



SAFETY MANAGEMENT SYSTEM



Construction Industry Sectorial Safety Management System

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The policy shall be understood, implemented and maintained at all levels of the organization;

The policy shall be communicated to all employees in languages understood by them to make them aware of their OH&S obligations;

The policy shall be reviewed at least once a year to ensure it remains relevant and appropriate to the organization.

The Company Believes in:

- A. Providing safe and healthy working environment for all employees.**
- B. Safety of employees will be the first consideration in the operation of the business.**
- C. Ensure that each employee is adequately trained and familiarise the relevant statutory requirements, codes of practices and the company's safety procedures/ standards in order to carry out his work safety.**
- D. Taking steps to ensure that safety messages are disseminated to all employees, subcontractors as well as all visitors, vendors who are at the work place.**
- E. Each employee should take personal responsibility to prevent injury to himself as well as to his fellow colleague.**

~ It is the responsibilities of all managers and employees to carry out this policy effectively.
All works will be carried out in accordance with the standards stated in this manual.~

REGARDS,

AUNG THAN KYI

CHIEF ENGINEER

1. SAFETY STANDARD

Industry : Building Construction Industry

Safety Management Descriptor : This unit covers the outcomes required to comply with regulatory and organizational requirements for occupational health and safety

Safety Management Elements

This Safety Management consists of the following elements:

Element 1: Follow safe work practices

Element 2. Evaluate hazards and risks

Element 3. Follow emergency procedures

Safety Management Element 1

Follow safe work practices

Essential Knowledge

A competent individual needs to know and understand the following:-

1. Safety regulations and laws
2. Safety signs and symbols and Personal Protective Equipment(PPE)
3. The emergency procedures

Performance Criteria

A competent individual must be able to successfully perform the following:

1.1 Follow *Safety regulations* and workplace safety and hazard control practices and procedures based on organization procedures

1.2 Identify *hazards/risks* in the workplace and their corresponding indicators to minimize or eliminate risk to co-workers, workplace and environment in accordance with organization procedures

1.3 Perform to comply with contingency measures during the events of workplace accidents, fire and other emergencies in accordance with organization procedures

Safety Management Element 2

Evaluate hazards and risks

Essential Knowledge

A competent individual needs to know and understand the following:-

1. Various site hazards
2. Safety and health procedures

Performance Criteria

A competent individual must be able to successfully perform the following:

- 2.1 Identify maximum tolerable limits of contaminants based on threshold limit values (TLV) which when exceeded will result in harm or damage to health
- 2.2 Determine effects of the hazards.
- 2.3 Report OHS issues or concerns and identified workplace hazards are to designated personnel in accordance with workplace requirements and relevant OHS legislation

Safety Management Element 3

Control hazards and risks

Essential Knowledge

A competent individual needs to know and understand the following:-

1. Accidents which may happen
2. Correct use of PPE
3. Under the permit to work system

Performance Criteria

A competent individual must be able to successfully perform the following:

- 3.1 Follow consistently Occupational Health and Safety (OHS) procedures for controlling Hazards/risks in workplace.
- 3.2 Follow procedures for dealing with workplace accidents, fire and emergencies in accordance with organization OHS policies
- 3.3 Use *Personal Protective Equipment (PPE)* correctly in accordance with organization's OHS procedures and practices
- 3.4 Provide appropriate assistance in the event of a workplace emergency in accordance with established organization protocol

Evidence for Assessment

Evidence may be collected through assessment methods such as:

- Knowledge of the safety and healthy standards
- Knowledge of bored piling site's standard instructions

Range and Context

Tasks to be performed may include:

- Waste management statutes and rules
- National Electrical and Fire Safety Codes
- Evacuation
- Isolation
- Check the calibrate of tools, equipment and materials for working conditions may include:
- Use with good brand tools, equipment
- Sign in professional recommendations
- Prevention and control measurement
- Work instructions
- Measurement units
- Checking of tools and equipment
- Foundation form works,
- Standard handling for all use standard on major specification for operation
- Brand and expire date
- Specification
- use power source
- To be exact
- Follow the shop drawing
- Building construction code(Myanmar)

Hazards related to Foundation making may include;-but not limited to;

- Physical hazards, electrical hazard, and falling hazards

Risk control measures may include: but not limited to;

- Precaution hazards (lower dawn Tremie Pipe)
- Life line
- Barricade
- PPE(Safety Belt, Harness, Head protection, Hand glass)

- signs
- guarding
- Mask
- Gloves

Setup work area for piling work may include ☹...**reconsider;**

- Safety work place
- Unsafe work place
- Activate
- Housekeeping

Tools, Equipment & Materials(hand tools)

Foundation work may include:

- Piling equipments, steel plates, chisels, boring bucket, hammers, other tools

Organisational Procedures

- Method of statements, code of practices issued by Building Construction, directives

Under recommended skills

- Skilful in identifying the required safe work procedure.
- Following work instructions
- Skilful in practice of bored piling works

2. COMPANY'S OH AND SAFETY POLICY STATEMENT

A. Planning

1 Planning for hazard identification, risk assessment and risk control

1.1 Methodology

Step 1 Breakdown of the job into different work activity

Step 2 Identify the hazards associated with each process of the work activity

Step 3 Evaluate the risks of the hazards, taking into account the likelihood of occurrence, and the potential severity of consequences of injury or damage

Step 4 Decide if the level of risk reduction is sufficient, if not, propose further measures to control or to reduce the risk levels

Step 5 Implement the developed control measures

To manage the above-identified hazards, which are intolerable, **appropriate control measures shall be developed and implemented** which may include but not limited to the followings:

- **Elimination** (refers to the total removal of the hazards)
- **Substitution** (this involves replacing the hazard by one that presents a lower risk)
- **Engineering controls** (e.g. barriers of open edges, guarding of moving parts of machinery, proper working platforms, shoring of excavations)
- **Administrative controls** (e.g. attendance of competent persons such as professional engineers, fire watchers, lifting supervisors, rigger & signalmen, regular maintenance and inspections etc...)
- **Personal Protective Equipment** (e.g. safety helmets, eye protectors, hearing protectors, dust masks, respirators, safety belts / harnesses, safety shoes, hand protection etc...)

Step 6 To **review the hazard identification, risk assessment and risk controls** at least once every 3 years or depending on the following considerations:

- the nature of the hazard
- the magnitude of the risk
- changes from normal operation
- after every incident/accident
- changes of WSH legal and other requirements.

B. Implementation and Operation

1 Structure and Responsibility

1.1 Director is responsible for the overall implementation of the OH&S Management System.

1.2 Everybody hold the ownership of safety outcome

1.3 The OH&S responsibilities of management and line personnel are stated as follows:

A. PROJECT MANAGER

- a. Overall in charge of Occupational, Health And Safety Management in the Company
- b. To implement the Company Occupational, Health And Safety Management System, Safety Programmed and Procedures
- c. Review and update Safety Policy

B. PROJECT ENGINEER

- a. To lead in implementation of company's safety management and policy
- b. Familiarize himself with all Statutory Regulations, Company's Occupational Health And Safety Management System and Code of Practice are implemented and ensure its effective application.
- c. Ensure safety is planned into all operations, review all working methods and process, both new and existing to see that all safety precautions are met.
- d. Take prompt corrective actions to remove any unsafe or unhealthy work conditions and to maintain effectively such corrections made.
- e. To review safety issues and recommendations for improvement of safety.
- f. Authorizes safety expenditures.

C. SITE MANAGER

- a. To lead and In charge of Safety and Health at the site
- b. Familiarize himself with all Statutory Regulations, Company's Occupational Health And Safety Management System and Code of Practice are implemented and ensure its effective application.
- c. Chairman of Site Safety Committee (if Applicable)
- d. Ensure safety is planned into all operations, review all working methods and process, both new and existing to see that all safety precautions are met.
- e. Review any new or changes in processes, equipment and assessment of the hazards.
- f. Take prompt corrective actions to remove any unsafe or unhealthy work conditions and to maintain effectively such corrections made.
- g. Submit procedures on safety equipment and plants.
- h. Liaise with all authorities on safety matters.

D. SITE ENGINEER

- a. Familiarize himself with all Statutory Regulations, Company's Occupational Health And Safety Management System and Code of Practice are implemented and ensure its effective application.
- b. Review any new or changes in processes, equipment and assessment of the hazards.
- c. Establish and maintain a programmed for the identification and assessment of hazards.
- d. Assist in the investigation of every serious or fatal accident and dangerous occurrence and recommend preventive measures.
- e. Take prompt corrective actions to remove any unsafe or unhealthy work conditions and to maintain effectively such corrections made.

E. ASSISTANCE MANAGER

- a. Familiarize himself with all Statutory Regulations, Company's Occupational Health And Safety Management System and Code of Practice are implemented and ensure its effective application.
- b. Review any new or changes in processes, equipment and assessment of the hazards.
- c. Establish and maintain a programmed for the identification and assessment of hazards.
- d. Ensure safety is planned into all operations, review all working methods and process, both new and existing to see that all safety precautions are met.
- e. Take prompt corrective actions to remove any unsafe or unhealthy work conditions and to maintain effectively such corrections made.
- f. Liaise with all authorities on safety matters.
- g. To lead and In charge of Safety and Health at the site
- h. Ensure that SWP & RA established was communicated to the workers prior to commencement of work.
- i. To ensure First-day Safety Induction are conducted for all work personnel on site and keep records.

F. WORKPLACE SAFETY AND HEALTH OFFICERS

- a. Responsible for advising the management team on the safety requirements of worksite.
- b. Application of safety procedure to all work operations
- c. Advice on legal requirements pertaining to safety & health matters.
- d. Advice on the suitability on the use of PPE .plants and equipment with the appropriate test certificate and the validity of use.
- e. Advice in any change in legislative change of Factories Act.
- f. Enforce the company's Safety Rules and Regulations.
- g. Investigate accidents, put up necessary reports and recommend remedial actions.
- h. Act as secretary to site Safety Committee and preside the meeting in the absence of Chairman.

G.SAFETY CO-ORDINATOR/WORKPLACE SAFETY & HEALTH CO-ORDINATOR

Safety Co-ordinator / Workplace Safety & Health Coordinator

- a. To promote workplace safety and health according to company's SMS (Safety Management System)
- b. To advice, Coaching, Conduct Briefing & Training to work personnel of safety matters.
- c. To assist Site In-charged and/or Project Manager ensuring safety is planned into all operations, review all working methods and process, both new and existing to see that all safety precautions are met.
- d. To assist Site In-charged and/or Project Manager review any new or changes in processes, equipment and assessment of the hazards.
- e. Act as secretary of Safety Committee.
- f. Ensure that SWP & RA established communicated to the workers on site.
- g. Investigate accidents & incidents, put up reports and recommend remedial actions.
- h. Liaise with all workplace occupier and/or site visits of authority on safety matters.
- i. Act as secretary of Safety Committee.
- j. Coordinate all Health & Safety matters with cooperate safety personnel, main contractor's safety officer and or officer's from authorities (MOM)
- k. • Coordinate Safety activities to ensure implementation throughout the organization while maintaining close relationship with management, supervisor and workers on job site.
- l. • Apply Safety knowledge in work operations; maintain safety records, inspection records and other records in line with the SMS (Safety Management System) set up on site.
- m. • Identify unsafe acts, hazards, diagnosed causes and take corrective actions to rectify the problems immediately so as to ensure a safe work environment for all on site.
- n. • Carry out daily inspections on site to eliminate any unsafe practices, conditions & unsafe act in non conformance with local safety standards and documented.
- o. • Assist client, main contractor, supervisors and subcontractors in identifying and resolving problems related to safety.
- p. • Conducted daily safety checks all on lifting machines, gears and accessories.
- q. • Attends to safety committee meeting that meets once a month.
- r. • Conducts toolbox meeting for all levels of personnel.

H.SITE IN-CHARGE AND SUPERVISOR IN-CHARGE

Site In-charge / Supervisor In-charge

- a. To promote workplace safety and health according to company's OH & S policy statement.
- b. To advice, Conduct Briefing & Training to work personnel of safety matters.
- c. To ensure all accidents & incidents are Investigate, and responsible to put up reports and recommend remedial actions.
- d. To ensure all safety record and reports are compiled and proper filing.
- e. Assist on safety audits
- f. Liaise with all workplace occupier and/or site visits of authorities on safety matters.
- g. To ensure weekly safety inspections are conducted and report are put up on follow-up actions.
- h. Ensure that SWP & RA established communicated to the workers prior to commencement of work.
- i. Coordinate all Health & Safety matters with cooperate safety personnel, main contractor's safety officer and attend to site inspection of officer's from authorities
- j. To conduct First-day Safety Induction for all work personnel on site and keep records.
(Note: where as main-contractor)
- k. To ensure on daily toolbox meeting are conduct and take active role to brief on daily task and related hazard to the work personnel.

I. DUTY SUPERVISOR / FOREMAN

Piling and or Duty Supervisor/ Foremen

- a. Responsible for the safety, health & welfare of all workers either assigned or not assigned to him but may be working temporary in his area.
- b. Ensure that workers know safety, health and environmental rules and regulations, followed safe job procedures and all major hazards associated with their work and work areas.
- c. Conduct daily tool-box meeting and safety inspection in his area of responsibility and to rectify any unsafe conditions or practices immediately after such inspections.
- d. Maintain satisfactory standards of housekeeping in his assigned area.
- e. Ensure that all workers in his working area use the appropriate personal protective equipment.
- f. Coordinating all piling activities in accordance to the method of statement;
- g. Brief all piling team members on the day to day plan or activities during daily toolbox meeting, safe piling procedures and RA;
- h. Ensure that only trained appointed registered crane operators and appointed banksman participate in piling operation;
- i. Ensure that the ground conditions are safe for any piling operation to be performed;
- j. Oversee all piling operations; carry out work without the compromised of safety.
- k. Take suitable measures to rectify any unsafe conditions to ensure the piling operation can be conducted safely;
- l. Ensure permit to work system are implemented.
- m. Ensure LM certificates is issued prior deployment of piling machines.
- n. To mark and identify the safe operation area and to identification of safe swinging demarcation area after the parking of the machines prior the boring operation.
- o. Ensure piling operator conduct a daily check on their rigs and enter their findings into a inspection checklist.
- p. Confirm that there is no cables or any underground utilities prior work by carry out cable detection conducted by 'licensed cable detection workers'
- q. To position or place boring tools in proper & safe manner to ensure the stability of the tools to prevent from falling or collapsed.

J. SAFETY SUPERVISOR

- a. To advice, Conduct Briefing & Training to work personnel of safety matters.
- b. Investigate accidents & incidents, put up reports and recommend remedial actions.
- c. Compile all safety record and reports.
- d. Assist on safety audits and put reports.
- e. Assist on liaising with main contractor on safety matters.
- f. Conduct safety inspections and put up report on follow-up actions.
- g. Ensure that SWP & RA established was communicated to the workers prior to commencement of work.
- h. Coordinate all Health & Safety matters with cooperate safety personnel, main contractor's safety officer and attend to site inspection of officer's from authorities (MOM)
- i. To conduct First-day Safety Induction for all work personnel on site and keep records.
(Note: where RPPL as main-contractor)
- j. To conduct daily toolbox meeting.

K. FIRST AIDER

- a. Report to the site Safety Supervisor.
- b. Maintain the first aid facilities and attend to all injured personnel in the worksite.
- c. Provide basic first aid knowledge and training to site personnel.

L. LIFTING SUPERVISOR

- a. Checks and prepare crane access for lifting operations
- b. Monitor daily checking of cranes by crane operators.
- c. Monitor and ensure the maintenance and inspection programmed of cranes and passengers hoist.
- d. Ensure operators conduct daily checking of cranes.
- e. Monitors safe lifting procedures are carried out.
- f. Coordinating all lifting activities in accordance with lifting plan;
- g. Brief all lifting team members on the lifting plan, safe lifting procedures and RA;
- h. Ensure that only registered crane operators, appointed riggers and appointed signalmen participate in lifting operation involving the use of mobile crane and lorry loader;
- i. Ensure that the ground conditions are safe for any lifting operation to be performed;
- j. Be present during all lifting operations;
- k. Take suitable measures to rectify any unsafe conditions to ensure the lifting operation can be conducted safely;

M. RIGGERS

- a. Check the slings to be used for slinging the loads to ensure that the slings are of good construction, sound and suitable material, and adequate strength and free from patent defect.
- b. Ensure that an adequate number of legs of the sling are used and that the slinging angle is correct so as to prevent the sling from being overloaded during the hoisting.
- c. Ascertain the weight of the load, which is to be lifted and inform the crane operator of the weight of the load.
- d. Ensure that only proper lifting gears are used in conjunction with the sling.
- e. Ensure that the load to be lifted is secured, stable and balanced.
- f. Ensure that any loose load including stones, bricks or tiles, is placed in a receptacle to prevent the load or part thereof from falling during the lifting operation.
- g. Report any defect in the lifting gear to the lifting supervisor.
- h. Ensure the load is correctly rigged up prior to giving signals to commence the lift;
- i. Give correct and clear signals to the lifting equipment operator to maneuver the load safely from the point of lift to the destination;
- j. Ensure communications are maintained with the lifting equipment operator throughout the lift in accordance with the lifting plan;
- k. Ensure the lift is controlled throughout the duration of the operation;
- l. Ensure the immediate areas within the lift (start point and final position) are clear of any hazards during the maneuver;
- m. Maintain his position so as to ensure line of sight during the controlled phase of the lift and to ensure this position is free of danger;
- n. Refrain from handling load/rigging simultaneously when giving signals to the operator;
- o. Ensure all slings, webbings, shackles and other lifting gears used to rig the load are within the SWL of the lift, in good condition and duly certified;
- p. Ensure that the load is rigged up in such a manner that it is stable, balanced (centre of gravity beneath the hook) and secured (i.e. no loose items);
- q. Ensure that the lifting equipment operator has been informed of the weight of the load;
- r. Establish tag lines to control the load as it is being maneuvered;
- s. Report any defect in lifting / rigging and materials to lifting supervisor;

N. SINGNAL MAN

- a. Ensure or verify with the rigger that the load is properly rigged up before he gives a clear signal to the crane operator to lift the load.
- b. Give correct and clear signals to guide the crane operator in the manoeuvre of the load safely to its destination.
- c. Ensure the load is correctly rigged up prior to giving signals to commence the lift;
- d. Give correct and clear signals to the lifting equipment operator to maneuver the load safely from the point of lift to the destination;
- e. Ensure communications are maintained with the lifting equipment operator throughout the lift in accordance with the lifting plan;
- f. Ensure the lift is controlled throughout the duration of the operation;
- g. Ensure the immediate areas within the lift (start point and final position) are clear of any hazards during the maneuver;
- h. Maintain his position so as to ensure line of sight during the controlled phase of the lift and to ensure this position is free of danger;
- i. Refrain from handling load/rigging simultaneously when giving signals to the operator;
- j. Ensure all slings, webbings, shackles and other lifting gears used to rig the load are within the SWL of the lift, in good condition and duly certified;
- k. Ensure that the load is rigged up in such a manner that it is stable, balanced (centre of gravity beneath the hook) and secured (i.e. no loose items);
- l. Ensure that the lifting equipment operator has been informed of the weight of the load;
- m. Establish tag lines to control the load as it is being maneuvered;
- n. Report any defect in lifting / rigging and materials to lifting supervisor;

O. CRANE OPERATOR

- a. Shall not carry out any lifting operation unless a lifting supervisor is present or has approved the carrying out of such operation.
- b. Shall not engage in any act of manoeuvre which is not in accordance with safe and sound practice.
- c. Shall ascertain whether the ground conditions, in particular the ground surface on which a mobile crane is to be operated, are safe for travel or any lifting operation, he shall report to the lifting supervisor.
- d. Shall not used the crane for any operation for which it is not intended , including pulling or dragging a load.
- e. Shall ensure that any outrigger when it is required is fully extended and secured.
- f. Shall before the start of every work shift , carry out operational tests on all limit switches under no load conditions before any lifting operation is carried out and shall enter the results of such tests in a log-book or log-sheet.
- g. Shall not hoist any object if he is unable to ascertain the weight of the object.
- h. Shall not hoist any load unless he has received a clear signal from a signalman.
- i. Carry out the lifting operation in accordance with the lifting plan.
- j. Inspect the lifting equipment prior to use to check for abnormalities.
- k. Check that load radius indicator and other safety devices are functioning properly;
- l. Ensure that the ground is stable and the surrounding is free from any structures or materials that may obstruct the lifting operation;
- m. Carry out lifting operation only when a lifting supervisor is present on site;
- n. Disengage from any maneuver that is dangerous;
- o. Monitor environmental effects such as thunderstorm and strong wind that will affect safe operation of the lift.
- p. Report any defects immediately to the lifting supervisor and record such defects in the maintenance log records;
- q. Stop the lift whenever unsafe conditions occur; and
- r. Check the crane wire rope to ensure it is still within safe use.

P. BANDSMAN / FOR HAEAVY MACHINERIES

- a. To use all PPE issued to them when carrying out their work.
- b. To observe all safety precautions and report all unsafe conditions.
- c. To attend all safety training.
- d. To comply with the company in-house safety rules and regulations.
- e. Give correct and clear signals to guide the driver and/or crane operator in the maneuver of the vehicle/machines.
- f. He must be a trained certified signaller cum rigger.
- g. Give correct and clear signals to the boring equipment operator to maneuver the boring rig safely from the point A to the destination;
- h. To watch-out, prevent workers to approach the pre-bore pilot-hole during casing installation
- i. To assist the piling operator conduct a daily check on their rigs and enter their findings into a inspection checklist
- j. Ensure line of sight and communications are maintained with the boring equipment operator throughout the maneuver of boring machines;
- k. Ensure the immediate areas within the maneuver (start point and final position) are clear of any hazards during the maneuver;
- l. Maintain his position so as to of the boring operation and to ensure this position is free of danger;
- m. To put in place/provide welded metal mash cover to cover bored hole during inspection and/or unattended period.
- n. To assist or inform piling supervisor of the barricade and/or cover to enclose the bore hole immediate after works.

Q. TRAFFIC CONTROLLER

- a. To use all PPE issued to them when carrying out their work.
- b. To observe all safety precautions and report all unsafe conditions.
- c. To attend all safety training.
- d. To comply with the company in-house safety rules and regulations.
- e. Give correct and clear signals to guide the driver and/or trailer drivers during the maneuver of the vehicle/trailer.
- f. Ensure line of sight and communications are maintained with the drivers throughout the maneuver of vehicles.
- g. Maintain his position so as to of the boring operation and to ensure this position is free of danger;
- h. To put in place/provide demarcation to indicate the access way for the vehicle.

R. WELDER AND HOT-WORK WORKER

- a. Must ensure relevant Permit-to-Work for hot-works is obtained prior carrying out any hot-works.
- b. Only competent and appointed workers shall use the welding machine and or flame cutter.
- c. Must take precaution against any exposure of ultraviolet radiation, fire explosion, asphyxiation, or exposed to toxic gases, fumes or dust on the workers and other personnel during welding activity.
- d. Must ensure fire extinguisher provided at the welding site.
- e. Must be competent using the fire extinguisher.
- f. Must wear adequate eye and face protection during welding activity.
- g. Must wear welding shields to protect the eyes.
- h. To ensure earth-rod are inserted into ground (min 600mm) before every used of welding machines.
- i. Must conduct daily maintenance checks on their welding-set and oxygen-acetylene flame cutter set prior used.

S. GENERAL WORKER

- a. To use all PPE issued to them when carrying out their work.
- b. To observe all safety precautions and report all unsafe conditions.
- c. To attend all safety training.
- d. To comply with the company in-house safety rules and regulations.

T. EXCAVATOR OPERATOR

- a. Only certified operators are allowed to operate the excavators.
- b. Must conduct daily maintenance checks on their excavators
- c. Ensure that the excavator is maintained in safe working conditions
- d. Must use PPE at all times while working on site.
- e. Must ensure mechanics conduct 3-monthly maintenance checks on the excavator.
- f. Must ensure relevant Permit-to-Work for excavation or to dig is obtained prior carrying out excavation work.
- g. Ensure that excavator is parked safely after work.

U. LORRY / TRUCK DRIVER

- a. Must possess the necessary driving license for the category of vehicles he operates.
- b. Must drive the truck in a careful and safe manner.
- c. Must conduct vehicle pre-use check and operate the vehicle in a safe manner.
- d. Must comply with all safety rules and regulations while driving.

V. FORKLIFT OPERATOR

- a. Only authorized or competent operators are allowed to operate a forklift.
- b. Must conduct forklift pre-use check and operate the forklift in a safe manner.
- c. Ensure that the forklift is maintained in a safe working condition.
- d. Must use a PPE at all times while working on site.

W. SCAFFOLD SUPERVISOR

- a. Shall ensure that the scaffold is erected, added to, or altered or dismantled in accordance with Factories (Scaffolds) Regulations.
- b. Ensure no scaffold shall be erected or be substantially added to or altered or be dismantled except under the immediate supervision of the scaffold supervisor approved in writing by the Chief Inspector.
- c. To inspect the scaffold within the immediate preceding 7 days.
- d. Ensure the results of such inspections are entered in a Register containing details as required by the Chief Inspector and the register shall be kept available at the site for inspection by the Inspector.

X. MAN HOLE SUPERVISOR

- a. To test the atmosphere of a confined space prior to entry by any person in the manhole.
- b. To conduct periodic testing at intervals determined by him. The test intervals should not exceed 8 hours.
- c. Keep the records of the results of the gas meter readings.

The above responsibilities shall be;

Communicated to respective personnel via safety induction training included in the Appointment Letter (whenever applicable)

Management support & adequate resources will be provided to enable OH&S tasks to be performed effectively such as:

- Director to attend safety meeting, give safety speech, present safety award to employees
- To provide all necessary safety measures at work
- Sufficient time to take corrective actions to rectify safety non-compliance

****IN HOUSE RULES AND REGULATIONS**

- 1 Workers must fully use their safety personal protective equipment (PPE).
- 2 Report injuries sustained, unsafe act / condition to your immediate supervisor at once
- 3 Safety harness/belts must be worn when working above 2 meters (6 ft) and must be properly anchored . Barricades all openings of more than 1.8 meters (5 ft) deep.
- 4 Report injuries sustained to your immediate supervisor at once.
- 5 No throwing of objects or debris from height.
- 6 Strictly observe all safety / warning signs posted.
- 7 No Littering – Keep workplace clean . Procedure good housekeeping.
- 8 No fooling or joking whilst working.
- 9 Never operate machines/equipment/explosive powered tools if you are not trained or authorized.
- 10 Do not use defective tools/equipment. Keep them away properly to prevent others from using it.
- 11 Do not take short cuts – Use Proper Access.
- 12 Never hitch a ride on suspended load or moving dumpers ,excavators etc.
- 13 Any worker who violates safety rules and regulations will be severely dealt with.
- 14 Attend tool box meetings and worksite general assembly , participate in safety promotion.
- 15 Observe all safety measure and work safely at all times.

Regards,

AUNG THAN KYI

CHIEF ENGINEER



SAFE WORK PROCEDURES

SWP – 01

SAFE WORK PROCEDURE - WORKING AT HEIGHT (2 Meter and Above)

- 1 To apply permit to work at height prior any work commence.
- 2 All working platform to be provided with protective measures such as safety guardrail/ fencing or barricades.
- 3 All personnel working at height are provided with safety harness/ safety belts and is briefed and trained the correct use of safety harness or restraint.
- 4 All safety harness/ safety belts are inspected by safety supervisor / supervisor incharge daily before use.
- 5 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 6 Where ladder is in use, ensure that all ladders are securely fixed, or held by a person, to prevent them from slipping.
- 7 Provide & use correctly other suitable equipments such as safety harness or safety belts if barricades/lifelines cannot be provided, such as 'Travel Restraint System' consist of a safety belt or harness that is connected by a lanyard to a suitable anchorage point or static line to restrict the person movement and prevents him from approaching an unprotected edge on a building or structure.
- 8 A PE's design passenger hoist/cage will be provided to transport workers up and down from test pile.
- 9 Lifelines to be provided when there are no suitable anchorage points for safety harness/ safety belts

SWP – 02

SAFE WORK PROCEDURE – SAFETY ON HOT WORKS

WELDING EQUIPMENT

- 1 To apply permit to work prior any hot works
- 2 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 3 Welding cables shall be connected or spliced in an approved manner .There shall be no exposed metal part in any splice.
- 4 Welding equipment shall be equipped with a fire extinguisher at all time .Ensure the fire extinguisher is in good working condition and fully refilled after each use.
- 5 Welding electrode holder is in good working condition.
- 6 Ensure that weld splatters or sparks do not come into contact with flammable materials.
- 7 DO NOT use welding equipment unless you have been trained to use it.
- 8 To ensure the hot work area is free from combustible materials
- 9 To use/put on PPE e.g. head shield, welding glove, etc.

CUTTING EQUIPMENT

- 1 To apply permit to work prior any hot works
- 2 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 3 Ensure all gas cylinder are secured in upright position at all time.
- 4 Check regulators for leakage and replace immediately if it is faulty.
- 5 Check all hoses for leak and ensure securely join and fasten with approved types of clips.
- 6 Check cutting torch for damage , replace if necessary.
- 7 Ensure flash back arrestors are installed at both ends and are in working condition.
- 8 Fire Extinguisher is provided near to equipment.
- 9 No Smoking'notice or proper warning sign shall be placed near the equipment.
- 10 To use/put on PPE e.g. head shield, welding glove, etc.

SWP – 03

SAFE WORK PROCEDURE – SAFETY ON LIFTING OPERATION

- 1 To apply Permit To Hoist prior all lifting activities by the site safety supervisor and or site supervisor.
- 2 Appointed crane operator to conduct daily check/inspection for all lifting machines prior work.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 Every crane shall be provided with safe working load indicator visible to the operator showing the safe working load corresponding to the radius of operation .
- 6 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 7 Cranes shall be operated by only certified competence crane operators.
- 8 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signaller , a registered crane operator and trained riggers.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 10 Understand the ‘Safe Working Load’ of slings , chains , shackles , etc . If you are in doubt , do not allow any lifting until it has been checked/advised by a qualified Lifting Supervisor.
- 11 To confirm on the correct crane type as approved for heavy lifting by the respective site safety supervisor or project manager.
- 12 To check on the crane working platform design by PE. and to ensure by the respective site safety supervisor or project manager.
- 13 Ensure workers are not allowed within the coverage of the crane swing area and keep a clearance between the rear counterweight and any object nearby or cordon off.
- 14 Suspended loads shall be unloaded, engine shut down and ignition key should be removed from crane whenever the operator is absent from the machine.
- 15 Not to maneuver or hold any suspended load over any road or public area unless these areas has been cordoned off
- 16 To provide sufficient lighting for the task if or when dark.
- 17 Lifting Supervisor to ensure and remind signaller and lifting operator to always keep the main hoist or auxiliary hook blocks above heads level and/or reasonably practicable height.

SWP – 04

SAFE WORK PROCEDURE – SAFETY ON BORING OPERATION

- 1 No boring rig/crane shall be used or operated unless it has a valid Lifting Machine certificate
- 2 Appointed rig/crane operator to conduct daily check/inspection for all boring machines prior
- 3 Banksman are appointed and to assist boring rig/crane operator conduct daily check/inspection prior work.
- 4 The site safety supervisor and or appointed safety personnel to conduct briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 5 Every boring rig/crane shall be provided & rested with steel plate at all time while parking.
- 6 Boring rig/crane shall be operated by only appointed operators
- 7 Check all attachment prior to work start for any loose items like secure auger to the kellybar with a kelly pin attached with safety pin at one end, ensure auger teeth are secured to the shank properly.
- 8 Open bore hole to be protected by metal mash cover if left unattended and safety casing with minimum of 500mm to 1mtr above ground level to prevent person from falling into drilled shaft.
- 9 Ensure non related workers are not allowed within the coverage of the boring rig/crane swing area and keep a clearance between the rear counterweight and any object nearby or cordon off.
- 10 To wear ear protection where necessary eg. ear plugs / mufflers
- 11 Constantly check wire-rope of kelly bar for wear and tear , change immediately if the rope is found abnormal or unsafe to-use.
- 12 Effective control must be exercised at all stages of a boring operation though the deployment of a competent banksmen/signalman.
- 13 To check on the crane working platform design by PE. and to ensure by the respective site safety supervisor or project manager.
- 14 Suspended loads shall be unloaded, engine shut down and ignition key should be removed from crane whenever the operator is absent from the machine.
- 15 To ensure on site by checking againts main-contractor provided information of cable and or under ground services layout/plan prior any boring activities.
- 16 To apply Permit To Work prior all boring activities by the site safety supervisor and or site supervisor if applicable.
- 17 To ensure the safety measure is in place during the process of installing and/or extraction of temporary casing with the aid of lifting machine and the lifting team by using vibro hammer.
- 18 To mobilized and set the boring rig/crane by coordinate with the operators with proper signal and guide for every movement provided by the banksmen/signalman.
- 19 To assist the rig operator by preparing the drilling tools before hand with the team of lifting supervisor, rigger, signalman & competent operator,
- 20 Banksman to ensure the stability of the boring tools by positioning or placing of boring tools in proper & safe manner to prevent it from falling or collapsed.
- 21 Working handglove to be worn by banksmen during clearing of soil within the 'kelly-box' and should use proper tools to assist.
- 22 Banksman to instruct the boring machine operator to swing aside and shall not carry work under any load of the kelly-bar.
- 23 Boring operator and/or banksmen to inform the Lifting Supervisor during the lifting of 'kelly-bar' without the attachment of boring tools, (eg. during the process of erecting/dismantling of 'kelly-bar') and Lifting Supervisor to ensure PTW for hoist shall applied and approved prior carry out work.
- 24 Backfill or provide barricade to enclose the bore hole after work.

SWP – 05

SAFE WORK PROCEDURE – SAFETY ON EXCAVATION OPERATION

- 1 To apply permit to work prior any excavation works
- 2 Excavation and trenches of 1.5 meters or more in depth shall be shored or stepped in an approved manner.
- 3 Open sides of excavation where a person may fall from a height of more than 2 meters should be guarded by adequate barricades with warning signs placed where they are readily or easily seen.
- 4 Ladders shall be provided in excavation and trenched of 1.2 meters or more in depth to ensure safe access to and egress from such excavation.
- 5 Excavation and trenches shall be inspected daily by a competent person . If there is any evidence of cave-in or slides , all work shall cease until necessary precautions have been taken.
- 6 Excavated or other materials shall be stored at least 610mm away from the edge of any excavation.
- 7 Excavation near underground facilities must be carried out manually using hand tools.
- 8 Machinery must be position and operated in a manner that will not endanger any person within the excavation work.
- 9 Excavation banks must be check periodically and after increment weather for sign of erasion.
- 10 Open cut excavation to maintain at 45 degree angle not more than 4 meter in height. Otherwise PE must be engaged to ensure soil stability.
- 11 Excavator operator should be competent and trained in order to carry out any deep excavation work.
- 12 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 13 Excavator operator to ensure the area are safe for the swing of the excavator boom/arm and only swing or travelling after conduct blind-spot check.
- 14 Operator to always maintain the excavator bucket at lowest possible height to the ground level while it heavy loaded,
- 15 Excavator operator to conduct check on rear mirror every time during the gliding of the machines for if any steelplates stuck at the trackshoes.
- 16 Excavator operator of all parties on site shall be briefed on the safe procedure that he should travel at slow speed while gliding the trackshoes on steelplates.

SWP – 06

SAFE WORK PROCEDURE – LOAD TEST PREPARATION (KENTLEDGE SYSTEM)

- 1 To apply Permit To Hoist prior all lifting activities by the site safety supervisor and or site supervisor.
- 2 Appointed crane operator to conduct daily check/inspection for all lifting machines prior work.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 Every crane shall be provided with safe working load indicator visible to the operator showing the safe working load corresponding to the radius of operation .
- 6 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 7 Cranes shall be operated by only certified competence crane operators.
- 8 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signaller , a registered crane operator and trained riggers.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 10 Understand the 'Safe Working Load' of slings , chains , shackles , etc . If you are in doubt , do not allow any lifting until it has been checked/advised by a qualified Lifting Supervisor.
- 11 To confirm on the correct crane type as approved for heavy lifting by the respective site safety supervisor or project manager.
- 12 To check on the crane working platform design by PE. and to ensure by the respective site safety supervisor or project manager.
- 13 Ensure workers are not allowed within the coverage of the crane swing area and keep a clearance between the rear counterweight and any object nearby or cordon off.
- 14 Suspended loads shall be unloaded, engine shut down and ignition key should be removed from crane whenever the operator is absent from the machine.
- 15 To check on the test pile platform by the respective site supervisor or project manager, top soil may need improvement by laying of hard core, steel mats or steel plates due to unfavorable soil condition.
- 16 Conduct daily inspection/check by respective supervisor incharge by monitoring the settlement of kentledge's platform and the stacking of kentledge's is not slanted or unbalance.
- 17 To ensure surrounding of the test pile kentledge are free from any deep excavation.
- 18 To remind all workers that resting underneath the kentledge is strictly prohibited.
- 19 The site safety supervisor and or site supervisor to ensure only a PE's designed passenger hoist/cage will be provided to transport workers up and down the stacked blocks.
- 20 Provide & use correctly other suitable equipments such as safety harness or safety belts if barricades/lifelines cannot be provided, such as 'Travel Restraint System' consist of a safety belt or harness that is connected by a lanyard to a suitable anchorage point or static line to restrict the person movement and prevents him from approaching an unprotected edge.

SWP – 07

MOBILIZATION/DEMOBILIZATION, MOVEMENT OF VEHICLES ON SITE

- 1 Traffic Controller to station at the access fronting the site entrance to control and Guide all traffic in and out of the site.
- 2 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 3 All necessary signs are to be installed at conspicuous positions to forewarn of any potential danger.
- 4 All vehicles leaving the site must be cleaned properly and to drive slowly within the site and/or to follow the in house speed limit signboard
- 5 All vehicles should give way to the general public and other vehicles within the compound or while leaving the site.
- 6 Provide a sweeper to clean up any litters of mud, earth or debris when necessary.
- 7 To use/put on basic PPE for all drivers or delivery man. e.g. safety helmet, boots, etc.
- 8 Project Manager shall ensure sufficient width is catered to the vehicle access during planning and construction.
- 9 Site Manager/Safety Supervisor shall ensure sufficient lighting is provided along the vehicle access
- 10 Site Manager/Safety Supervisor to instruct all suppliers and contractors to inform their drivers to follow the verbal and hand signals of the worksite's traffic controllers.
- 11 Site Manager shall conduct periodically check on the vehicle access is safe for use and provide feedback to main-con safety personnel.
- 12 Driver shall not exceed the speed limit of 15 km/hour when driving in the worksite.
- 13 Speed limit signage shall be prominently displayed at the entrance of the worksite.
- 14 Every heavy vehicle shall switch on the hazard light (at night) when entering the worksite.
- 15 Traffic controller shall wear luminous vest and reflective hand gloves (when dark/at night) to direct traffic movement .
- 16 Traffic controller, Safety or Piling Supervisors shall conduct routine checks to ensure vehicle access is not blocked.
- 17 Traffic controller shall check the vehicle for the present of right and left mirrors before directing the vehicle to enter the worksite.
- 18 Brief and/or worker not to stand directly in front or at the rear of the vehicle during daily toolbox talk.
- 19 Ensure no pedestrian is crossing before directing the vehicle into or out of the worksite and provide in-house training for traffic controller and keep the record.
- 20 Traffic controller shall be provided with whistle or other communication tool.

SWP – 08

**SAFE WORK PROCEDURE – SAFETY ON ASSEMBLY & DISASSEMBLY OF
CRANE and/or RIG**

- 1 To apply Permit To Hoist prior all lifting activities by the site safety supervisor and/or site supervisor.
- 2 Appointed crane operator to conduct daily check/inspection for all lifting machines prior work.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 All assembly, repairs and maintenance works must be carried out by trained and/or competent maintenance personnel.
- 6 The presence of approved crane erector shall provide for the process of assembly & disassembly of crane and/or rig
- 7 To ensure machines is proper lock-out before any repair or maintenance.
- 8 Effective control must be exercised at all stages of lifting operation through the deployment of a competent Lifting Supervisor , a qualified signaller ,a registered crane operator and trained riggers.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 10 Ensure workers are not allowed within the coverage of the crane swing area and keep a clearance between the rear counterweight and any object nearby or cordon off.
- 11 All hand tools shall handle and keep properly and to store in means of toolbox/container
- 12 Ensure bolts are installed and secured, no workers are under the suspension load before signal to releasing the hoist of the helping crane
- 13 Visual check for if any tools are left on the boom before lift-up the boom of the crane.
- 14 Lifting machine shall be inspected by AE after assembly prior any use.
- 15 To use/put on PPE.

SWP – 09

SAFE WORK PROCEDURE – SAFETY ON GENERAL REPAIR and/or MAINTENANCE

WORK for MACHINERIES, PLANT, CRANE and/or RIG

- 1 Safety Coordinator/Supervisor to ensure all relevant permit-to-work are apply and approval prior the high risk work
- 2 Safety Coordinator/Supervisor to ensure duty mechanics/ technician are briefed for the relevant hazard.
- 3 Any mechanical issue of the machineries, he should always report to duty mechanics or supervisor, and he shall not attempt to repair it by himself.
- 4 Safety Coordinator/Supervisor to ensure proper and suitable PPE are provided and are worn by the work personel, proper record shall be kept prior the work
- 5 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 6 Switch-off engine and allowed time for engine to cool down. Not to open the cap/cover of radiator, diesel tank, lubrication oil, etc. while engines is still running or is hot and/or presurelised.
- 7 Work personnel to put on face shield, leather glove and long sleeve attire while handling the hot surface, liquid or hot steam.
- 9 Periodic servicing, repairs and maintenance works will be carried out by trained and/or competent maintenance personnel and/or service technicians.
- 10 To ensure machines or equipment to be repair or provide maintenance are switch off and/or cabin are locked.
- 11 To ensure machines is proper lock-out before any repair or maintenance.
- 12 Effective control must be exercised at all stages of lifting operation through the deployment of a competent Lifting Supervisor , a qualified signalman ,a registered crane operator and trained riggers.
- 13 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 14 To remind all work personnel on site of the possible hazards, especially operators, banksman, mechanics and newly joint workers, regularly through daily toolbox meeting.
- 15 All hand tools shall handle and keep properly and to store in means of toolbox/container

SWP – 09

- 16 Ensure bolts are installed and secured, no workers are under the suspension load before signal to releasing the hoist of the helping crane
- 17 Visual check for if any tools are left on the boom before lift-up the boom of the crane.
- 18 To provide container to contain used lubrication oil.
- 19 When welding and/or flame cutting works are required, permit to work for hot work shall apply and approved prior any hot work activity.
- 20 To provide proper PPE for all relevant activity
- 21 Ensure no loose clothing while working near to any possible rotating parts of the engines from the kinetic hazard.
- 22 A proper tools to be use to avoid placing hand/ finger into the gaps or pinching point.
- 23 To provide proper access and egress to reach the work area
- 24 Proper footwear to be use to prevent slip and fall from height
- 25 To put on fall protection equipment and to anchor on a secure ancorage point
- 26 A PE's design Man-cage will be provided to transport workers up and down when necessary.
- 27 Duty Mechanics and/or Erector shall be informed and made known of the project's in-house rules and basic PPE requirement, (eg. attending the SIC conducted by main contractor prior work)
- 28 Safety supervisor to conduct check during the work process, for all work personnel to equipt with relevant PPE.
- 29 Safety Sup. to conduct regular inspection on site to ensure proper tools to be use and to avoid using bare hand

SWP – 10

SAFE WORK PROCEDURE – SAFETY ON LIFTING OF 'MANCAGE'

- 1 To apply Permit To Hoist prior all lifting activities by the site safety supervisor and or site supervisor.
- 2 No 'Mancage' shall be used unless it has a valid Lifting Gears certificate within 6 months.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 Prior to each use, check that the condition of the 'Mancage' is safe and in good condition. eg. The platform base, safety latch and the swing door etc..
- 5 Before Lifting of personnel, test run with the empty 'Mancage' first by hoisting up and down, by testing all the function of the crane.
- 6 Understand the 'Safe Working Load' of the 'Mancage'
- 7 At any time, 'Mancage' only allowed not more than two (2) person to use at the same time.
- 8 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signaller , a registered crane operator and trained riggers.
- 9 Every crane shall be provided with safe working load indicator visible to the operator showing the safe working load corresponding to the radius of operation .
Every crane shall have a device warning overloading of the crane capacity.
- 10 Cranes shall be operated by only certified competence crane operators.
- 11 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 12 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 13 Hand signals to crane, hoist operator and rigger shall be given by a trained competent person.

SWP – 11

SAFE WORK PROCEDURE – SAFETY ON CONCRETING

- 1 To apply Permit To Hoist prior all lifting activities by the lifting supervisor.
- 2 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 5 Every crane shall be provided with safe working load indicator visible to the operator showing the safe working load corresponding to the radius of operation .
- 6 Cranes shall be operated by only certified competence crane operators.
- 7 Not to maneuver or hold any suspended load over any existing structure or public area
- 8 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signaller , a registered crane operator and trained riggers.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA
- 10 To check on the crane working platform design by PE. and to ensure by safety supervisor.
- 11 To provide proper access for concrete trucks to travel till the bored pile position by laying of steel plates
- 12 To provide a 'watchman to guide the concrete trucks to the destined area.
- 13 Ensure the concrete trucks and workers are not allowed within the coverage of the crane swing area and keep a clearance between the rear counterweight.
- 14 Tremie pipe rack shall position or place on a firm and/or level platform.
- 15 Tremie pipe rack to be checked and approved by a PE
- 16 To provide and put on safety harness when work on height more than 2 meter, periodical check on the condition of the guard rail by safety supervisor.
- 17 Workers to put on eyes protection from the concrete or cement debris.
- 18 When welding and/or flame cutting works are required, permit to work for hot work shall apply and approved prior any hot work activity.

SWP – 12

SAFE WORK PROCEDURE – SAFETY ON ERECTING & DISMANTLING OF SILO PLANT

- 1 Traffic controller to station at the access fronting the site entrance to control and guide all traffic during the mobilization of silo tank
- 2 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 3 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 4 Cranes shall be operated by only certified competence crane operators.
- 5 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor, a qualified signaller, a registered crane operator and trained riggers.
- 6 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 7 Using tag-lines to assist and/or resist the movement of the silo tank during loading and unloading
- 8 Pre-cast or cast in situ concrete platform will be laid to prevent slanting of silo due to the unfavorable soil conditions.
- 9 To position the silo tank up right with the aid of plum-line to ensure the verticality of the silo(s).
- 10 A PE's designed 'Mancage' will be provided to transport workers up and down when necessary
- 11 To provide PE's calculation for the silo plant platform as preventive measure.
- 12 To have periodical check on the platform by safety supervisor, especially during/after heavy rain

SWP – 13

SAFE WORK PROCEDURE – PDA LOAD TEST

- 1 To apply Permit To Hoist prior all lifting activities by the site safety supervisor and or site supervisor.
- 2 Daily check/inspection for all lifting machines prior work.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear prior use.
- 4 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 Every crane shall be provided with safe working load indicator visible to the operator showing the safe working load corresponding to the radius of operation .
- 6 Cranes shall be operated by only certified competence crane operators.
- 7 Lifting supervisor to check the 'SWL' of slings, shackles & eyehook are suitable.
- 8 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signaller , a registered crane operator and trained riggers.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 10 The pile head is to built-up/cast in with a short length of collar casing to prevent the pile head from damage/cracking during the test.
- 11 To check the pile head had to be achieved min. of 7 days in concrete strength.
- 12 Check if any under ground services prior excavation work, apply 'permit to excavate' prior excavation. (conduct under ground service detection by licensed detector if necessary)
- 13 Keep a safe clearance by cordon off with safety nets/safety tapes to ensure no others workers than who is assigned are allowed into the PDA Load Test zone.
- 14 PPE to be worn during the process of preparation of PDA Load Test (i.e. safety helmet with chin-strap, eye protection, safety rubber boots, hand protection)
- 15 To provide proper excess after exposed selected pile head to minimum 800mm below the base of collar casing for the installation of transducers
- 16 Prepare the surface by general cleaning of the pile head to prevent from any frying objects
- 17 Place a piece of plywood to serve as a cushion over the pile head. (if necessary)
- 18 To hoist the PDA hammer slowly and close to the ground level if possible, let it rest on the top of the test pile head by using the tag line to resist or to assist the movement of the load.
- 19 To ensure suspended load does not remain stationery above any persons below.
- 20 Safety Supervisor to ensure the process of the PDA load test should be fully supervise by the Lifting Supervisor
- 21 Conduct final inspection/check by respective Safety Supervisor, no one should be remain within the cordon off zone prior appointed signaller provide signal to release the PDA hammer.

SWP – 14

SAFE WORK PROCEDURE – SAFETY ON LOADING/UNLOADING OF MATERIAL AND EQUIPMENT USING LORRY CRANE

- 1 To apply Permit To Hoist prior all lifting activities by the site safety supervisor and or site lifting supervisor.
- 2 Appointed crane operator to conduct check/inspection prior lifting work.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 6 Cranes shall be operated by trained and qualify person
- 7 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signalman ,a registered crane operator and trained riggers.
- 8 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 9 To check platform condition for parking/position of the lorry crane are reasonably even.
- 10 Outrigger must be extended fully at all sides and use steel plates for support
- 11 To remove any loose items or materials prior lifting of the load.
- 12 Using tag line to assist and resist the movement of the load
- 13 Not to maneuver or hold any suspended load over any road or public area unless these areas has been cordoned off
- 14 Provide necessary PPE to person involve in the lifting operation.

SWP – 15

SAFE WORK PROCEDURE - Operation and Maintenance at Silo Plant

- 1 To apply permit to work at height prior any work commence.
- 2 All working platform to be provided with protective measures such as safety guardrail/ fencing or barricades and with safe access.
- 3 All personnel working at height are provided with safety harness/ safety belts and is briefed and trained the correct use of safety harness or restraint.
- 4 All safety harness/ safety belts are inspected by safety supervisor / supervisor incharge daily before use.
- 5 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 6 Where ladder is in use, ensure that all ladders are securely fixed, or held by a person, to prevent them from slipping.
- 7 Provide & ensure the workers are use correctly of other suitable PPE such as safety harness or safety belts, safety helmet, eye protection, ear protection, working hand glove, dust mask, rubber hand glove etc and to replace once item is found damaged during the periodically check.
- 8 Provide & ensure the workers are use correctly of other suitable hand tools for the work assigned.
- 9 To provide MSDS of the products and should be accessible at site office or near by the plant
- 10 The site safety supervisor and or site supervisor to conduct prior briefing of MSDS of products to appointed workers through first day at work orientation.
- 11 The MSDS of the products should be accessible at site office or near by the plant
- 12 Always follow the recommended safety measure and/or handling method from products MSDS
- 13 All electrical work should only carry out by 'licensed electric worker'
- 14 Safety supervisor to carry out periodically check on cable connection and it's condition
- 15 All extension cables on site to be elevate from ground and wet surface.
- 16 To ensure silo plant area are free from stagnant water and clear all plastic waste daily

SWP – 16

**SAFE WORK PROCEDURE - Maintenance work -
Cleaning, Clearing and/or Chipping of Concrete**

- 1 To apply permit to work at height prior any work commence.
- 2 All working platform to be provided with protective measures such as safety guardrail/ fencing or barricades.
- 3 All personnel working at height are provided with safety harness/ safety belts and is briefed and trained the correct use of safety harness or restraint.
- 4 All safety harness/ safety belts are inspected by safety supervisor / supervisor incharge daily before use.
- 5 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 6 Where ladder is in use, ensure that all ladders are securely fixed, or held by a person, to prevent them from slipping.
- 7 Provide & ensure the workers are use correctly of other suitable PPE such as safety harness or safety belts, safety helmet, eye protection, ear protection, working hand glove, dust mask etc and to replace once item is found damaged
- 8 Provide & ensure the workers are use correctly of other suitable hand tools for the work assigned.

SWP – 17

SAFE WORK PROCEDURE – Safety During Installation and/or Dismantling of Tremie Pipes

- 1 Site safety supervisor and or site supervisor in-charge to ensure all relevant Permit To Work are applied and approved. (eg. Work-at-height, Lifting Operation, etc.)
- 2 Appointed crane operator to conduct daily check/inspection for all lifting machines prior work.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 Lifting supervisor to conduct check all lifting cranes shall be operated only by certified competence crane operators.
- 5 Lifting team are appointed and present for lifting operation (eg. Lifting Supervisor, signalman, riggers and crane operator)
- 6 The site safety supervisor to ensure workers are attended briefing on safe work procedure and the work relevant potential risks and hazards.
- 7 Lifting Supervisor / Safety Supervisor to check the condition of PPE and are properly worn or to used by the work personnel who assigned on top of the tremie-rack. (eg. body harness, working glove, etc.)
- 8 Lifting Supervisor / Safety Supervisor to ensure tremie pipes does not remain stationery above any of the work personnel.
- 9 Signalman to ensure hands are free from all pinch point prior giving any signal to the lifting crane operator.
- 10 Workers assigned on the tremie-rack should ensure pipes are placed and rest at the bottom of the rack before releasing of the pipes from the help of lifting-crane
- 11 All workers to wear hand protective glove when handling of tremie-pipes to prevent from cuts and sharp edges when handling the tremie-pipes
- 12 Not to hold bottom of the pipes or suspended load
- 13 All workers feet are not used to positioned lifted components (eg. Tremie-pipes)
- 14 All workers fingers/hands are away from the pinch point, gaps and should avoid to placed in between pipes.
- 15 Individual work personnel to pay careful attention and to observe the movement of the pipes during the process of installation and/or dismantling of pipes.
- 16 Duty Supervisor to supervise the operation and conduct random check on worker
- 17 All workers to avoid placing hand or fingers in between any opening and potential pinch point hazard, (eg. The opening of concreting table.) and supervisor in-charge to educate & promote during toolbox meeting.
- 18 Lifting Supervisor to ensure the tremie-rack placed on reasonably level and firm ground.
- 19 Duty supervisor/duty worker to check all tremie-pipes are rested well on the bottom of the rack to prevent pipes from dropping unintentionally.

SWP – 18

SAFETY ON TEMPORARY ACCESS OF SEDIMENT EARTH TANK

- 1 To apply permit to work at height prior any work commence.
- 2 All work access to be provided with protective measures such as safety guardrail
- 3 The site safety supervisor and or site supervisor to inspect on the condition of the guard rail in placed/used are practically safe for use and able to sustained the weight of workers.
- 4 All personnel working at height are provided with safety harness and is briefed and trained the correct use of safety harness or restraint.
- 5 All safety harness are inspected by safety supervisor / supervisor in-charged daily before use.
- 6 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to work personnel through toolbox meeting or first day at work orientation.
- 7 Provide and to have good practise of the 'buddy system' worker to watch-out for one another, avoid worker carry out work alone.
- 8 Planned and minimise carry out work at night if possible, supervisor in-charged to ensure sufficient working light are provided if need to carry out work when dark or at night.
- 9 The site safety supervisor and or site supervisor to ensure adequate numbers of life bouy(s) are provided and have periodicaly check if it's condition are in resonnably good, replace it if damaged.

SWP – 19

Safety on Hacking, Trimming and/or Build-up of Pile Head

- 1 No air-compressor shall be used or operated unless it has a valid certificate.
- 2 All cutting equipments shall be checked to meet all safety requirements before use. Fire-Extinguisher is provided near to hot-work zone/equipment.
- 3 Welding equipment shall be equipped with a fire-extinguisher at all time. Ensure the extinguisher is in good working condition and fully refilled after each use.
- 4 Safety goggles must be worn during the hacking operation, to prevent concrete debris or any other flying objects.
- 5 Personnel protective Equipment must be worn during the hacking and trimming of pile head operation, e.g. safety helmet, eye protection, ear protection, working hand glove, dust mask etc.. and to replace once item is found damaged
- 6 Provide & ensure the workers are use correctly of other suitable fall protection or fall restraint system PPE such as safety harness or safety belts.
(All safety harness/ safety belts are inspected by safety supervisor / supervisor incharge daily before use.)
- 7 To apply permit to work at height if have to work more than 2 meter at height.
- 8 All personnel working at height are provided with safety harness/ safety belts and is briefed and trained the correct use of safety harness or restraint.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 10 Where ladder is in use it should be in sound and good conditions and are security fixed, or held by a person, to prevent them from slipping.
- 11 Provide & ensure the workers are use correctly of other suitable hand tools for the work assigned.
- 12 Lifting supervisor shall check with the project engineer on the safe loading capacity of the formwork slab before hoisting and unloading the air compressor.
- 13 Shall conduct inspection on the effectiveness of the air compressor's lifting ear before supervising the lifting operation.
- 14 Shall ensure only qualified rigger and signaller perform the rigging and signalling operations.
- 15 Shall be responsible to prior apply the Permit To Work from the project manager before hoisting the air compressor.
- 16 Air compressor shall be placed at least 2 meters away from the edges of building, access way and excavation.
- 17 Ensure the air compressor is switch off when not in use.

SWP – 20

SAFE WORK PROCEDURE – SAFETY ON KING-POST INSTALLATION

- 1 To apply Permit-to-Hoist prior all lifting activities by the site safety supervisor and or site supervisor.
- 2 To attend main-con SIC on day one to be briefed on the in-house rules, emergency respond procedure, briefing on RA & SWP, etc.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 LS to ensure no crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 Site I/C to ensure appointment of qualified lifting supervisor; rigger/ signaller for the lifting operation and approved by PM.
- 6 Site I/C or LS to ensure lifting crane(s) shall be provided with necessary safety devices and complied with the requirement.
- 7 To check on the crane working platform design by PE. and to ensure by the respective site safety supervisor or project manager.
- 8 Suspended loads shall be unloaded, engine shut down and ignition key should be removed from crane whenever the operator is absent from the machine.
- 9 Lifting Supervisor to ensure and remind signaller and lifting operator to always keep the main hoist or auxiliary hook blocks above heads level and/or reasonably practicable height.
- 10 Ensure workers are not allowed within the coverage of the crane swing area and keep a clearance between the rear counterweight and any object nearby or cordon off.
- 11 Not to maneuver or hold any suspended load over any road or public area unless these areas has been cordoned off
- 12 To provide sufficient lighting for the task if or when dark.
- 13 Tag-lines are use to assist and/or resist the movement of the guide frame or King-post
- 14 Check and removed all loose items or hand-tools prior lifting of guide frame or King-post
- 15 Lifting Supervisor/ Duty Supervisor to supervise the process of placing of the guide frame, tag-weld, positioning and alignment, installation of king-post column,
- 16 Duty Supervisor to check and ensure to comply the safe practices during carry out the hot-works

SWP – 21

Safety On Preparation Work for Temporary Road Closure

- 1 To carry out proper submission of the road closure according to the [] procedure and to get clearance and/or approval from the authorities prior commence work
- 2 To call [] at the point of start for the road closure, to inform the person in-charge of the authorities prior commence work.
- 3 Traffic Controller equipt with control baton; reflective glove; highly visible green reflective vest etc. to station at the stratigic location to control and guide all traffic where necessary.
- 4 The site safety supervisor and or site supervisor to conduct briefing of SWP, RA and site instructions to all workers through toolbox meeting prior work.
- 5 To use/put on basic PPE for all site personnel working near and/or at the road or during road closure period. (e.g. highly reflective vest in green colour)
- 6 All vehicles leaving the site must be cleaned and to drive carefully to fit into the existing traffic flow.
- 7 All vehicles should give way to the general public and other vehicles during the road closure period.
- 8 Provide a sweeper to clean up any litters of mud, earth or debris when necessary.
- 9 All temporary road traffic signs; traffic cones; rotating lamps etc... are to be installed at conspicuous positions according to the approved submission plan.
- 10 Supervisor in-charged to ensure all rotating lamps to maintain operational at all times, on site should have reserve batteries or spare lamps in case of need.

SWP – 22

SPECIAL SAFETY ATTENTION DURING BORED PILE WORKS WITHIN THE FLIGHT PATH / ZONE.

SAFE WORK PROCEDURE (Load Testing - Kentledge System)

- 1 To submit and get clearance from main contractor for all personnel deploy to the project's site
- 2 All workers whom work at the project site must attend "Firstday Induction Course" conducted by main contractor's safety personnel prior work.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 Every crane shall be provided with safe working load indicator visible to the operator showing the safe working load corresponding to the radius of operation .
- 6 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 7 Cranes shall be operated by only certified competence crane operators.
- 8 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signalman ,a registered crane operator and trained riggers.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 10 Understand the 'Safe Working Load' of slings , chains , shackles , etc . If you are in doubt , do not allow any lifting until it has been checked/advised by a qualified Lifting Supervisor.
- 11 To confirm on the correct crane type as approved for heavy lifting by the respective site safety supervisor or project manager.
- 12 To check on the crane working platform design by PE. and to ensure by the respective site safety supervisor or project manager.
- 13 Ensure workers are not allowed within the coverage of the crane swing area and keep a clearance between the rear counterweight and any object nearby or cordon off.
- 14 Suspended loads shall be unloaded, engine shut down and ignition key should be removed from crane whenever the operator is absent from the machine.
- 15 To check on the test pile platform by the respective site supervisor or project manager, top soil may need improvement by laying of hard core, steel mats or steel plates due to unfavorable soil condition.
- 16 Conduct daily inspection/check by respective supervisor incharge by monitoring the settlement of kentledge's platform and the stacking of kentledge's is not slanted or unbalance.
- 17 To ensure surrounding of the test pile kentledge are free from any deep excavation.
- 18 To remind all workers that resting underneath the kentledge is strictly prohibited.
- 19 The site safety supervisor and or site supervisor to ensure only a PE's designed passenger hoist/cage will be provided to transport workers up and down the stacked blocks.
- 20 Provide & use correctly other suitable equipments such as safety harness or safety belts if barricades/lifelines cannot be provided, such as 'Travel Restraint System' consist of a safety belt or harness that is connected by a lanyard to a suitable anchorage point or static line to restrict the person movement and prevents him from approaching an unprotected edge.

SWP – 22A

SPECIAL SAFETY ATTENTION DURING BORED PILE WORKS WITHIN THE FLIGHT PATH / ZONE.

SAFE WORK PROCEDURE (Load Testing - Kentledge System)

- 1 To submit and get clearance from main contractor for all personnel deploy to the project's site
- 2 All workers whom work at the project site must attend "First day Induction Course" conducted by main contractor's safety personnel prior work.
- 3 Workers only allowed to consume food at designated places, and the leftovers must disposed off properly, to avoid attracting birds, dogs, cats & others wildlives.
- 4 Smoking are strictly prohibited on site.
- 5 To submit list of construction equipment for height clearance prior deploying and/or work commence.
- 6 All cranes/boring machines and silo to be installed a red steady light and a chequered flags of a type approved by the airport licensee at the heigest point
- 7 No littering are allowed and proper house keeping are necessary at all times within the site.
- 8 No burning of candles, joss stick, joss paper, etc on site.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting.
- 10 The Hot work Permit from main contractor shall applied prior carry out any hot work on site.
- 11 Suspended loads shall be unloaded, engine shut down and ignition key should be removed from crane whenever the operator is absent from the machine.

SWP – 23

SAFE WORK PROCEDURE – SAFETY ON USED OF EXCAVATOR

- 1 To submit work permits; relevant document and/or certificates prior to attend the 'Safety Induction Course' on site. No workers are allowed to enter the site and carry out any work without undergo the 'Safety Induction Course'
- 2 The safety personnel to conduct prior briefing and/or training of SWP, RA and site instructions to all workers of the relevant trade and/or job scope through first day at work orientation or toolbox meeting.
- 3 To apply permit to work and approval prior any operations of the machines.
- 4 Appoint and provide a banksman on site to guide the movement of excavator, banksman should equip with reflective vest; whistle and/or red flag for effective signalling.
- 5 Excavator operator should conduct daily check and enter the findings into the checklist and to report if found any unsatisfied conditions of the machines and/or surrounding work environment.
- 6 Machinery must be position and operated in a manner that will not endanger any person within the excavation work.
- 7 Excavation near underground facilities must be carried out manually using hand tools.
- 8 Excavator are provide and equip with side mirror for the blind spot, and the side mirror shall be maintain and are in good conditions.
- 9 Operator should remain within the cabin at all times during the process of work, if in any case, operator should ensure engine are switch off during lunch or off period or prior the maintenance and/or repair work.
- 10 At night or when dark, safety personnel to monitor and provide sufficient lighting for the work area. Banksman should be equip with highly reflective vest and 'traffic baton' at night for effective signalling.
- 11 PPE such as safety helmet with chin strap; safety boots; eyes and hand protection and highly reflective vest for banksman are to be provided and used, periodically check by safety personnel for wear and tear, change immediately once item found damaged.

SWP – 24

SAFE WORK PROCEDURE – SAFETY ON REBAR CAGE FABRICATION

1. BENDING OF REBAR

- ~ Bending machine position properly and secure for rigidity, area to be keep clear access.
- ~ Ensure that all bending machines are checked and certified by LEW on monthly basis.
- ~ All the diesel machine service will be every month from the supplier mechanics.
- ~ During the bending, hold the rebar in position and clear away from the bending radius
- ~ Only appointed and trained machine operators are allowed to operate the bending machines.
- ~ Rotating parts and pinching points are protected with guards before activating machinery.
- ~ Work area to display signages and to barricade to warn non work personnel.

2. REBAR CAGE ASSEMBLY

- ~ Where the rebar cage diameter is higher than one meter, i.e. people can enter into the cage for work, the bar chairs designed are use to prevent collapse of top bar during the cage fabrication.
- ~ All workers shall wear on proper PPE which includes of working hand glove.
- ~ Housekeeping within working areas are to be kept clean and tidy to prevent tripping hazard.

3. HOT-WORKS

- ~ To apply permit to work prior any hot works
- ~ Welding & Flame cutting are to be barricade and isolate from flammable materials.
- ~ Only trained and qualified welder with available welding certificate shall be engage for welding work.
- ~ Wear proper welding shield and gloves.
- ~ Ensure that functioning of the fire extinguishers and all flammable articles are removed from hotwork zone.
- ~ Ensure that all welding machines are checked and certified by LEW every month and do not touch any intermediate or connected part or any equipment without any without knowing its electric status and to make sure adequate grounding at all times.
- ~ Ensure all gas cylinder are secured in upright position at all time.
- ~ Check regulators for leakage and replace immediately if it is faulty.
- ~ Check all hoses for leak and ensure securely join and fasten with approved types of clips.
- ~ Check cutting torch for damage , replace if necessary.
- ~ Ensure flash back arrestors are installed at both ends and are in working condition.

4. LIFTING WORKS

- ~ To apply Permit To Hoist prior all lifting activities by the site safety supervisor and/or site supervisor.
- ~ No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- ~ Cranes shall be operated by only certified competence crane operators.
- ~ All lifting works are to be supervised by qualified lifting supervisor, rigger & signaller and well coordinate, communicate between crane operator and signaller.
- ~ During lowering the rebar, no worker are allowed to work or walk under the suspended load and lifting equipment area only used for lifting and not for pulling or dragging.
- ~ All the lifting machines, lifting gears and lifting appliances must be with the available certificate of LM, LG and LA respectively.
- ~ The lifting gears and lifting appliances must be in good working condition and to be make sure by lifting supervisor.
- ~ Rebar must be tie with steel wire before being lifted. This is to make more rigid and secure to the bundle
- ~ Tag line to be tie at both ends to control the movement of load.

SWP – 25

Safety On Night Work

- 1 Adequate general lighting should be provided (by others) at the perimeter of the working zone including access or passageways.
- 2 Flood lighting should be installed or positioned in such a way to avoid direct or reflected glare as well as objectionable shadow.
- 3 General lighting should be position above working level and mounted as high as possible.
- 4 Traffic Controller equipped with control baton; reflective glove; highly visible green reflective vest to station at the strategic/safe location to control and guide all vehicular where necessary. Traffic controller to ensure no one should remain at the rear side of the moving vehicular.
- 5 The site safety supervisor and or site supervisor to conduct briefing of SWP, RA and site instructions to all workers through toolbox meeting prior work.
- 6 During toolbox meeting for night shift, safety personnel are to conduct visual check on all work personnel to use/put on basic PPE for all site personnel working at night (e.g. highly reflective vest). And to observe if anyone appears fatigue or ill.
- 7 All lifting works to be closely monitored at all time by lifting supervisor.
- 8 Whenever necessary, signalman/banks men shall be deployed to assist and direct the plant operation during the execution of operation
- 9 A safe means of access or egress must be provided.
- 10 All temporary road traffic signs; traffic cones; rotating lamps etc... are to be installed at conspicuous positions.
- 11 Supervisor in-charged to ensure all rotating lamps on heavy machineries (eg. Cranes, Rigs, Excavator) to maintain operational at all times.
- 12 Safety Personnel on duty to remind daily on the potential burn/ scald by contact with hot surface, liquid or steam (eg. radiator)
- 13 Safety Personnel to conduct site walk and inspection to identify if any opening exposed to falling hazard
- 14 Account for all personnel on site after each operation.

SWP – 26

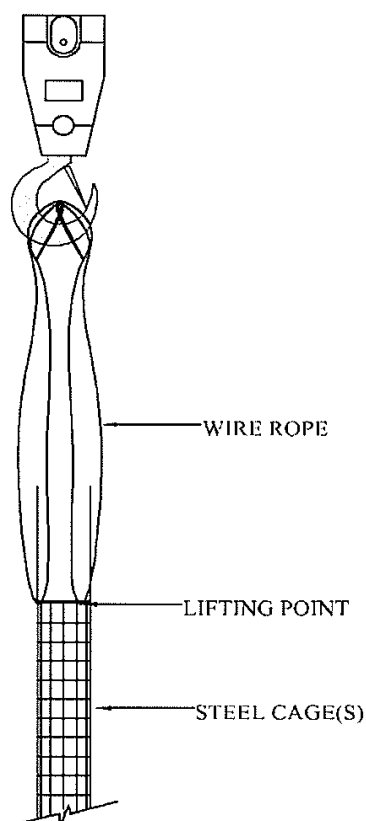
SAFETY ON LOWERING OF STEELCAGE(S)/REINFORCEMENT INTO BORED HOLE

- 1 Submission of capacity check for the Lifting Point to be used according to the steelcage/reinforcement design for the project accordingly.
- 2 Submission of the valid Lifting Machine Certificates after the inspection done by the 'Approved Examiner'
- 3 Submission of the valid Lifting Gear Certificates after the inspection done by the 'Approved Examiner'
- 4 Appointment of certified Lifting Team which inclusive of Lifting Supervisor; Crane Operator; Signaller & Rigger.
- 5 Appointment of certified Hot-work workers for the work.
- 6 To apply Permit-to-Work for Lifting and get approval prior the lifting operation
- 7 To apply Permit-to-Work for Hot-work and get approval prior the work.
- 8 Lifting Team to conduct check on LG (Lifting Gear) prior every used.
- 9 Lifting Supervisor to conduct visual check on the condition of the Lifting Point prior the rigging of the steelcage(s).
- 10 Use only suitable size and correct type of LG according to the weight of the load/steelcage to be lift/hoist.
- 11 Lifting Team to ensure and to alert others by using whisel if any work personnel within the premises to be keep clear from/of the lifting zone or swing radius of the crane.
- 12 Signalman to provide hand signal and ensure a clear visual contact with the crane operator during lifting of steelcage(s) from storage yard to the destinated bored hole, signalman shall ensure all hands are free from the load during the initial lifting of the steelcage(s) and adequate length/numbers of tag-line shall be used to assist and/or resist the load during the lifting process and/or during lowering the steelcage(s) into the bored hole.
- 13 No suspended load shall hoist over the work personnel at all times.
- 14 Only removed/discovered the 'welded mesh casing cover" when the steelcage(s) is ready to lower/install into the bored hole
- 15 NO workers should place their hand within the steelcages at all time during the process of lowering the steelcage(s)
- 16 Hand protection shall be use during handling of steelcages to prevent injury from any sharp edges
- 17 Use suitable length/appropriate size and adequate numbers of 're-bar stopper' accordingly for the steelcages to rest on the casing. Signalman should check if all hands are free from the pinching point prior to give signal to the crane operator.
(Note: A good practise of a sound/blow of whisel to alert others prior the hand signal should be observed)
- 18 Steps No.3 to No.17 will be repeated if more than one steelcages are required for the bored hole.
- 19 Workers to avoid bare-hand and a proper hand-tools shall be use as an aid during the lapping of steelcages. (eg. sledge hammer, short-rebar, webbing sling etc..)

SWP – 26

- 20 During any Hot-work the following safety measure shall be observed
- ~ To apply permit to work prior any hot works
 - ~ Welding & Flame cutting are to be barricade and isolate from flammable materials.
 - ~ Only trained and qualified welder with available welding certificate shall be engage for welding work.
 - ~ Wear proper welding shield and gloves.
 - ~ Ensure that functioning of the fire extinguishers and all flammable articles are removed from hotwork zone.
 - ~ Ensure that all welding machines are checked and certified by LEW every month and do not touch any intermediate or connected part or any equipment without any without knowing its electric status and to make sure adequate grounding at all times.
 - ~ Ensure all gas cylinder are secured in upright position at all time.
 - ~ Check regulators for leakage and replace immediately if it is faulty.
 - ~ Check all hoses for leak and ensure securely join and fasten with approved types of clips.
 - ~ Check cutting torch for damage , replace if necessary.
 - ~ Ensure flash back arrestors are installed at both ends and are in working condition.
- !1-a During lowering of the final cage to the desire level within the bored hole, a suitable size and length of wirerope to be 'loop' over the lifting point (*see figure 'A'*) in order to prevent the cage from drop-off.
- Note: For Dry-Pile Method and/or piles with Cut-off-Level < 5 meter (less than 5 meter) - please see *figure-'A'*

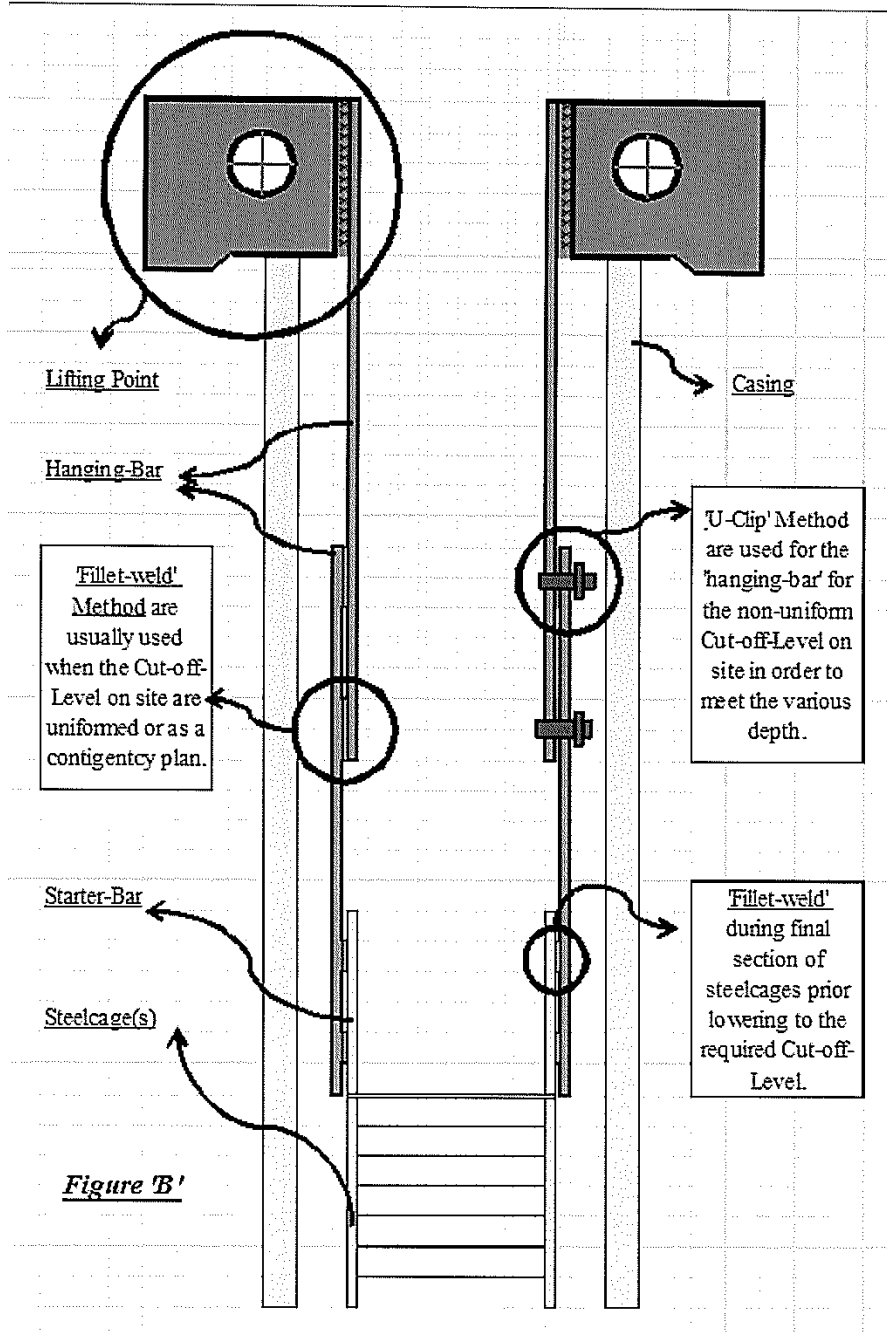
Figure 'A'



SWP – 26

SAFETY ON LOWERING OF STEELCAGE(S)/REINFORCEMENT INTO BORED HOLE

- b For 'Tremie piles' or piles with deep cut off level > 5m (more than 5 meter), used minimum 2 hanger bars and to lower the steelcage(s) to the required Cut-off-Level. The size and lifting points on top of the hanger bars to be design by PE's. (see figure 'B')



SWP – 26

SAFETY ON LOWERING OF STEELCAGE(S)/REINFORCEMENT INTO BORED HOLE

- 22 Lifting Supervisor to supervise during the process of lowering of the steelcage(s) should be smooth and steady and are not jerking.
- 23 Releasing/removed of the wire rope:
 - For 'Dry-Pile'
 - ~ Wire rope to be removed only when concrete level near to the cut-off-level or reached approximately 1 to 2 mtr below cut-off-level whereby the steelcages already hold/sustained by the concrete.
 - For 'Tremie-Pile'
 - ~ Wire rope will be removed only after the steelcage welded and supported at the temporary casing by using a 'hanging-bar' extended from the 'Starter-bar'.
- 24 During the releasing of the wire-rope, An appointed certified Signalman to give signal to the operator to lower the main-hoist hook block slowly and away from the work personnel and the casing/cast pile, follow by a Rigger to open up one end of each wire rope from the main hoist hook block, wire rope will be extract out fully and slowly by the crane from the bored hole.

SWP – 27

Safety On Carry Out Work Within Confined Space

- 1 Ensuring that entrant are attend and received briefing from main contractor on the safety and health precautions to take during specific safety induction prior to entry and work.
- 2 Conduct risk assessments to identify all hazards, evaluate risk and planned mitigating measures.
- 3 Following the confined space entry permit system implemented on site by main contractor.
- 4 Ensuring entrant/workers are following entry and work procedures
- 5 Ensuring sufficient and suitable lighting are provided at the perimeter of the working zone including access passageways for entry into or work in a confined space.
- 6 Ensure adequate ventilation are provided to the confined space before entry and during work in confined space.
- 7 Ensure safe means of access to and egress from confined space are provided prior entry.
- 8 Ensuring that confined space attendance are appointed and make known to entrant or workers involved.
- 9 Ensuring permit-to-entry onto confined space are applied, approved, prior entry
- 10 The site safety supervisor and or site supervisor to conduct briefing of SWP, RA and site instructions to all workers through toolbox meeting prior work.
- 11 During toolbox meeting, safety personnel are to conduct visual check on all work personnel to use/put on provided appropriate PPE to reduce exposure to any residual risks. And to observe if anyone appears fatigue or ill.
- 12 Re-training or briefing the entrant/worker involved has demonstrated a lack of understanding of any safe work procedures.
- 13 Responsible personnel who are involved in confined space entry or work are been appointed.
(Authorized Manager; Confined Space Safety Assessor; Confine Space Attendant; Rescue Personnel & Entrant(s))
- 14 Duties and Responsibilities of the key personnel are clearly stipulated and are briefed and understood.
- 15 Risk Assessment and Safe Work Procedure of the key personnel are clearly stipulated and are briefed and understood.
- 16 Only gas-proof lighting shall be used in confined or enclosed spaces unless the atmosphere has been proven to be non-flammable.

SWP – 27

- 17 Only approved types of breathing apparatus as specified in the relevant statutory regulations shall be used.
- 18 A trained Confined Space Assessor / shall ensure persons working in confined or enclosed spaces are trained to perform assigned duties where the atmosphere has oxygen deficiency or contamination sufficient to require respiratory protection shall be required to use safety harness and lifeline and shall be continuously attended whilst working in such spaces. He shall regularly check, maintain continuous communication and monitor the condition of the worker in such spaces and shall not be assigned any other duties.
- 19 No person should enter an unoccupied tunnel before checking that the ventilation system is working, that the atmosphere is monitored and is proven to be safe for entry.
- 20 Workers' exposure to airborne contaminants in any tunnel or shaft should not exceed the PEL of the contaminants as specified.
- 21 Testing should be conducted before the commencement of any work for the day and thereafter at least once in 6 hours.
- 22 If any lifting machine is used and lifting operation involved, it shall comply to the WSH Acts
- 23 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 24 Where ladder is in use, ensure that all ladders are securely fixed, or held by a person, to prevent them from slipping.
- 25 Provide & use correctly other suitable equipments such as safety harness
- 26 Only A PE's design passenger hoist/cage will be provided to transport work personnel.
- 27 Ensure the relevant permit-to-work applied and approved.

SWP – 28

Safety On Used of Mobile Elevated Work Platform (eg. Boom Lifts or Scissors Lift)

- 1 To engage supplier of said MEWP to provide specific brand and model training for the appointed operator to ensure the competency.
- 2 To conduct visual check on MEWP parking platform and it should only be used on solid level surface.
- 3 The surface to be checked to make sure that there are no penetrates or obstructions that can cause uncontrolled movement or the platform to overturn.
- 4 MEWP in used to be clearly marked with a safe working load limit or maximum rate capacity noti
- 5 Not be used in high wind conditions or where there is risk of lightning.
- 6 Provide personnal fall protective equipment (eg. full body harness)
- 7 Operators of boom lifts/Scissor lift to be properly trained and competent for the job.
- 8 A pre-operational inspection & fuction test on MEWP to be performed by trained operator before usage.
- 9 Only appointed operator are allowed to operate MEWP.
- 10 No unauthorised alternation or modification of MEWP or any of its safety devices or functions.
- 11 Barricade provided to the working platform shall be check and are in good condition to prevent person from fall.
- 12 To deploy outriggers where necessary accordingly to the requirement.
- 13 Operators working in boom lifts / Scissor lift to wear a suitably anchored safety harness. Anchorin to nearby poles or equipment outside the work platform is prohibited.
- 14 Operator to conduct check on surrounding prior menuver the MEWP, such as slopes or trenches.
- 15 No personnel/ workers should climb out of an elevated boom lift or scissors lift onto any elevated facility structure.
- 16 The use of planks, ladders or any other devices on the work platform for the purpose of achiving additional height or reach is prohibited.
- 17 No one shall remain on the work platform while during the menuver of boom lifts
- 18 No menuver are allowed at the extended scirssor lift
- 19 Always parked the MEWP at level surface and chocked the wheel if possible.
- 20 Keys are removed during break time and during end of the dav.

SWP – 29

SAFE WORK PROCEDURE – SAFETY ON CRANE and/or RIG OPERATION on Extended and/or Concrete Blocks Platform

- 1 To apply Permit To Hoist prior all lifting activities by the site safety supervisor and or lifting supervisor.
- 2 Appointed crane/rig operator and safety supervisor to conduct daily check of the stability for the concrete blocks working platform prior work & every after heavy rain.
- 3 Lifting supervisor to conduct check/inspection for all lifting gear to ensure the good working condition and the validity of the LG certificates.
- 4 No crane shall be used or operated unless it has a valid Lifting Machine certificate.
- 5 Every crane shall be provided with safe working load indicator visible to the operator showing the safe working load corresponding to the radius of operation .
- 6 Every crane shall have a cut-off device warning overloading of the crane capacity.
- 7 Cranes shall be operated by only certified competence crane operators.
- 8 Effective control must be exercised at all stages of a lifting operation through the deployment of a competent Lifting Supervisor , a qualified signaller , a registered crane operator and trained riggers.
- 9 The site safety supervisor and or site supervisor to conduct prior briefing of SWP, RA and site instructions to all workers through toolbox meeting or first day at work orientation.
- 10 Understand the 'Safe Working Load' of slings , chains , shackles , etc . If you are in doubt , do not allow any lifting until it has been checked/advised by a qualified Lifting Supervisor.
- 11 Where ladder is in use, ensure that all ladders are securely fixed, or held by a person, to prevent them from slipping.
- 12 Provide & use correctly other suitable equipments such as safety harness or safety belts if barricades/lifelines cannot be provided, such as 'Travel Restraint System' consist of a safety belt or harness that is connected by a lanyard to a suitable anchorage point or static line to restrict the person movement and prevents him from approaching an unprotected edge.
- 13 To check on the crane working platform design by PE. and to ensure by the respective site safety supervisor or site manager.
- 14 Ensure workers are not allowed within the coverage of the crane swing area and keep a clearance between the rear counterweight and any object nearby or cordon off.
- 15 Suspended loads shall be unloaded, engine shut down and ignition key should be removed from crane whenever the operator is absent from the machine.
- 16 A PE's design passenger hoist/cage will be provided to transport workers up and down from concrete blocks platform

SWP – 30

SAFE WORK PROCEDURE – SAFETY ON USED OF GENERATOR

- 1 The instructions that come with the generator must be followed strictly.
- 2 Never use a generator indoors, including enclosed or partially-enclosed areas.
- 3 Regular inspection would be conducted on Generator and Distribution box by the LEW.
- 4 To prevent electrical shock, make sure the generator is provided with earth rod and make it is Inserted deep enough into the ground. Barricade the earth point to prevent person accidentally touch/contact with it.
- 5 Proper power cords should be used. Overloaded cords can cause fires or equipment damage. Don't use multiple sockets in single outlet. Use only approved industrial type sockets.
- 6 Never refuel a generator while it's running, it may cause fire.
- 7 Before refuelling a generator, turn it down and let it cool down. Gasoline spilled on hot engine parts could ignite.
- 8 Turn off all equipment powered by the generator before shutting down your generator.
- 9 Fire extinguisher must be provided at the location where hot work is being carried out.
- 10 Generator shall be fenced and to be locked to prevent unauthorized entry of persons.
- 11 Generator current tapping point and DB box shall be locked and the key hold by .
Authorized/Appointed Person
- 12 All electric wire and fittings shall be elevated and not allowed to lie on the wet ground.
- 13 All wires shall be elevated at least 5.2m above ground if it run across vehicular access.
- 14 All generator and DB box shall be maintained by equipment supplier's mechanic and obtain a Monthly maintenance certificate and kept available on site.
- 15 Brief all site workers that no person shall be allowed to do any connection / repair / alteration on equipment and fittings other than the designated mechanic and licensed electrical worker by appointed safety personnel.
- 16 Appointed safety personnel shall conduct briefing in daily tool box meeting that if any equipment found faulty, should not be used and report immediately to the supervisor.
- 17 Generator shall be equipped with fire extinguisher and supervisor shall brief all workers of fire fighting technique to act accordingly during emergency.

SWP – 31

SAFE WORK PROCEDURE – STORAGE OF LUBRICATION OIL and/or HAZARDOUS MATERIAL

- 1 Storage of lubrication oil, hazardous material/chemical only at designated storage area given by main contractor.
- 2 Storage area for lubrication oil, hazardous material/chemical shall putting up a barricade or a proper fencing, equip with adequate nos of fire extinguishers. Near the storage area a 'Danger keep-out' signage, relevant SDS, a contact no. of the handler and first aider should be displayed.
- 3 A drip tray or a containment shall be provide at the base of the lubrication oil, hazardous material/chemical
- 4 A minimum safe distance between highly flammable / fire hazard from the storage area to the nearest hotwork zone should be considered.
- 5 Ventilation for the location of storage area shall be considered
- 6 Sufficiency of the area for storage place
- 7 Selection of storage area should not be located at a low ground level to prevent from water ponding into the containment and lead to contamination of water course.
- 8 The construction of the storage area shall be reasonably good .
- 9 All lubrication oil, hazardous material/chemical should have label from the packaging, in any case if the label is not able to be observed, safety supervisor has to ensure a replacement to be label accordingly.
- 10 All relevant signages, SDS, fire extinguisher (if required), etc. shall be displayed.

SWP – 32

SAFETY ON CARRY OUT WORK WITHIN SILO TANK (CONFINED AREA)

- 1 Ensuring that entrant are attend and received briefing from main contractor on the safety and health precautions to take during specific safety induction prior to entry and work.
- 2 Conduct risk assessments to identify all hazards, evaluate risk and planned mitigating measures.
- 3 Following the confined space entry permit system implemented on site by main contractor.
- 4 Ensuring entrant/workers are following entry and work procedures
- 5 Ensuring sufficient and suitable lighting are provided at the perimeter of the working zone including access or passageways for entry into or work into silo.
- 6 Ensure adequate ventilation are provided to the confined space before entry and during work into silo. Silo has to be purged for minimum 30 minutes prior entry or work activity
- 7 Assigned a "watch out man" to maintain contact with the entrant by visual or verbal communication.
- 8 Ensure safe means of access to and egress from confined space are provided prior entry. To include warning signages and only authorised personnel.
- 9 Ensuring that silo attendance "watch out man" are appointed and make known to entrant or workers involved.
- 10 Ensuring permit-to-entry & re-entry onto silo are applied, approved, prior commencement of entry
- 11 The site safety personnel and or site supervisor to conduct briefing of SWP, RA and site instructions to all workers through toolbox meeting prior work.
- 12 During toolbox meeting, safety personnel are to conduct visual check on all work personnel to use/put on provided appropriate PPE to reduce exposure to any residual risks. And to observe if anyone appears fatigue or ill.
- 13 Re-training or briefing the entrant/worker involved has demonstrated a lack of understanding of any safe work procedures.
- 14 Responsible personnel who are involved in silo tank entry or work are been appointed.
- 15 Duties and Responsibilities of the key personnel are clearly stipulated and are briefed and understood.
(Watch men, Entrant, Gas tester, Site in-charge, Safety coordinator.)
- 16 Risk Assessment and Safe Work Procedure of the key personnel are clearly stipulated and are briefed and understood.
- 17 Only gas-proof lighting shall be used in confined or enclosed spaces unless the atmosphere has been proven to be non-flammab
- 18 Ensure access and egress not blocked at all times.
- 19 A gas test shall be test shall be conducted prior to entry of the silo. And test before entry.
- 20 No person should enter an unoccupied silo before checking that the ventilation system is working, that the atmosphere is monitored and is proven to be safe for entry.
- 21 Workers' working shall be provided with safety goggles or glasses to protect their eyes from debris.
- 22 Testing should be conducted before the commencement of any work for the day and thereafter at least once in 8 hours.
- 23 Ensure the relavant permit-to-work applied and approved.

SWP – 33

SAFE WORK PROCEDURE – SAFETY ON CHANGING OF BORING TOOLS

- 1 Boring Tools to be position and rest firmly on ground.
- 2 Banks man must signal to boring operator to stop machine prior removing the boring tool.
- 3 Banks man to signal operator using hand signal and whistle.
- 4 Operator to position boring tools on firm and stable ground.
- 5 The position of the boring tools shall be relatively at a level where the worker can reach comfortably
- 6 To use both hands at any time possible.
- 7 Ensure worker is working and standing on firm ground.
- 8 Worker to spread their leg width apart to create a more supported standing posture.
- 9 When pulling out pin workers is advised not to do any jerking motion.
- 10 Workers to fully concentrating while conducting activity not to be engrossed in other activity such as using handphones.
- 11 Workers hands are off or stay away from any contact of holding to kelly pins or boring tool while spinning or lifting up of kelly bar.
- 12 Prevent any motion of swing or dropping the kelly pin after extracting .
- 13 To provide a proper handle of kelly pin.
- 14 To always use working hand glove while completing task.

SWP – 34

SAFE WORK PROCEDURE – SAFETY ON HANDLING OF DRILING FLUID

- 1 To ensure the availability of the relevant SDS on site
- 2 To place or display the said SDS at the workplace or near the plant whereby 'appointed workers' (waterman) can easy access.
- 3 Site supervisor to brief the SDS to the appointed waterman and keep proper records.
- 4 Supervisor to provide suitable PPE (ie. rubber glove, dusk mask, eye protection, etc.) or follow the product's recommendations to the appointed 'waterman' prior deployment to the task.
- 5 Supervisor to brief the hazard and risk identified to the appointed 'waterman' prior work.
- 6 Supervisor to brief the safe work procedure to the appointed 'waterman' prior work.
- 7 Appointed 'waterman' shall always used the PPE provided (ie. rubber glove, dusk mask, eye protection, etc.) at all time during carry out work or whenever contact with the drilling fluid.
- 8 Appointed 'waterman' shall practice his/her individual personal hygiene by washing hand every before meal, after handling the products and during end of the day.
- 9 Appointed 'waterman' shall removed all products waste or package waste regularly or by every end of the day to prevent others slip, trip & fall. And also potential of mosquitoes breeding ground.
- 10 Appointed 'waterman' to ensure the stacking of the products are in safe manner and it should free from toppling hazard.

PERMIT-TO-WORKS

PTW-01: PERMIT TO WORK AT HEIGHT

Project Title :		Permit No.:				
Note: This Permit-to-Work is valid for <u>Maximum of 7 days</u> from the time of approval subjected to no change of work method & work condition. otherwise, this permit may be withdrawn at anytime.						
Part I : Application - To Be Complete By Applicant						
Applicant Company: _____						
Name of Applicant: _____		(Supervisor of the person who is carry out work)				
*Safety/Scaffold Supervisor Name: _____		Man-Cage LG No.(if any): _____				
Location of Work: _____						
Description of work to be done: _____						
Duration of Work: From (Date & Time) _____		To (Date & Time) _____ .Total of _____ Days				
Safety requirements to be complied with, Prior Application of Permit To Work at Height.						
	Y	N	NA			
1. Safety guardrail / proper fencing or barricades are provided						
2. Full body harness / safety belts are inspected and in good condition before use..						
3. SWP, RA for working at height and related hazard was briefed prior commence of works.						
4. Provision of Warning Signage & Barriers						
5. Provision of Full body harness. For heights >4m shock absorbers to be incorporated.						
6. Ladders are securely fixed, or held by a person.						
7. PE's design passenger hoist/cage are provided with valid certificates.						
8. Lifelines to be provided when there are no suitable anchorage points for Full body harness/safety belts						
9. PPE such as working gloves, safety helmet, safety shoes, Full body harness/ belts are provided						
10. Scaffold to be certified safe use.						
Name & Signature (Supervisor of the person who is carry out work)		Date: _____				
		Time: _____				
Part 2 : Inspect & Assess - (*By Sub-Contractor's Competent Person / *By Main-Contractor's Competent Person)						
~Assessed that all reasonable practicable measures have been taken to ensure the safety and health of the persons at the point of assessment.						
~*We (Assessor & Supervisor of the person) / I, have <u>Inspected</u> the work area & its surrounding where the work to be carry out and are satisfied that the Permit To Work can be carried out the due regard to the safety & health of worker and/or other persons who may be affected.						
Name & Signature of Safety Assessor		Name & Signature (Supervisor of the person who is carry out work)				
Date: _____		Date: _____				
Time: _____		Time: _____				
Part 3 : Approval - (*By Sub-Contractor's Project Manager / *By Main-Contractor's Project Manager/Deputy)						
~I satisfied that there has been a proper evaluation of the risk & hazards		~I shall continually review the progress of all PTW area,				
~I satisfied that no incompatible work which may pose a risk to the others at work.		the work are carried out safely.				
~I satisfied that all reasonable practicable measures have been taken to ensure the safety and health of the persons.		~I satisfied that all person who carry out the work are informed of the hazard associated with it.				
Name & Signature of Project Manager		Date: _____				
		Time: _____				
Part 4 : Notification of Work Completion. (By the Supervisor of the person who is carried out work.)						
~The above mentioned work has completed.	~Housekeeping has been carried out.	~Work area is safe for other personnel.				
Name & Signature (Supervisor of the person who is carry out work)		Date: _____				
		Time: _____				
Part 5 : Daily Check & Sign (By the Supervisor of the person who is carried out work.)						
	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Sign: Work Supervisor						
Sign: Assessor						
Date:						
Note: * Please delete accordingly.		Remarks: 1st Original-Applicant		3rd Copy-Assessor/Site Copy		
		2nd Copy-Display at Work Area		4th Copy-Person Approved PTW		

DAGON CONSTRUCTION COMPANY LIMITED

PTW-02: PERMIT TO WORK FOR HOT WORK

Project Title : _____						
Note: This Permit-to-Work is valid for <u>Maximum of 7 days</u> from the time of approval subjected to no change of work method & work condition. otherwise, this permit may be withdrawn at anytime.					Permit No.: _____	
Part I : Application - To Be Complete By Applicant						
Applicant Company: _____						
Name of Applicant: _____			(Supervisor of the person who is carry out work)			
Name of Appointed Hot Work Worker: _____			Location of Work: _____			
Description of work to be done: _____						
Duration of Work:		From (Date & Time) _____		To (Date & Time) _____		Total of _____ Days
Safety requirements to be complied with, Prior Application of Permit To Work for Hot Work.						
Welding & Flame Cutting Works			Welding & Flame Cutting Works			
Y N NA			Y N NA			
1. Competency of Hot Work Worker				12. Gas regulator in good condition		
2. Full body harness / safety belts are inspected and in good condition				13. Cylinder in upright position & secured		
3. Area clears of combustibles material				14. Barriers provided & warning sign display prominently		
4. Adequate ventilation				15. Safety helmet, Safety Shoes, Full body harness/belt		
5. Face shield, Hand gloves, Eye protection.				16. Flashback arrestors in use & in good condition		
6. Electrode holder in good condition				17. 'O' clips used to secure hoses		
7. Cables are free from water/ sharp edges				18. Fire extinguisher available		
8. Cables are free from tripping hazard.				19. SWP, RA or related hazard are briefed		
9. First aid box				20. Equipment check for leakage		
10. No incompatible works at surroundings				22. No smoking or naked flame		
11. Work access & platform provided				23. Sparks fly are free from flammable substance		
Name & Signature (Supervisor of the person who is carry out work) _____					Date: _____	
					Time: _____	
Part 2 : Inspect & Assess - (*By Sub-Contractor's Competent Person / *By Main-Contractor's Competent Person)						
~Assessed that all reasonable practicable measures have been taken to ensure the safety and health of the persons at the point of assessment.						
~*We (Assessor & Supervisor of the person) / I, have <u>Inspected</u> the work area & its surrounding where the work to be carry out and are satisfied that the Permit To Work can be carried out the due regard to the safety & health of worker and/or other persons who may be affected.						
Name & Signature of Safety Assessor _____			Name & Signature (Supervisor of the person who is carry out work) _____			
Date: _____			Date: _____			
Time: _____			Time: _____			
Part 3 : Approval - (*By Sub-Contractor's Project Manager / *By Main-Contractor's Project Manager/Deputy)						
~I satisfied that there has been a proper evaluation of the risk & hazards			~I shall continually review the progress of all PTW area, the work are carried out safely.			
~I satisfied that no incompatible work which may pose a risk to the others at work.			~I satisfied that all person who carry out the work are informed of the hazard associated with it.			
~I satisfied that all reasonable practicable measures have been taken to ensure the safety and health of the persons.						
Name & Signature of Project Manager _____					Date: _____	
					Time: _____	
Part 4 : Notification of Work Completion. (By the Supervisor of the person who is carried out work.)						
~The above mentioned work has completed.		~Housekeeping has been carried out.		~Work area is safe for other personnel.		
Name & Signature (Supervisor of the person who is carry out work) _____					Date: _____	
					Time: _____	
Part 5 : Daily Check & Sign (By the Supervisor of the person who is carried out work.)						
	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Sign: Work Supervisor						
Sign: Assessor						
Date:						
Note: * Please delete accordingly.		Remarks: 1st Original-Applicant		3rd Copy-Assessor/Site Copy		
		2nd Copy-Display at Work Area		4th Copy-Person Approved PTW		

DAGON CONSTRUCTION COMPANY LIMITED

PTW-03: PERMIT TO WORK FOR LIFTING/HOIST OPERATION

Project Title :		Permit No.:				
Note: This Permit-to-Work is valid for <u>Maximum of 7 days</u> from the time of approval subjected to no change of work method & work condition. otherwise, this permit may be withdrawn at anytime.						
Part 1 : Application - To Be Complete By Applicant						
Applicant Company: _____						
Name of Applicant: _____	LM No. Involved: _____					
Name of Appointed Lifting Operator: _____	Name-Rigger: _____					
Name of Lifting Supervisor: _____	Name-Signaler: _____					
Location of Work: _____						
Description of work to be done: _____						
Duration of Work: From (Date & Time) _____ To (Date & Time) _____ . Total of ____ Days						
Safety requirements to be complied with, Prior Application of Permit To Work for Lifting/Hoist Operation.			Y	N	NA	
1. To check the validity of the license of the appointed lifting crane operator						
2. Valid LG certificates & inspected in good condition before use.						
3. SWP, RA for lifting/hoist operation and related hazard was briefed prior commencement of works.						
4. Provision of Warning Signage & Barriers						
5. Crane sitting on stable ground condition.						
6. Team of Qualified Lifting Supervisor, Rigger & Signaler are appointed & present						
7. Valid LM certificates for crane						
8. Crane operator aware of the SWL for the lifting machines in use.						
9. Crane operator has conduct the daily check/inspection for the lifting machines in use.						
_____			Date: _____			
Name & Signature (Supervisor of the person who is carry out work)			Time: _____			
Part 2 : Inspect & Assess - (*By Sub-Contractor's Competent Person / *By Main-Contractor's Competent Person)						
~Assessed that all reasonable practicable measures have been taken to ensure the safety and health of the persons at the point of assessment.						
~We (Assessor & Supervisor of the person)/ I, have <u>Inspected</u> the work area & its surrounding where the work to be carry out and are satisfied that the Permit To Work can be carried out the due regard to the safety & health of worker and/or other persons who may be affected.						
_____			Date: _____			
Name & Signature of Safety Assessor			Time: _____			
_____			Date: _____			
Name & Signature (Supervisor of the person who is carry out work)			Time: _____			
Part 3 : Approval - (*By Sub-Contractor's Project Manager / *By Main-Contractor's Project Manager/Deputy)						
~I satisfied that there has been a proper evaluation of the risk & hazards			~I shall continually review the progress of all PTW area,			
~I satisfied that no incompatible work which may pose a risk to the others at work.			the work are carried out safely.			
~I satisfied that all reasonable practicable measures have been taken to ensure the safety and health of the persons.			~I satisfied that all person who carry out the work are informed of the hazard associated with it.			
_____			Date: _____			
Name & Signature of Project Manager			Time: _____			
Part 4 : Notification of Work Completion. (By the Supervisor of the person who is carried out work.)						
~The above mentioned work has completed.		~Housekeeping has been carried out.		~Work area is safe for other personnel.		
_____			Date: _____			
Name & Signature (Supervisor of the person who is carry out work)			Time: _____			
Part 5 : Daily Check & Sign (By the Supervisor of the person who is carried out work.)						
	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Sign: Work Supervisor						
Sign: Assessor						
Date:						
Note: * Please delete accordingly.		Remarks: 1st Original-Applicant 2nd Copy-Display at Work Area		3rd Copy-Assessor/Site Copy 4th Copy-Person Approved PTW		

DAGON CONSTRUCTION COMPANY LIMITED

PTW-04: PERMIT TO WORK FOR BORING/PILING OPERATION

Project Title :						
Note: This Permit-to-Work is valid for <u>Maximum of 7 days</u> from the time of approval subjected to no change of work method & work condition. otherwise, this permit may be withdrawn at anytime.		Permit No.:				
Part 1 : Application - To Be Complete By Applicant						
Applicant Company: _____						
Name of Applicant: _____		(Supervisor of the person who is carry out work)				
Name of Appointed Operator: _____		LM No. Involved: _____				
Location of Work: _____						
Description of work to be done: _____						
Duration of Work: From (Date & Time) _____		To (Date & Time) _____ . Total of _____ Days				
Safety requirements to be complied with, Prior Application of Permit To Work for Boring/Piling Operation.						
	Y	N	NA			
1. To check the validity of the license of the rig/crane operator						
2. Full body harness / safety belts are inspected and in good condition before use..						
3. SWP, RA for boring/piling operation and related hazard was briefed prior commence of works.						
4. Provision of Warning Signage & Barriers						
5. Rig/Crane sitting on stable ground condition.						
6. Banksman and/or competent signalman are assigned to assist the boring/piling operation.						
7. To check the validity of the LM certificates.						
8. Rig/crane operator aware of the SWL for the boring/piling machines in use.						
9. PPE such as working gloves, safety helmet, safety shoes, Full body harness/ belts are provided						
10. Rig/crane operator has conduct the daily check/inspection for the boring/piling machines in use.						
Name & Signature (Supervisor of the person who is carry out work)			Date: _____			
			Time: _____			
Part 2 : Inspect & Assess - (*By Sub-Contractor's Competent Person / *By Main-Contractor's Competent Person)						
~Assessed that all reasonable practicable measures have been taken to ensure the safety and health of the persons at the point of assessment.						
~*We (Assessor & Supervisor of the person) / I, have <u>Inspected</u> the work area & its surrounding where the work to be carry out and are satisfied that the Permit To Work can be carried out the due regard to the safety & health of worker and/or other persons who may be affected.						
Name & Signature of Safety Assessor		Name & Signature (Supervisor of the person who is carry out work)				
Date: _____		Date: _____				
Time: _____		Time: _____				
Part 3 : Approval - (*By Sub-Contractor's Project Manager / *By Main-Contractor's Project Manager/Deputy)						
~I satisfied that there has been a proper evaluation of the risk & hazards		~I shall continually review the progress of all PTW area,				
~I satisfied that no incompatible work which may pose a risk to the others at work.		the work are carried out safely.				
~I satisfied that all reasonable practicable measures have been taken to ensure the safety and health of the persons.		~I satisfied that all person who carry out the work are informed of the hazard associated with it.				
Name & Signature of Project Manager			Date: _____			
			Time: _____			
Part 4 : Notification of Work Completion. (By the Supervisor of the person who is carried out work.)						
~The above mentioned work has completed.		~Housekeeping has been carried out.	~Work area is safe for other personnel.			
Name & Signature (Supervisor of the person who is carry out work)			Date: _____			
			Time: _____			
Part 5 : Daily Check & Sign (By the Supervisor of the person who is carried out work.)						
	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Sign: Work Supervisor						
Sign: Assessor						
Date:						
Note: * Please delete accordingly.		Remarks: 1st Original-Applicant		3rd Copy-Assessor/Site Copy		
		2nd Copy-Display at Work Area		4th Copy-Person Approved PTW		

DAGON CONSTRUCTION COMPANY LIMITED

PTW-05: PERMIT TO WORK FOR EXCAVATION OPERATION

Project Title : _____						
Note: This Permit-to-Work is valid for <u>Maximum of 7 days</u> from the time of approval subjected to no change of work method & work condition. otherwise, this permit may be withdrawn at anytime.			Permit No.: _____			
Part 1 : Application - To Be Complete By Applicant						
Applicant Company: _____						
Name of Applicant: _____		(Supervisor of the person who is carry out work)				
Name of Appointed Excavator Operator: _____		Location of Work: _____				
Description of work to be done: _____						
Duration of Work: From (Date & Time) _____ To (Date & Time) _____ .Total of ____ Days						
Safety requirements to be complied with, Prior Application of Permit To Work for Excavation Operation.						
	Y	N	NA			
1. To check the competency and validity of the license of the excavator operator						
2. Ladders, stairways or proper excess provided in trench of more than 1.2m depth						
2. Full body harness / safety belts are inspected and in good condition before use..						
4. Warning signs provided & positioned at conspicuously locations.						
5. Open sides of excavation are guarded by adequate and effective barricades (Minimum 1.1m height)						
6. Shoring to excavated trenches more than 1.5m deep						
7. Shoring for excavated trench more than 4m deep constructed according to PE's design and drawings						
8. Materials kept away from the edges of the trench (At least 610mm away from the trench)						
9. PPE such as working gloves, safety helmet, safety shoes, Full body harness/ belts are provided						
10. Operator has conduct the daily check/inspection for the hydraulic excavator in use.						
11. Location of live pipes or energy source has been pre-determined						
Name & Signature (Supervisor of the person who is carry out work) _____			Date: _____			
			Time: _____			
Part 2 : Inspect & Assess - (*By Sub-Contractor's Competent Person / *By Main-Contractor's Competent Person)						
~Assessed that all reasonable practicable measures have been taken to ensure the safety and health of the persons at the point of assessment.						
~*We (Assessor & Supervisor of the person) / I, have <u>Inspected</u> the work area & its surrounding where the work to be carry out and are satisfied that the Permit To Work can be carried out the due regard to the safety & health of worker and/or other persons who may be affected.						
Name & Signature of Safety Assessor _____		Name & Signature (Supervisor of the person who is carry out work) _____				
Date: _____		Date: _____				
Time: _____		Time: _____				
Part 3 : Approval - (*By Sub-Contractor's Project Manager / *By Main-Contractor's Project Manager/Deputy)						
~I satisfied that there has been a proper evaluation of the risk & hazards		~I shall continually review the progress of all PTW area,				
~I satisfied that no incompatible work which may pose a risk to the others at work.		the work are carried out safely.				
~I satisfied that all reasonable practicable measures have been taken to ensure the safety and health of the persons.		~I satisfied that all person who carry out the work are informed of the hazard associated with it.				
Name & Signature of Project Manager _____			Date: _____			
			Time: _____			
Part 4 : Notification of Work Completion. (By the Supervisor of the person who is carried out work.)						
~The above mentioned work has completed.	~Housekeeping has been carried out.	~Work area is safe for other personnel.				
Name & Signature (Supervisor of the person who is carry out work) _____			Date: _____			
			Time: _____			
Part 5 : Daily Check & Sign (By the Supervisor of the person who is carried out work.)						
	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Sign: Work Supervisor						
Sign: Assessor						
Date:						
Note: * Please delete accordingly.		Remarks: 1st Original-Applicant		3rd Copy-Assessor/Site Copy		
		2nd Copy-Display at Work Area		4th Copy-Person Approved PTW		

DAGON CONSTRUCTION COMPANY LIMITED

PTW-06: PERMIT TO WORK FOR DEMOLITION WORKS

Project Title :		Permit No.:				
Note: This Permit-to-Work is valid for <u>Maximum of 7 days</u> from the time of approval subjected to no change of work method & work condition. otherwise, this permit may be withdrawn at anytime.						
Part 1 : Application - To Be Complete By Applicant						
Applicant Company: _____						
Name of Applicant: _____		(Supervisor of the person who is carry out work)				
Description of work to be done: _____		Location of Work: _____				
Duration of Work: From (Date & Time) _____ To (Date & Time) _____ .Total of ____ Days						
Safety requirements to be complied with, Prior Application of Permit To Work for Demolition Works						
	Y	N	NA			
1. Trained and Competent operators and trained workers deployed for demolition work?						
2. SWP & Method Statement for demolition and related hazard was briefed & documented prior commence works?						
3. Electricity, PUB, Telecom lines are terminated before demolition?						
2. Full body harness / safety belts are inspected and in good condition before use..						
5. Machine operator inspected the machine & satisfied with the working condition?						
6. Engineer I/C for demolition checked the area before demolition commence?						
7. Glass, CU-units & others falling hazard items removed before demolition?						
8. Safety screen around the demolition building in good condition?						
9. Safe means of access and egress to upper level are clear and safe to access?						
12. Propping done at least 4 layers from working level?						
13. External protective scaffold to be at a height of not > 2mtr above demolition level?						
12. Water pumps and hoses for spraying of water to control dust emission are in working condition?						
13. Demolition area cordoned off and/or Barricades at the building edges provided?						
14. Excavator Operators & Workers are provided with required PPE and worn properly?						
Name & Signature (Supervisor of the person who is carry out work)		Date: _____				
		Time: _____				
Part 2 : Inspect & Assess - (*By Sub-Contractor's Competent Person / *By Main-Contractor's Competent Person)						
~Assessed that all reasonable practicable measures have been taken to ensure the safety and health of the persons at the point of assessment.						
~*We (Assessor & Supervisor of the person) / I, have <u>Inspected</u> the work area & its surrounding where the work to be carry out and are satisfied that the Permit To Work can be carried out the due regard to the safety & health of worker and/or other persons who may be affected.						
Name & Signature of Safety Assessor		Name & Signature (Supervisor of the person who is carry out work)				
Date: _____		Date: _____				
Time: _____		Time: _____				
Part 3 : Approval - (*By Sub-Contractor's Project Manager / *By Main-Contractor's Project Manager/Deputy)						
~I satisfied that there has been a proper evaluation of the risk & hazards		~I shall continually review the progress of all PTW area,				
~I satisfied that no incompatible work which may pose a risk to the others at work.		the work are carried out safely.				
~I satisfied that all reasonable practicable measures have been taken to ensure the safety and health of the persons.		~I satisfied that all person who carry out the work are informed of the hazard associated with it.				
Name & Signature of Project Manager		Date: _____				
		Time: _____				
Part 4 : Notification of Work Completion. (By the Supervisor of the person who is carried out work.)						
~The above mentioned work has completed.	~Housekeeping has been carried out.	~Work area is safe for other personnel.				
Name & Signature (Supervisor of the person who is carry out work)		Date: _____				
		Time: _____				
Part 5 : Daily Check & Sign (By the Supervisor of the person who is carried out work.)						
	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Sign: Work Supervisor						
Sign: Assessor						
Date:						
Note: * Please delete accordingly.		Remarks: 1st Original-Applicant		3rd Copy-Assessor/Site Copy		
		2nd Copy-Display at Work Area		4th Copy-Person Approved PTW		

Forms: A to M

Form A (Group Induction)

SAFETY ORIENTATION & SAFETY INDUCTION TRAINING

PROJECT/LOCATION: _____

COMPANY : _____ DATE : _____

CONDUCTED BY: _____ DESIGNATION: _____

SIGNATURE : _____ TIME (Started-End) : _____

S/N	NAME OF WORKER	ID No.	SIGNATURE
SUBJECTS:			
1)	Please be informed that the workers listed below have been undergone the first day safety induction training & safety orientation and was made known of the company's OH&S policy statement, in-house rules regulations of the worksite and duty & responsibilities by safety supervisor and/or site supervisor in-charged		
2)	They have been issued and/or checked are with appropriate basic PPE (Personnal Protective Equipment),		
3)	They were also briefed on the general safety awareness, occupational health hazard, emergency preparedness, environmental control, site security system etc...		
1			
2			
3			
4			
5			
6			
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8			
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10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Note: Photo-copy of NRIC/WP/S-Pass/EP & CSOC certificates shall be accompanied with this form.

DAGON CONSTRUCTION COMPANY LIMITED

Form A.01 (Individual Induction)

Rev:02

SAFETY ORIENTATION & SAFETY INDUCTION TRAINING



























PROJECT / SITE LOCATION: _____

COMPANY NAME : _____ TRADE / WORK SCOPE : _____

WORKER'S FULL NAME : _____ NRIC / FIN No.: _____

INDUCTION DATE : _____

CONTENT :

A) OH&S POLICY STATEMENT <input type="checkbox"/>	C) DUTY & RESPONSIBILITIES <input type="checkbox"/>
B) IN-HOUSE RULES & REGULATION <input type="checkbox"/>	D) PENALTY / DISCIPLINARY SYSTEM (If Any) <input type="checkbox"/>
1.  P.P.E. <input type="checkbox"/>	14.  AVOID OVERLOADING <input type="checkbox"/>
2.  PREVENTION OF FALLS FROM HEIGHT <input type="checkbox"/>	15.  GOOD HOUSEKEEPING <input type="checkbox"/>
3.  LADDER SAFETY <input type="checkbox"/>	16.  ACCESS & EGRESS <input type="checkbox"/>
4.  VEHICLE SAFETY <input type="checkbox"/>	17.  NO HORSEPLAY <input type="checkbox"/>
5.  PREVENTING COLLAPSE <input type="checkbox"/>	18.  SAFETY SIGNS <input type="checkbox"/>
6.  ELECTRICAL SAFETY <input type="checkbox"/>	19.  PERSONAL HYGIENE <input type="checkbox"/>
7.  CONFINED SPACES <input type="checkbox"/>	20.  NOISE & DEHYDRATION <input type="checkbox"/>
8.  LIFTING OPERATIONS <input type="checkbox"/>	21.  REPORT INJURIES <input type="checkbox"/>
9.  SIGNALING FOR LIFTING OPERATION <input type="checkbox"/>	22.  REPORT HAZARDS <input type="checkbox"/>
10.  CORRECT USE OF TOOLS & EQUIPMENT <input type="checkbox"/>	23.  FIRE SAFETY <input type="checkbox"/>
11.  SAFETY & EMERGENCY STOP FEATURES <input type="checkbox"/>	24.  OPERATING OF FIRE EXTINGUISHER <input type="checkbox"/>
12.  TOOLS & EQUIPMENT CONDITION <input type="checkbox"/>	25.  KNOW YOUR FIRE SAFETY PROVISION <input type="checkbox"/>
13.  LOOKING AFTER YOUR BACK <input type="checkbox"/>	26.  KNOW YOUR EMERGENCY PROCEDURES <input type="checkbox"/>
X. <i>Others</i> <input type="checkbox"/>	Y. <i>Others</i> <input type="checkbox"/>

- A. I have been undergone the first day safety induction training & safety orientation and was made known of the company's OH&S policy statement, in-house rules & regulations of the worksite and also my duty & responsibilities as individual.
- B. I was also briefed on the general safety awareness, occupational health hazard, emergency preparedness, environmental control, site security system etc...
- C. I acknowledge & declare that I understood all the content of the above that was briefed.

SIC ATTENDEE (NAME OF WORKER): _____ SIGNATURE: _____

(Note: A reasonably clear photocopy of NRIC/WP/S-Pass/EP & CSOC & Relevant Trade Certificates shall be accompanied with this form.)

SIC CONDUCTED BY (NAME): _____ SIGNATURE: _____

DESIGNATION: Safety Supervisor Site Supervisor In-charged. (Others, Specify) _____

(Note: A copy of Item A,B,C & D and Others Relevant Documents that use for this SIC shall be accompanied with this form.)

Form B
TOOLBOX MEETING

PROJECT/LOCATION: _____

COMPANY : _____ DATE : _____

CONDUCTED BY: _____ DESIGNATION: _____

SIGNATURE : _____ TIME (Started-End) : _____

S/N	Subjects Discussed : (eg. SWP, Risk & Hazard Associated with the task / work)

S/N	NAME OF WORKER	ID No.	SIGNATURE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Feedbacks :	

DAGON CONSTRUCTION COMPANY LIMITED

Form C - MAINTENANCE & SERVICING REPORT

MAINTENANCE OF MACHINERIES/ EQUIPMENTS / CRANES / BORING UNITS or RIGS

Project Site : _____ MONTHLY
 Model of Machines/Equipment _____ 3-MONTHLY
 Company I/D No: _____
 Serial No. : _____ Month of Servicing: _____

S/N	ITEM CHECKED	CHECK FOR	REMARKS
1	Wirope:	~ Main Line	
		~ Single Line	
		~ Back Boom	
2	Lifting Hook		
3	Rope Drum		
4	Rope Pulleys & Securing Pins		
5	Brakes	~ Winch	
		~ Clutch Linen	
6	Gears		
7	Rollers:	~ Swing	
		~ Under-Carriage	
8	Running surface	~ Track Shoe	
		~ Track Chain	
9	Shafts & Axles		
10	Crane Boom	~ Appearance	
11	Frame Work	~ Walkway, Unit Base	
12	Welding or other fastening devices		
13	Instruments working condition		
14	Engine Oil / Filter		
	~ Radiator Water		
	~ Battery (Water)		
	~ Fan Belt		
	~ Air Cleaner		
	~ Hydraulic Oil / Filter		
	~ Transmission oil filter		
	~ Gear Oil		
	~ Diesel Tank / Filter		
15	Others		

√	Satisfactory	▲ Serviced & Report by :	
X	Not Satisfactory		
NA	Not Applicable		_____ (Mechanic's Name & Signature)
	Report Reviewed by :		
		_____ (Destination)	_____ (Name & Signature)

Form D - DAILY MAINTENANCE CHECKLIST *PWC-OR-08 (REV-03)*

FOR CHECK ON : GENERATOR VIBRO-HAMMER WELDING SET MOBILE CRANE
 EXCAVATOR AIR-RECEIVER BORING UNIT BORING MACHINE

MACHINE/EQUIPMENT LM or ID No: _____

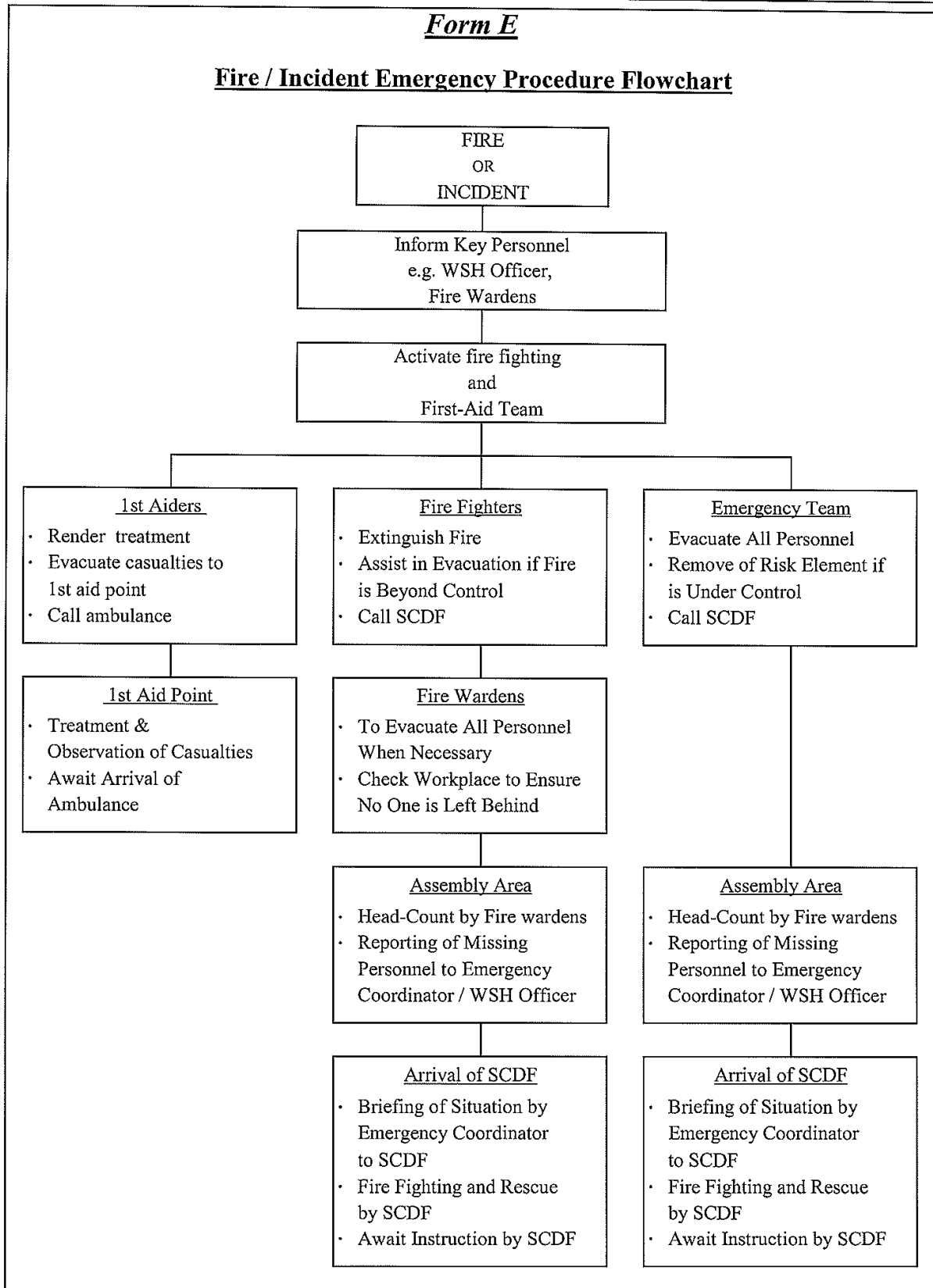
MONTH: _____

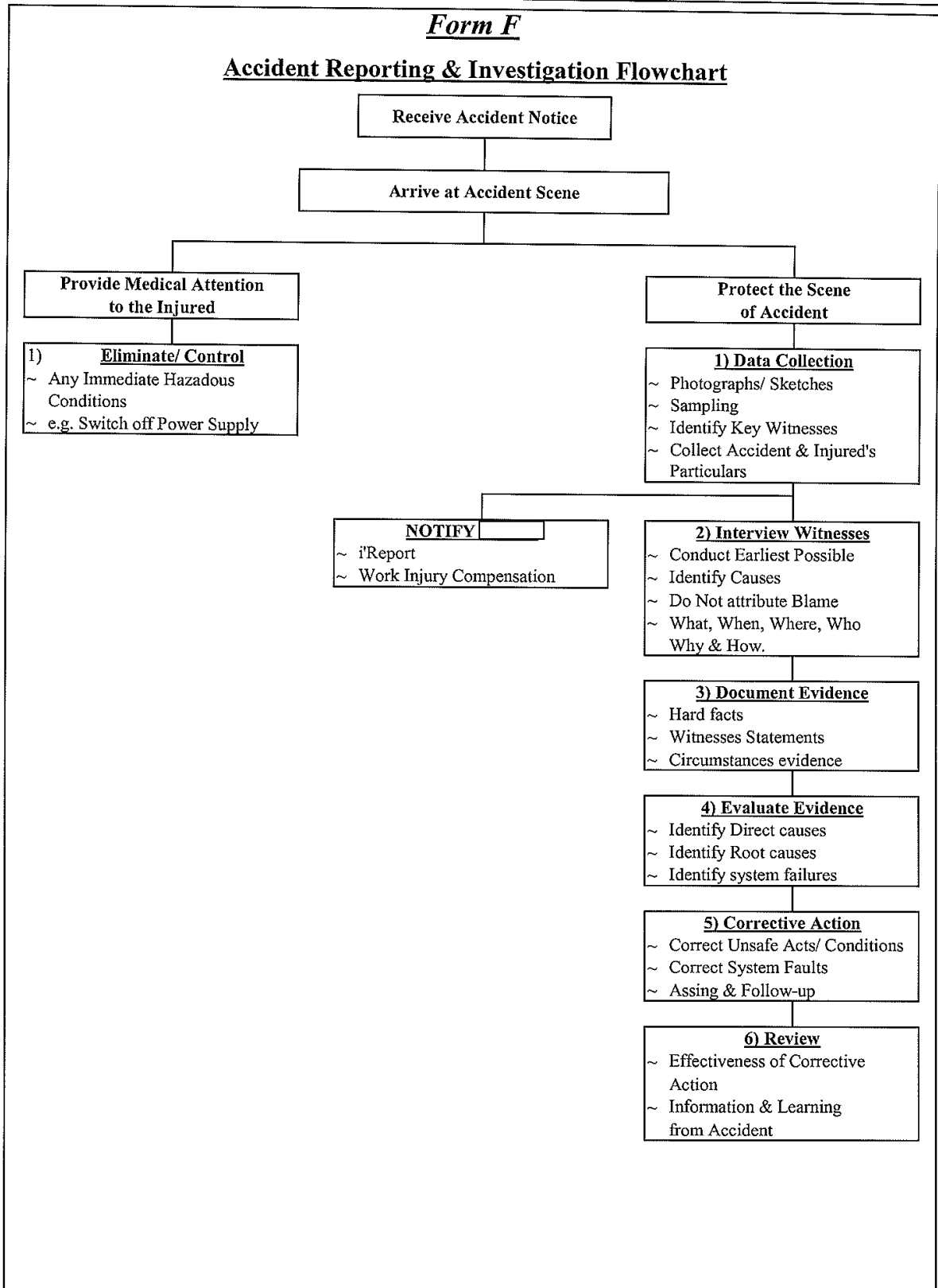
Check	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Water level/conditions																																
2. Oil level/conditions																																
3. Leakage																																
4. Fan belt																																
5. Filters																																
6. Radiator																																
7. Starting & exhaust pipe																																
8. Hydraulic oil level																																
9. Pump working conditions																																
10. Battery water/conditions																																
11. Diesel																																
12. Conditions of equipment																																
13. Others																																
Check By:																																
Name:																																
Signature:																																

PROJECT SITE: _____

PROJECT SITE: _____

Reviewed By: _____
(Name/Signature/Date)





Form-G

INCIDENT/ SAFETY ANALYSIS REPORT

1. TYPES OF INCIDENT TO BE REPORT: *(Please select or indicate if others)*

- | | |
|---|---|
| <ul style="list-style-type: none"> • Accident Report <input style="width: 30px; height: 20px;" type="checkbox"/> • Dangerous Occurrence <input style="width: 30px; height: 20px;" type="checkbox"/> • Near Miss Incident <input style="width: 30px; height: 20px;" type="checkbox"/> | <ul style="list-style-type: none"> • Unsafe Act / Unsafe Condition <input style="width: 30px; height: 20px;" type="checkbox"/> • Safety Infringement Report <input style="width: 30px; height: 20px;" type="checkbox"/> • Others _____ |
|---|---|

2.1 # PARTICULARS OF INJURED PERSON / PERSON INVOLVED

- Name of Company : _____
- # Full Name *(Injured Person/Person Involved)* : _____ • Sex : _____
- # WP/ EP/ NRIC No. : _____ • Age : _____
- Resident Address : _____
- # Occupation/ Trade/ Site Appointment : _____ • Date of Birth : _____
- Date Joined Company : _____ • Contact No: _____

2.2 # PARTICULARS OF INJURED PERSON / PERSON INVOLVED

- Name of Company / WP Employer: : _____
- # Full Name *(Injured Person/Person Involved)* : _____ • Sex : _____
- # WP/ EP/ NRIC No. : _____ • Age : _____
- Resident Address : _____
- # Occupation/ Trade/ Site Appointment : _____ • Date of Birth : _____
- Date Joined Company : _____ • Contact No: _____

3.1 DETAILS OF THE INCIDENT

- # Date of Incident : _____ • Time : _____
- # Project of Incident take place : _____
- # Main Contractor/ Workplace Occupier : _____
- # Area/ Location of Accident/ Incident : _____
- Description of Machineries involved *(if any)* : _____

3.2 Name of Witness -A

- # Witness WP/ ID. No. : _____ (Designation)
- # Witness Tel/Hp No. : _____

3.3 Name of Witness -B

- # Witness WP/ ID. No. : _____ (Designation)
- Witness(es) Address *(if any)* : _____
- # Witness(es) Tel/Hp No. : A) _____ B) _____

6.1 FINDINGS AND OBSERVATIONS OF INCIDENT	
• Type of Incident	: _____
• What time did he start work that day	: _____
• Was he working overtime	: _____
• # Machine(s) / Agencies Involved (if any)	: _____
• What was the activity during the incident?	: _____

6.2 What was the Immediate Causes?	: _____

6.3 What was the Root Causes?	: _____

6.4 Any contribution factors?	: _____

7.1 IMMEDIATE CORRECTIVE ACTION : <i>(Actions taken during or right after the incident)</i>	

7.2 PREVENTIVE MEASURES: <i>(Recommendations to be taken to prevent re-occurrence of such incident)</i>	

• Implement by <i>WHO?</i> (Name & Appointment)	: _____ • Targeted Date: _____
8. REPORT PREPARED BY: (Site Incharge / Appointed Site Safety Coordinator or Safety Supervisor)	
<i>(The Appointed Site Incharge are responsible to prepare this report for items 1 to 8, if not the Site In-charge should have dedicate his duty to the Appointed Site Safety Supervisor and/or Site Safety Coordinator - if any.)</i>	
• # Full Name of Site Supervisor Incharge / Appointed Site Safety Coordinator	: _____ • Signature : _____
	• Date : _____
9. REPORT VETTED & APPROVED BY PROJECT MANAGER	
• Commend or Suggestion (if any)	_____

• Name of Project Manager	: _____ • Signature : _____
	• Date : _____
Note:	
~ NA = Not Applicable;	# = Delete accordingly

Form-H (Statement Record)

Date / Time of Interview : _____
Full Name of Witness / Injured Worker : _____
Designation / Occupation : _____
NRIC / Fin & WP No. : _____
Company/Address : _____
Contact No. (if any) : _____

Note: NA = Not Applicable; # = Delete accordingly

Interview Statement

I declare all the above statement are truth and according to my best knowledge and understanding, and this statement was given under my clear conscience and is not under any influence by anybody.

Full Name of Interviewee

Signature & Date

Statement taken by: (Full Name)

Signature & Date

Full Name of Interpreter/Translator (if any)

Signature & Date

Form J

ISSUE OF PERSONNAL PROTECTIVE EQUIPMENT RECORD

Project / Site Location : _____ Page: _____

Company Name: _____ Trade: _____

Prepared & Issued by : _____ Name: _____ Designation: _____ Signature: _____

S/N	Name	WP/ NRIC No:	TYPES OF PPE													Signature	Date		
			Safety Helmet	Safety Boots	Safety Rub.Boots	Work'g Glove	Safety Vest	Safety Plug	Ear Protection	Eye Mask	Dust Mask	Safety Belt	Safety Harness	Whistle	Rain Coat				
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

NOTE:

- 1) ALL THE ABOVE PPE ITEMS ARE ISSUED TO THE PERSONNAL UPON EMPLOYMENT BY THE COMPANY.
- 2) ANY DAMAGE TO ABOVE, MUST BE REPORTED AND REPLACED IMMEDIATELY.
- 3) TO UTILIZE ALL PPE PROVIDED AT ALL TIME ON SITE DURING WORKING PERIOD.
- 4) REPLACEMENT OF THE ABOVE ITEMS WILL BE SOLE RESPONSIBILITIES OF THE INDIVIDUAL PERSONNAL UNLESS PROVENT THAT THE ITEMS IS OF THE GENERAL WEAR & TEAR. THE FINAL DECISION WILL BE OF THE MANAGEMENT.
- 5) LEGISLATION AND PROMOTIONAL ACTIVITIES ALONE CANNOT PREVENT ACCIDENT FROM HAPPENING. WORKERS SHOULD PLAY THEIR PART BY OBSERVING SAFETY RULES TO ENSURE THEIR SAFETY AND SAFETY OF OTHERS

RISK ASSESSMENT / SWP BRIEFING / IN-HOUSE TRAINING RECORD

PROJECT/LOCATION: _____

COMPANY : _____ DATE : _____

CONDUCTED BY: _____ DESIGNATION: _____

SIGNATURE : _____ TIME (Started-End) : _____

SUBJECTS:
 During this training session the workers listed below are briefed of the set of company's established safe work procedure & risk assessment on various work process as listed below by the apponited safety personnel and/or site supervisor in-charged.

S/N	WORK OPERATION / PROCESS

S/N	NAME OF WORKER	ID No.	SIGNATURE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

FORMS

Form 1

GENERAL SAFETY INSPECTION CHECKLIST

INSPECTED BY : _____
(Name & Signature) (Designation)

DATE INSPECTED: _____ TIME INSPECTED : _____

S/N	ITEMS CHECKED	YES	NO	N.A	LOCATION	REMARKS
1	Personal Protective Equipment					
a	Are all workers issued with the appropriate type of PPE?					
b	Any records of issuance kept?					
c	Are safety helmets / belt / harness worn and used by workers while working on site / height?					
2	Electrical Hazards					
a	Is all electrical equipment free of electrical defects?					
b	Are all temporary electrical installation provided with ELCB?					
c	Any bare wires inserted into the socket outlet?					
d	Any electrical wires running on wet surfaces?					
e	Are portable hand tools, equipment, wire and plugs used in good working condition?					
3	Fire Hazards					
a	Any fire extinguishers provided in site office and hot work areas?					
b	Are oxy – acetylene cylinders fitted with flashback arrestors?					
4	Falling Hazards					
a	Any unguarded / floor openings and effectively barricaded or covered up?					
b	Are proper working platforms provided to workers working at height?					
5	Housekeeping					
a	Any passageways obstructed by debris / materials?					
b	Workers disposed their debris daily at the designated areas / bins?					
6	First Aid Box					
a	Is first aid boxed available?					
b	Are they maintained and documented?					
c	Are there first aiders available?					
7	Scaffold					
a	Weekly check by scaffold supervisor?					
b	SWL displayed?					
c	Erected by qualified erectors and supervised by scaffold supervisors?					
8	Others					
a						

Form 2

CONCRETING – FORMWORK INSPECTION CHECKLIST

Part 1	Design	OK	NOT OK	CORRECTIVE ACTION
1	Formwork structure designed by a competent person / professional engineer			
2	Safety factor for the structure is at least two.			
3	Drawing sufficient in detail for construction of the structure			
4	Adequate diagonal and horizontal braces incorporated into the design for the shoring system			
5	Design checked and verified by construction manager			
6	Copy of design drawing extended to the formwork supervisor			
Part 2	A.) Erection of Formwork	OK	NOT OK	CORRECTIVE ACTION
1	Materials used are adequate in strength.			
2	Formwork constructed in accordance to design.			
3	Forms adequately braced or tied to maintain shape and position (with props , tie backs).			
4	Forms are effectively secured to the shoring system			
Part 2	B.) Erection of Shoring	OK	NOT OK	CORRECTIVE ACTION
1	Members of the shoring system are in good condition and in adequate size.			
2	Spacing of members (vertical & horizontal) and bracing (lateral & diagonal) is as designed.			
3	Bracing including diagonal bracing installed in both longitudinal and transverse directions.			
4	Shoring rests on firm and uniform footing (on soleplates if resting on ground)			
5	Platform provided for inspection			
Part 3	Supervision and Inspection	OK	NOT OK	CORRECTIVE ACTION
1	Erection supervised by designated person			
2	Structure endorsed by the professional engineer (if designed by him) before concreting works commence			
3	Structure inspected by designated person during erection and during concreting work and details of such inspections recorded			
Checked by: _____		Approved by : _____		
Name & Signature: _____		Name & Signature: _____		
Date: _____		Date: _____		
Part 4	Stripping	OK	NOT OK	CORRECTIVE ACTION
1	Stripping commences only after concrete is set			
2	Reshoring provided to support slabs and beams after stripping			
Checked by: _____		Approved by : _____		
Name & Signature: _____		Name & Signature: _____		
Date: _____		Date: _____		

Form 3

INSPECTION CHECKLIST FOR SCAFFOLD SUPERVISOR

Site: _____
 Location of Scaffold : _____
 Type of Scaffold: _____
 Height of Scaffold: _____

Weekly
 1-Monthly
 3-Monthly

Inspection No.	Inspection Date/Time	Scaffold Supervisor/Professional Engineer	
		Name / Signature	
		Contractor	

	Scaffold Components	Components (inadequate, undersized ,etc.)	Conditions of Scaffolds / Component Corroded / bent dented ...etc	Correct Method of Installation	Rectification Remarks
				(Yes / No)	
1	Ties-back			Y / N	
2	Cross Bracing			Y / N	
3	Horizontal Bracing			Y / N	
4	Joint Pins & Armlock			Y / N	
5	Base Plates / Sole Boards			Y / N	
6	Foundation			Y / N	
7	Working Platforms			Y / N	
8	Toe Boards Planks & Decking used for working platform			Y / N	
9	Guardians (At roof top)			Y / N	
10	Housekeeping on scaffold			Y / N	
11	Debris netting			Y / N	
12	Others				

Note :

- 1 This register shall be entered by a scaffold supervisor and shall be kept at the worksite for inspection by an inspector , pursuant to Factories Act (Chapter 104)-Factories (Scaffolds) Regulations 2004.
- 2 This inspection register should be kept available at the worksite for inspection by a factory inspector.
- 3 If the scaffold is designed by a Professional Engineer(PE) the erection shall be done strictly according to the PE's design . A copy of this design must be kept at the site for checking by an Inspector.
 If amendments are necessary , the PE must be informed and design of scaffold amended by the P.E. accordingly

Form-4
PRE-EXCAVATION INSPECTION CHECKLIST

TO BE INSPECT, CHECK & FILLED UP BY EXCAVATOR OPERATOR PRIOR EXCAVATION WORK	
Project Title:	_____
Name of Contractor:	_____
Date of Inspection:	_____
Name of Inspector:	_____ Signature: _____
Hydraulic Excavator Model No. :	_____ LM (if any) _____
LM Cert. Expiry Date:(if any)	_____ (dd-mm-yyyy)

	* Items Inspected / Checked (√ = Yes/Satisfactory, X = No/Not Satisfactory, NA=Not Applicable)	Results			Remarks
		√	X	NA	
1	Adequate warning signboards placed conspicuously at strategic locations				
2	Route diversion signboards for public information and convenience (where public access is affected)				
3	Blinker lights to trenches / works of existing road				
4	Shoring to excavated trenches more than 1.5m deep				
5	Shoring for excavated trench more than 4m deep constructed according to PE's design and drawings				
6	Open sides of excavation are guarded by adequate and effective barricades (Minimum 1.1m height)				
7	Temporary access with railing properly secured over trenches				
8	Ladders, stairways or ramps provided in trench of more than 1.2m depth				
9	Materials kept away from the edges of the trench (At least 610mm away from the trench)				
10	Safety cover across road opening / over drain opening				
11	Overhead protection for workers working in the manholes near buildings under construction				
12	Tunnel constructed according to PE's design and drawings				
13	Approved ventilation system provided in tunnel in accordance to PE's design and drawings				
14	Personal Protective Equipment worn by workers / site staff				
15	Vehicles / Machinery operated by authorized person				
16	Others				

<u>Contractor's Excavator Operator</u>	
<i>~I declare that the works have been inspected and accepted to the best of my knowledge.</i>	
_____	Date: _____
Name & Signature of Contractor's Excavator Operator	Time: _____

Form 5

MONTHLY INSPECTION CHECKLIST FOR FIRE EXTINGUISHER

SITE: _____

LOCATION OF CHECK: _____

MONTH OF: _____

NAME OF CHECKER: _____

DATE: _____

SIGNATURE: _____

TIME: _____

CHECKING ITEMS		YES	NO	REMARKS
1	Is the equipment updated			
2	Is the equipment placed at a suitable location			
3	Is the equipment gauge in working condition			
4	Are safety pin / catch attached.			
5				

SITE: _____

LOCATION OF CHECK: _____

MONTH OF: _____

NAME OF CHECKER: _____

DATE: _____

SIGNATURE: _____

TIME: _____

CHECKING ITEMS		YES	NO	REMARKS
1	Is the equipment updated			
2	Is the equipment placed at a suitable location			
3	Is the equipment gauge in working condition			
4	Are safety pin / catch attached.			
5				

SITE: _____

LOCATION OF CHECK: _____

MONTH OF: _____

NAME OF CHECKER: _____

DATE: _____

SIGNATURE: _____

TIME: _____

CHECKING ITEMS		YES	NO	REMARKS
1	Is the equipment updated			
2	Is the equipment placed at a suitable location			
3	Is the equipment gauge in working condition			
4	Are safety pin / catch attached.			
5				

Form 6

MONTHLY INSPECTION CHECKLIST FOR FIRST AID BOX

PROJECT: _____

LOCATION OF CHECK: _____ MONTH OF: _____

NAME OF CHECKER: _____ DATE: _____

SIGNATURE: _____ TIME: _____

CHECKING ITEMS		YES	NO	NA	REMARKS
1	Is the first-aid box updated				
2	Is the first-aid box placed at a suitable location				
3	Is the first-aid box suitable/right/sufficient size				
3	Individually wrapped sterile adhesive dressing				
4	Crepe bandage 5cm				
5	Crepe bandage 10cm				
6	Absorbent gauze (packet of 10 pieces)				
7	Hypoallergenic Tape				
8	Triangular bandages				
9	Scissors				
10	Safety Pins				
11	Disposable gloves (pairs)				
12	Eye Shield				
13	Eye Pad				
14	Resuscitation Mask (One-way)				
15					

Note:

Tick in Yes indicate : No replenish is required
 Tick in No indicate : Contents required replenish
 Tick in NA indicate : Not Applicable

Form 7

GAS CUTTING EQUIPMENT INSPECTION CHECKLIST

Project Site: _____

Equipment No: _____

ITEM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 GAS CYLINDER																															
1.1	Secured in upright position.																														
1.2	Protected from oil ,sparks ,heat and fire.																														
1.3	Kept away from live electrical cables.																														
1.4	Leak free (To be tested with soap solution																														
1.5	Oxygen & Acetylene are kept apart.																														
1.6	Stored apart and marked "Empty" & "Full".																														
2 REGULATORS																															
2.1	Are in good working conditions																														
2.2	Are leak free (To be tested with soap solution)																														
3 HOSES AND CONNECTIONS																															
3.1	Is Leak free(To be tested with soap solution).																														
3.2	Are securely joined and fasten with clips.																														
4 CUTTING TORCH																															
4.1	Are in good working condition.																														
4.2	Are leak free(To be tested with soap solution).																														
4.3	Are securely connected to the nozzle & hose.																														
5 SAFETY DEVICES																															
5.1	Flash back arrestors at regular and torch																														
5.2	Fire extinguisher near equipment.																														
6 OTHERS																															
6.1	Cylinder Key are available																														
6.2																															
Check By: _____																															
Name: _____																															
Signature: _____																															

Form-11

PRE-LIFTING OPERATION INSPECTION CHECKLIST

TO BE INSPECT, CHECK & FILLED UP BY LIFTING SUPERVISOR PRIOR LIFTING OPERATION	
Project Title :	_____
Contractor :	_____
Date of Inspection:	_____
Name of Lifting Supervisor:	_____ Signature:
Lifting Machine LM No. :	_____ ID No.:
LM Cert. Expiry Date:	_____ (dd-mm-yyyy)

S/N	DESCRIPTION	YES	NO	NA	REMARKS
1	LOAD				
~	Has the actual weight of the load inclusive of the accessories been established?				
~	Is the established load within the safe working load of the lifting equipment?				
~	Is the load rigged to the centre of gravity?				
~	Is a tag line provide to control movement of the load?				
~	Is the load being lifted in a level and stable manner?				
2	LIFTING EQUIPMENT				
~	Is the selected lifting equipment fit for purpose and appropriate for the lifting operation?				
~	Has the lifting equipment been examined at least once in the last 12 months (or 6 months for those lifting personnel) by authorised examiner and does it possess a valid lifting equipment certificate?				
~	Has the lifting equipment been marked conspicuously with the maximum working load which it can safely carry?				
3	LIFTING OPERATION				
~	Is there a lifting team available for the operation?				
~	Has risk assessment been conducted to ensure that all possible hazard are eliminated and risk are reduced?				
~	Has the identified control measure(s) been implemented?				
~	Is the area for lifting the load and the lifting path been cleared of obstruction and personnel?				
~	Has the designated area for placing the load been cleared or properly prepared prior to the lifting operation?				
~	Is the load likely to clash with other structures or equipment along its lifting path?				
~	Has a safe means of access or egress been provided for personnel to attach or recover the rigging of the load?				
~	Has the means of communication during the lift been established and confirmed?				
~	Has the lifting zone been barricaded to prevent access by unauthorised personnel?				
4	PERSONNEL INVOLVED IN LIFTING OPERATION, SUCH AS EQUIPMENT OPERATOR, SIGNALMAN, RIGGER AND LIFTING SUPERVISOR				
~	Has trained and competent lifting personnel been identified for the lifting operation?				
~	Have all lifting personnel such as operator, lifting supervisor, signalman and rigger been brief at a tool box for risk assessment & SWP prior lifting the load?				

Contractor's Lift/Hoist Operator	
<i>~I fully understand the nature of the work and safety conditions that must be met. I have inspected the requirements and conditions relating to the work to be performed to the best of my knowledge.</i>	
_____	Date: _____
(Name & Signature of Contractor's Lift/Hoist Operator)	Time: _____

Form-12

PRE-OPERATION PILING MACHINE INSPECTION CHECKLIST

TO BE INSPECT, CHECK & FILLED UP BY PILING MACHINE OPERATOR	
Project Title:	_____
Name of Contractor:	_____
Date of Inspection:	_____
Name of Inspector:	_____ Signature: _____
Piling Machine LM / ID No. :	LM. _____ ID. _____
LM Cert. Expiry Date:	_____ (dd-mm-yyyy)

	* Items Inspected / Checked (Tick for OK, Cross for defective)	Results			Remarks
		OK	Defective	NA	
1	Engine Condition				
2	Engine Oil Leaks				
3	Hydraulic Oil leaks				
4	Battery Checks				
5	Guide Wire in good Condition				
6	Wire rope are in good condition				
7	Conditions of Retaining pins & Position				
8	Lifting Gear Tested & Identification Tag in place				
9	Leader Condition				
10	Pulleys in good condition & Properly Greased				
11	Mirrors				
12	Wipers				
13	Wind Screen Condition				
14	Operation lever Condition				
15	Condition of Fire Extinguisher				
16	Cabin Free from Obstruction				
17	Hydraulic Hoses in Good condition				
18	Electric Cables & Holders properly insulated				
19	Brake pedal in Good Condition				
20	Wire Rope properly Feed on Sheave				
21	Bolts & Nuts Tightened properly				
22	Ladder in Good Condition				
23					

<u>Contractor's Boring Operator</u>	
<i>~I fully understand the nature of the work and safety conditions that must be met. I have inspected the requirements and conditions relating to the work to be performed to the best of my knowledge.</i>	
_____ Name & Signature of Contractor's Boring Operator	Date: _____ Time: _____

Form 14

INSPECTION CHECKLIST FOR LIFTING GEAR / APPLIANCES

PROJECT: _____	
NAME OF CHECKER: _____	SIGNATURE: _____
DESIGNATION _____	DATE: _____
LE Registration No: _____	Expiry Date: _____
Max SWL: _____	
Type & Description of Lifting Equipment: _____	

DESCRIPTION OF ITEMS CHECKED		YES	NO	REMARKS
A	WIRE ROPE SLING			
1	Reduction in wire rope diameter (more than 7%)			
2	Damage in wire rope strands (more than 10%)			
3	Abraded / Cut			
5	Kinked or Twisted			
6	Wire rope Corroded			
7	Bird Cage			
8	With valid LG Certificates			
B	SHACKLE			
1	Visual Crack observed			
2	Fatigue			
3	Twisted			
4	Shackle Corroded			
5	Abraded / Cut			
6	With valid LG Certificates			
C	EYE-HOOK			
1	Visual Crack observed			
2	Fatigue			
3	Twisted			
4	Eye-hook Corroded			
5	Abraded / Cut			
6	Safety Latch in place and in good working condition			
7	With valid LG Certificates			
D	CHAIN SLING			
1	Visual Crack observed			
2	Fatigue or Elongated			
3	Twisted on chain link			
4	Master link or chain link Corroded			
5	With valid LG Certificates			
E	WEBBING SLING			
1	Knots			
2	Chafe			
3	Cut			
4	Stitches seams damaged			
5	With valid LG Certificates			
F	OTHERS (Please specify)			
1				

Project: _____

Form-19 Lifting Gear - Register Forms

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Page ____ of ____

Type of Lifting Gear: _____
(indicate here e.g. Wire-Rope Sling / Webbing Sling / Chain-Blocks etc.)

LG Description (details from LG Cert.)

ITEM	Dia./Size (Ø / mm)	Length (Mtr)	Dee Shackles	Eye Hook / Clamp	Others	LG (Lifting Gear) / LE (Lifting Equipment) No.:	Max. SWL (Ton)	Expiry Date	Remarks
			Size (Ton)	Size (Ton)	Size (Ton)				
1									

Note: Different Types of Lifting Gear should use others forms for records.

Recorded By:
Name : _____ Signature: _____
Appointed Lifting Supervisor: _____ Date : _____

Checked By Site In-Charged :
Name : _____ Signature: _____
Date : _____