data Sheets

- 5.3.1. Where any hazardous substance is used, handled or stored in a worksite, it shall be the duty of the occupier of the worksite to –
- a) Obtain a safety data sheet of the substance;
  - b) Assess the information in the safety data sheet and take precautionary measures to ensure the safe use of the substance; and
  - c) Make available the safety data sheet to all persons at work in the worksite who are liable to be exposed to the substance.
- 5.3.2. Where any hazardous substance is sold to any person for use in a worksite, the seller or any agent of the seller who caused or procured the sale shall provide the buyer with a safety data sheet for the substance, giving accurate and adequate information on the substance, including as far as is reasonably practicable –
- a) Information on the identify of substance;
  - b) The safety and health hazard information of and ingredients used in the substance;
  - c) Information on the composition of and ingredients used in the substance;
  - d) Information on first-aid measures;
  - e) Information on fire-fighting measures;
  - f) Information on accidental release measures;
  - g) Information on the precautions to be taken for safe handling and storage;
  - h) Information on the exposure controls and personal protection needed;
  - i) Information on the physical and chemical properties of the substance;
  - j) Information on the stability and reactivity of the substance;
  - k) Toxicological information;
  - l) Ecological information;
  - m) Information on disposal considerations;
  - n) Transport information;
  - o) Regulatory information; and
  - p) Any other relevant information.

## 5.4. Storage Area

- 5.4.1. The Contractor shall ensure an acceptable means for storing of equipment's, material, chemical and fuel on locations. The requirements for storing of materials shall include but not limited to the following:
- Written procedures on handling and disposal for all materials must be made available.
  - Good housekeeping must be practiced at all storage sites.
  - Storage racks and bins shall be labelled and constructed to safely support the loads that are to be imposed upon them with a stamp of safe working load.
  - Storage area must be provided with adequate lighting and ventilated. Adequate number of fire extinguishers of appropriate type shall be made available at all storage areas.

- Flammable and combustible liquids shall be stored separately.
- Approved safety cans/cabinets shall be used to store and transfer flammable and combustible liquids, with the name of the materials clearly stamped.

## **6. HOT WORK ACTIVITY**

### **6.1. Compressed Gas Cylinders**

6.1.1. The Contractor shall ensure that:

- a) Compressed gas cylinders are stored, transported or used in an upright position and secured to some substantial object or other suitable means capable of supporting the weight of the cylinder. This applies to all cylinders, whether empty or full.
- b) Cylinders valves shall be closed and hoses depressurized when cylinders are not in use. Only designated hoses shall be used for a specific gas.
- c) Cylinders shall have protective valve caps in place while they are being transported or stored.
- d) Cylinders shall be returned promptly to a designated storage area after use. They shall not be left at any location.
- e) Flammable gases and oxygen cylinders shall not be stored in close proximity (minimum 3 m) unless separated by a non-combustible wall/partition.
- f) Cylinders may only be hoisted when enclosed in an approved box or cradle within which they are securely fastened.
- g) Cylinders must be identified by a color code in accordance with Malaysian legislative requirement.
- h) Periodical and pre-job inspection shall be carried out on the cylinder with accessories such as but not limited to leak test, functionality test for regulator and check valve.
- i) Gas welding cylinders shall have hose check valves (non-return valves), which allow gases to the blowpipe, but not back from it. Flashback arrestors shall be installed to prevent flashback flames in both oxygen and fuel gas outlet lines.
- j) Outlet from gas cylinders to be fitted with check valves which will shut down in case of any pressure drop in the hose.

### **6.2. Welding, Cutting and Hot Work**

- 6.2.1. The Contractor shall ensure only competent welder be allowed to use welding equipment.
- 6.2.2. The Contractor shall ensure suitable precautions against exposure of welding hazards such as excessive ultraviolet radiation, fire, or dusts.
- 6.2.3. Welding, and/or flame cutting in the vicinity of flammable or combustible items shall only be done under the control of the PTW.
- 6.2.4. Trained Fire Watcher ("FW") shall be assigned to each work activity if required under the PTW. The Employer may consider the employment of a single FW to oversee work activities within vicinity of few locations.
- 6.2.5. FW shall attend formal training conducted by a recognized training provider by the Fire and Rescue Department Malaysia.

- 6.2.6. When required in the PTW, The Contractor shall be responsible to provide appropriate number of gas monitoring devices (explosive proof type) during the execution of any hot work activities. Gas monitoring devices shall be periodically calibrated with certificate or tags available.
- 6.2.7. The Contractor shall provide adequate numbers of suitable fire extinguishers are accessible at hot work area. Welders must be competent in use of these extinguishers.

## **7. SPECIAL WORK SITUATIONS**

### **7.1. Working in Confined Space**

- 7.1.1. All confined space works shall be performed in accordance with DOSH Confined Space Entry Code of Practice 2010. (Example Authorized person, standby person, authorized gas tester, Medical Fitness, PPE, etc.)
- 7.1.2. Entry by a worker into any confined space shall be under the control of a suitable written procedure meeting all legislations and the Employer's requirements for testing, ventilation, recording or test data and personal protection.
- 7.1.3. The Contractor is responsible for ensuring that all necessary test and protective measures are implemented. Dangerous gases or oxygen deficiency cannot be detected by sight or smell and areas which may contain a harmful atmosphere must be properly tested. All areas found to be dangerous to personnel must be ventilated immediately and checked with suitable gas detection equipment to ensure it is safe to work before work is started or resumed.
- 7.1.4. Confined space entry must be authorized through PTW's approval process.

### **7.2. Traffic Movement Management**

#### **7.2.1 Inspection of the Existing Site Condition**

The traffic movement and information regarding the project shall be reviewed, prepared and planned for all traffic and parking for area(s) based on the available space.

#### **7.2.2 Public Convenience**

- a) Operation shall be conducted as to offer the least possible obstruction and inconvenience to the public and to maintain public safety.
- b) Construction vehicles entering and exiting the work site should be reduced during peak hours as their movement could affect existing road users.
- c) Lorries using public roads to and from the work site should be well maintained and the drivers have to be careful while driving. Signage should be put up at strategic locations to warn motorists of the work in progress and humps should be installed across the road to reduce speed.
- d) Vehicles transporting earth and other construction materials should be covered properly with tarpaulin / canvas to reduce windblown dust and spills.
- e) Contractor is strictly prohibited to drop, spill, or scatter any dirt, sand, earth, gravel, clay, loam, stone, grass, straw, shavings, sawdust, ashes, manure, and garbage in public road whether from a moving or stationary vehicle or in any other manner. Contractor is fully responsible for the clean-up works and liable for any fine/summons issued from the local authority.



### 7.2.3. Maintaining Vehicular and Pedestrian Traffic Control

- a) Existing signals signs and street lighting
  - i. Existing traffic signal and street lighting systems shall be kept in operation for the benefit of the traffic during progress of the work.
  - ii. Certain signs might be required to be covered which regulate or direct traffic.
- b) Public passage through or around a construction area
  - i. Signs, light, flare, and other facilities in order to direct and expedite the passage of public traffic through or around the work area in a safe manner shall be installed.
  - ii. Competent flag personnel whose sole duties shall consist of directing the movement of traffic through or around the work site shall be engaged.
- c) Prohibition of stopping and parking

Vehicles may be prohibited to stop or park within and adjacent to the construction site. As and when necessary, the Contractor shall provide temporary space required in facilitating a particular construction activity. The “NO PARKING, NO STOPPING” zones sign in critical areas may have to be provided in the work areas.
- d) Flag personnel
  - i. Flag personnel shall be used where necessary to control the flow of traffic through the work site and shall be used in all cases where traffic is being routed through the work area under one-way control.
  - ii. Flag personnel, while assigned to traffic control, shall perform their duties and shall be provided with the necessary equipment. The equipment shall be furnished and kept clean and in good repair by the Contractor at its expense.
- e) Traffic Management plan

The Contractor shall prepare a traffic management plan by taking into consideration of the following factors;

  - i. The necessity for workers to carry equipment across the live carriageway
  - ii. The necessity to stop traffic in live traffic lanes
  - iii. The use of technology or equipment to help avoid or mitigate risks
  - iv. Safe access for maintenance operations
  - v. The specification of materials or equipment for use during the work
  - vi. The establishment of safe working areas
  - vii. The establishment of safety zone.
  - viii. The adoption of safe working practices
  - ix. The provision of safe access to and egress from the working areas for vehicles and pedestrians
  - x. The implementation of a traffic flow and control system aimed at keeping traffic delays to a minimum
  - xi. The needs of motorists, cyclists, pedestrians (including vulnerable road users)



### 7.3. Excavation

- 7.3.1. All Contractors shall obtain an excavation permit from the Employer before excavation work more than 1.2 meters below grade is performed including any pile or pole driving and soil testing (etc.).
- 7.3.2. Excavations and trenches shall be inspected by a competent person daily and after every rainfall to determine if they are safe.
- 7.3.3. Excavations such as ditches, trenches or holes shall be sloped sufficiently to prevent cave-ins or slides. If sloping is impractical, shoring shall be used whenever the vertical dimension exceeds 1.5 meters or as soil condition warrant.
- 7.3.4. Personnel removing shoring after completion of work shall not be in the bottom of the excavation. Shoring shall be removed in a manner to prevent cave-in on personnel.
- 7.3.5. Barricades, handrails, signals or other appropriate warning devices to protect personnel from any hazardous operation or excavation shall be provided. Open trenches, excavations, etc., shall be covered when handrails or barricades do not provide adequate protection.
- 7.3.6. Grade lines, ropes, chains, and other tripping hazards shall be sufficiently marked to be clearly visible day or night.
- 7.3.7. All excavations along or in roads shall be illuminated at night with approved blinking amber lights. These shall be explosion proof, transistorized, flashing beacons, or safety approved type.
- 7.3.8. Exploratory probe holes shall be hand dug to a depth exposing the underground obstacle or to the depth of the planned excavation.
- 7.3.9. Located underground obstacles, cables and piping shall be marked, i.e. physically identified, in the field and will be updated on drawings.
- 7.3.10. Extreme care shall be taken when excavating in the vicinity of underground piping. If lines are accidentally damaged the sub-contractor shall notify the Employer's representative HSSE immediately.
- 7.3.11. If cables, piping, etc., are exposed during excavation work, they shall be sufficiently supported in order to avoid breaking under their own weight (maximum 2 m distance).
- 7.3.12. Access ladders will be provided at least every 8 meters around the perimeter of all excavations.
- 7.3.13. Ground water shall be removed from and kept out of the bottoms of all trenches and excavations.
- 7.3.14. Excavations and trenches shall have gas testing performed before personnel enter if evidence of gaseous elements are detected.
- 7.3.15. No superimposed loads of any equipment, materials or removed earth shall be permitted within 0.6 meter of the upper perimeter of excavations and trenches which may cause side wall cave-in.
- 7.3.16. Gas cylinders are not permitted to be taken into any excavation or trench. Only the torch and hose are permitted in such location and must be removed as soon as work is completed.

## **8. ENVIRONMENT MANAGEMENT MONITORING**

### **8.1. Water Quality Monitoring**

- 8.1.1. No direct water discharge from the work site into any of the nearby drains by having silt trap or sedimentation pond. The sedimentation pond will be used to collect water from the surface runoff from the site.
- 8.1.2. Desilting and other maintenance works on the sedimentation pond including repair of any collapsed slopes should regularly be carried out. Excavated materials from the sedimentation pond should not be dumped at the side of the pond as they can then be easily washed back into the pond. They should be dumped in sinks or used as fill materials. The sedimentation pond must be maintained and desilted regularly. The sedimentation pond should be desilted once reached 75% of the pond's actual depth. The Contractor shall install flood level at silt trap as measurement of the pond.
- 8.1.3. The Contractor shall also keep all drains, streams, sediment pond and waterways free from mud, silt and other obstructions and make good where necessary to the satisfaction of the Employer during the completion of the work.
- 8.1.4. Fuel, grease, engine oil storage facilities must be covered and carefully sited and to avoid contamination of the surface waters. Temporary fuel storage facilities must be located away from on-site drainage channels. The disposal of waste oil should be handled according to the stipulated Environmental Quality (Scheduled Wastes) Regulations, 2005.
- 8.1.5. Scheduled waste should be stored in proper containers, labelled, sealed and placed in a covered area and disposed of by the licensed waste collector. The concrete bund around the skid tank provided in the work site should be of sufficient height (110% of the skid tank volume) to contain spillage.
- 8.1.6. Domestic and solid wastes, if not properly managed, may lead to water pollution and potential flooding due to flow obstruction and congested drains. Garbage should be collected in covered bins and finally disposed of at the approved designated dumpsite.
- 8.1.7. Open stockpiles of construction materials (e.g. aggregates, sand etc.) should be covered with fabric or plastic sheet during rainy conditions.
- 8.1.8. To ensure provision of sufficient mobile toilets and self-contained septic tank system at the site will help to prevent potential pollution of sewage and silage.
- 8.1.9. The Contractor shall carry out water quality monitoring in accordance with the applicable legal and other regulatory requirements.

### **8.2. Air Quality Monitoring**

- 8.2.1. Setting up of fuel burning equipment such as generator set must be with the written approval from the Director General ("DG") as set in the Environmental Quality Act 1974 prior to set-up. Application must be submitted together with detailed engineering plan verified by registered Professional Engineer (PE).
- 8.2.2. The Contractor shall particularly take all necessary measures to abate the discharge of black smoke fumes and other obnoxious gases from the plant and machinery used on the site. When notified by the Employer, the Contractor shall stop the use of any plant and equipment which emit black smoke or fumes and Contractor's attention is also drawn to the fact that the site is possibly situated near existing buildings and pollution must be controlled to the minimum.

- 8.2.3. Open burning on site is strictly prohibited and the Contractor shall be held solely responsible for the sufficiency of precaution taken by them according to DOE requirements and shall be liable for and shall indemnify the Employer in respect of any claims or proceedings arise out of its neglect of this clause.
- 8.2.4. All the roads in the work site, including access roads from the work site to public road junction, must be paved prior to start of earthwork.
- 8.2.5. Frequent spraying of water on the exposed surface especially during dry seasons to reduce dust. Soil and other materials spilled onto paved roads should periodically be removed, either manually or washed by water jets and the flows diverted to a retention pond.
- 8.2.6. Regular spraying the entrance and exit points of the site with water must be carried out to reduce dust and soil particles from the tyres prior to exit on the main / protocol road.
- 8.2.7. Traffic controls such as speed limits and traffic volume restrictions to reduce dust churned up by vehicles. Vehicles transporting earth and other construction materials should be covered properly with tarpaulin / canvas to reduce windblown dust.
- 8.2.8. The Contractor shall carry out air quality monitoring as per applicable legal and other regulatory requirements.

### **8.3. Boundary Noise Monitoring**

- 8.3.1. Construction work and movement of heavy vehicles should be confined to daytime hours, i.e. between 7.00 am to 7.00 pm, and minimize activities during weekends and public holidays; unless requested to do so by the employer.
- 8.3.2. Reduce noise at source by reducing the amplitude of the machines used by if possible, isolating or damping them, or by reducing the area of solid surface vibrations.
- 8.3.3. Hoarding is recommended to be erected at the boundary of the work site. Hoarding is needed firstly to isolate the unsightly construction activity from the residents of nearby areas, secondly, to enhance the safety and health environment, and thirdly to attenuate noise levels within the work site.
- 8.3.4. Construction vehicles must comply with the noise control requirements of the Environmental Quality (Motor Vehicle Noise) Regulations 1987. The maximum sound level permitted for trucks transporting goods or materials is 88 dB (A).
- 8.3.5. Overall noise level emitted from the transport of construction equipment and materials can be controlled by routing all construction vehicles to routes that will cause minimum disturbance to the residents along the route.
- 8.3.6. Carry out traffic management system to ensure that vehicular traffic to and from the work site is controlled.
- 8.3.7. Road bumps can be constructed at the ingress of major routes to reduce the speed of construction vehicles.
- 8.3.8. Any complaints from nearby residents should be immediately attended to and actions taken. The nature of complaint and action taken shall be recorded, photographed (if applicable) and a copy is kept.
- 8.3.9. The Contractor shall carry out boundary noise monitoring as per applicable legal and other regulatory requirements.

#### **8.4. Pollution, Flooding**

- 8.4.1. The Contractor shall be responsible for taking immediate steps to make good and shall bear the cost of remedying the effects of pollution, flooding and other nuisance caused by the commissioning of its works under, to neighbouring properties, roads, drains etc. all to the satisfaction of local authorities and the Employer.
- 8.4.2. The Contractor shall satisfy itself of the existing flood level and the surrounding local condition as no claim will be allowed on the ground of ignorance on this matter.
- 8.4.3. The Contractor shall take measures as the Employer may require preventing the entry of oil or other deleterious materials from the works into any new or existing drainage system or natural watercourse. Nevertheless, should any drainage system or watercourse be fouled by such material the Contractor shall clean the drainage or watercourse at its expense to the satisfaction of the Employer.

#### **8.5. Preservation of Earth Slopes**

- 8.5.1. The Contractor shall take all necessary precaution to preserve all earth slopes, both existing i.e. slopes already existing on the site at the time of the site being handed over to the Contractor and new i.e. slopes formed and constructed by the Contractor under the Contract. The Contractor shall construct adequate temporary water courses and drains and take other necessary steps to prevent slips from occurring.
- 8.5.2. The method of slope preservation and maintenance shall be submitted to the Employer and no works shall be carried out before approval from the Employer been obtained.
- 8.5.3. Should slips occur due to the Contractor's neglect to preserve the earth slopes, it shall, at its own expenses, make good such slips to the entire satisfaction of the Employer.
- 8.5.4. The Contractor shall make regular inspection of the earth slopes and more often if it deems it necessary or if so instructed by the Employer. It shall properly record the results of its inspections to be provided to the Employer as and when requested. In the event of slips occurring or in the opinion of the Contractor may possibly occur, the necessary measures need to be taken as prevention.
- 8.5.5. The Contractor shall be held solely responsible for the sufficiency of the precautions taken by it to preserve the earth slopes and shall be liable for and shall indemnify the Employer in respect of any claims or proceedings arising out of its neglect of this requirement.

#### **8.6. Waste management**

##### **8.6.1. Solid Waste / Domestic Waste / Construction Waste and Housekeeping**

- i. During the work period, the Contractor shall remove regularly all rubbish, debris, surplus and useless materials from site as directed by the Employer in conformity to local authorities' requirement including paying all charges in connection therewith.
- ii. Construction wastes and domestic wastes disposal should be carried out in accordance with local council conditions in order to prevent breeding of flies and mosquitoes. The waste disposal shall be properly managed.
- iii. Open burning is strictly prohibited.
- iv. Daily housekeeping of the work site is a must.
- v. Areas for construction wastes are to be designated at the site for temporary storage.

- vi. Proper waste containers should be provided by the Contractor for the workers to dispose of their wastes.
- vii. Any residue should be collected and sent to the approved landfill for disposal.
- viii. The Contractor shall provide appropriately coloured recycle bins at the workplace for segregation of paper, plastics, glass and aluminum. These wastes shall where practicable, be reduced, recycled or reused.

#### **8.6.2. Scheduled Waste**

- i. Provision of adequate collection, removal and regulated disposal scheduled wastes to be managed in accordance with the Environmental Quality (Scheduled Wastes) Regulations, 2005.
- ii. The Contractor shall notify the Department of Environment (DOE) of any generation, inventory and disposal of scheduled wastes. A copy of notification shall be forwarded to the Employer.
- iii. Scheduled waste shall be stored in appropriate containers in a bunded area with a shed over it. The storage containers shall be properly labelled with the type of scheduled waste stored in it, together with hazard signage prior to collection by a licensed scheduled waste collection service and sent to a designated landfill site.
- iv. Scheduled waste disposal should be carried out every 180 days or less after its generation provided that the quantity of scheduled waste accumulation on site shall not exceed 20 metric tonnes.
- v. Scheduled wastes shall be disposed in accordance with Environmental Quality Act 1974 through contractors appointed by the DOE. Consignment note obtain shall be kept in file and a copy forwarded to the Employer's representative.
- vi. Scheduled waste handling must be handled by the competent and certified person (CEPSWAM)

#### **8.7. Environmental Protection**

- 8.7.1. The Contractor shall be aware of the environmental conditions of the site and the areas surrounding the site. The Contractor is also to allow for continuous liaison with the Department of Environment to ensure that all works being carried out do not directly or indirectly contribute to pollute or contaminating the environment.
- 8.7.2. The Contractor shall be held solely responsible for the sufficiency of precautions taken by it to protect the environment and shall comply with requirements imposed by the relevant authorities and comply, in particular, but be not limited to the following.
  - i. Environmental Quality Act 1974
    - a. The Contractor shall comply with all aspects of the Environmental Quality Act 1974 which have relevance to the design, construction, equipping and commissioning of the work.

- ii. Environmental Impact Assessment
  - a. The Contractor shall follow the Environmental Impact Assessment (EIA) approval and shall incorporate into the works all the abatement and mitigation measures for environmental protection and environmental monitoring as required by the Department of Environment.
  - b. The Contractor shall install rain gauge at the work site.
  - c. The Contractor shall be liable for and shall indemnify the Employer in respect of any claim or proceeding arising from its neglect of this provision. All costs associated therewith shall be deemed to be included in the Contract Sum.

## **9. SECURITY**

### **9.1. Personnel Control Pass and Identification**

- 9.1.1. All person authorised by the Employer and **SHO** shall have access to the site at all times.
- 9.1.2. All the Contractor's staff and workforce (including all supplier and sub-contractor) are required to carry personnel security passes whilst working on site. Passes will be issued by the Contractor.
- 9.1.3. Only workers with a valid work permit and possesses the CIDB Green Card (if applicable) or Induction Program card or Safety Passport shall be issued with contractor's security pass. Having valid CIDB Green Card (if applicable) and Induction Program card or Safety Passport is a pre-requisite for issuance of contractor's security pass.
- 9.1.4. No person will be permitted to enter the site without personnel security pass.

### **9.2. Control of Visitors**

- 9.2.1. All first-time personnel to the work site must be inducted and given safety briefing by the Employer's HSSE personnel.
- 9.2.2. With the exception of the Employer's employee, the Contractor is required to provide all necessary control and guidance to visitors who wish to visit the worksite to ensure their protection and where necessary provide personal protective equipment for their use.

### **9.3. Records**

- 9.3.1. All personnel and visitors entering the site shall be recorded for their visit to the site.
- 9.3.2. The records shall be kept and maintained for future references.

# Appendix AA

## Consequence Management

**CONSEQUENCE MANAGEMENT FOR NON-CONFORMANCE WITH HSSE MANAGEMENT REQUIREMENTS**

Item	1 <sup>st</sup> Occurrence HSSE Non-conformance	2 <sup>nd</sup> Occurrence HSSE Non-conformance	3 <sup>rd</sup> Occurrence HSSE Non-conformance
HSSE Non-conformance for 12 rolling months from first occurrence	Communicate to contractor and Deduct RM1,000 from next payment	Communicate to contractor and Deduct RM1,000 from next payment	Communicate to contractor, Deduct RM1,000 from next payment and deduct of 5% of contract value.  HQ panel to decide on termination or suspension.

ITEM	CRITICAL HSSE NON-COMFORMANCE	
1	Violation of UEM Life Saving Rules as stipulated in Appendix herein.	Immediately apply 3rd occurrence
2	Endangering lives and safety of others at Site by committing dangerous acts and/or dangerous execution of the Works, resulting in serious/fatal accidents.	
3	Allowing worker/s to abuse and/or threaten any company staff in the course of his duty	

**Note:**

- After every HSSE Non-conformance, a communication pertaining to the HSSE non-conformance to the Contractor and status of the contractor's HSSE Non-Conformance will be monitored.
- A HSSE Non-conformance can be reported by any Edgenta staff to a HSSE Practitioner.
- Next, the HSSE Practitioner will determine whether the HSSE Non-conformance reported falls under the HSSE Non-conformance criteria. The HSSE practitioner shall then issue the HSSE Non-conformance to the Contractor within five (5) working days.
- The HSSE Practitioner will use the HSSE Risk Matrix to determine the potential risks. The HSSE Non-conformance applies when it has a potential risk of yellow C3, D3, C4 and Red risks as per the HSSE Risk Matrix.
- For any legal related offences, further penalty to be imposed as per regulations.
- Attached appendices: Consequence Management and HSSE Management Requirements (Including UEM Life Saving Rules),
- For any inconsistencies with regards to HSSE matters between the terms of the contract and the appendices attached herein, the terms stated in these appendices shall take precedent.
- For sub-contractors that are UEMEd's subsidiaries; any HSSE violations shall be referred to and processed in accordance with the Staff Consequence Management process.



Risk assessment matrix									
Severity	Consequences				Increasing likelihood				
	People	Assets	Community	Environment	A	B	C	D	E
					Never heard of in the industry	Heard of in the industry	Has happened in our organisation or more than once per year in the industry	Has happened at the location or more than once per year in our organisation	Has happened more than once per year at the location
0	No injury or health effect	No damage	No effect	No effect	Continuous Improvements				
1	Slight injury or health effect	Slight damage	Slight effect	Slight effect					
2	Minor injury or health impact	Minor damage	Minor effect	Minor effect	Control to ALARP				
3	Major injury or health effect	Moderate damage	Moderate effect	Moderate effect					
4	PTD* or up to three fatalities	Major damage	Major effect	Major effect	Tolerability to be endorsed by management				
5	More than three fatalities	Massive damage	Massive effect	Massive effect					

\* Permanent total disability

NCR has potential risk of yellow C3, D3, C4 and all Red risks as per the HSSE Risk Matrix).

# UEM LIFE SAVING RULES

*Comply, Intervene & Coach*



Obtain authorization before entering a confined space



Protect yourself against a fall when working at height



Obtain authorization before overriding or disabling safety critical equipment



Prevent dropped objects



Follow prescribed lift plan



Position yourself in a safe zone in relation to moving and energised equipment



Follow prescribed Journey Management Plan



Work with a valid permit (PTW) required by the job



Verify isolation before starting work



Obtain authorization before starting excavation activities




Wear your seatbelt and follow speed limit



Follow Traffic Management Plan

## What are the Life Saving Rules?



- ✓ The Life Saving Rules are **basic safety rules** for **high-risk works** where failure to comply with the rules has the **highest potential for serious injury or death**. They also highlight simple actions individuals can take to protect themselves and others.

- ✓ The aim is **not to blame** employees but to drive a **culture of compliance**. The focus is on modifying worker and supervisor behaviours in the workplace by raising awareness.

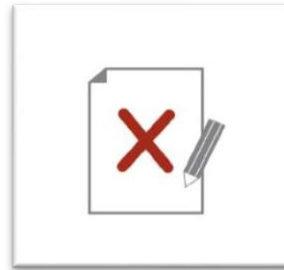
- ✓ **Compliance is mandatory** for everyone, UEM Group of companies, contractor and sub-contractor employees alike.

- ✓ **Failure to comply** will result in **disciplinary action**.

## Introduction: Consequences of breaching the rules



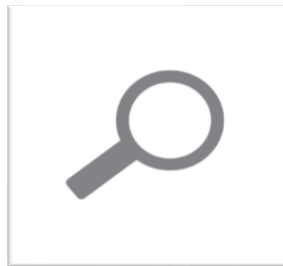
Rule violators expose themselves or others to a **higher risk of injury or fatality**.



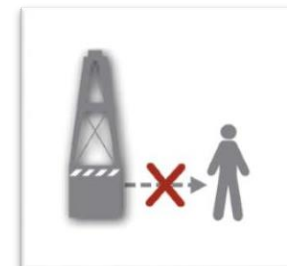
If the rule violator acted **intentionally**, the **maximum appropriate disciplinary action** will be applied.



If a **supervisor sets the conditions** for rule breaking or **fails to follow through** if one is broken, appropriate disciplinary action will apply.



All rule-breaking cases will be **investigated thoroughly**.



For employees of **contractors or sub-contractors**, this can include **removal from site and disqualification** from future Company work.

# UEM LIFE SAVING RULES

*Comply, Intervene & Coach*



## 2. Your roles as UEM Staff



1

- ✓ Know the Life Saving Rules
  - Purpose
  - application;
  - consequence for non-compliance.

2

- ✓ Comply with the rules to keep yourself and others safe

3

- ✓ Informed your supervisor or STOP WORK if you can't comply with the rules

4

- ✓ Recognize potential hazards & act appropriately.

5

- ✓ Intervene when you see someone breaking a rule & accept intervention if you break a rule.

## UEM Life Saving Rules

- ✓ **Obtain authorization before entering a confined space**
- ✓ **Protect yourself against a fall when working at height**
- ✓ **Position yourself in a safe zone in relation to moving and energised equipment**
- ✓ **Follow prescribed Journey Management Plan**
- ✓ **Work with a valid permit (PTW) required by the job**
- ✓ **Verify isolation before starting work**
- ✓ **Prevent dropped objects**
- ✓ **Follow prescribed lift plan**
- ✓ **Obtain authorization before overriding or disabling safety critical equipment**
- ✓ **Obtain authorization before starting excavation activities**
- ✓ **Wear safety belt & follow speed limit**
- ✓ **Follow Traffic Management Plan**

# UEM LIFE SAVING RULES

Comply, Intervene & Coach



## UEM Life Saving Rules Icons

### Life

# Saving Rules



Obtain authorization before entering a confined space



Protect yourself against a fall when working at height



Obtain authorization before overriding or disabling safety critical equipment



Prevent dropped objects



Follow prescribed lift plan



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Follow Traffic Management Plan

**SMALL CHANGES  
BIG DIFFERENCE**

UEM
PLUS
UEM
OPUS
UEM

### Peraturan

# Penyelamat Nyawa



dapatkan kebenaran sebelum memasuki ruang terkandung



Lindungi diri ketika bekerja di tempat tinggi



Dapatkan kebenaran sebelum memina atau mengantikan peralatan keselamatan kritikal



Elakkan sebarang objek daripada terjatuh



Ikuti Pelan mengangkut yang ditetapkan



Pastikan diri anda berada di zon selamat ketika berhadapan dengan peralatan yang beroperasi



Ikuti Pelan Pengurusan Perjalanan yang ditetapkan



Bekerja dengan permit kerja (PTW) yang sah jika diperlukan



Sahkan pengasingan tenaga sebelum memulakan kerja



Dapatkan kebenaran sebelum memulakan aktiviti penggalian



Pasang tali pengaman keselamatan dan patuhi had laju



Patuhi Pelan Pengurusan Trafik

**SMALL CHANGES  
BIG DIFFERENCE**

UEM
PLUS
UEM
OPUS
UEM

## RULE #1 Confined Space



**Obtain  
authorisation  
before entering a  
confined space**

A confined space, such as a vessel, tank or pipe can contain explosive gas, poisonous air or other dangers such as a lack of oxygen, things that can fall on you or you can fall from. Authorised access keeps you safe. Air is tested to stop explosions and/or make sure you can breathe the air safely.

### **You should:**

- confirm with the supervisor or the person in charge of the work that it is safe to start work*
- confirm with the attendant that you can enter a confined space*
- follow the requirements of the work permit*
- confirm with the supervisor or the person in charge of the work that the air is tested*
- confirm with the supervisor or the person in charge of the work it is safe to start work*
- stop work if you smell gas*



## RULE #2 Working at Height



Use fall protection equipment when working outside a protective environment where you can fall over 2.0 meters to keep you safe. A protective environment includes approved scaffolds, stairs with handrails, and man lifts.

**Protect yourself against a fall when working at height**

### **You should:**

- have authorisation to work at height outside a protective environment.*
- be aware of what fall protection equipment to use and how to use it.*
- check equipment before using it.*
- always tie off when at height outside of a protective environment.*
- confirm that it is safe to start work at height.*

## RULE #3 Safety Critical Equipment



**Obtain authorization before overriding or disabling safety critical equipment**

**Safety-critical equipment must work correctly to keep you safe.**

Examples of safety-critical equipment include isolation devices/emergency shut down valves, lock out/tag out devices, trip systems, relief valves, fire and gas alarm systems, certain level controls, alarms, crane computers, in-vehicle monitoring systems.

### **You should:**

- Obtain authorization from the supervisor or person in charge before overriding or disabling safety-critical equipment*
- Point out the safety-critical equipment in your work place.*
- Confirm the authorization comes from the right level*

## RULE #4 Prevent dropped objects



There is a significant risk of dropped objects when using tools and portable equipment at height. Preventing objects from falling keeps you and people working below you safe.

### **Prevent dropped objects**

#### **You should:**

- secure all tools and equipment to prevent them from falling/being dropped.*
- put barriers around areas where there is a potential for dropped objects.*
- always wear head protection where required.*
- create awareness of the risk of dropped objects and understanding of what actions need to be taken (for example during team/toolbox meetings.)*
- regularly inspect the site to ensure that precautions are taken to prevent objects from falling from height (e.g. hand tools are tied off, no loose objects, no holes in grating, toe boards are in place, barriers are in place where necessary, head protection is worn where required, etc.).*

## RULE #5 Lift Plan



A lift plan describes how to lift and hoist safely. For routine lifts, there needs to be a general lift plan. For non-routine lifts, including complex shall be lifting permit or permit to work. Working or walking immediately under a suspended load or lifting equipment is unsafe as the load or can fall on you. A suspended load or hook is an object that is temporary lifted and hangs above the ground.

### **Follow prescribed lift plan**

#### **You should:**

- ✓ *Never cross a barrier controlling an area with a suspended load without authorization.*
- ✓ *Follow the instructions of the flagman or the person in charge of the lift.*
- ✓ *understand the lift plan before starting the work and follow it.*
- ✓ *confirm that the load does not exceed the capacity of the lifting equipment.*
- ✓ *confirm that the crane is level and positioned on a solid surface.*
- ✓ *verify that safety devices.*

## RULE #6 Moving & Operating Equipment



**Position yourself in a safe zone in relation to moving and operating equipment**

Working “in the line of fire” of moving equipment (e.g. cranes and other vehicles) and operating equipment (e.g. rotating, electrical or pressurised machinery) is unsafe as this can impact you.

### **You should:**

- confirm the safety precautions with the supervisor or the person in charge of the work when working near moving or operating equipment.*
- follow the instructions of the flagman or the person in charge for equipment movements.*
- confirm with the person in charge that it is safe to enter and/or work in the restricted zone.*
- make sure that the driver of a moving vehicle sees you.*
- confirm that access to areas posing danger is restricted and that barriers are put in place.*
- ensure that only authorised personnel is working in a restricted zone.*
- confirm that signalling methods and communications are agreed on and understood by everyone.*
- ensure that the site is properly lit and/or that high-visibility clothing is worn.*

## RULE #7 Journey Management Plan



A journey management plan is a plan for you as a driver that will help you to travel and arrive safely. A seat belt protects you from injury in the event of an incident while driving and keeps you safe. Speeding or using your phone while driving increases the risk of losing control of your vehicle.

### **Follow prescribed journey management plan**

#### **You should:**

- confirm if a journey management plan is required before starting the journey*
- discuss the journey management plan with the authorised person*
- understand the journey management plan before starting the journey*
- comply with the duty, driving and rest hours specified in the journey management plan*
- follow the route specified in the journey management*
- tell the authorised person immediately if changes occur*
- not use a mobile phone or pager, send or read a text message, or use a hands-free mobile phone device.*
- adjust your speed to the prevailing conditions*
- intervene if a driver is using a phone in a moving vehicle*

## RULE #8 Permit to Work



**Work with a valid  
work permit when  
required**

A work permit describes what you must do to stay safe.

**You should:**

- understand the work permit and follow it.*
- confirm that the work permit is valid.*
- confirm with the supervisor or the person in charge of the work that it is safe to start work.*
- confirm if a work permit is required for this work.*
- confirm that the workplace has been inspected before work starts.*
- explain how the work permit keeps you safe.*
- confirm the work permit is signed.*
- confirm that it is safe to start work.*
- get a new work permit when the work or the situation changes.*
- confirm that the work is completed.*

## RULE #9 Isolation



**Verify isolation before starting work**

Isolation separates you from danger, such as electricity, pressure, toxic materials, poisonous gas, chemicals, hot liquids/material or radiation to keep you safe. Specified life-protecting equipment by the Permit to Work, such as breathing apparatus, electrical arc flash protection or chemical resistant suits protect you from danger.

### **You should:**

- understand the isolations that protect you from danger.
- confirm with the supervisor or the person in charge of the work that isolations are in place.
- confirm with the supervisor or the person in charge of the work it is safe to start work.
- confirm isolation is in place, for example, lock switches, separate pipes with spades, or lock access doors.
- confirm no stored energy or other dangers remain.
- confirm that it is safe to start work.



## RULE #10 Excavation



### **Obtain authorization before starting excavation activities**

Obtain authorization before starting excavation activities. Excavation activities may contain hazards such as electrical cables, confined space, collapse of walls or excavated material. Check that it is safe to start work. An excavation is any man-made cut, cavity, trench, or depression, formed by earth removal (e.g. digging).

#### **You should**

- Confirm with the supervisor or person in charge that it is safe to start work. Follow applicable Work Permit requirements.*
- Stop work and notify your supervisor if anything unexpected happens.*
- All work permit requirements are in place (e.g. confined space, isolation).*
- Barriers and signs are in place to restrict access to excavation site.*
- A work site risk assessment has been conducted by a competent person(s) including: identified hazards e.g. cable/pipeline route marking; soil classification and testing.*
- Soil movement is controlled to prevent collapse (e.g. shoring, sloping, soil placement).*
- Ground stability is inspected before work and after adverse weather conditions*
- An emergency response plan is in place.*

## **RULE #11 Wear seatbelt & follow speed limit**



### **Wear your seatbelt & follow speed limit**

#### Wear seat belt

A seat belt protects you from injury in the event of an incident while driving and keeps you safe. Wearing seat belts includes safety belts in (rental) cars, taxis, (mini) buses, trucks, cranes, or forklift trucks, and involves persons in moving vehicles when engaged on company business.

You (drivers and passengers) should:

- always use a 3-point seatbelt (please note exceptions<sup>†</sup> above)*
- check that your seat belt works properly*
- keep your seat belt properly fastened while in a moving vehicle*
- check that everyone in the vehicle is wearing a seat belt properly before starting to drive*
- intervene when your fellow passengers are not wearing seatbelts properly*
- stay at or below the maximum allowable speed for the road you are driving on as indicated by road signs or journey management instructions*
- adjust your speed to the prevailing conditions*

## RULE #12 Traffic Management Plan



### **Followed Traffic Management Plan**

The five basic components of a temporary traffic management control (safe working zone) are advance warning area, transition area, buffer space, work space (Activity area) and termination area

#### **You should**

- ✓ *Working in expressway or road shall inside the working area (safe zone)*
- ✓ *Ensure traffic management plan in place before start work*
- ✓ *Stop work and notify your supervisor if traffic management plan is not properly install.*
- ✓ *All work permit requirements are in place (e.g. PTW, Traffic Management Plan)*
- ✓ *Working in expressway or road shall with approved traffic management plan*
- ✓ *Check and verify the Traffic Management Plan before allow worker enter the site*
- ✓ *Traffic Management Plan shall be installed by a competent person(s)*
- ✓ *An emergency response plan is in place*