

# EHS PLAN

## ALL CONSTRUCTION PROJECTS

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**Environment and Health, Safety Policy**

## EHS OBJECTIVES & TARGETS.

Objective	Measurable Target	Action Plan	Responsible Person
Zero Incident	zero	<ul style="list-style-type: none"> <li>- EHS committee establishment</li> <li>- EHS Inspection</li> <li>- Compliance of EHS audit.</li> <li>- Try to minimize recordable Injuries.</li> </ul>	All team members including management
Reduction in fuel and energy consumption	Up to 1.5%	<p>To create records for current consumption</p> <p>To devise methods to reduce consumption</p>	All team members including management
Wastage Control of natural resources like aggregate, sand etc.	1% less than budgeted limits	<p>To create records for current consumption</p> <p>To devise methods to reduce Consumption with fulfillment of standards</p>	All team members including management

## Abbreviations

<b>Abbreviations</b>	<b>Terms</b>
Partner	PARTNER
Cor.	CO-ORDINATOR
PM	PROJECT MANAGER
S. Eng	SENIOR ENGINEER
J. Eng	JUNIOR ENGINEER
SUP.	SUPERVISOR
SAFETY	SAFETY OFFICER
ASST. SAFETY	ASSITANT SAFETY OFFICER
ACCT.	ACCOUNTANT
B. Eng.	BILLING ENGINEER
ELCT.	ELECTRICIAN
ASST. ELCT.	ASSISTANT ELECTRICIAN
STORE	STORE OFFICER
QA/QC	QUALITY ENGINEER

## **Details of Major Activities**

1. Excavation, Footing excavation.
2. Footing & Column shuttering, reinforcement and concrete placing.
3. Foundation bolt fixing in columns for structure erection
4. Slab shuttering and reinforcement and concrete placing.
5. Brickwork below and above ground
6. Plaster internal & external.
7. Painting internal & external

## 01 INTRODUCTION

### 1.1 Purpose

An important element of living our values is protecting the health and safety of all, as well as the environment of all the communities in which we operate. A health and safety policy ensures that the employer complies with the Occupational Safety and Health Act and relevant state legislation. It provides guidelines for establishing and implementing programs that will reduce workplace hazards, protect lives and promote employee health.

### 1.2 Scope

The Construction E&HS Plan is developed for site construction activities before civil, mechanical, electrical and other support services work completion and does not cover commissioning and start-up or operation.

## 2.d **SAFETY ORGANISATION & RESPONSIBILITIES**

### 2.1 **Organization**

#### a) **PROJECT SAFETY ORGANISATION**



Projects Safety organization Chart as per project requirement will be prepared and submitted

#### b) **RESPONSIBILITIES**

**The Project Manager** – shall be totally responsible for compliance, implementation of Health, Safety and Environment Policy.

##### **Safety at Construction Phase:**

- Organizing, Co-coordinating and Co-operation between employees.
- Coordinating the Safety, Health, Welfare measures by the employers.
- Coordinating Supervision; to meet the joint facilities.

##### **Give Indications to the Vendors:**

- Co-ordinate the information to all the employers.
- Take measures to assume that only authorized persons are entitled to come at the Work place.
- PM shall keep up and actualize the and files in “Draft “and file.

#### c) **SAFETY INSTRUCTIONS and PROCEDURES**

- Clear safety instructions and procedures are the basis for functioning of all at site. These safety instructions and procedures are the minimum safety requirements to be followed by all always at site.
- Every employee, contractor and visitors shall be responsible for fulfilling all safety Instructions and procedures.
- Report unsafe conditions, situations and handlings to the Project Manager.

#### d) **COMMUNICATIONS:**

##### **Kick-off Meeting:**

- The kick-off meeting should be seen as a start meeting, preliminary to the general or project oriented activities.
- In the kick-off meeting beside technical relevant information pay attention to the aspects of Health, Safety and Environment in general.



**Safety Meeting:**

- Specific appointment e.g. Action points as result of consultation between safety technicalities related to the project are discussed every fortnight.

**Pre-Job Meeting:**

- The Pre-Job Meeting is meant for consultation before activities start.
- A part of the meeting is a review to make detail appointment for specific plan on location directed to Health and Safety matters and actual deviation of the normal situation.
- At this meeting the “pre-job checklist” shall be handed over and worked out with all persons involved.

**Tool Box Meeting:**

- Toolbox meetings are conducted every day with the executing employees informing them potential hazards involved about the actual work.

**Progress Meeting:**

- The progress meeting is meant forth daily / weekly consultation between the client and the main contractor.
- E&HS part in this meeting should be a fixed item on the agenda and following discussed.
- Measures of finding from risk analysis are related to interaction between different disciplines.

### 3 | Assocons Projects LLP requirement related to OH & S /Project Rules & Regulations / Disciplinary Program.

#### **Appendix H - Health, Safety and wellbeing Requirements**

Assocons Projects LLP takes the Health, Safety and Wellbeing of its people, suppliers and customer very seriously. In order to ensure that the forthcoming works do not present a risk to the health, safety and wellbeing of anyone that comes into contact with this work Assocons Projects LLP ensures that we as a vendor/supplier define/establish our requirements for health, safety and wellbeing.

1. Health and Safety policy
2. Standards on:
  - Working at height
  - Driver and vehicle safety
  - Electrical work
  - The Management of Health and Safety Risks of RF Fields

As construction/site of work involves high risk activities, some of which may result in Client experiencing serious incidences, awfully documented Health and Safety plan is a must for all contract / project.

The Health and Safety plan includes detailed measures that company has in place to manage the risks associated with the works. The following is a list of the contents that is majorly included in plan.

- Scope of the work to be undertaken
- Key contacts and responsibilities for health, safety and wellbeing delivery including the qualifications and experience of those with specific responsibility for health, Safety and well being.
- Risk assessments, method statements, and safe systems of work that detail how The tasks will be completed safely. These must be specific to the project/ contract And take into account the difference environments that will be encountered.
- Details of any relevant accreditations e.g. OHSAS 18001 or associated programs.
- Training matrix detailing what health, safety and wellbeing training you deliver to Your employees and contractors.
- Details of PPE selection, type and record keeping
- Details of the monitoring, auditing, inspection, certification and reporting processes.
- Details of companies incident reporting and investigation procedures

- Details on how subcontractors to be selected and managed, including Communication of client requirements ☒
  - Details on how local legislation and standards, Policies and Standards will be adhered to

### **Subcontractor Selection and Management**

- As the contractor employed by Client we are responsible for ensuring that all sub -contractors comply with all Client requirements
- The Client Turkey inspection and monitoring regime shall be used to manage and Report on the performance of all contractors under the supplier’s control.
- This will Be delivered using the provided checklist and process.
- Regular meetings must be held with all subcontractors on a regular basis to discuss Health and Safety performance and initiatives
- Regular meetings must be held with all subcontractors on a regular basis to discuss

### **Health and Safety Management**

- A single point of contact for health and safety shall be nominated for the project, which is competent, senior, and has sufficient authority to influence health and Safety management.
- Management delivering the project has access to sufficient, competent health And safety advice.
- Attendance of these nominated people at health and safety review meetings or as required at operational meetings is mandatory.

### **Training**

- Training schedule to be produced for the project and must cover all risks associated With the works.
- Training and certification for high risk tasks such as working at Height, driving and electrical work must be agreed with Client.
- All training records must be available for inspection by Client at any time.
- Mechanisms are in place to ensure that no person conducts works for which they have not received training or instruction. This is especially important for the high Risk activities of working at height, driving and electrical work.

### **Driving and Vehicle Safety**

- All drivers must be appropriately trained. The training standard must be agreed With Client.

- all vehicles must be fitted with seatbelts to all seats. □
- all vehicles must be fitted with GPS tracking devices that allow speed and other be Monitored.
- All vehicles must be suitable for the intended use.
- All vehicles must be maintained in line with manufacturer’s recommendations.
- A strict programmed must be in place to monitor the behavior of drivers and passengers, any breach of the following rules must result in dismissal:
  - Driving dangerously e.g. at excessive speed
  - Not wearing a seat belt
  - Driving whilst talking on a mobile phone

**THE BASIC RULES OF CONDUCT** for all Project personnel while on the job site:

- All contractors/subcontractors management and employees must be familiar with the site safety standards and adhere to all requirements:

**3.1 Site Access**

- Prior to issuing a site access card all Contractors/Subcontractors personnel must attend a safety orientation before they are allowed to work on the project.

The **ENTRY PASSES** posses the following general information.

Project:	
Pass Number:	Date of Issue:
NAME:	Designation:
Signature of Issuing Authority:	
Name of Company/contractor:	

**3.2 Orientation**

- All job site personnel must attend an initial safety orientation before beginning work on the project.
- Attendance at the safety orientation shall be documented. At the end of the safety orientation, the workers will be provided with safety helmets which are labeled as **“New Worker”**.
- After assessing them for 15 days on practice of safety standards, these workers will then be designated as permanent workers for the site.

### **3.3 Reporting Hazards**

- Employees must report any unsafe conditions to their supervisor and/or the Safety Engineer/supervisor, without fear of reprisal.

### **3.4 Injuries**












- Employees must report all injuries to their supervisor. All cases must be reported and treated at the First Aid Office. All injuries shall be reported immediately to the Safety.

### **3.5 Smoking / alcohol**

- Smoking is totally prohibited on the site.
- Alcohol consumption is totally prohibited on the site.

# PPE Matrix

Project: -

	PPE											
	ACTIVITIES	Safety Helmet	Safety Shoes	Safety Goggles	Face Shield	Welding Shield	Safety Belt	Rubber Hand gloves	Gum boot	Hand Gloves	Ear Muff /plug	Nose Mask
1	Shuttering & Reinforcement work	✓	✓	As required			✓			As required		As required
2	Concreting / Casting	✓	✓	✓			As required	✓	✓		As required	
3	Working at height.	✓	✓				✓					
4	Welding	✓	✓			✓				✓		✓
5	Gas cutting	✓	✓	✓						✓		
6	Grinding & drilling.	✓	✓		✓					As required	✓	✓
7	Material Handling.	✓	✓	As required						As required		
8	Housekeeping	✓	✓	As required						As required		✓
9	Mechanical maintenance	✓	✓							As required		
10	maintenance Electrical	✓	✓					✓				
11	Working at high noise area	✓	✓								✓	



### 3.3 Safety Helmets

All Contractor/Sub-contractors shall provide IS: 2925-1984 Safety helmets and their employees must wear at all times in the project site.

The employee's site ID number and company name must be displayed above the brim.

Additional identification tape may be added with the approval of the Project/Construction E&HS manager.



- All the contractors/ Sub-contractors should following color codes for safety helmets at Site. Staff/ visitors – White, Workers – Yellow, Contractors / F/M – Blue Electrician – Red, Safety personnel – Green

### 3.7 Safety Shoes

- All employees must wear as per IS: 15298 Safety shoes or boots on the Project site.
  - Sandals, slippers, opened - toed shoes and high heels are not permitted at any time.



### 3.8 Hand Protection

- Gloves must be worn when working with materials or equipment with the potential injury due to sharp edges, corrosive materials, splinters, etc.
- IS 4770-1991 Rubber Gloves must be worn during Concrete works, Electrical works.
- IS 6994(Part I)-1973 Leather Gloves must be worn during- Hot works, Steel works, Mechanical works.



### 3.9 Eye Protection

All Contractors/Subcontractors shall provide their employees IS: 7524(Part I)-1979 Safety goggles or approved equal rated safety glasses with hard side shields required when performing hazardous tasks such as welding, burning, chipping, or grinding



Corrective lens manufactured to IS: 5983-1980 eye protectors (or approved equal) may be worn with hard side shields; other lenses require “over glasses” and/or the use of goggles. Electrical workers are not permitted to wear metal framed safety glasses.



### 3.10 Contact Lens

- Project site does not recommend wearing of contact lens.

### 3.11 Hearing Conservation Program

- Protective hearing equipment is to be provided and used in areas where the noise levels exceed 85 dBA.
- Subcontractors and their employees must wear approved disposable or multi-use earplugs.
- 
- Additional hearing protection may be required for specific activities and/or in designated areas.
- The E & HS Department shall publish a list of known tools and work operations that normally exceed the 85 dBA level.



### 3.14 Jewelry

- Loose necklaces, dangling earrings and bracelets shall not be worn while working on the Project.

### 3.15 Hair

- Anyone working on site property with scalp hair longer than the top of his/her shoulders must tie-up and restrains the hair within the hard hat or coveralls, shirt or jacket collar.

### 3.16 Respiratory Protection

- Respiratory equipment must be worn in areas where health hazards exist due to accumulations of dust, fumes, mists, or vapors.



### 3.17 General Respiratory Protection Program

- E&HS will provide the procedures for proper selection, use, and care of respiratory equipment.
- The Project/Construction E &HS Managers can provide information concerning respirator approval.
- Approved respirators shall only be used for the purpose for which they were originally intended and must not be modified in any way.
- All respirators purchased must be Indian Standards and all personnel must be properly fit tested and trained prior to using respiratory protective equipment.

### 3.18 Clothing

- A minimum requirement for all male persons working on the Project site includes the wearing of a long sleeved shirt and long pants and the female workers shall wear long sleeved shirt over their regular dress.

### 3.19 Truck Transport of Employees

- Project personnel are forbidden to ride on loads, fenders, running boards, sideboards, tailgates, or with legs or feet hanging over sides of trucks.
- Transportation of passengers shall only be permitted in the passenger compartment of vehicles.

- Drivers must not start trucks until they and all internal passengers have seat belts secured and all riders comply with these rules and are properly seated.

### **3.20 Mobile Equipment**

- Personnel are forbidden to ride on any mobile equipment where proper seating is not provided.
- Drivers must secure their seat belts.
- No mobile equipment shall back up without the assistance of a spotter/flagman.
- Other people are forbidden to take the mobile equipment except drivers, such as shoves and lift trucks, etc.

### **3.21 Speed Limit**

- Vehicular traffic shall not exceed the posted speed limit. The speed limit in the site is 15 km/h.



### **3.22 Entering/Exiting Plant Property**

- Security Personnel will be utilized to direct/control employee vehicle traffic entering and/or exiting Project plant property.
- Failure to follow their instructions will result in disciplinary action up to possible removal from the project.

### **3.23 Personal Fall Arrest Systems**

- Positive fall protection is required for all elevated work areas in excess of 2 meters.
- This can be provided through the use of a safety harnesses, guards, scaffolds, safety nets, lifeline 24 mm or 8 mm wire rope etc.
- Where this is not feasible or the hazards of their erection are greater than the protection

Provided then an alternate work method must be developed and approved by the Project/Construction E&HS Department.



- All employees shall wear a full body safety harnesses when they are more than 2 meters above ground level, within 2 meters of an exposed edge without complete fall protection, or when exposed to a lesser fall potential directly above dangerous equipment.
- All safety harnesses shall be to Indian Standards or equally approved shall be equipped with two shock-absorbing lanyards.

### 3.24 Electrical

#### Safety

#### INTRODUCTION

Electrical equipment is used on every site. All personnel should be familiar with all equipment, that electricity can cause serious harm, injury or even a fatality. Electrical systems and equipment must be properly selected, installed, operated and maintained.

Arrangements for the electricity supply should be completed. Prior to project starting taking into consideration all plant such as tower cranes, hoist, bankrolls etc.

It is essential that the electricity power supply requirements are established before any work takes place.

#### GENERAL

Only qualified electricians can work on an electrical installation. Electrical systems insulation must be kept in good order at all times and only authorized operators of machinery who are competent can work on live equipment.

Report faulty electrical equipment as soon as possible, isolate, repair or remove equipment from site ensuring that all signs are in place that identifies the various circuits. A lockout system should be implemented where required.

- Not to touch live equipment and machinery unless operator is authorized and competent to do so;
- Only qualified electricians can work on an electrical installation;

- Ensure that the electrical installation is inspected by a competent person at least Once per month and results recorded in a register
- Ensure that all plug points, distribution boards are properly earthed to the ground Earthing system
- Flame proof fittings shall be fitted in all hazardous areas
- Access to the electrical distribution system shall be controlled to prevent operation By unauthorized persons;
- A lockout system should be implemented where necessary (live work)
- Ensure that all signs are in place that identifies the various circuits
- Report faulty electrical equipment as soon as possible isolate, immediately repair, Or remove from service until repairs are complete;
- Electrical systems insulation to be kept in good order.

### **ELECTRICAL INSTALLATION**

- No unauthorized persons should tamper or work on the electrical installation;
- Sufficient sub distribution boards should be placed on site to avoid overloading; ☐
- Test all conductors and circuits before it is to be worked on; ☐
- Know where all isolation points are; ☐
  - Ensure that the electrical installation is inspected by a competent person at least once per month and results recorded in a register.

### **DISTRIBUTION BOARDS**

- All distribution boards must be properly earthed;
- Access to the electrical distribution system shall be controlled to prevent access by unauthorized persons.

### **PROTECTION AGAINST AND ELECTRIC CURRENTS:**

#### **CIRCUIT BREAKER**

- Before switching on any circuit breakers ensure that all equipment to be energized is safe and in good working order;
- All circuit breakers must be correctly labeled and rated;
- Automatic earth leakage breakers must be installed to protect all out going circuits;
- Circuit breakers shall be provided for all electrical equipment, such as hoists,
- Winches, pumps, grinders, and similar equipment, to prevent workers from being injured by electric shock;
- Determine the reason for a tripped circuit breaker before switching it back on.

## **EARTHING**

### **An efficient earthing system shall have the following:**

- Excellent contact between earth wire and earth rod / plate and ground;
- Excellent contact between earth wire and object to be earthed;
- All earth connections will be made by welding them together or by nut and bolt connectors;
- The conductors to earth shall have no sharp bends;
- They shall not be subject to mechanical pressure;
- Shall not be exposed to corrosion;
- The conductors must not be too long as this will increase the resistance;
- Ropes, levers or chains will not be used as earth conductors;
- Earth rods and plates must be made of copper or copper coated.
- They must not be made of materials that can corrode;
- Ensure that all metal parts that form part of the electrical system are properly earthed;
- When more than one earth rods and plates are required they shall be between six to ten Meters apart;
- Ensure that all plug points, distribution boards are properly earthed to the ground earthing System;
- Automatic earth leakage units must be installed to protect all out going circuits.
- All personnel, except qualified, authorized and licensed electricians, must keep clear of Electrical gear and wiring at all times.
- Only qualified, authorized and licensed personnel will be authorized to work on electrical Equipment.

### **3.25 Compressed Air**

- Personnel must never use compressed air to blow dirt from hands, hair, or clothing. They must not misuse compressed air or release it at another person.

### **3.26 Scaffolds, Ladders and Work Platforms**

#### **INTRODUCTION**

Almost one in five accidental deaths in the construction industry results from falls during work at height. Any place where work is carried out should be safe and free from risk. This includes access to and from the workplace. Sufficient space to work safely must be provided.

#### **THE MAIN AREAS FROM WHICH PEOPLE FALL ARE:**

- Roofs;
- Fragile structures;
- Through openings and holes;
- Ladders and Scaffolds.

### **SELECTION OF EQUIPMENT AND PERSONNEL FOR HEIGHTS**

- Equipment should be suitable for use and must be inspected.
- All conditions of work conditions to be taken into account, including weather conditions.
- All work at heights must be properly planned and organized.
- All employees working at heights must be properly trained and competent.
- The risk of falling from heights must be minimized before the issue of PPE
- Always give priority to handrails and toe board protection then issue PPE

### **FALLING OBJECTS**

- Ensure that nothing is thrown from heights;
- Ensure that the entire work area is barricaded off to prevent accidental entry
- Ensure that toe boards are in place to prevent material and equipment

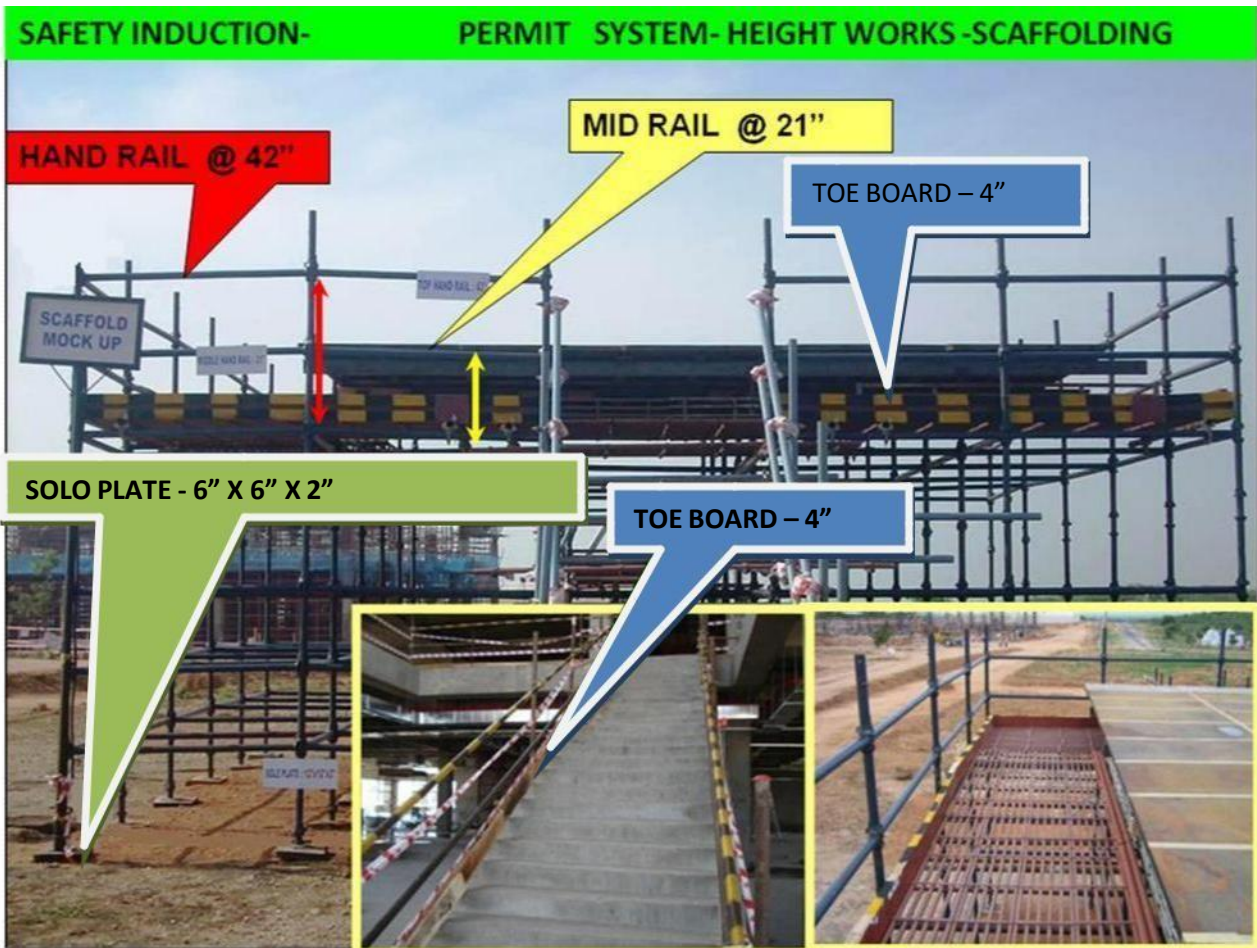
### **PLATFORM INSPECTION**

- Only competent people can inspect working platforms
- An inspection of working platforms, scaffolding and equipment must be carried out before Work commences.

### **PLANNING**

- Ensure that all-risk assessments are completed and correct  
Ensure that all work is planned and appropriately supervised.
- Scaffolds must be assembled and used according to the manufacturer's guidelines or Recommendations.
- Non-standard or "job made" scaffolds, ladders or work platforms must be assembled and Used per a "registered Engineer's approval".
- Non-standard job made scaffolds, ladders or work platforms must be approved in advance by the PMC Safety Manager.





### 3.27 Hoisting Equipment

- Project personnel are forbidden to ride on any hook, load, or headache ball.
- Equipment operators must be qualified /certified before operating equipment, with certification on their person.
- Equipment operator certifications shall be submitted to the Project/Construction E&HS Department prior to operator beginning work on this project.

### 3.28 Lifts

- Unauthorized lifts are not permitted. Project Manager must be notified prior to any critical lift (a critical lift is any lift that exceeds 80% of the design capacity of the lifting device) being carried out.
- All lifting equipment and devices shall be maintained to manufacturer specifications.



### **3.29 Emergency Equipment**

- Personnel must not use emergency equipment for other than its intended use during an emergency, such as fire alarm equipment, fire extinguishers etc.

### **3.30 Sanitary Facilities**

- For construction activities, Contractors/Subcontractor must provide portable toilets. Thereafter toilets wash-up facilities.
- Potable water must be provided for employee convenience and comfort.
- Each contractor/subcontractor is held fully responsible for seeing that his personnel abide by the applicable sanitary requirements and proper use of the sanitary facilities. Defacing or damaging of these facilities is forbidden.

### **3.31 Housekeeping**

- Good housekeeping on the Project site is mandatory.
- The contractor has to adhere to general neatness of working areas, daily disposal of waste and trash, maintenance of clear passageways and walkways, providing adequate temporary lighting and ventilation (both natural as well as artificial) to perform the project related works, removal of projecting nails, removal of oil and grease, removal of loose unused construction material, provision for waste containers, and maintaining adequate sanitary facilities for the work force.
- The contractor and in turn its sub-contractors shall be responsible for cleaning them on daily basis. The contractor shall make necessary arrangements for a disposal tank for collection of waste materials generated during construction activities.
- The container shall be made on a concrete bed of size 3X3X3 m with three separate enclosures for collection of construction debris, wooden pieces and steel scrap. These enclosures shall be constructed with block work at the designated location as indicated by PMC.



- The construction materials/ debris from the site activities shall be accumulated and dumped at the designated disposal area on a daily basis.
- This collection tank shall be cleared once a week from the site.
- The plastic and unused electrical material generated from site should be collected in dustbins and disposed daily basis.

### 3.32 Unsafe Acts

- Unsafe acts will not be tolerated. It is everyone's responsibility to watch for unsafe work and halt it until the work can be done safely.

### 3.33 Fighting

- Fighting anywhere on the site, including in parking areas, is strictly forbidden.
- Violators will be barred from site and possibly subjected to legal action by local Authorities.

### 3.34 Horseplay

- Running, pushing, practical jokes, and other horseplay are forbidden on the site, including Parking areas.

### 3.35 Gambling

- Gambling on the site is not permitted.

### **3.36 Alcohol and Drugs**

- Intoxication or possession of alcohol or illegal drugs is strictly forbidden.

### **3.37 Weapons**

- Possession of weapons on the site is strictly forbidden. This includes parking lot areas.

### **3.38 Tool Box Meetings**

- Contractors and Subcontractors shall take daily **TOOLBOX** safety meetings with their personnel to reinforce safe working procedures.
- These meeting shall be documented and copies of the minutes shall be forwarded to the Project/Construction E&HS Managers.
- E&HS managers and Project Managers shall periodically attend such meetings for auditing and information sharing purposes.
- Contractors/Subcontractors shall conduct daily meetings between the supervisor/foreman and workers to discuss the job to be done, review safe work practices, potential hazards and come to agreement on the safe way to complete the task.

### **3.39 Task Instruction**

- Task instructions shall be provided to the workers daily at all locations and for each individual work task.
- This is a mandatory safety process and failure to utilize will result in disciplinary action up to and including termination from the job site.

### **3.40 Asbestos Material**

- No asbestos material is allowed at Site.

### **3.41 Project Disciplinary Policy and Procedures**

- Contractors/Subcontractors ensure strict compliance with the Project E&HS policies, procedures and site safety practices.
- Condoning of blatant breaches of E&HS by Supervision will not be tolerated on the Project.
- Project team has the right and will exercise this right to remove any person from the Project for condoning, supporting or instructing any employee to commit an unsafe act, work in an unsafe environment or unhealthy conditions, endanger the environment, endanger the health of others, or work with unsafe equipment.

- Employees who ignore or disregard the E&HS requirements will be disciplined in the following manner.
- Blatant Disregard for Project Working at Heights site safety practice - **Instant Dismissal**
- Unauthorized Removal of a Danger Tag or Lock -- **Instant Dismissal**
- Unauthorized Removal of an Out of Service Tag -- **Instant Dismissal**
- Fighting, Consuming or Bringing Alcohol or mind altering Drugs on the site, Horseplay, Unauthorized Alteration to Scaffolding, Bringing firearms, ammunition, explosives, or lethal weapons onto the site - **Instant Dismissal**

#### **Smoking at Site**

First Offense -- Written Warning  
 Second Offense – **Dismissal**

#### **Non Compliance with Personal Protective Equipment**

First Offense -- Verbal Warning  
 Second Offense -- Written Warning  
 Third Offense --**Dismissal**

#### **Non Compliance with Project E&HS Work Practices**

First Offense --Verbal Warning  
 Second Offense -- Written Warning  
 Third Offense -- Monetary fine  
 Fourth time -- **Dismissal**

#### **3.42 Transportation of personnel to the Job Site**

- Contractors/Subcontractors working at the Site are expected to get their personnel to and from the Labor camps (Temporary residences) to the job site in a safe manner.
- All Contractors/Subcontractor must establish safety guidelines for their employees regarding transportation.
- Project management will intervene when unsafe acts are witnessed. Examples of transportation practices that would be considered unsafe are:
  - People standing or sitting in the bed or back of a truck.
  - Buses that are poorly maintained.

### **3.43 SAFETY IN EXCAVATIONS**

#### **INTRODUCTION**

Every year, people are killed or seriously injured when working in excavations. Excavation work shall be properly planned, managed and supervised to prevent accidents.

No excavation can be relied upon to support its own weight. Even rock that looks solid from a visual inspection can collapse without warning. The sides of any type of excavation almost invariably need to be suitably shored or sloped back to the natural angle of repose. Where excavated material may be loose or highly saturated, shoring and dewatering will be required.

#### **PLANNING**

- Before excavating, it is important to plan for the following:
  - Size and purpose of the excavation
  - Nature of the ground including the proximity of any made-up ground
  - Proximity of adjacent structures
  - Position of underground obstructions such as pipes, drainage line, tunnel, well and cables
  - Weather and moisture conditions
  - Sources of vibrations
  - Adjacent roads and sidewalks
  - Protection of the public
  - All the necessary equipment is available on site before work commences.

#### **IMPLEMENTATION AND CONTROL**

- Provide good access in and out of excavation
- Do not store materials close to the edge of the excavation as this may result in the Collapse of the side walls
- Barricade to prevent people from falling into the excavation
- Keep vehicles away from excavation edges
- Wear correct PPE when working in excavations
- Plant operators must be competent
- Stop work should the excavation become unsafe.

#### **UNDERMINING ADJACENT STRUCTURES**

- Ensure that excavations do not affect the base of scaffolding or foundations;
- Plan before work commences whether the nearby structures require temporary support.

## **AVOIDING UNDERGROUND SERVICES**

- All employees should have a sound knowledge of safe digging practices;
- Look for obvious signs such as valve covers or electrical cable indicators; Use locators to trace underground services;
- Whenever the presence of underground pipes, cables, vessels, or structures is known or suspected, mechanical excavators will not be used until all such services have been located;
- Ensure that person supervising excavation work is competent and has an approved existing services plan.

## **PROTECTING THE PUBLIC**

Where members of the public are present, fence off the excavation area to protect them from injury;

- Take special precautions after hours to prevent children from harm;
- Keep members of the public away from moving plant;

## **INSPECTION OF EXCAVATION WORK**

Inspection of work shall be done on start of work shift, end of work shift, when change in conditions or work occur.

### **Only a competent person can inspect excavation work as follows**

- at the start of each shift before work begins;
- After any event that might have affected the strength or stability of the excavation;
- After any accidental fall of rock, earth or any other material;
- All findings must be recorded and reported at the end of each shift;
- People working in the excavation area must be given clear instructions on how to work safely.

## **3.44 MANUAL HANDLING**

### **INTRODUCTION**

In the Construction Industry over one of five of all accidents involve injuries while manually lifting or handling materials. Whenever possible, manual handling to be avoided.

### **GENERAL**

Much of the work on site requires people to lift, carry, move and place loads, sometimes of awkward shape. Poor lifting technique can result in strained muscles or serious back injury. A typical problem is laying paving blocks, pre-cast lintels etc... These may weigh 20 Kg. or more and the strain placed on the back if they are not lifted properly may cause Serious back injury.

Back injuries frequently result from a poor lifting technique. Lifting from a standing position with the back rounded can produce stress on the back six times greater than if the spine is kept straight.

#### **IDENTIFYING, PLANNING AND CONTROLLING RISKS:**

- Avoid unnecessary handling;
- Identify before work is begun, operations which involve either lifting heavy or Awkward loads or repetitive lifting operations
- Find ways of either avoiding the operation altogether, or using mechanical aids to Minimize the amount of manual handling
- Sharing heavy or awkward loads which have to be lifted by hand, remember, some Workers are stronger than others; no one is immune from injury
- Positioning loads by machine and planning to reduce the height from which they have to be lifted and the distance over which they have to be carried;
- Train personnel in safe lifting techniques and sensible handling of loads; ☐
- Anybody injuring their back at work should be encouraged to report the injury, get early medical attention and return gradually to heavy handling duties.

#### **HEAVY LOAD LIFTING TECHNIQUE**

Feet position about 450 mm width apart, with one foot slightly forward, in the direction of movement. This gives a good balance and provides a secure base for the lift Knees should be slightly bent (but not fully bent as in squat)

Back must be straight, although the body may be inclined forward as in the Illustration Grip must be firm and secure

Keep close to body, do not twist Trunk, Head should be erect with the chin.

### **3.45 MATERIAL HANDLING EQUIPMENT, TOOLS &**

#### **TACKLES INTRODUCTION**

The Company through their Plant and Machinery Department will ensure that a competence test is performed and issue a certificate indicating the class of plant the operator is allowed to use. The operator will be in possession of a current operator's license applicable to the Legal Compliances.

#### **LIFTING EQUIPMENT**

##### **SLINGS**

A Rigging store will be established by contractor /vendor at a convenient location. These will provide dedicated areas for the safe storage, regular inspection and controlled issue of lifting equipment.

A register of all lifting equipment will be kept and regularly updated.

Frequent inspections will be made of all lifting equipment, and if there are any doubts as to the safety of this equipment, it will be removed from service.

##### **SLINGER / RIGGERS**

The Company employs experienced slingers who have been trained by an approved 3<sup>rd</sup> Party. The slinger / rigger will be responsible for properly attaching the load to the crane and giving the correct hand signals to the crane operator.

As far as possible; he will remain with the same crane operator so that they work as a team. He is the only person authorized to give signals to the crane operator. In certain complicated lifts he may require an assistant, but the assistant's signals will be to him and not to the operator, who will be warned that such a situation is in effect. Always wear personal protective equipment, which forms part of his work equipment, in particular: highvisibility jacket, yellow helmet, gloves and safety shoes.

Visual checking shall be done on regular interval to check efficiency of the ropes, chains and straps. Check the maximum safe working load of the slings as per test certificate or ring.

Under no circumstances should personnel be found standing or working below a suspended load.



## **MOBILE CRANE**

### **GENERAL**

Mobile cranes are used as versatile lifting devices.

All lifts no matter how small shall be planned and carried out by a trained competent person.

Prior to use on site the mobile crane shall be inspected by a competent person, and certificate copied and kept on site.

The crane shall be able to carry the heaviest load required with radius and capacity to spare.

SLI must be fitted and working if loads above 1 tone are to be lifted.

Crane must be placed in apposition where, the driver has a clear view, away from edges and excavations, overhead power lines.

The ground should be well compacted and should be able to take the full weight of the crane and load.

Timber packing is required under outriggers to transferee the load from the crane to the ground

### **OPERATOR**

- When the crane operator is physically or mentally unfit he will not engage in crane operation.
- The operator will not engage in any practice, which will divert his attention while operating the crane.
- When handling loads, the operator will not start crane movement until signalman Or complete load is within his range of vision.
- The crane operator will respond to operating signals only from the appointed Signalman. He will obey an emergency stop signal at any time.
- The crane operator is in command of all crane-handling operations and is primarily responsible that the crane operations are carried out in safe manner. Whenever there is any doubt as to safety, the crane operator will have the authority to stop And refuse to handle loads until safe conditions have been re-established.
- Each day before the crane is put into use the operator will perform all movements and maintenance necessary to ensure that the machinery is functioning satisfactorily. He will ensure that all safety devices are set and operating correctly And that the wire ropes are in approved working condition.
- Cranes will not be used if any limit switches or other safety equipment is out of order.
- No gear will be used for any load

exceeding its safe working load.

- The load will be attached to the hook by means of slings or other devices. Suitable protection will be provided between the sling and sharp unyielding surfaces of the Load to be lifted.
- Cranes will not be used for transport of personnel.
- Cranes will only be used for vertical lowering and lifting of loads.
- Relevant load charts shall be available in operator's cab.
- Limit switches will not during normal operation of the crane be used as stopping Devices.
- The operator of a crane will not leave the operating seat when a load is hanging in the hook.
- A suitable container specially designed will be used for mass transportation of loose material, (Brick bucket, tested by approved third party) so that no material is likely to fall during operation. Double chains or slings are to be used. A copy of the Test Certificate shall be kept at site.

## **SERVICEABILITY, MAINTENANCE AND INSPECTION**

Crane has been certified by an approved 3<sup>rd</sup> party, all repairs & alterations will be carried out under the direction of Company Transport Division or approved supplier.

Where welded repairs are carried out to steel members, e.g. boom, hydraulic jacks or rigging, the repair will be inspected by a qualified welding inspector and a proof load test carried out, re-certification will be carried out prior to going into service.

The PMC Project Manager, PMC HSC Manager can withdraw a crane from service any time if he considers it is not in good operating condition.

Cranes and lifting equipment will be in good mechanical condition and operated in accordance with the manufacturer's instructions these instructions shall form a part of the HSE Policy. Deviations from these instructions will not be permitted.

The Mobile Crane shall be inspected / certified by an approved 3<sup>rd</sup> party:

- At least once every 12 months;
- After major alterations, maintenance have been carried out re-certification will be carried out prior to going into operation;

A copy of a test certificate should be submitted to PMC.

## **HOIST**

### **GENERAL**

Where possible material and personnel hoists shall be separated.

Hoist shall be selected which is suitable for site and capable of lifting the loads required.

Prior to use on site the Hoist shall be inspected by an approved 3<sup>rd</sup> Party and certificate kept on site.

The hoist base shall be enclosed so that no person may be struck.

Gates shall be provided at all landing, these gates shall be only accessible to be opened by the hoist operator or his assistant.

The edge of the hoist platform shall be close to the slab edge so that there's no gap to fall through.

## **OPERATOR**

- The operator should be trained to operate Hoist safely.
- When the crane operator is physically or mentally unfit he will not engage in crane operation.
- The operator will not engage in any practice, which will divert his attention while Operating the hoist.
- When handling loads, the operator will not start crane movement until signalman Or complete load is within his range of vision.
- Each day before the hoist is put into use the operator will perform all movements And maintenance necessary to ensure that the machinery is functioning Satisfactorily. He will ensure that all safety devices are set and operating correctly.
- Hoist will not be used if any limit switches, emergency brakes or other safety Equipment is out of order.
- Relevant maximum load chart shall be available in operator's cab; under no Circumstances shall the SWL be exceeded.
- The operator of a hoist will not leave the operating seat without securing the hoist from accidental operation.

## **SERVICEABILITY, MAINTENANCE AND INSPECTION**

No hoist will be operated unless it is released to do so by the Company Tower Crane Division or approved supplier... This will be released after the hoist has been certified by an rd Approved party, after all deviations have been corrected.

All repairs & alterations will be carried out under the direction of Company Tower Crane Division or approved supplier.

The PMC Project Manager, PMC HSC Manager can withdraw a Hoist from service any time if he considers it is not in good operating condition.

The hoist will be in good mechanical condition and operated in accordance with the manufacturer's instructions these instructions shall form a part of the HSE Policy. Deviations from these instructions will not be permitted.

The Hoist shall be inspected / certified by an approved 3<sup>rd</sup> party:

- At least once every six months;
- After major alterations, maintenance have been carried out re-certification will be carried out prior to going into operation;

A copy of a test certificate should be submitted to PMC.

## **HANDLING OF MECHANICAL EQUIPMENT**

### **INTRODUCTION**

The widespread use of mechanical equipment in the construction industry improves the speed and efficiency of the work. It can also lead to many situations, which are potentially hazardous. The only safe way of using mechanical equipment is to have properly trained operators working with well-maintained equipment, carrying out the work for which it was designed.

A check of the manufacturers/suppliers instructions must always be made before machinery is put into operation for the first time.

The Handling of Mechanical Equipment has been compiled mainly from the following source material as specified in codes and standards.

All motor vehicles and mechanical equipment shall be checked by contractor's mechanical department prior to being used on Site.

### **GENERAL PRECAUTIONS**

- All machinery shall be inspected before being placed in service and at regular intervals thereafter
- Maintenance schedules will be established for each piece of equipment and strictly followed
- No repair, adjustment or replacement of parts on moving machinery is permitted. Before making any repairs all equipment will be stopped and de-activated so that it cannot be Unintentionally started.
- at the start of each shift the operator will check oil, water, fuel and hydraulic levels and he will check that all gauges are operating and that the machine is functioning smoothly. Safety equipment (guards, limit switches, governors, etc.) will be checked daily.
- Equipment travelling or working on the highway will have lights and reflectors. When it is parked, it will be clear of the roadway. If this is not possible, flashing lights, cones or other warning devices will be used to alert approaching traffic
- When vehicles are left unattended, engines will be stopped and parking brakes applied or The wheels chocked, blades, scraper buckets, and other hydraulic equipment will be stopped to the ground before the operator leaves the machine;

- Cabs fitted to equipment will give maximum all round visibility. Cabs will be kept clean of rubbish, loose tools, etc. Windows will be kept clean at all times and will be replaced if the glass becomes pitted, cracked or broken
- Where the operator of a machine cannot see the area all around his machine, an attendant will be in a position to direct and assist the operator;  
All equipment will be located in such a position that the exhaust fumes and noise will not affect employees working in the area. Gasoline driven equipment will not be used inside confined space.

All equipment left on site shall have a competent person trained to inspect and maintain equipment.

For additional information refer to Vehicle and Driver Safety.

### **GUARDING OF MACHINERY**

All moving machinery will be guarded. In particular gears, pulleys, V-belt drives, fans and revolving shafts, all of which are present on most of the static equipment used on or around construction sites

Guards shall be installed on equipment prior to arrival on site and will be maintained in position at all time while the equipment is operating. Guards which are removed for routine maintenance or repair work, will be replaced before the equipment is returned to service.

### **OPERATORS**

Only trained personnel will operate mechanical equipment. Operators will be trained in the procedures and functions relevant to that specific equipment. They will be fully aware of the capability and limitations of the machine and have knowledge of the day-to-day maintenance required.

All drivers and operators of heavy equipment will be in possession of current licenses for the particular class of machinery applicable to the legal compliances.

All equipment operators will be trained, tested and issued with written authorization specifying the equipment, which they are competent to operate.

Perform daily / weekly maintenance checks of machine. ☐  
Ensure persons and objects are clear of path of travel. Check to rear when reversing, reverse light and horn work and equipment fit for purpose.

### **COMPRESSORS**

- Compressors are one of the most common pieces of equipment used in construction work;
- the dangers of compressed air must be impressed on all employees on Site. It will not be Used for dusting off clothing or machinery. Horseplay will be strictly forbidden;
- A daily check will be made of the machine before starting it. In addition to checking fuel Oils and water levels, the air reservoir will be drained of trapped water.

## **CONCRETE MIXERS AND BATCHING PLANTS**

- On every construction site, at some time or another, a concrete mixer will be found. It may be only a small mixer for masonry work or it may be a full batching plant, with a large Capacity cement silo, sand and aggregate bins and a power shovel to load the mixer. In any case, the principles of good maintenance and properly trained operators apply;
- Safety chains and catches will be operative and the lifting mechanism will be in good order;
- Men will not be allowed to work under or near the loading skip unless it is held in position by a safety chain or catch, or positively blocked;
- The mixers drum and the area around the machine will be thoroughly cleaned at the end of each day's operations;
- Cement bags will not be allowed to accumulate in the mixer area; they will be collected and disposed of at regular intervals during the day;
- A hooped access ladder will be firmly attached to silos when access is required to the top manhole. Men will not be allowed to work inside the silo unless they are wearing a safety belt with a lifeline and there is an attendant posted outside in a position to assist in case of emergency.

## **DUMPERS AND DUMP TRUCKS**

These vehicles are commonly used for construction work. In many cases, they also travel on the public highway and it is therefore essential that they are properly maintained.

The latch on dumper skips will be in good working order and the release mechanism will function smoothly.

Dumpers are not designed to carry passengers. It will be strictly forbidden for employees to ride in the bucket or on the engine cover.

When repairs or maintenance are being carried out on hydraulically operated dump trucks, the dump body will be fully lowered. If it is necessary to have it in the raised position, it will be blocked. Reliance cannot be placed on the hydraulic ram to support the raised body for an extended period.

## **EXCAVATORS'**

Operators of excavators will possess a valid license, as applicable

If required an attendant will be appointed and during operations be positioned so that he can assist and guide the operator in his work.

## **GENERATORS**

There will always be a competent electrician available to ensure that electrical connections are properly made. The operator will be responsible only for the mechanical function.

The side panels to the engine cover are designed to give access to the machinery for maintenance or repair. They will be closed at all times when the engine is running.

The machine will be properly grounded before each use.

## **GRADERS, DOZERS, SCRAPERS AND ROLLERS**

Heavy items of earth moving equipment permit the operator only a limited view of the immediate area. A person will be appointed to warn the driver of hazards that cannot be seen from the driver's position.

Before moving his machine, the driver will walk around it to see if the area is clear.

Men will not be allowed to sit or lie in the area around the machine.

The engine will not be left running when the driver is not at the controls. On leaving his machine, the driver will shut off the engine and remove the Ignition key.

If there is work to be done underneath such hydraulic equipment, the equipment will be blocked in position.

**Rule of thumb methods for calculating the SWLs of flexible steel wire rope, chain and fiber rope.**

Please note that these methods only give approximate answers.

**Flexible steel wire rope (FSWR)**

To calculate the SWL in kilograms of FSWR square the rope diameter (D) in millimeters (mm) and multiply by 8.

**Formula: SWL (kg) = D<sup>2</sup> (mm) x 8**

For example:

Rope dia (D) = 12 mm

SWL (kg) = D<sup>2</sup> (mm) x 8

= D (mm) x D (mm) x 8

= 12 x 12 x 8

= 1152 kg SWL

(t) = 1.15 tonnes

The above equation can be reversed to calculate the diameter (D) in millimeters of FSWR needed to lift a given load. To do this, divide the load (L) in kilograms by 8 and find the square root of the result.

**Formula: D (mm) =  $\sqrt{\frac{L \text{ (kg)}}{8}}$**

For example:

Load = 1152 kg

D (mm) =  $\sqrt{1152 \div 8}$

=  $\sqrt{144}$

= 12 (mm)

Therefore a FSWR sling of at least 12 mm in diameter is required to lift an 1152 kg load for a straight lift.

**Chain**

The SWL of chain is determined by the grade (G).

Do not use a chain to lift if it does not have a manufacturer's tag that gives details of the SWL.

Return it to the manufacturer for SWL assessment and retagging.

To calculate the SWL of lifting chain in kilograms, multiply the diameter (D) in millimeters (mm) squared, by the grade (G), by either 0.3 or 0.4. For Grade 80 chain, use 0.4, and for Grade 30 or 40 chains, use 0.3.

**Formula: SWL (kg) = D<sup>2</sup> (mm) x G x 0.4**

For example:

Chain diameter, 10 mm. Chain grade (T) (i.e. grade 80)

SWL = D<sup>2</sup> (mm) x G x 0.4

= D (mm) x D (mm) x G x 0.4

= 10 x 10 x 80 x 0.4

= 3200 kg

SWL (t) = 3.2 tonnes



### 3.47 GENERAL SITE RULES

- Allot project site are advised to follow all times **DOs** and **DON'Ts** given below for the safety of every one working in project.

**Warning:** Deliberate ignorance of these safety rules will be viewed seriously and liable for penalty/ removal from site.

#### **DO's**

1. Under go EHS induction Training before entering into project site/ ensure all your employees received EHS induction Training.
2. Provide and ensure proper use of PPE such as Safety shoe, Safety helmet, Safety gloves, Safety belt (when working at height) etc by all the employees in the project.
3. Comply with method statement wherever applicable
4. Ensure "Work Permit" prior to start of activities such as work at height, Hot work, Deep excavation etc.,
5. Ensure all activities related to Electrical energy are handled by Competent person/authorized electrician only.
6. Ensure that proper lugs are provided to welding cables
7. Ensure that proper wedging/locking of wheels is done for mobile scaffold/Concrete Mixer/ Transport vehicles before starting the work activity
8. Ensure proper barricading/ covering where there is a danger of fall of persons/ fall of material from top.
9. Check front, back and bottom of the vehicle before starting to move the vehicle
10. Watch vehicle movement and cautions while walking in the project area.
11. Clean and kept workplace neat and tidy and remove all wastage/scrap from the work spot after completion of each work without delay.

### **DON'Ts**

1. Persons below 18 years of age, pregnant ladies and persons who are physically incapacitated and aged are not permitted at project sites.
2. Smoke in the project premises
3. Drink liquor in the project premises
4. Use open place for Toilets (Use Toilets provided in the project site)
5. Run the vehicle beyond 15 Kamp speed
6. Play with Hazardous chemicals
7. Interfere in others work
8. Enter areas not of your concern without permission
9. Work at height and under HT lines during raining, lightening and heavy wind
10. Dress Lunge/ half pant during working at project (Wear full pant and shirt).

## 4 EDUCATION&TRAINING

Safety education and training of personnel is a major component of any loss prevention program.

### 4.1 TRAINING

- Contractors/Subcontractors are responsible for providing safety and health training for their employees.
- In special cases where training is provided by Project or by Contracted personnel to contractor/subcontractor personnel, the Project Safety Manager will ensure that it is comprehensive and documented with a summary of the training provided.
- The Project Safety Department will assist with training requirements as required.

#### 4.1.1 Project Site Safety Orientation

- All Project employees, contractors, and subcontractors are required to attend the site safety orientation course, prior to working on the site.
- A site access control card will be issued after confirming that an employee has received and successfully completed the site orientation course.
- The information provided during the orientation will include, but is not limited to such topics as:
  1. Job rules, personal safety and conduct
  2. Hazards reporting
  3. Reporting of injuries/pre-existing conditions
  4. Emergency procedures
  5. Working with Chemicals
  6. Safety Activities and Program including disciplinary measure and incentives.

#### 4.1.2 Supervisor's Orientation

- All supervisors, assigned to the project must be indoctrinated to their responsibilities by the Contractor/Subcontractor E&HS manager.

**Information to be covered includes:**

- Supervisor's safety responsibilities and project requirements
- JHA Training,
- Safety motivation,
- Safe practices for specific crafts Accident reporting/investigations,

Conducting effective safety meetings

- The Project requirements, Effects of unsafe acts, conditions and accidents on productivity,
- All supervisors must learn and enforce Project E&HS rules applicable to their work.
- They must set an example for their subordinates and co-workers by their compliance with work, rules and their aggressive leadership in safety.

#### **4.2 Safety Task Instruction / Job Hazard Analysis Training (STI/JHA)**

- The STI/JHA components of the E&HS program are designed to train supervisors to analyze the tasks to be performed,
- The identification and elimination of hazards and communications with their crews in how to do the job safely. They in turn will train their crews to work safely on the job through implementation of the program, during toolbox meetings and as otherwise needed.
- Clients Ltd.'s .Project Manager / CONSULTANTS (PMC) Safety Manager will take an active role in the evaluation of JHA's. It has been observed that routine and common tasks can have serious safety risks that can be eliminated by a proper JHA review.
- The E&HS managers are responsible to enlist the required technical assistance to assure that thorough and complete reviews are performed on all JHA's.

#### **4.3 Trade and Skill Training**

- Appropriate training is given to ensure that a jobholder, either supervisor or worker, is competent to do his job safely.
- Contractors and Subcontractors shall ensure that such training is provided at periodic intervals. All training information, records, and certificates will be properly documented and made available for verification.

#### **4.4 TBT (Tool Box Talk)**

- Contractors/Subcontractors are responsible for providing TBT (Tool Box Talk) safety and health training for their employees.
- The Project Safety Department will assist with training requirements as required.

## **5 FIRST AID / MEDICAL FACILITIES**

- Project policy is to place highest priority on the safety and health of all personnel working on the site through use of a strong E&HS Program.
- Prevention is the key element used to reduce the number and severity of occupational injuries and/or illness. When unplanned events occur, it is important that adequate emergency medical services be established so that prompt and competent medical care is provided to project personnel.
- Project will provide appropriate emergency rescue, first aid and medical staff, facilities and procedures necessary to respond to anticipated onsite emergencies.
- These facilities and services will be established and maintained, based on a detailed review of risk factors, present at the site.

### **5.1 Medical/First Aid Facility**

- a) The facility will be set up to administer care of all injured employees resulting out of course and scope of employment.
  - It will be suitably equipped to provide medical and rescue emergency response in all anticipated situations, from minor to major medical/traumatic events.
  - The facility will be provided and maintained by for all the workers and staff working at project with the provision of and Emergency vehicle round the clock (24 hrs.) at site.
  - All the injuries will be recorded in First Aid Register by the First Aider which is available in First Aid Room.

#### **First Aid Box**

- First Aid box should be placed in First Aid Room clearly identified and contains a sufficient quantity of suitable first-aid materials and nothing else.
- First Aid Box should be checked weekly once to ensure they are fully stocked and all items are in a usable condition. Sufficient quantities of each item should always be available in first aid box.

Following items should be available in First Aid Box as number of persons working at site:

## Contents of a First Aid box

- The first-aid box contents should be protected from dampness and dust.

Sr. No	Item	Type	Qty	Expiry date	Purpose
1	Tincture iodine	Bottle	1		Cleaning wounds
2	Hydrogenperoxide	Bottle	1		Cleaning wounds
3	Dettol	Bottle	1		Cleaning wounds
4	Burnol	Bottle	1		Burn Injury
5	Ciplaiodine	Tube	1		Ointment for wounds
6	Cotton wool	Bundle	2		Cleaning wounds & dressing
7	Cotton Bandage	Nos	4		Dressing
8	Cotton Bandage	Nos	1		Dressing
9	Bandaids strips	Nos	15		For superficial injuries
10	VoliniOintment	Tube	1		For pain relief (Swelling)
11	Eye drop (cpiol , oflox)	Bottle	2		cleaning eyes
12	Nebasulf Powder	Bottle	1		Powder for wounds
13	Scissor	Nos	1		Dressing
14		Nos			
15	Adhesive Tape	Nos	1		Dressing
16	Lomofen	Tab	10		Loose Motion
17	Paracetamol	Tab	10		Fever
18	Combiflam	Tab	10		Pain relief
19	Cyclopum	Tab	10		Stomach pain
20	Stemetil	Tab	5		Vomiting
21	Pan 40	Tab	10		Acidity
22	Okacet	Tab	10		Cold/fever
23	Pain Relief spray	bottle	1		Pain relief

## 5.2 Medical Services

- Project will establish a working relationship with a designated to ensure prompt, professional care for all occupational injuries and illnesses.
- The Safety Manager/officers (Vendors) shall ensure that the designated project provided with general project scope, anticipated safety/health hazards, and the importance of good "medical management".

### **5.3 Transportation**

- For cases involving severe injuries, the medical attendant should give the required first aid and take the victim in Emergency vehicle to nearest Hospital. In all cases ambulance service shall be called for transport to the project emergency room, which is equipped to handle the emergency.
- The Employer will provide transportation for all follow-up visits (i.e., removal of stitches, physical therapy, etc.).

### **5.4 Medical/First Aid Treatment**

- All the contractors working at site should tie-up with nearby Hospital. CONSULTANTS Safety Officer or Project Manager should inform all contractors on the location and procedure for accessing the Hospital.
- Medical Attendant shall administer first care to injured project employees using, established standards of practice, or as directed by the local consulting physician.

### **5.5 Injury Documentation**

- Injured employees should report all occupational injuries and illnesses to his Supervisor before reporting to a First Aid Facility on the day of injury or onset of illness.

## 6 ACCIDENT/INCIDENT INVESTIGATIONS & ANALYSIS

Prevention is the key element used to reduce the number and severity of occupational injuries and/or illness.

- It is the project policy that all incidents and environmental releases, regardless of severity, are reported immediately to CONSULTANTS and the Client's Project Manager. A joint written investigation will be conducted by CONSULTANTS, even where no injuries occur.
- These incidents include potentially serious injuries (near misses), illnesses, equipment damage, or hazardous liquid spills.
- The contracting or subcontracting Safety Officers shall prepare reports to satisfy their own corporate reporting requirements.
- All reports and investigations must include cause of the incident, any "Unplanned events" occurring as well as corrective actions to be taken to prevent recurrences.
- Corrective actions taken shall be fully documented. The incident investigation is to identify and correct inadequacies in the Site E&HS Program and/or those of our Contractors and Subcontractors.

### 6.1 **INCIDENT REPORTING**

- When an accident or a "near miss" occurs (even if seemingly minor with no injuries), the injured must be attended to promptly.
- The root cause(s) of the accident determined; any unsafe or inadequate policies, procedures, behaviors or conditions corrected.
- All incidents and near misses must be reported.
- Project Team requires incident reporting system be used in reporting and documenting incidents.
- This determines actual causes and contributing factors to the incident.

#### 6.1.2 **Incident Analysis**

- A. The Contractor/Subcontractor E&HS Department completes the evaluation on the incident. Where the incident is minor and no questionable conditions or procedures are noted, the report is completed based on the information provided, ensuring corrective action is taken by the supervisor.



- B. Where the actual or potential severity of the incident or behavior is significant or occurs frequently, the Project Manager shall appoint a committee to investigate, the accident/incident, verifying the information, and completing a Root Cause Analysis.
- C. All corrective actions shall be carried out, monitored by the Project/Construction E&HS Department and initialed/dated on the original report to confirm the hazard is remedied.

### **6.1.3 Labor Regulations**

**IS: 3786-1983** - Method for Computation of Frequency and Severity rates for Industrialinjuries and classification of industrial accidents

- All the incidents and accidents classification will be recorded as per IS: 3768-1983 reporting system.

## **6.2 RECORDKEEPING**

### **6.2.1 Daily First Aid Record**

- This record should reflect how the injury occurred and what medical care was administered by the medical attendant, or if the employee was referred to a physician.
- When an employee reports to the First Aid Facility for treatment, the medical attendant must log the incident, the date and time of injury/illness, employee's name, his number and supervisor, the type of injury, treatment given, patient disposition.

## 6.2.2 Monthly Safety Performance Report

- Monthly, the CONSULTANTS Project Manager will report on the project's injury and illness experience to the Project Manager.
- Each contractor shall compile a similar report. The report is due in conjunction with the project monthly report.
- Project Report to be compiled by the site E&HS department before 1st of each month and distributed as required.
- The monthly report will show the number of man-hours worked on the project, the number of safe days worked, the number of days away from work and non-lost time injuries, days lost to injury, etc, for Company, Contractors and subcontractor work. Lower tier subcontractors, staff and staff support work hours are also included in the report.

## 6.3 LEARNING

- Near miss and incident report data will be analyzed for trends to identify and correct systematic deficiencies to maintain the highest level of E&HS performance.

## 7 | LOSS PREVENTION INSPECTIONS & AUDITS

- Weekly Contractor Field Inspections and Audits will be conducted with joint representation of Project Team and Contractors. Area Supervisors as well as the Contractor E&HS officer should participate in all workplace inspections or audits.
- \* **All members of the construction Management Team are encouraged to regularly participate in workplace inspections or audits**
- The E&HS managers will be responsible for establishing a tracking system for recommendations and findings from safety audits and incident investigations.
- These findings will be discussed in the contractor weekly safety meeting to determine and drive corrective actions.

## 7.1 Sub-Contractor Inspections and Audits

- Contractors/Subcontractor supervisors are responsible to ensure that regular inspections are made of storage areas for Flammable and/or combustible materials. Likewise, inspections of equipment are the responsibility of the contractor/subcontractors' management.
- Project E&HS managers or his designates shall regularly inspect, audit project facilities and note EHS deviations and site safety practices for **FIRE PREVENTION**.

## **7.2 Contractor's Safety Audit**

- Copies of the Weekly Contractor Field inspection and Audits reports will be forwarded to the respective Project Manager and to contractor's site management for corrective actions.
- The respective contractor site management must take immediate corrective actions as may be required should inspection results indicate undesirable conditions or practices. Items requiring more time shall be prioritized and corrected as soon as possible.
- All deviations shall be rectified within the agreed period. Reports will be completed by the contractor's representative and submitted to the Project Managers and Project E&HS Manager.
- The client's project Manager, CONSULTANTS Safety Manager and Contractor Safety Managers/supervisors will review the Audit trends to provide continuous improvement focus to the site initiatives for contractor safety performance.

## **7.3 Daily/Periodic Safety Inspection**

Contractor and site Supervisors shall conduct routine periodic safety inspections and Inspection shall make

Note of; hazardous substances, unsafe acts/conditions

Observations and correction; proper equipment, proper rigging, electrical, scaffolding, ladder inspections, etc.

Contractor supervisors are responsible for preparing and submitting observation safety reports to their project manager for his review.

## **7.4 Safe-Work Practice Assessments**

The Project/Construction Safety Managers will conduct periodic assessments of compliance with site safety practices and procedures to ensure that they are effective and that they are being followed.

## 8 | FIRE PREVENTION&PROTECTION

- All contractors must comply with the Project Fire Prevention/Protection practices as outlined plan below.
- They must train their personnel to follow procedures when fire is discovered. The plan covers fire reporting, personnel evacuation, safeguarding high value materials, first aid, fire fighting procedures, accidents involving hazardous materials, and measures to correct fire hazards when reported.

### 8.1 FIRE PREVENTION POLICIES

- As per Project policy, prevention of fires is utmost goal.
- Emphasis is placed on pre-planning of work; hot work permits controls.
- Flammable gas, liquid, and material control.
- Control of smoking.
- Training and use of warning signs, proper electrical wiring, and proper waste storage and removal.
- It is the responsibility of all project personnel to participate in FIRE PREVENTION activities, including:
  - Training
  - Inspection of equipment for proper operation and condition
  - Containment and/or segregation of high-risk activities and/or materials (storage of fuels, refueling, etc.)
  - Planning of work activities, utilizing the Job Hazard Analysis technique.
  - Audits, inspections of workplace and activities, Supply of equipment to be used in the containment of fire
- During routine fire inspections, if a hazard is noted, the responsible supervisor takes the necessary action to immediately correct the discrepancy. Work site supervisors must advise the Project E&HS managers of hazardous situations that cannot be corrected by their personnel.

#### 8.1.1 Training

Contractor/Subcontractor managers and supervisors must ensure all personnel

- assigned are educated in fire prevention practices.

#### 8.1.2 Smoking

- Smoking is **not permitted** on project site.

#### 8.1.3 Inspection of Tools, Equipment and Electrical Cords/Wiring

- Inspection of Tools, Equipment and Electrical Cords/Wiring

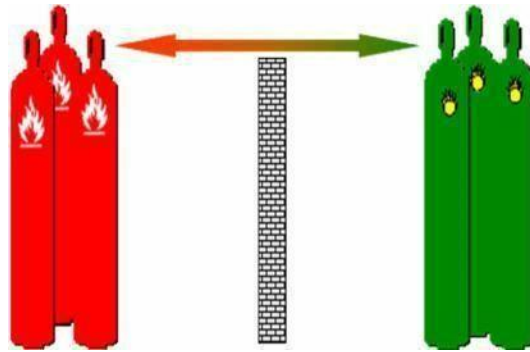
- All hand tools, equipment, and vehicles are required to be regularly inspected to ensure its Working condition.
- Electrical extension cords must be equipped with non-conductive plugs.
- The use of extension cords by means of multiple outlets plus from single outlets is prohibited.
- All non-essential electrical equipment and appliances must be disconnected or turned off when not in use.

#### **8.1.4 Storage Areas for Flammable/Combustible Liquids/Materials**

- Flammable and/or combustible materials are required to be stored in segregated areas, in compliance with Project safety practices and regulatory requirements.
- Sources of ignition are prohibited in storage areas.
- Flammable liquids must not be used for cleaning purposes.
- Flammable and combustible liquids must be stored in approved safety cans, labeled as to contents. Plastic or glass containers must not be used.
- All combustible materials must be kept at least 10 meters away from other sources of ignition.

#### **8.1.5 Welding and Burning Operations**

- Welding and burning operations have a high potential for causing personnel injuries and fires; therefore all the client's & CONSULTANTS's contractors, supervisors shall follow precautions and procedures as a minimum:
- Welding or burning in a hazardous area without obtaining a permit/authorization from the responsible authority is prohibited.
- Before starting to burn or weld, the work area around and below must be inspected to ensure that sparks or molten metal won't fall on combustible materials. If an employee is unable provide the necessary safeguards, he must not start the job and immediately contact his supervisor.
- 
- Stored oxygen cylinders shall be separated from gas cylinders by either a one-hour rated firewall or a minimum distance of 7 meters.



- Check to make sure CO<sub>2</sub> or DCP fire extinguishing equipment is available in the work area.
- Do not use matches to light torches. Spark ignites must be used. Torches must not be used to light smoking materials.
- Welding screens/barricades must be used to reduce welding flash.

## 8.2 FIRE PROTECTION

### 8.2.1 Fire Extinguisher

- Each contractor must provide Fire Extinguisher to comply with Project requirements or Safety Manager's requirements.
- Contractors' supervisory personnel must ensure that all fire extinguishers in their control areas are sufficient for expected hazards, are accessible, in proper working order, and fully charged.

### 8.2.2 Inspection of Fire Extinguishers

- All fire extinguishers are to be inspected by the contractor safety representative, or a designated individual, on a Weekly basis to identify any deficiencies, conditions that may prevent emergency use of the appliance, must be corrected immediately.
- Fire Extinguisher shall be visually inspected prior to each use.
- Safety representatives keeps a consolidated record of the location of all extinguishers, maintenance received, and other conditions relative to the condition and maintenance of fire appliances.
- Each fire extinguisher must have an inspection tag attached. The tag provides data such as the date of the inspection, date recharged, and inspector's signature.

## 8.3 REPORTING EMERGENCIES

- All fires, releases and spills, large or small, are to be reported **IMMEDIATELY**, to Clients Project Manager and CONSULTANTS Project Manager.

Provide the following information:

S. No	Description
1	Specific Location and area of the emergency
2	State a fire (or a spill, leak or injury) is being reported Unit or building name or number
3	Your name and the contractor you work for, and extension calling from Status of Fire, if known
4	Contractor/Subcontractor personnel should only attempt to extinguish localized, incipient fires discovered at work site.

- This shall apply if the fire is small, local, confinable, and if the person is properly trained.
- Fires, which are large, out of control or near a fuel source, should be immediately reported.
- Supervisor shall notify and remove all personnel regardless of organization, from the area immediately, without attempting to save property or risking injury.
- When a fire has occurred a written report must be submitted to the Clients Project Manager and CONSULTANTS before the end of the working day.
- Any fire extinguisher used shall be carefully inspected, discharged and fire extinguishers must be taken out of service and replaced and/or recharged before returned to use.

## 09 ENVIRONMENTAL HAZARDS

At the project site, all contractors will use comprehensive professional environmental/industrial hygiene methods, procedures and guidelines to anticipate, identify, evaluate and control workplace exposures that may cause illness.

- All hazards should be avoided wherever alternatives are available.
- The program provides a structured means of documenting the project's efforts to anticipate identify, evaluate and control occupational exposures to hazardous chemicals and physical agents.

The programs include the following elements.

1. Evaluation and examination of the project.
2. Interpretation of gathered data.
3. Preparation and Implementation of control measures.

### 9.1 Hazard Communication

- Contractors and Subcontractors are responsible for complying with the Hazard Communication Program.

### 9.2 Respiratory Protection

- Respirator use provides the first line of employee protection against airborne contaminants.
- Employees in the course of their job may be required to use respiratory protection.
  - a) Employees must be trained in the use and limitations of the equipment.
  - b) Respiratory equipment must be clean, inspected and stored in a sanitary manner
  - c) Employees must be medically qualified to wear the equipment and perform the work
  - d) Employees must complete an annual fit test.
- It must be stressed, if job conditions change and respiratory protection is needed, employees not qualified to wear respirators will be removed from the job.
- Jobs will be closely monitored to ensure that the conditions associated with the job remain consistent.

### 9.3 Welding

#### Welding, Cutting or Heating of Metals of Toxic Significance

- Welding, cutting or heating of any the metals specified below must be protected by local exhaust ventilation or by airline respirators.
- Metals containing lead, other than as an impurity, or metals coated with lead-bearing materials.
- Metals coated with mercury-bearing metals, cadmium bearing or cadmium-coated base metals.



- Beryllium-containing base or filler metals. (Because of its high toxicity, work involving beryllium shall be done with both local exhaust ventilation and airline respirator.)
- Welding, cutting or heating of metals of toxic significance in the open air shall use air-line or other approved filter-type respiratory protection.

#### **9.4 Heat Stress**

- Contractors/Subcontractors will establish the necessary programs to ensure that project employees work safely in heat stress conditions.
- The reduction of adverse health effects can be accomplished by engineering controls, work practices, training, acclimatization, monitoring, water and electrolyte balance and the recognition and treatment of heat stress emergencies.

#### **9.5 ENVIRONMENTAL PROTECTION**

Contractors and subcontractors shall comply with the following:

- Oils, grease, fuels, lubricants, paints, solvents, acid or alkali's, chemicals, or contaminated waste waters shall not be allowed to migrate into the site drain system, or discharge any of this material on the ground.
- Spills of petroleum products, chemicals or other materials must be reported immediately to the Project/Construction E&HS Department and immediate spill containment and clean up actions will be taken. For all spills, a written spill report shall be prepared and submitted to the area E&HS managers within 3 hrs of the spill. The area E&HS managers will distribute the report to Project E&HS manager.
- Washing and maintenance of vehicles may only be done in specifically designated contained areas
- Cleaning, washing of equipment which has been exposed to chemicals, oils, acids, basis or other contaminants must be performed in run off contained areas approved for this type work.

**There will be no open burning of any materials.**

- The use of any toxic or hazardous materials or chemicals must be approved by the E&HS Department
- Nontoxic waste such as office trash, construction materials, concrete rubble and scrap metal generated from a project will be properly disposed of on a daily basis. Each project must implement the recognized site wide, Waste Recycling Program in order to minimize and manage waste during the life of the project.

#### **9.7 HEALTH and HYGIENE STANDARDS**

- All the contractor workers shall use the latrines and urinals provided at site.
- Separate scavenger should deploy for cleaning the toilets.
- The contractor should take necessary Anti-malarial precautions.

## 10 SUBSTANCE ABUSE POLICIES

THE Project is committed to safe and efficient construction operations at project site.

- The safety of all project personnel, as well as the quality of construction, is of paramount concern on the Project. Accordingly, the following activities are regarded as completely inconsistent with our goal for a safe work environment and are grounds for disciplinary action.
- Possession, use, distribution or sale of **drugs\*** or alcohol on the jobsite or on company property is "Gross Misconduct" and shall result in termination and when applicable, local authorities will be notified.
- "Drugs" for the purpose of this policy includes all drugs, narcotics, restricted by law as to their possession or use, yet are capable of adversely affecting employee safe work performance.
- Drugs also include alcohol or any substances used in an abusive or intoxicating manner, and/or possession is in violation of local law.
- Persons under medical care shall discuss the potential side effects of prescribed medication with the physician and with their supervisor and/or onsite medical personnel prior to starting work.

**NOTE:** This could also include all drugs legally obtained which would require a prescription by a licensed physician.

### 10.1 Training

- All supervisors shall receive training on how to identify drug related performance problems and proper handling of afflicted employees.
- All Employees shall receive an ongoing educational program in the hazards of abuse and shall be communicated during Orientation Program and Toolbox meetings.

## 11 EMERGENCY RESPONSE PROCEDURES

Construction work can be very hazardous. The policies and procedures in this plan are established to prevent accidents, fires, explosions, etc. When these policies and procedures are violated or ignored or unforeseen circumstances occur, a plan of action must be established for each type of situation so that loss of life and property are avoided and disruptions are minimized.

The Emergency Response Procedures for the Project are based on the following:  
A system is required that meets the needs for an emergency response to a situation on the construction project.

### 11.1 Training

- All Contractors and Subcontractor personnel will be briefed on the emergency reporting response procedures during the new employee orientation and at frequent "Tool Box" E&HS meetings.
- Emergency procedures and telephone numbers will be posted at key locations throughout the jobsite.
- Emergency evacuation plans for all work areas, contractors, and office areas and shall be identified by competent persons trained in emergency procedures.
- As directed by the Project Manager, the Project/Construction, E&HS Manager shall schedule announced/unannounced drills, in order to ascertain the effectiveness of the training being provided.

### 11.2 Emergency Procedures

#### 11.2.1 Emergency Contacts

Post this form in the site project offices of the Site Safety Manager and PMC offices.

Project name:

Project No.

**The following are the business telephone numbers where project key personnel can be reached at all times. In addition, the emergency telephone numbers of other vital agencies are listed:**

Business No.      Residence No.

ASSOCONS PROJECTS LLP Project Manager-  
ASSOCONS PROJECTS LLP Safety In- Charge-  
First Aider -  
ASSOCONS PROJECTS LLP Admin / HR –S

## OTHER EMERGENCY TELEPHONE NUMBERS

FIRE	:	101
AMBULANCE	:	108
DOCTOR	:	
HOSPITAL	:	
POLICE	:	100
ELECTRIC COMPANY	:	
WATER COMPANY	:	
TELEPHONE COMPANY	:	
OTHERS	:	
OTHERS	:	
OTHERS	:	

### 11.2.2 Fire

- Evacuate the area. Call for help.
- Do not attempt to extinguish fire without stopping the fuel source.
- If possible do so without greatly exposing personnel to injury.
- Use available fire extinguisher or fire equipment to extinguish fires in enclosures.

### 11.2.3 Inhalation

- Move to fresh air immediately any worker suffering from headache, dizziness, unconsciousness, or other symptoms of oxygen deficiency.
- Call for emergency assistance immediately.
- If breathing has stopped apply artificial respiration at once. In any event, do not hesitate or delay emergency treatment.

### 11.2.4 Alarm Activation

- Any individual observing a fire, spill, leak, medical emergency or any unusual hazardous condition must immediately notify their immediate supervisor.

The following information must be given:

- What?(Describe the emergency
- Where? (Exact location, i.e., building number, grid location, etc.)
- Name of person calling
- Any other pertinent information

## **11.3 Emergency Evacuation Plan**

### **11.3.1 Fire/Explosive**

- All personnel will shut/put down any spark emitting equipment and evacuate, to the closest Emergency meeting point, unless you must pass near the emergency. In that event move cross wind to an alternate remote assembly area.

**11.3.2** If vehicles cannot be safely removed they should be parked on the side of the road, turn off the engine, leave keys in the vehicle, and walk to the closest Emergency meeting point.

**11.3.3** Once arriving at a Emergency meeting point, contractor personnel should check in with the assembly area coordinator as soon as possible and report their name, company and their supervisor's name.

**11.3.4** Contractor personnel should remain at the Emergency meeting point until additional instructions are received. Instructions will be given orally.

## **12 | SITE TRAFFIC PLAN**

### **12.1 General Motor Vehicle Use**

- A Vehicle Permitting Pass is required to be issued by Security, and must be displayed.
- Company vehicles should be so indicted with a door panel sign or placard on the dash.
- Prior to entry onto the site any vehicle may be required to pass a Project Safety Inspection. If required, this inspection will be carried out by PMC.
- To enter the site, vehicles must have a current registration and proof of valid insurance.

### **12.2 SPEED LIMITS & RULES**

- Speed limits will be strictly enforced within the Site. The site speed limit is **15 km/h** or as posted.
- All drivers operating vehicles within the Site must have a valid driver's license.
- Obey all traffic signs including speed, STOP, and directional signs.
- Seat belts are to be provided - and worn by - all occupants of any moving vehicle.
- Any automobiles and/or trucks entering the site must be maintained in a safe operating condition.
- Vehicles must yield the right-of-way to pedestrians, forklifts and mobile crane equipment, including yielding the right-of-way to emergency vehicles.
- Parking is allowed only in designated parking areas and spaces; parking in other locations may be required to load/unload materials. At no time shall emergency equipment be blocked by a parked vehicle.
- Vehicles parked in non-designated parking areas, must have the keys left in the vehicle.
- In the event of a vehicle accident on-site, the vehicle(s) must not be moved until their Supervisor and the PMC Safety Manager have been notified and the accident scene has been investigated.
- Violations of any of these rules may be cause for removal of driving or site access privileges. Continuous violations are cause for dismissal.

- Client's Security personnel may be utilized to direct/control employee vehicle traffic in the a.m. and p.m. at the gates if determined as necessary by the Project Manager.

## **12.2 Barricades, Restricted Roads and Road Closures**

**12.2.1** Some roads or access ways may have to be restricted by signs for specific reason(s); use of such roads must be cleared through the Project Manager or designee.

- Contractors shall not block off or otherwise make any road impassable or hazardous without PMC's prior approval.
- Approval for road closure will be based on availability of alternate roads for emergency vehicles. The need for barricades, bridges, red lights, etc., must be determined before and the necessary equipment available at the location prior to closing any road.
- All barricades and road-closed signs shall be strictly observed, as they are silent guardsmen for hazardous areas or conditions. The removal of road barricades is limited to the individuals who installed them initially, unless or except in extreme situations or emergencies.

## **12.3 Motor Vehicles / Construction Equipment Operating Guidelines**

- Motor vehicle operators must be in possession of a valid driver's license or applicable operators' certificate.
- Seat belts are to be used by all passengers while the vehicle is in operation. This includes forklifts, automobiles, trucks and other mobile equipment.
- Vehicles and equipment that to be used to carry people shall be fit for purpose, forexample; People are not allowed to ride in the back of an open truck. In addition, Project Team reserves the right to inspect and approve for use, or to forbid the use of any vehicle or piece of equipment determined to be unfit or unsafe for its intended purpose.
- All normal "rules of the road" apply to vehicle traffic on Site Roadways, failure to comply will result is suspension of vehicle site access/driving privileges for the driver and a warning to the contractor and subcontractor.
- The keys are to be left in the ignition of any vehicle not parked in a designate parking area; this is to facilitate moving a vehicle in an emergency situation.
- Transportation of passengers shall only be permitted in the passenger compartment of vehicles or other specially constructed areas.
- **No personal vehicles (only company owned vehicles)** may be used for personnel transportation.
- An initial inspection priors use on the job site is required, and a daily visual check for any Safety equipment items that is applicable; however, daily recordkeeping is not necessary
- When towing trailers, welding machines, cutting rigs, etc., make certain the hitch is secured and pinned and safety chains are attached. A red flag shall be secured to all loads extending 1 meter or more beyond the front or rear of the vehicle.

## **13 | SUB-CONTRACTOR SAFETY, HEALTH&ENVIRONMENT PROGRAM**

Project requires that every contractor and their lower tier subcontractor's place the highest importance on E&HS at all times during the performance of the work on site.

- Subcontractors shall fully participate in and cooperate with all E&HS programs implemented by Project, to meet the E&HS objectives of the project, and shall provide all statistics, information, training and education in E&HS required by such programs.

### **13.1 General Safety Policy**

- a) Each contractor/subcontractor must provide the mandatory PPE for their employees prior to entry to the site. All expenses relating to the provision of Personal Protective Equipment shall be paid by the contractor/subcontractor and not by individual or groups of employees.
- b) Each contractor must actively promote safe work performance on the part of all employees. Site supervisors shall participate in and implement such activities as safety meetings, safety inspections and safety recognition programs. The contractor must ensure that all employees will be equipped with all personal protective equipment as required by local laws, regulations and codes or by this Safety Manual.
- c) Each contractor must provide method statements for their expected work activities to the PMC Manager. These work procedures will be reviewed by PMC using the Job Hazard Analysis (JHA) method. Contractors will be required to modify their work practice or method if the PMC Project JHA process reveals a potential for injury or accident. Periodically Project Team will audit Contractor / Subcontractor to assure that the prescribed methods are being followed in the day to day execution of the work.

### **13.2 Expectations Goals/Objectives**

- a) Project Team requires that each contractor/subcontractor and their sub trade's place the highest importance on safety at all times during the performance of the work on site.
- b) The subcontractor shall fully participate and cooperate with all Safety Programs implemented by Project Team to meet the project Safety Objectives and shall provide all statistics, information, training and education required for such programs.
- c) The overall Safety Goals for all projects are to be incident and injury free.

### **13.3 Safe Work Planning**

- All contractors must plan for and have all equipment, materials and personnel necessary to perform the work safely and to the satisfaction of Project Team.
- The contractor's safety representative shall provide advice as needed.

### **13.4 Security**

- The contractors and subcontractors shall secure all equipment boxes and buildings and establish internal procedures to minimize theft and sabotage of any nature.
- Contractors and their employees must comply with all Project Security Practices and Requirements. Failure to comply could result in immediate dismissal.

### **13.5 Compliance with Safety Rules**

- All contractors shall comply ensuring that their employees, agents and subcontractors comply with all Project Safety Policies, rules, regulations, practices and procedures.
- All contractors shall comply with the provisions of the contract, rules and regulations of India and local authority laws, statutes and standards.

### **13.6 Failure to Comply**

- Failure to comply with the requirements of this document, Project shall notify the contractor verbally and/Or in writing.
- The contractor shall, upon being advised of its noncompliance, immediately take all necessary corrective actions in order to comply.
- If a subcontractor fails to initiate prompt corrective action, Project Team may take any or all actions provided for in the contract terms and conditions necessary to achieve compliance. Costs incurred by the subcontractor as a result of such actions shall be for the subcontractor's account.

### **13.7 E & HS Program**

- All contractors shall have an established, written E&HS program.
- The program shall contain their company's Safety policies and procedures in addition to their procedures for implementing project requirements.
- The program shall address the particular safety hazards of the work to be performed.
- The E&HS Program must meet the following minimum criteria and contain the information indicated.
  1. A company code of safe working practices.
  2. Assignment of responsibility for safety to the contractor's senior manager and to all line supervisors.
  3. Enforcement and compliance of all Project Team's, and all governmental and local E&HS requirements is a condition of employment.



4. The contractor shall notify Project Team that the India or local authority inspector is on the project site, and to make his visit as pleasant as possible.
5. Designate a safety officer to administer the program, conduct regular inspections of the work area for safety hazards and participate in Project Team's audits of the contractor work areas.
6. Selection/placement of personnel capable of safely performing all assigned tasks.
7. Perform a hazard analysis of the work to be performed and identify necessary safety, precautions for hazards anticipated. This program shall meet or exceed Project Team Program standards.
8. All supervisors shall be trained in hazard recognition and correction, and their E&HS responsibilities.
9. Report all unsafe conditions and near misses to the supervisor and the E&HS Department so corrective action can be taken.
10. Maintain a project site free of illegal drugs, alcohol and abuse of any substance that affects project safety and performance.
11. Provide Project Team with a copy of their Hazard Communication Program, a list of all hazardous substances to be brought on site, appropriate controls to be used, and a copy of any approved Material Safety Data Sheet (MSDS) for each.
12. Label all flammable and toxic substance.
13. No Smoking signs around flammable liquid and gas storage areas, barrel trucks and battery charging rooms.
14. Any government required postings or communications.
15. A fire prevention and protection plan for the proposed work, including an emergency evacuation plan.
16. Procedures for the documentation and reporting of fires, injury accidents, and other incidents that may affect the project.
17. Procedures for excavation work when the depth is anticipated to reach over 1.2 meters or where underground hazards are reasonably anticipated.
18. Establish a first-aid program and provide adequate personnel, supplies and facilities for the work anticipated. At least one supervisor shall be certified in first aid.
19. The contractor shall report immediately all injuries resulting in medical treatment and other incidents including any hazardous substance exposure, breaches of security and equipment or property damage to The Project E&HS representative. Failure to report may result in termination.

20. Post the emergency medical telephone numbers (doctors, ambulance, fire department, etc.) in appropriate areas.
21. **“HORSEPLAY”** on the project site is strictly prohibited. Running on the project site is allowed only in extreme emergencies.

### **13.8 Inspections**

Establish periodic inspections of the following:

- Project work areas – daily
- Project E&HS inspections – monthly
- Fire extinguishers – after each use, Weekly, annual inspection

Equipment inspections – before entry to project site and the following as noted:

- Cranes – annual certification, inspect monthly, before large lifts and document Rigging – before use and monthly, document
- Dozers, loaders, aerial lifts, etc. – monthly, document

### **13.9 Reports**

- The contractor files a report of First Aid/Medical Cases to Project Team weekly.
- The contractor files a Safety Performance report to Project Team monthly. This report includes:
  - Total exposure hours for employees on project
  - Number of medical treatment injuries - Number of restricted cases
  - Number of Days Away From Work (DAFW) cases
- The supervisor and contractor file an oral Incident/Accident Investigation report immediately to Project Team, with a written report within 24 hours.
- The contractor and lower tier subcontractor file an oral Employers First Report of Injury immediately to Project Team, with a written report within 12 hours.
- The contractor files an oral Environmental Spills/Releases report immediately to Project Team, with a written report within 12 hours.

## **14 | SECURITY PLAN**

- This plan has been prepared as a guide for on-site protection of employees working on the Project.
- It is intended to protect personnel, material, tools, equipment and all property of Project or the property of any other person or contractors on this project.
- Since all the situations encountered in the course of the project execution cannot be anticipated by the guidelines set forth herein, there will be times when the greatest service, which can be performed, will depend on sound principles and common sense.
- To enforce the rules set forth on a fair and impartial basis, familiarity with the contents of this plan is essential for effective performance.

- Further, this plan may be revised as site and/or Project requirements change. Regardless of the possible revisions, the conditions herein will be minimum requirements.

#### **14.1 General Security Functions**

- The Project E&HS Department is responsible for the basic security requirements associated with the Project.
- While they may be called upon to provide additional services their responsibilities on this project will be:
  1. Maintain secure and controlled exterior boundaries of the Project.
  2. Monitor and control access and egress of project personnel and visitors.
  3. Monitor and control the movement of equipment and materials onto the Project site and prevent any unauthorized removal of such materials or equipment.
  4. Patrol and survey premises to prevent accidental or intentional loss of or damage to Project property, help Contractor or subcontractor's security to protect their property, during non-working hours.
  5. Control the flow of traffic and parking to minimize accidents and road blockages.
  6. Perform inspection, packages, toolboxes, equipment and motor vehicles on the Project.
  7. Assist project personnel in maintaining control and order in emergency situations.

#### **14.2 Control Procedures**

##### **14.2.1 Parking**

- Client, PMC and contractor personnel shall park in the designated parking areas.
- Those items prohibited on Project property, will be likewise prohibited in the Contractor's parking area.
- Persons will not be allowed to loiter in the parking areas.
- Project team will control traffic and parking in the parking areas. Security personnel may be utilized to direct/control employee vehicle traffic in the a.m. and p.m. as determined necessary by the Project Manager, during peak work force periods.

### 14.2.2 Personnel - Identification and Control

- Client, CONSULTANTS and contractor, vendor's employees entering the site will be checked for proper identification badges, prior to entering the site.
- Project will furnish all personnel assigned to the Project with an ID badge. These badges will have the employee's name, picture on the front of the badge.
- If an employee does not have his/her ID badge, his/her foreman or supervisor must come to the gate and sign for the employee. This will only be allowed on the **first occasion** that it occurs. **Second occasion** violations of the ID badge policy will result in the employee being requested to leave and obtain their ID badge. **Third occasion violation** - the employee will not be allowed in the site for five (5) working days.
- If the personnel enter the site without ID badge, they will be required to sign in/out with the Project Security Personnel.
- Lost Badges - An employee who loses their ID badge may obtain a replacement. In such cases, the employee shall fill-out a lost badge form and have their supervisor acknowledge the lost badge by signing this form. ID badges will not be issued more than two times during the same 12-month period.

### 14.2.3 Visitors

- Prior to any visitor being allowed on-site, authorization shall be obtained. The visitor after producing identification shall be logged in and out by the security officer on duty.
- Only persons having official business at the site, or those with prior authorization (i.e., appointments) shall be directed to the project office and be permitted entry the Project site.
- All visitors in the construction areas shall comply with all Project E&HS rules, regulations and procedures.

### 14.2.4 Equipment/Material Delivery and Removal

- Common carrier type vehicles making deliveries or picking up materials shall only make deliveries or pick up during normal working hours, unless special arrangements have been made. Common carrier vehicles, which enter the project, shall be logged in and out by Project security personnel
- Site visitor's badges and safety equipment will be issued in accordance with established policies. Drivers working in construction areas requiring safety helmets and safety glasses with side shields shall be required to comply and be advised to remain with their vehicles at all times.
- All vehicles will be subject to inspection.
- Any person removing materials from the site will be required to have an authorized material pass. The pass shall be signed by persons authorized by the Project Team. This material pass will list, by items, a description of the material being removed and contractor markings and/or serial numbers.
- The contractors should manage their equipment and materials, protect against theft.

### **14.3.5 Tools**

- Contractor's tools shall be marked for identification. Visitors or employees found with such tools in their possession on leaving the project and without a material pass will be detained. The site Security Manager will be notified to investigate and take appropriate action.
- Contractor employees taking their personal tools off the job shall have those tools inventoried and recorded, prior to their leaving the site.

**NOTE:** Security has the option to perform an inspection and re-inventory of the toolbox.

### **14.3.6 Motor Vehicles and Equipment**

- All motor vehicles in the Project must be in safe operating condition.
- Contractor vehicles must have their company logo displayed on both sides of the vehicle.
- Contractor self-propelled, rubber-tired equipment must have the company name or logo displayed prominently on both sides of the equipment.
- All buses must be identified with a contractor's company logo and a bus identification number. The number must be large enough to be easily read and be prominently displayed.
- Red flags shall be used on any load that extends beyond the front, side or rear of the vehicle.
- All traffic signs and signals, whether fixed or portable must be obeyed; drivers must cooperate with Project security officers and others appointed to direct traffic.
- All vehicles must be operated within the sites maximum speed limit of 15 kilometer per hour, unless a lower speed is posted.
- Any person may have in-plant driving privileges canceled or be subject to disciplinary action, or both, for failure to comply with site traffic regulations or for improper use of vehicle.
- Vehicles needing access onto the Project site on a regular basis may be issued a vehicle entry authorization decal. Only those company vehicles and/or personnel that have been approved by the Project Manager will be issued a vehicle entry permit.
- The permit is to be displayed on the windshield / windscreen of the vehicle.

### **14.3.7 Cameras**

- No cameras shall be allowed on site without the permission of the Project Manager or CONSULTANTS. The sole exception to this regulation is the camera allotted to the E&HS Department for use during investigation of mishaps, accidents, thefts, etc.
- It is forbidden to use the camera/camcorder on site. If need be, a prior approval shall be taken from CONSULTANTS/ PM.

### **14.3.8 Notification of Violations**

- Contractors shall immediately notify the site Security Manager of all thefts and security violations and shall submit a monthly summary of thefts and security violation.

## 15 | PROMOTIONS & INCENTIVES

The objective of safety promotions and incentives is to develop, heighten and maintain all employees' safety awareness assigned to the Project. It reiterates the Project commitment to safety and of the employee's responsibility to support that commitment.

### 15.1 Safety Notice Boards

- Contractors will provide safety notice boards that display information such as safety inspection results, safety memorandum/newsletter, monthly accident summary report, and safety posters.
- These boards shall be displayed at location where high volumes of movements of employees. This may be at Contractors and subcontractors site offices, workers quarters, canteen, and any other location where it is deemed recognized by E&HS Department

### 15.2 Warning and Safety Signs

- Warning and signs shall be adopted as visual aids for accident and fire prevention. Signs shall be written in English, Telugu, and Hindi and be conspicuously displayed.
- The project will maximize the use of wordless safety signs and symbols.

### 15.3 Posters and Safety Banners

- Posters and Safety Banners shall be displayed to promote and to maintain safety awareness at site.
- These posters and banners shall be displayed at safety notice boards, and conspicuously placed at site. These shall be updated frequently to maintain interest.

### 15.4 Accident Statistic Board

- CONSULTANTS and Contractors will maintain an E&HS Performance Board, (At least 3m x 2m in size, written boldly in both English and Hindi). The content of the board shall include the following:

Following information will be displayed at the entrance

- Project Name
  - Status date
  - Number of Man hours as on date
  - Cumulative Man hours completed as on date
  - Number of reportable accidents
  - Loss of Man hours due to accidents
  - Total number of Safe Man hours clocked
- A notice board shall be erected at the main entrance to the work area. The PMC Safety Manager will be responsible in ensuring that the statistic board is updated to reflect the safety performance of the site.

### 15.5 Safety Incentive Program

- Safety incentive program will be conducted every month to motivate the workers towards safety.
- The incentive program will be informed during the orientation and regular tool box talks to workers.
- Encouraging the workers by highlighting the incentive programs of the management to aim at Zero injury.
- If such outstanding performances are noticed by the engineers and brought to the notice of the PMC Safety Manager, due respect shall be endorsed to the individual. The matter shall be acknowledged and forwarded to the Client's Project Manager for due consideration and further recognition.

### 16 FORMATS, PERMITS

1. EHS –Induction
2. Safety Pep Talk / Tool Box Talk report
3. EHS Training
4. Excavation Permit
5. Working at height Permit
6. Hot work Permit
7. Extended hours of work (Night) Permit
8. Confined Space Permit
9. Electrical work permits
10. Incident / Accident Investigation Report
11. Non-Conformance Report
12. Daily inspection Check-List for Safety measures at site
13. Safety Check-List for Scaffoldings/Ladders
14. Crane Check-List
15. Equipment fitness report for Vehicle and Equipment
16. Personal protective equipment check-list
17. Disposal Permit Form
18. Shaft work Permit
19. Job safety analysis





**Safety Pep Talk / Tool Box Talk Format**

Contractor's Name: - \_\_\_\_\_

Project:

Date:

Time:

Topics highlighted

- 1.
- 2.
- 3.
- 4.
- 5.

S. No.	Name	Designation	Company/Contractor	Signature

Conducted by:

Name:

Designation:

Signature:



**EXCAVATION PERMIT**

Permit No:

Date:

Project :

Contractor and Sub-Contractor Name:

**Excavation Details:**

Purpose:

Area /Location:

Proposed start date and time:

Proposed date and time of completion of work:

Equipment and tools used:

Excavation Length ..... m

Excavation Width ..... m

Excavation Depth ..... m

**Preparations:**

- 1. Underground cables, pipelines, electrical lines etc checked ... Yes /No
- 2. Personnel protective equipment's to be used are:
  - a) Safety shoes .... Yes/No
  - b) Safety helmets .... Yes/No
  - c) Gloves .... Yes/No
  - d) Eye protection .... Yes/No
  - e) Ear protection .... Yes/No
  - f) Dust mask .... Yes/ No

**Safety Precautions:**

- 1. Proper access made with required no: of exits
- 2. Provide and use proper PPE's
- 3. Barricade the area ,display caution boards
- 4. Ensure good housekeeping before and after the work
- 5. Ensure constant supervision
- 6. Use certified equipment and machinery
- 7. Check for underground utilities interference
- 8. Check operators driving license and reverse horn for the equipment used
- 9. Any other precautions, if any and specify-

**Checked by:**

Contractor's Safety Officer Name and Signature:

Date and Time:

**Permit Issuing Authority:**

Permit is granted and valid up to:

Permit is revalidated for a period of:

CONSULTANTS Safety Officer Name and Signature:

Date and Time:

**WORKING AT HEIGHT PERMIT**

Permit no :  
Project :  
Location :  
Job description:  
Contractor :

Date:

**Safety Precautions:-**

S. No	Description	Yes / No
<b>Scaffolding:</b>		
1	Scaffoldings of good construction ,adequate with 600 mm width walkways, toe-boards	
2	Scaffold secured with stairways, wide enough to pass 2 persons at a time, handrails,(should be of metal scaffolding)	
3	Maintain good housekeeping at work locations	
<b>Safety nets:</b>		
1	Safety nets fixed at the bottom of scaffold to prevent bodily injuries in case of fall	
<b>Ladders:</b>		
1	Strong materials used and well maintained	
2	Ladder not placed against loose boxes, round materials. objects, near electrical installation	
3	Ladder of sufficient height used, on top tied and positioned at the foot of ladder	
4	Safety foot ware provided at base	
5	Ladder placed at an angle of70 -75 degrees	
6	Area of the work barricaded so that no person can walk under the ladder	
<b>Personal Protective Equipment:</b>		
1	Safety harness provided and worn	

Above safety precautions have been taken.

Name and Signature of permitted:

Date:

Permission issued from ..... hrs to..... hrs

Date:

Name and Signature of issuing authority:

**Permit closure:**

This permit is closed on ..... hrs.

Name and Signature of permit tee:

Date:

Name and Signature of issuing authority:

**HOT WORK PERMIT**

Permit no : \_\_\_\_\_ Date: \_\_\_\_\_  
Project : \_\_\_\_\_  
Location : \_\_\_\_\_  
Job description: \_\_\_\_\_  
Contractor : \_\_\_\_\_

The area of work has been examined, precautions checked mentioned below have been taken to prevent fire.

**Safety precautions:**

- a) The technician must inspect the proposed precautions taken to prevent fire.

**Electrical Isolations:**

- a) Electrical isolation required for equipments isolated.
- b) Electrical cables covered.

**General Precautions:**

- a) Fire extinguishers are in service.
- b) Cutting and welding machines are in good condition.
- c) Area technician notified.

**Precautions near area of work:**

- a) Nearby area swept clear of combustibles.
- b) No combustible, flammable liquids are nearby.

**Fire watch:**

- a) To be provided during operation.
- b) Supplied with fire extinguishers.
- c) Trained in use of equipment for fire fighting.

I have personally examined the area and certify, precautions have been taken for the abovementioned area.

Name and Signature of the technician: \_\_\_\_\_

**PERMISSION ISSUING AUTHORITY:**

Permission issued for this work from .....hrs to ..... hrs.

Permit expiry date: \_\_\_\_\_

Name and Signature of issuing authority: \_\_\_\_\_

Name and Signature of the permit tee: \_\_\_\_\_

**Permit Closure:**

Date and Time ..... this permit is closed.

Name and Signature of Permit tee.    Name and Signature of issuing authority: \_\_\_\_\_



## CONFINED SPACE PERMIT

Project:

**A. Permittee** (The person taking the permit) to fill:

1. Location of the confined space:
2. Identity of the confined space:
3. Purpose of entering the confined space:
4. Date and time:

Check-List:

S. No	Description	Yes / No
1	Has the Vessel/Equipment/Space been cleaned, purged, isolated	
2	Have all electrical/air/hydraulic equipment/drives been disconnected	
3	Are the persons required to enter the confined space are trained in dealing with the specified hazards	
4	Personal Protective Equipment provided	
5	Is the rescue team equipped with emergency rescue devices put on as standby	
6	Is a 24 V hand lamp provided for use inside?	
7	Is forced ventilation provided? (Exhaust/Fresh airflow fan)	

Tests required:

- 1) Oxygen level (19.5% to 23.5%)
- 2) Explicability (0%)
- 3) Carbon monoxide level (50ppm max)
- 4) Carbon di-oxide level(1200 ppm max)
- 5) Temperature
- 6) Air-flow
- 7) Others

a) List of authorized persons to work inside the confined space and the rescue team  
(List enclosed).

I have checked the above points and found the conditions suitable to undertake the work.

- Name, Designation and Signature of the Permitted (Site Engineer):

**B. Permit issuing authority** (The person giving permit) to fill:

The safety precautions and safe conditions mentioned above have been verified and work can be started.

(Name and Signature of issuing authority)

(Name and Signature of Safety Officer)

**C. Permit closure:**

Date and Time .....this permit is closed .

(Name and Signature of issuing authority)

(Name and Signature off Safety Officer).

- **Note:** The scope of this permit is limited to entering into confined space .Relevant Work permits shall be obtained for carrying out activities inside the confined space along with this permit.

**PERMIT FOR WORKING IN ISOLATED AREAS**

Permit No:  
Project :  
Location :  
Date :  
Time :

ISSUE :  
Nature of jobs identified:  
1) .....  
2) .....  
3) .....  
4) .....

**A. Safety measures to be provided and followed:**

- a) .....
- b) .....
- c) .....
- d) .....

I hereby authorize.....to carry out the above work.

Name and signature of Site Engineer: .....

**B. Acceptance:**

I have understood the hazards and safety precautions /requirements to carry out the abovementioned work and I accept to undertake the work.

Name and signature of Contractor’s Engineer: .....

**C. Name and signature of issuing authority:**

Date and Time:



**ELECTRICAL WORK PERMITS (H.T/ L.T.)**

Project:

Contractor:

Clearance required from.....hrs. Date.....To.....hrs Date.....

Name of the equipment..... HT/LT Switch Gear No:

Nature of the job to be done:

Area:

Location:

Associated work request No:

Dated:

Time:

Permit Validation:

Performing Authority:

Name:

I hereby authorize the electrical personnel  
to isolate the above equipment from all sour

Designation:

for maintenance/ repair.

The work and precautions will be  
carried  
Out under my overall responsibility.

Issuing Authority

Signature:

Signature:

Name:

Date:

Date:

Work site responsibility delegated to:

Name:

Designation:

Signature:

Date:

**PERMIT VALIDATION FOR DE-ISOLATION**

I here-by authorize the electrical personnel to De-Isolate the above equipment and return back for normal operation:

Signature:

Name:

Date:

Issuing authority

I certify that the equipment mentioned above is de-isolated and is ready for normal operation.

Signature:

Name:

Date:

**Incident / Accident Investigation Report**

Project:

Name of Contractor/Sub contractor:

Name of Victim or Person Involved:

Date and Time:

Location:

Description of Incident/Accident:  
(Brief narration how it occurred)

Nature of Damage /Injury:

Witness (if any):

Observations:

Cause of Accident/Incident:

Corrective action taken/suggested for:

Prevention of recurrence:

Signature :

Date :

Name :

Designation:

## Non Conformance Report

Contractor:			Package:	
Project:			Location:	

A. IDENTIFICATION OF NON-CONFORMANCE BY CONSULTANTS	Report number:	
	Date:	
	Issued by - Name:	
	Signature:	
	Received by - Name:	
	Signature:	

B. CORRECTIVE ACTION TO BE TAKEN BY CONTRACTOR	
	Action by Name:  Corrective Action Date  Reviewed by; Signature:  Date

C. PREVENTIVE ACTION TO BE TAKEN BY CONTRACTOR	
	Action by Name:  Corrective Action Date  Reviewed by;  Signature:  Date

<b>D. REMARKS and COMMENTS</b>	



**--Checklists--**

**DAILY INSPECTION CHECK-LIST FOR SAFETY MEASURES AT SITE**

Date:

Location:

Project :

Inspected By

<b><u>Sr.No</u></b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Are all persons entering site wearing Safety helmets and Safety shoes?			
2	Are persons working above 2 meters, wearing safety Harness with life line anchored to a rigid support? All works over 2 meters must be carried out on good working platforms which are built acceptable to Safety standards.			
3	Is special electrical equipment required for electrical works Available?			
4	Are safety guards for moving parts of machines in position?			
5	Are openings/pits covered, barricaded and warning signs displayed?			
6	Is house-keeping in order, materials are stacked properly In marked areas?			
7	Is the work area polluted with dust, fumes, gases etc. for which safety appliances are provided or not?			
8	Are fire extinguishers available at site?			
9	Are fire extinguishers hanged on wall with proper clamps or placed on ground?			
10	Is validity of refilling extinguishers displayed on the body of extinguisher?			
11	Are fire buckets available at site?			
12	Are fire buckets filled with water and sand?			
13	Is earthling provided to all equipment's?			
14	Does the earth conductor continued up to the distribution board?			
15	Is ELCB provided to all electrical circuits?			
16	Is the access and working platforms properly illuminated?			
17	Is insertion of loose wires in sockets without plug sockets present?			
18	Is improper joining of cables and wires prevailing at site?			
19	Is proper cover for DB, PDB etc. provided with locking			

	arrangement?			
20	Are lifting equipment's and tackles in good working condition and recently load tested?			

Site

**SAFETY CHECK-LIST FOR SCAFFOLDINGS/LADDERS**

Project :

Location:

Date:

Inspection by:

<u>S. No</u>	<u>Description</u>	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
1	Design tall scaffold			
2	Provide scaffold of sound material			
3	For tubular scaffold ,diameter should not be less than 48 mm and wall thickness less than 2.3 mm			
4	Check whether each scaffold is securely supported or suspended and properly struted or braced			
5	Check whether all scaffolds and working platforms are securely fastened to the building or structure and braced or guyed properly			
6	Provide a regular plank stairway wide enough for 2 persons to pass and provide handrails on both sides			
7	The length of the ladders should not be more than 4 meters			
8	Check for fall of loose materials, bracings and other parts off scaffold			
9	Check whether un- insulated electric wires exist near working platforms, gangway etc of a scaffold			
10	Any other safety issues:			

(Signature of the safety officer)

## CRANE CHECK-LIST

---

Project:

Location:

Description of Crane:

Make:

Registration No:

Inspection by:

Sl.No.	Check points	Observation	Remarks
1	Hook and Hook Latch		
2	Over-Hoist Limit Switch		
3	Boom Limit Switch		
4	Boom angle Indicator		
5	Boom-Limit Cut off Switch		
6	Condition of Boom		
7	Condition of Ropes		
8	No. of Load Lines		
9	Size and Condition of the sling		
10	Swing brake and lock		
11	Proper brake and lock		
12	Hoist brake and Lock		
13	Boom brake and lock		
14	Main clutch		
15	Leakage in hydraulic cylinders		
16	Out triggers fully extendable		
17	Tyre Pressure		
18	Condition of Battery and Lamps		
19	Guards of moving and rotating parts		
20	Load Chart Provided		
21	No. and position of pendant ropes		
22	Reverse Horn		
23	Load Test Details		
24	Swing alarm provided		
25	Operator Fitness		
26	First Aid box		
27	Fire Extinguisher in operator cabin		

(Checked by P&M Engineer)(Site Safety Officer).

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## Painting

Project:

Location:

Inspection by:

Date:

S. No	Painting	Yes	No	Remarks
1	Are the painters using required PPEs like chemical cartridge type mask, hand gloves etc..?			
2	Are there sufficient ventilations in the painting area?			
3	Are the fumes and gases affecting the other workers in the surrounding area?			
4	Are the painting areas properly barricaded and marked?			
5	Are the materials like thinners and paints stored in a safe area? Is the area clear from sparking producing equipment's?			

Signature of the safety officer)

### Equipment fitness report for Vehicle and Equipment

Project:

Location:

Make:

Model:

Identification No./Reg.No:

Inspection by:

Date:

S. No:	Check points	Observation	Remarks
1.	Engine condition		
2.	Clutch/Brake		
3.	Hydraulic system		
4.	Guards/ Covers/ Doors		
5.	Fastener lock pins/Keys		
6.	Horn/Reverse horns/ Lights		
7.	Indicators/ Wiper blades		
8.	Operators fitness		
9.	Tyre pressure		
10.	Condition of battery/Lamps		
11.	Operating levers/ Steering		
12.	Gauges and Warning devices		
13.	Swing alarm provided		
14.	First-aid box provided		
15.	Fire extinguisher provided		

The Vehicle/Earth moving equipment has been checked for above points and

Found Okay

Found not Okay

(P and M Engineer)

(Site Safety Officer)

**MONTHLY SAFETY REPORT**

Project Name:

Location:

Month:

Date:

**I Accident Statistics**

Description	CONSULTANTS	Contractors	Total
<b><u>A) MONTHLY STATUS OF MANPOWER</u></b>			
1. Total Man-Days worked			
2. Total Man-hours Worked (Including O.T.)			
<b><u>B) MONTHLY ACCIDENT REPORT</u></b>			
1. Total Number of Accident			
a) First-aid cases			
b) Minor Accidents			
c) Reportable Accidents			
d) Fatal Accident			
2. Total Man-days lost due to accident			
a) Due to minor accidents			
b) Due to reportable accidents			

**CUMULATIVE SAFE MAN HOURS:**

*PS: Please inform immediately to Head-EHS and Legal Department in case of serious and fatal Accident*

**II Safety Committee Meeting**

Dates of Meeting

Held Date				
By Whom				

*Enclose all minutes of meeting*

**III Safety Inspections**

Date				
By Whom				

*Enclose Safety Inspection Report along with Compliance Report*

**IV Safety Induction Training**

Date	
No. of Employees	

**PERSONAL PROTECTIVE EQUIPMENTS CHECKLIST**

<b>SL.NO</b>	<b>PARTICULARS</b>	<b>YES / NO</b>
1	Do the Workers Wear Helmet in such a way to protect their head?	
2	Are they wearing hand gloves, Rubber gloves (IS 4770 for electrical purpose), Leather hand gloves of required quality for the job	
3	Do the workers using appropriate Footwear with steel toe?	
4	Is there any need for Safety belt (IS 3521-1965) use? If so, are they hooked properly?	
5	Is there any need for Ear protection? If so, are they using the device external or internal type?	
6	Are there any need for Safety glasses / Safety screens /Safety goggles for the work being done? If so, are they using appropriate equipment?	
7	Do the Workers have respirator/ protection from inhalation hazards?	
8	Are the helpers also using proper PPE or not?	
9	Have the Workers been briefed about the Hazards associated with the job and the emergency action to be followed whenever there is requirement?	

Contractor's Site In-charge/Safety In-charge:

EHS Manager/ Site Safety Officer:

**DISPOSAL PERMIT FORM**

PERMIT NO.: \_\_\_\_\_

DATE: \_\_\_\_\_

Mr. \_\_\_\_\_ Foreman is authorized to dispose of the following materials in the manner indicated:

MATERIAL	METHOD	LOCATION

The procedures posted at the burning ground and disposal area must be followed in detail during these operations.

Personnel Authorized:

Date:

Time:

(Supervisor)

