



Sanitech Engineers & Consultants
Pvt. Ltd.

Projects EHS Department

SAFETY RULES

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01. MAJOR EQUIPMENTS

SECPL - List of Major equipment

S. No	Type of Machinery	Units	Quantity
1	Cutting Machines	Nos	45
2	Drill Machines	Nos	25
3	Electrical Hydraulic Testing Machine	Nos	18
4	Water Level	Mtr	30
5	Groove Cutting Machine	Nos	12
6	Chop saw Cutting Machine	Nos	40
7	Breaker Machine	Nos	25
8	Wall Chasing Machine (Bosch)	Nos	60
10	Testing Machine	Nos	33
11	Chipping Machine	Nos	30
12	Welding Machines	Nos	25
13	Laser Level Instrument.	Nos	30
14	Grinding Machines	Nos	50
15	Pipe Threading Machine	Sets	15
16	Dumpy Level	Nos	12
17	Plumber/Fitter/Welder Tool Kit	Nos	50
18	HDPE Jointing Machine	Set	08





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02. INTRODUCTION

EHS procedures set forth in this manual are the minimum acceptable standard for the project execution. All levels of management personnel and supervisors are responsible to implement and enforce the provision of EHS plan with in their respective area of accountability with due consideration of environment, health and safety of all involved parties.

With the unique nature of each type of activities, certain issues may arise, which have not been covered in this plan. The Site management is required to review on case-by-case basis, to ensure the safe execution of the job.

OBJECTIVES OF THIS HSE PLAN:

To identify certain critical activities, assess the risk associated therein and suggest precautionary measures to avoid accidents.

To integrate EHS requirement in work practices.

Compliance to the requirement in line with Indian Regulations Act, MOEF regulations & SAP construction safety guidelines.

To create safety awareness to every individual associated with the project.

To provide the necessary EHS inputs.

To formulate and effectively maintain the accident prevention program of the project.

To achieve the prime objective of ' ZERO ACCIDENT '.

Facilitating a safe and productive project in scheduled time.





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03. EHS POLICY

Environment Health and Safety Policy

We accept the responsibility to carry out all works with safe methods

We will train the man power and provide PPE, leather / rubber hand gloves and for working with electrical equipment's

We will follow the safety policies while working at sites

We will make all our staff, wear safety helmets, goggles and shoes

We will apply proper tools for proper job

We will do housekeeping on daily basis and remove all debris and store into the areas identified for storage.

We will be providing training for my workers and staff like first aid, firefighting, and safety

We will provide first aid facility at site.

We will make sure to wear safety belts, to all our workers, working at heights

We will keep all plastic sheets and rubber items, wooden pieces into recycle bins .for better environmental standards.

We will take work permit for hazardous areas before start of job

We will not use any materials which will endanger the environmental around us

We will be providing fire extinguishers and fire buckets with water and sand at work places

We will adhere to all policies Of OHSAS I S standards 14001 and 18001





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04. PROJECT EHS MANAGEMENT SYSTEM

To manage the complexity of the safety requirement a well-defined and organized “Environment, Health and Safety management system” to be developed at site.

Screening system:

All workmen shall be screened before placement to determine the suitability to activity / work by the concerned department person. Workmen screening format shall be filled for each workmen and documented in the administration department. Age proof of all workmen during the time of screening shall be ensured. Photocopy of age proof shall be produced along with screening form. Generalized induction will be given by PC to the workmen’s at the site induction Room before the commencement of works and the document will be maintained.

EHS orientation:

EHS induction shall be given to all new employees before they are deployed in the site activities. EHS Officer shall explain the general safety rules of the site and all the EHS requirements that are required to be observed during the site activities.

Toolbox meeting:

The concerned site engineer shall conduct toolbox meeting with the workmen and supervisor of each activity. This meeting shall be conducted at least twice in a week with proper documentation to remind and regulate the EHS aspects in the site related activity.

Safety committee:

Safety committee to be formed as follows:

Chairman: Project Manager

Secretary : EHS Engineer.

Member : HODs of all site departments.





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The meeting of safety committee to be organized monthly to review discuss and take collective decisions for integration & updating of EHS parameters at site.

Safety inspection:

Site safety inspection shall be done weekly by EHS Officer and members of site safety committee to locate unsafe act/ unsafe condition prevailing at site and get it rectified.

Job specific training shall be imparted to all level of management according to the requirement.

Equipment fitness certificate:

Any equipment arriving to the site is inspected and authorized by P&M engineer on its fitness to use. Based on their recommendation the equipment is deployed / rejected / used after the minor repair.

Monthly inspection of P&M equipment to be done to ensure that all safety systems are functioning properly and equipment are in good working condition.

Drivers and operators of mobile equipment must possess a valid driving license and certificate for their equipment. The type of vehicle being driven shall be in accordance with the driving license. Only trained and authorized personnel shall be operating the mobile equipment.

All vehicles used at site should have reverse horn and drivers/operators should possess a medical test certificate.

F-15 New Generation Crane will be used as per the site specifications.

Method statement / Safe working method:

Method statement to be submitted by the engineer concerned in consultation with the site EHS Officer prior to start the activities.

Supervision:

The site in charge should ensure that an employee (of suitable seniority, authority and responsibility for environment, health and safety) is always





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Present at site during the course of the work, to supervise, direct the work force and to receive & implement instructions from the authorities.

PPE:

Besides the enforcement of the engineering measures and management control, relevant PPEs conforming to IS standards must be given to all individuals associated with the project. All equipment conforming to the relevant safety standard to be procured and the same should be inspected by EHSO.

Incident Reporting procedures:

It is the responsibility of the concerned site engineer to inform the EHS department about the incident/dangerous occurrences or near miss cases within one hour of the incident took place

Any incident (including near misses, dangerous occurrences) to be reported within 12 hours and investigation report to be submitted within 24 hours.

EHS PROMOTION AND RECOGNIZATION

To enhance the EHS standards various EHS programs shall be implemented for EHS promotion, motivation and recognition etc., for individuals and sub-contractors.

Safety notices, warning signs, posters, slogans, important telephone numbers, shall be duly displayed to make everyone aware of the prevailing

Hazards in the construction area. Training program, drill and demonstration

as detailed in this plan shall be organized during the construction period to enhance the awareness and motivational level.

Every month one area/contractor/group shall be selected "Best housekeeping practices".

Every month one person shall be chosen and awarded for "Best Safety Conscious workman of the month". This shall be displayed in the notice board also as part of motivational effort.

Safety training:





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Every workman should be trained to do the work assigned for him. Details of the training matrix should be attached in the plan.

HAZARD WARNING

Adequate warning signs, signals, caution notices, barricades appropriate to the type of hazards, shall be provided in the construction area. The primary factor with any hazard warning is that all employees, visitors, etc. shall be educated about the hazards in the construction site.

The entire hazard warning signs, tags, barriers, etc. must be removed when the hazard is no longer exists. Removal of warning signs is the responsibility of the person who erected the warning signs. No other person shall remove or issue instruction for the removal of the warning sign.

EMERGENCY PREPARDNESS

Communication system

Safety toolbox talks shall be given to all concerned about the emergency assembly point, firefighting equipment and its use.

Emergency related notices shall be displayed as required.

All important phone numbers in case of emergency shall be displayed at site

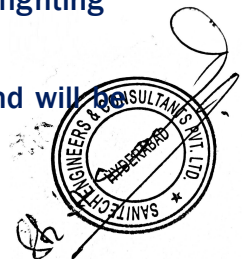
Firefighting system

Sufficient firefighting equipment such as extinguishers shall be strategically placed during the construction activities near hot work, electrical installations and storage yard.

Sufficient employees will be given the training to use of firefighting equipment.

Fire fighting equipment will be maintained and checked regularly and will recorded.

First aid facilities:





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A trained first aider shall maintain first aid center during the working hours. Apart from that, emergency vehicle shall be made available for transportation of the injured personnel. First aid boxes shall be placed at conspicuous locations regularly inspected and contents shall be replenished. The authorized first aider shall maintain the records of inspection for the contents of the first aid box.

Records of incident, first aid cases and other visits to the clinic shall be maintained and evaluated to identify recurring problems and corrective measures shall be implemented by the site management.

Safety violations:

In the event of safety violations, the site management shall apply a combination of counseling and enforcement through punitive measures. For serious and repetitive behavior, person will be removed from the site and related activities.

WORK PERMIT SYSTEM

The purpose of the work permit system is to ensure that works having potential hazard can be carried out with due regard to safety, health and welfare of the workers; to prevent any incompatible work from being carried out at the same time in the project. The permit serves as an official written records of "conditions and requirements" agreed upon by the issuer and receiver. It lists the hazards (which must be controlled) and the minimum safety precautions to be taken.





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05. ROLES AND RESPONSIBILITIES:

Project Manager:

To participate in safety activities and give full support for the safety related programs.

To chair the safety meeting and advice the execution team to adhere with the recommendation made by the committee.

For any new activity call a meeting with concerned person and discuss the work procedure to explain the sequence of operation to outline the potential hazards at each stage and indicate precautions to be adopted.

Review the EHS performance of the site and act for continuous improvement.

Empower personnel to stop activities where there is an imminent danger of accident.

Taking all effort to prevent accident.

EHS officer:

Responsible for organizing and conducting safety inspection of the work area, work method, men, Machine, and materials, P&M and other tools and tackles.

Facilitate inclusion of safety elements into work method statement

Highlight the requirement of safety through pep talk.

Help site engineers to prepare Risk Assessment for all jobs.

Conduct investigation of all incidents/ dangerous occurrences and recommend appropriate safety measures.

Convene the safety meeting and minute the proceedings for circulation and follow up action.

Advice and co-ordinate for implementation of work permit system.





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Plan procurement of PPE & safety device and inspect before use as per laid down norms.

Facilitate screening of workmen and safety induction.

Monitoring administration of First aid.

Conduct fire drill and facilitate emergency preparedness.

Design campaigns, competitions and other special emphasis programs to promote safety in the work place.

Assist Project head in effective implementation of approved Project EHS plan.

Exercise authority to stop work when need arises.

To provide assistances to all levels of management to implement accident prevention activities.

Evaluating the sub-contractor's EHS performance.

Departmental in charges/Site Engineers:

Responsible for the prevention of accident in his section.

To enforce all general and site EHS rules and regulations.

Prepare construction method statement so that work is carried out to the required standard with the minimum risk to men, equipment and materials.

Ensure adequate supervision for all the work, having potential hazards.

Sparing workmen, where necessary for on or off site training programs.

Ensure that all plant and machinery received at the site are equipped with safety devices and is tested in accordance with the construction regulations.

Take certain that all plant and machinery operators are deployed only on those equipment for which they have been thoroughly trained.





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Check that hired plant is safe and appropriate copies of test certificates are available.

Attend promptly to all unsafe condition and defective plants noticed or call the attention of the site management.

Mobilize and maintain fire extinguisher, where flammable materials are stored.

Ensure that all hazardous materials are properly marked to enable adequate Precautions to be taken

To participate in the site safety committees, site safety meetings, safety inspections and ensure all site EHS issues are addressed at the earliest.

Seek E H S advices and c o-ordinate with the EHS engineer in effectively implementing the “EHS POLICY” and Project EHS Plan.

To conduct pep talks at site.

To ensure that all persons working under him are trained on safety and proper working procedures.

To assist the EHS Engineer in conducting incident investigation involving his workers.

Taking all effort to prevent incident at his area.

Front line supervisors:

To ensure that all the workmen undergo the screening formalities.

To ensure the use of personal protective equipment as per the nature of the job.

Deploying only trained persons in the activities at height and in other risky activities.

Teach the workmen about the possible hazards and emergency procedures.





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Check that all machinery and plant, including power and hand tools are maintained in good condition.

Inspect the access, platform and other scaffolding arrangements before permitting the workers to start the work.

To maintain good housekeeping in their respective work areas.

All tools and tackles to be inspected before use. Defects to be reported immediately. No lifting tackles to be used unless it is certified by the concerned P&M Engineer/ EHS engineer.

Get the temporary electrical installation inspected by the electrician periodically.

Ensure adequate illumination at work places before starting the work at night.

To avoid/manage (with adequate precautions) on multi-tier work.

Follow work permit system.

In case of miss-happening, see that proper care is taken for casualty and learn that where to obtain medical aid and ambulance service in the event of a serious injury.

Inform EHS department about the incident / dangerous occurrences and near misses if any.

To stop work in case of imminent danger to man, machine or material observed and resumed only after corrective measures.





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06. General site safety rules

1. No workmen below 18 years and above 58 years of age shall be engaged for a job.
2. All workmen shall be screened before engaging them on the job.

Physical fitness of the person to certain critical jobs like working at height or other dangerous locations to be ensured before engaging the person on work. The final decision rests with the site management to reject any person on the ground of physical fitness.
3. All workmen shall be provided with Photo ID card.
4. Visitors can enter the site with the visitor pass. He should be provided with helmet & safety Shoes. Also he should be accompanied with the responsible person of that area.
5. Smoking is strictly prohibited at workplace.
6. Sub-contractors shall ensure adequate supervision at workplaces. They shall ensure that all persons working under them shall not create any hazard to self or to the co-workers.
7. No body is allowed to enter the site without wearing safety helmet.

Chinstrap of safety helmet shall be always on.
8. No one is allowed to work at or more than two-meter height without wearing full body harness with double lanyard and anchoring the lanyard to firm support preferably at shoulder level.
9. No one is allowed to enter into workplace and work at site without adequate foot protection.
10. Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas cutting.

For other jobs, as and when site safety coordinator insists eye protection has to be provided.





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11. All PPEs like shoes, helmet, full body harness, etc. shall be arranged before starting the job as per recommendation of the site EHSO.
12. All excavated pits shall be barricaded. And barrication shall be maintained till the backfilling is done. Safe approach is to be ensured into every excavation.
13. Adequate illumination at workplace shall be ensured before starting the job at night.
14. All the dangerous moving parts of the portable/fixed machinery being used shall be adequately guarded.
15. Ladders being used at site shall be adequately secured at bottom and top. Ladder shall not be used as work platforms.
16. Erection zone and dismantling zone shall be barricaded and nobody will be allowed to stand under the suspended loads.
17. Horseplay is completely prohibited at workplace. Running at site is completely prohibited except in case of emergency.
18. Material shall not be thrown from the height. Proper arrangement of Debris Chute can be installed.
19. Other than the electrician with red helmet, no is allowed to carryout electrical connection, repairs on electrical equipment or other job related thereto.
20. Inserting of bare wires for tapping the power from electrical socket is completely prohibited.
21. All major, minor incidents near misses and unhygienic conditions must be reported to site in charge/site EHS officer to enable the management to take necessary steps to avoid the recurrence.
22. All scaffoldings/ work platform shall be strong enough to take the expected load. The width of the working platform and fall protection arrangement shall be maintained as per recommendation of site EHSO.





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23. All tools and tackles shall be inspected before use. Defects to be reported immediately. No lifting tackle to be used unless it is certified by the concerned P&M engineer / EHS officer.
24. Good house keeping to be maintained. Passage shall not be blocked with materials. Loose materials shall not be stacked to the dangerous height at workplace.
25. Debris, scrap and other material to be cleared then and there from the work place and at the time of closing of work every day.
26. Contractors shall ensure that all their workmen are following safe practices while traveling in the company's transport and staying at company's accommodations.
27. Adequate fire fighting equipment shall be made available a workplace and persons to be trained in fire fighting techniques with the co-ordination of EHSO.
28. All the unsafe conditions, unsafe act identified by the contractors, reported by site supervisor and / or EHS personnel to be corrected on priority basis.
29. No children shall be allowed to enter the workplace.
30. Female workmen are not allowed to work on height & other high-risk areas.
31. Other than the Driver/operator, no one shall travel in a tractor /tough rider etc.
32. Wherever the vehicle/equipment has to work near or pass through the overhead electrical lines, take adequate precautions.
33. Any person found to be interfering with or misusing fixtures, fittings or equipment provided in the interest of health, safety and welfare would be excluded from site.(like using helmet and fire bucket for carrying the material, removing the handrails, etc.)
34. Visitors must use safety helmet before entering the Site.





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35. Safety signs and notices must be displayed and followed.
36. Transistor radios or personal stereos / Walkman must not be used.
37. All site personnel, for their own safety and for the safety of others, are required to fully comply with the agreed safety systems/ procedures and working method.
38. Consumption of alcohol and drugs is prohibited.
39. No person is to operate any mechanical / Electrical equipment unless they have been authorized and have been certified as competent.
40. Take Food only at the designated area (like dining, Rest Room etc.). The Waste food, PVC/Paper covers need to be dumped in the Dustbin. The House keeping gang on regular intervals will clear this. Also hand / vessels should be washed in the same area with proper drainage.
41. No workers should enter the site in loose clothes.
42. No body should sit / sleep on the walls / floor edges.
43. Don't enter inside the room where there is no light.
44. Don't take shelter under the vehicle or in an electrical installation rooms.
45. Look for warnings signs, caution boards and other notices.
46. Aware where the first aid Centre, fire extinguisher and emergency assembly point is.
47. Aware about the emergency communication.
48. Beware of unguarded floor openings and floor edges.
49. Training is must for all scaffolders and only trained scaffolders should make platforms.
50. Don't keep loose materials at height.





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51. Permission should be taken for all earthworks from P&M Department to ensure that no under ground temporary cables are getting damaged.
52. Those who are violating the safety norms will be send out immediately.
53. Same segmental vertical work shall be strictly avoided.
54. DG sets shall be made up of acoustical enclosures.
55. All the material storage shed/ temporary offices at site shall be made up of non combustible materials.





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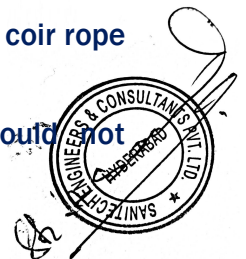
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07. Scaffold & Ladder Norms

1. Use full body harness with double lanyard when required to move vertically or horizontally and where fall arrestor cannot be used.
2. Scaffold Tag system shall be implemented.
3. Tie the tools with rope.
4. Tie the lifeline wherever required.
5. Barricade the area beneath the working location.
6. Always keep one lanyard tied while moving from one place to another place (Horizontally or vertically)
7. While climbing vertically use fall arrestor with Full body harness when lanyard cannot be used.
8. Carry all bolt, nut and tool in a tool bag.
9. Don't keep loose materials at height.
10. Don't throw the material from height.
11. While lowering the material, engage one person exclusively for alerting the people who may try to enter the barricaded area.
12. Proper ladder arrangement to be made for approach.
13. Wooden planks must be free of defects. Thickness of the planks should be 50 mm and span between the supports should be restricted to 2.25 mtrs.
14. Tie the pulley with MS ropes or PP ropes, don't use deteriorated coir rope while securing for material shifting.
15. Tie safety net in such a way so that the fall distance should not exceed 6mtrs.
16. No double tier work to be entertained.





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17. Do not climb with materials in hand. Use rope to lift.
18. The Scaffold components should be free from defects.
19. If the scaffold height is more than 6 mtrs than every 6 mtrs it has to be given support from fixed/permanent structure.
20. All access scaffolds should be erected as per the scheme diagram.
21. No openings shall be left in the platform.

Mobile Scaffolds.

The maximum height for mobile scaffold shall be 9.6meter except that this may be increased to 12 meter if it is tied to a structure when in use.

When free-standing mobile scaffold towers are used, the height shall not exceed four times the minimum base dimension.

Wheels or casters shall be properly designed for strength and dimensions to support four times the maximum intended load. All wheels shall be provided with a positive locking device to hold the scaffold in position.

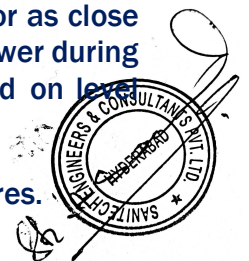
Scaffolds shall be braced by cross bracing or diagonal braces or both, for securing vertical members together laterally, and the cross braces shall be of such length as will automatically square and align vertical members so that the erected scaffold always plumb, square and rigid. All brace connections shall be made square.

Platform shall be tightly decked for the full width of the scaffold and scaffold boards shall be secured against displacement. Platform shall be provided with guard rails (Top rail, mid rail and toe board).

The force necessary to move the mobile scaffold shall be applied near or as close to the base as practicable and provision shall be made to stabilize the tower during movement from one location to another. Scaffold shall only be moved on level floors free from obstructions and openings.

The wheels or casters shall be provided with rubber or similar resilient tires.

Workmen shall not be allowed to ride on the mobile scaffold.





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All materials shall be removed before mobile scaffold is moved.

The mobile scaffold in use shall rest upon a suitable footing and shall stand plumb. The caster or wheels shall be locked to prevent any movement.

Mobile scaffold shall also conform to the applicable provisions of tube and coupler independent scaffolding.

Scaffolding tagging and their identification shall be ensured while using at site.

Working Platform

A working platform shall be designed to support the weight of the personnel and equipment to be used.

Working platform shall be fully decked with scaffold boards.

Scaffold boards shall be secured to prevent displacement.

Working platform shall be erected on stable scaffold.

Every working platform shall be provided with a ladder or any other safe means of access.

Edges of the platform shall be provided with guard rails. Height of the top rails shall be from 900 mm to 1200 mm.

The mid rails shall be provided half way between the platform and the top rails on the inside of the posts. Toe guard shall be of minimum 100 mm height.

Posts and rails shall be capable of withstanding a force of at least 900 N (200 lb) applied at any point or withstanding any load likely to be applied.

Barriers shall be provided on open edges, holes and openings in the platform.

The minimum width of working platform shall be as follows,

1. Only workmen ————— 600 mm
2. Men, tools & materials ————— 900 mm
3. Men, tools, materials and wheel barrows – 1200 mm





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08. Material Handling.

TRANSPORTATION OF MATERIALS

Only identified crew does the loading and unloading of the materials.

The gang leader and the crew should be aware of the weight of the materials they are to handle,

Tools & tackles like slings, D-shackles, etc., shall be checked prior to use for material handling.

Lashing to be done after the materials loaded on the trailer.

Red flag is tied on structures extending beyond the trailer body. At night reflectors to be fixed,

Structures extending beyond the cabin height are prohibited from transporting.

The driver should be aware of the path to the terminal he is to transport the material and ensure no blockades are there.

The gang leader should know the specific spot for unloading the materials.

All structural steel shall be placed on wooden sleepers.

Stable and sufficient wooden sleepers to be ensured by the Foreman /gang leader.

Workmen should not travel along with the loaded material.

Do's & Don'ts of material handling.

While shifting materials manually, care should be taken that the rope should not rub against the edge of any structural members or concrete floors. Materials should be shifted by using suitable size of rope & pulley based on SWL.

A designated person should ensure tying of the lifting material so that the material does not slip and fall by any chance.

It shall be done by a good Riggers & khalasi gang.





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The persons receiving the material on the platform top should hook their safety harness lanyard to a rigid point at structure.

When the material is lifted, the area underneath should be barricaded so that no one can enter when the material is lifted.

While shifting materials through platform openings, the same precautions as stated above should be taken.

While lifting materials by crane suitable size of sling & D-shackle should be used.

If any sling or wire rope found damaged that should be cut in to pieces and stacked in the scrap yard. Damaged slings should not be left anywhere as it can lead to unauthorized usage resulting an accident.





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09. FLOOR OPENINGS

Openings which are provided in the floor during construction will be used for laying pipes of various dia as required.

EDGE PROTECTION SYSTEM

Floor edges should be adequately protected to prevent fall of person, until permanent wall, parapet or a hand rail is constructed. Edge protection using warning tapes or by providing collapsible tube props are ineffective in protecting the fall of persons.

Hence hard barricades are required to be fixed. To adopt this method, the vertical posts & the horizontal members are prefabricated as per the design. The vertical posts are inserted to the edge of the slabs using 20 mm reinforcement rods inserted in the slab at specified intervals. After the fixing of verticals, the horizontal members are inserted into the rings in the vertical post.

The major advantages of this system are, Provides effective protection against fall of persons from the edges.

A separate warning symbol or arrangement is not required. Gives an aesthetic look to the structure under construction.





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10. Housekeeping

General

1. A lay out demarcating areas for stacking and disposing the materials to be made.
2. The materials shall be stacked with clear passageways to reach them.

Care shall be taken so that the materials do not protrude beyond the marked area posing tripping hazard.

3. Name boards shall be displayed to identify the material in the storage area.
4. Adequate lighting to be provided in the material storage area.
5. Sufficient fire extinguishers to be kept at conspicuous places and the path to reach them are kept free.
6. Toxic & hazardous materials are labeled and kept at isolated place where only authorize persons shall handle. The Material Safety Data

Sheet (MSDS) of the chemicals are displayed near by.

7. Vertical stacking of materials should not exceed the prescribed norms (above 1.5 mtrs), posing falling hazard because of imbalance.
8. Flammable materials like acetylene, diesel, gasoline, paints etc are stored under well-ventilated shed. Electrical connection in those locations should be proper and maintained well such that they do not cause short circuits. Smoking, carrying matchbox or any other fire causing materials is prohibited in these areas.
9. Barrels and drums shall preferably be placed on end. If placed on their sides, these shall be provided with racks, or blocked with wedges to prevent rolling.
10. Oils, grease, and paints shall not be openly stored at any time.
11. Height of the cement bags stacking should not be exceeds the height of 10 bags.





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12. The scrap and junk materials shall be kept as orderly as conditions will permit. Extreme care shall be taken in handling scrap materials to prevent personal injury.

Unwanted material / Scrap disposal plan:

Types of scraps:	Pipe Cut Pieces – GI, CI, PVC Metal Angle Pieces Thread Rods Solution Bottles Carton Boxes Scrape Papers
How it is getting generated:	During the Execution & while installation, During Loading & Unloading During Preparations
How your are going to remove it from the work location:	Periodical inspection and cleaning
At what frequency you are going to remove it:	For every 1 Week
Where you are going to dump it:	In a specialized identified Dump Yard / Near Our Store





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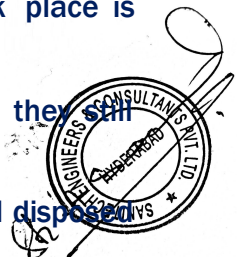
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11. FIRE PROTECTION AND CONTROL

All the following fire protection measures shall be implemented at site:

1. Smoking is prohibited in the construction area.
2. Aware where the fire extinguisher are located and how to use them.
3. Know where the emergency assembly point (display with a Board).
4. Flammables shall be stored in properly labeled containers.
5. Accumulation of oily rags, combustible materials and similar fire hazard of any nature should not be permitted
6. Fire fighting equipment to be available at the construction and office area.
7. There must be fire extinguisher, water hose, or other fire control equipment easily accessible for each welding, cutting, grinding or other such operation.
8. Materials shall not be stacked so as to block fire doors, emergency exit, and access to fire fighting equipment.
9. Fence the storage area like flammable liquids, paints, oil storage and other material stores (especially timber stacks)
10. In order to eliminate any source of ignition, notices proclaiming "NO SMOKING" and "NO NAKED FLAME" should be placed.
11. It is vital that all waste of highly flammable liquids or materials contaminated by them is disposed off immediately and work place is kept clean all times to eliminate the hazard.
12. Heat should never be applied to the empty oil vessels as they contain explosive mixtures
13. Empty containers with the cap removed should be crushed and disposed off as rubbish, but not incinerated.





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14. The cleaning or repairing of drums on site is not recommended.

They should be returned to the suppliers if they are to be removed.

15. Adequate and well-maintained first aid & fire fighting equipment must be provided and personnel to be trained.

16. Effective communication with the emergency services to be ensured.

17. All the temporary wiring should be well supported and protected.

No electrical circuits should be overloaded.

18. Gas cutting set should not come in contact with the welding cable and electrical cable.

19. Rubbish should be burnt with adequate supervision.





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12. VEHICULAR AND TRAFFIC SAFETY

Driver's qualification and training

The driver / operators should be competent enough to drive the vehicle and hold a valid license for the class and type of vehicle or equipment to be operated by them. Each driver or operator must have completed the safety induction course before driving / operating vehicles and equipment at site.

All the drivers should have medical test certificate.

Vehicle maintenance and inspection

Each vehicle must be equipped with the required safety features that functions properly. Preventive maintenance shall be performed on all vehicles on a periodical schedule. All safety features shall be checked and repaired as necessary to ensure proper operation. Drivers and operator shall perform pre- operational checks of their assigned vehicles and equipment at the start of each working day.

All site vehicles should have following as minimum,

Light,

Indicators.

Brake light

Danger light

Horn

Reverse horn

Side mirrors.

Warning gauges.

PCB certificate

In addition to above hydra crane shall comply with tyre guard, human sensors, front view mirror, delay start mechanism, over hoist limit & overload indicator.





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Some guidelines for the traffic control in the construction areas

Drivers and operators shall comply with all traffic safety regulations, traffic controls and traffic signs.

The maximum speed limit on the construction site is 15 km/hr .The maximum speed limit in work area is 10 km / hr.

Driver or operator who violate the site traffic safety regulations will be removed from the site.

Personnel shall not be transported while standing on the bed of the trailers or they shall be allowed to sit on doors.

Personnel shall not be ride on the body of material handling or earth moving equipment.

A trained banks man /Helper or guide should be deployed to ensure safe reversing. The banks man should be a designated person, whose task is to ensure a reversing area free of pedestrians and ensure a safe vehicle maneuver.

The vehicle should get parked only in designated location and should not get parked so that it blocks the regular traffic or it becomes unsafe.

Create clearance around slewing vehicles

Make sure that loads are secured. After loading the material, the driver should check whether the loaded material is secured or not.

Don't allow the workmen to travel along the load.

Do not use vehicles on dangerous slope.

Only take passengers on vehicles designated to take them.

No workers shall be allowed to take rest under the vehicle.

While loading or unloading from the vehicle the wheels should be locked with wedge.





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Whenever the driver / operator leaves the vehicle / equipment the engine should be put off.

Arrival of any new vehicle / equipment to be informed to the EHS engineer.

Drivers must wear a safety helmet and shoes at all times when at risk.

All the vehicles must have statutory documents in current.

Drivers shall get fitness certificate for their vehicle from the EHS department / P&M department.

Wherever the vehicle/equipment has to work near or pass through the overhead electrical lines adequate precautions to be taken.





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13. ELECTRICAL SAFETY:

1. All portable equipment shall be properly earthed. Electric power for all portable equipment must be taken through ELCB/RCCB.
2. All DB, FDB, PDB and other electrical equipment shall be provided with double earthing & shall be metallic & standardized.
3. Only qualified, experienced and licensed workers shall perform all electric works.
4. Only Electrical authorized persons shall be allowed to obtain the permit.
5. Equipment shall be locked or secured to prevent starting by unauthorized person.
6. Warning signs or posters, such as DANGER. NO ENTRY, DON'T TOUCH, etc., shall be posted at dangerous places, such as substations, switch boxes and overhead or underground cable.
7. Circuit's breakers (RCCB) shall be provided and regularly tested for all electrical equipment to prevent worker from being injured by electrical shock.
8. Ensure DB/Extension boards are protected from rain or water.
9. Switch boxes shall be grounded.
10. All the cable joints must be adequately insulated and protected from water. Keep the cable joints above the ground and barricade it.
11. Provide neutral earth for the source of power.
12. Ensure all metal parts of electrical equipment and light fitting/accessories are grounded.
13. LOCK OUT and TAG OUT system should be followed during maintenance work on electrical switches and operating panels.





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14. "MEN ON JOB", "DO NOT SWITCH ON" boards shall be used for carryout any maintenance work, provided work permit is obtained.
15. Educate about electrical shock and its treatment by displaying chart in D.G. room.
16. Ensure correct/proper fuses provided at main/sub boards.
17. Provide rubber mats at all DB/SDB panels.
18. Provide ELR in D.G.set.
19. DCP and Carbon-di-oxide type fire extinguisher shall be kept near the D.B.s
20. Insertion of loose wires shall not be allowed.
21. Never use electrical tools in damp or in wet location unless they are designed for that purpose.
22. Double insulated cables shall be used at site.





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14. EMERGENCY RESPONSE PLAN

Types of Possible Emergencies:

Gas Leakage / Fire & Explosion

Collapse of Structure, fall of Person & Electrocutation / Major Injuries

Earth Quake

Cyclone & Flood

Collapse of Lifting appliances and transport equipment.

COLLAPSE OF STRUCTURE , FALL OF PERSON & ELECTROCUTION / MAJOR INJURIES :-

SITE ENGINEER / SUPERVISOR:

Call the first aider to the work spot

Call Time office for vehicle.

Shift the workmen to time office for First Aid.

Convey the message to the concerned Project Manager

By getting Information - FIRST-AIDER:

Rushes to the location by the Emergency Vehicle with medical aid or on foot.

If the First-Aid finds that the injured can be attended in the First-Aid Centre itself, he will bring the injured to the First-Aid Centre and treat there.

If treatment in the First-Aid Centre is not advisable, he will rush the injured to nearby Hospital.

Time Office

For minor injuries, arrange First-Aid Treatment at the Time office itself.

For Major Injury shift the victim to the nearby Hospital.





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Project Manager

Arrange all required facilities through Accounts & Administration for the necessary medical aid, manpower, money, conveyance etc.

In case of fatal or likely to be fatal, inform Local Police and the concerned Persons.

Administrative Incharge

Accounts & Administration to arrange the Required Medical aid, food etc. through Time Keeper for the concerned persons and also fulfill the legal and statutory requirements.

Inform the family of Injured / deceased Person.

EHS Officer

Report the incident to Project Manager.

Immediately Report in detail after investigating the incident and suggest suitable remedial measures.

Ensure implementation of the remedial measures.

FLOOD & CYCLONE:

Information is obtained from Television, Radio, Newspaper or any other source.

- 1) Declaration of the emergency situation by Project Manager.
- 2) Anchoring of erected structures / equipments.
- 3) Tower crane & Mobile cranes are to be shifted to suitable location so that boom does not tilt; length of the boom is reduced by P&M Incharge.
- 4) Tower crane swing lock to be removed & kept free by P&M Incharge.
- 5) Put weight on loose objects pile like G.I Sheet etc by Site Engineers.





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- 6) Evacuation of staff & workmen including families to an identified safe place & arrangement of food, drinking water & medical aid by Administrative in charge.
- 7) District Emergency Authority (District Collector) to be informed.
- 8) After the emergency is over, the normal situation is to be declared by the Project Manager.
- 9) Staff, workmen & family to be rehabilitated.

EARTH QUAKE:

Adequate precautions to be taken care for work sites at Earth Quake prone areas can be determined through seismic studies carried out by project people. Information / Weather Forecast is obtained from Television, Radio, Newspapers & Meteorological Dept. / any other source.

1. A team with overlapping responsibility to be formed to initiate action during a contingency.
2. Emergency assembly place for site & Labour Colony is to be identified separately.
3. Declaration of Emergency situation by Project Manager.
4. Shifting of Construction Equipments / Materials to an identified location by P&M Incharge.
5. Evacuation of workmen & staff from emergency assembly point to a safe shelter by Administrative in charge.
6. Arrangement for food, drinking water & medical aid by Administrative in charge.
7. District Emergency Authority (District Collector) to be informed.
8. In case of short notice, all the identified persons to contact themselves and act as mentioned above.





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9. After the emergency is over, the normal situation is to be declared by Project Manager.
10. Staff, workmen & family to be rehabilitated.

COLLAPSE OF LIFTING APPLIANCES AND TRANSPORT EQUIPMENT:-

SITE ENGINEER / SUPERVISOR :

Call the first aider to the work spot

Call Time office for vehicle.

Shift the workmen to time office for First Aid.

Convey the message to the concerned Project Manager

By getting Information - FIRST-AIDER:

Rushes to the location by the Emergency Vehicle with medical aid or on foot.

If the First-Aid finds that the injured can be attended in the First-Aid Centre itself, he will bring the injured to the First-Aid Centre and treat there.

Time Office

For minor injuries, arrange First-Aid Treatment at the Time office itself.

For Major Injury shift the victim to the nearby Hospital.

Project Manager

Arrange all required facilities through Accounts & Administration for the necessary medical aid, manpower, money, conveyance etc.

In case of fatal or likely to be fatal, inform Local Police and the concerned Project Manager

Administrative Incharge

Accounts & Administration to arrange the Required Medical aid, food etc. through Time Keeper for the concerned persons and also fulfill the legal and statutory requirements.

Inform the family of Injured / deceased Person.

EHS Officer

Report the incident to Project Manager.

Immediately Report in detail after investigating the incident and suggest suitable remedial measures.

Ensure implementation of the remedial measures.





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15. HSE Risk Assessment & Safe Work Method.

B) HSE Risk Assessment

Activities to be considered

HSE Risk Assessment shall be done for

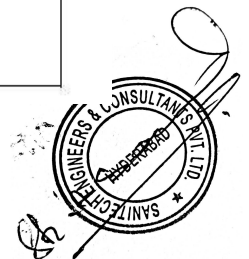
- Routine & non routine activities.
- Activities of all personnel having access to the workplace (including contractors & visitors)
- Facilities at the workplace.

Team for HSE Risk Assessment

HSE Risk assessment shall be conducted by a team of persons who have a thorough knowledge of the work to be assessed. Team members may include CPM, CHSEM, Project Manager, Area / Section In charges & Execution Engineer, Subcontractors, Workmen.

Implementation Procedure for HSE Risk Assessment

No.	Task	Action by	Compliance target	Verification document
1.	HSE Risk Assessment is prepared for all known activities before starting of the project	CHSEM / HSEO in coordination with Project Manager	Before starting the Project	HSE Risk Assessment - IM-08 B
2.	Fine tuning of HSE Risk Assessment or preparation of the HSE Risk Assessment for additional activities shall be carried out before starting the particular activity	HSEO in coordination with Project Manager / Section In charges	Before starting the activity	HSE Risk Assessment - IM-08 B
3.	Listing out the existing control measures, additional control measures, residual risks of a particular activity in the form of a safe work method, which is the documented procedure for operational control.	HSEO in coordination with Project Manager / Section In charges	Before starting the activity	Safe Work Method – IM-08 C





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Evaluation of H&S Risk, Environment Impact Level

The evaluation shall be done by

- Identifying the existing risk control measures;
- Determining the likelihood of occurrence (probability);
- Assessing the potential severity of the health & safety hazards, environmental aspects;
- Assessing the risk / impact level based on the likelihood and severity.

Existing Risk Control

The presence of existing control measures shall be first identified for each of the Health & Safety hazard, Environment aspect.

By considering the effectiveness of the existing controls and the consequences of their failure, the risk / impact level can be assessed.

Likelihood of occurrence (Probability)

Likelihood of occurrence of an incident is classified as per the table given below.

Probability Descriptions (The highest category will always be used)		
VALUE	Status	Description
5	Very much likely	Happens several times per year in a site.
4	Most Likely	Happens several times per year in our OC.
3	Likely	Incident occurred in our OC.
2	Unlikely	Known to occur in the other OCs & construction industry.
1	Most Unlikely	Never heard of in construction industry.

Severity

Severity is the degree or extent of harm that can be caused by the hazards or the environment aspect as a result of an incident. Severity is classified as per the table given below.





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Severity Descriptions

(The highest category shall always be used)

VALUE	Result of Hazard to Personnel	Result of Hazard to Assets / Progress	Severity of the environmental impact
5	Single or multiple Fatality	Catastrophic Damages, Critical Delay	Massive effect
4	Serious Injury requiring hospitalisation	Major Damages, Serious Delay	Major effect
3	Lost Time Injury	Serious Damage, Moderate Delay	Localized effect
2	Injury requiring Medical Treatment but not Lost Time	Moderate Damage, Minor Delay	Minor effect
1	First Aid treatment only	Minor Damage, No Delay	Slight effect

Matrix for Risk Assessment

- Once the likelihood and severity have been established, the risk / impact level can be determined.
- To determine the risk / impact level, select the appropriate row for Severity and the appropriate column for Likelihood; the cell where they intersect indicates the Risk / Impact Level.





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Control of Risk / Impact:

Based on the level determined, controls should be selected to reduce the risk / impact level to an acceptable level. This can be done by reducing the Severity and/or Likelihood.

Health & Safety Risks

- As indicated in the risk matrix, when the risk level is "High" or "Medium", effective and practicable risk controls must be implemented to bring down the High Risk level to ALARP Level "As low as reasonably practicable".
- Environment Impact With respect to environment aspects, they are considered as "SIGNIFICANT" when the impact level is medium or high. Control measures are evolved to bring them to lower than significant level.
- All legal requirements are considered to be significant only.

Residual Risks / Impact

Residual risks / Impacts are the remaining risks, impacts for which the planned controls are not able to effectively remove or control. It shall be ensured that the residual risks / impacts are acceptable and manageable.

Review of HSE Risk Assessment

HSE Risk Assessment and the safe work method shall be reviewed when

- There is a significant change in work processes that could affect health, safety & environment, for example, the introduction of new machinery or change in work procedure.
- After an accident as a result of exposure to a hazard

Communication

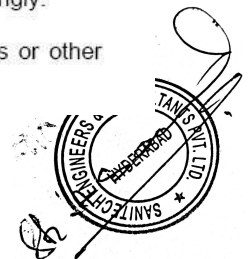
Employees at the workplace shall be communicated about the possible risk they may be exposed to during the course of work as identified in the risk assessment.

They shall be informed of the following:

- the nature of the risk involved
- the measures implemented to control the risk

Whenever the risk assessment is revised, or when there is a significant change in work practices or procedures, the employees or other persons who may be at risk shall be informed accordingly.

The communication shall be done through HSE Induction, PEP talk, Training programs or other suitable means.





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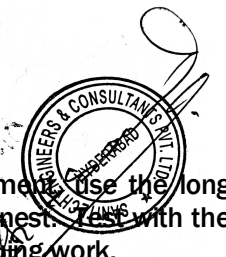
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C) Operational Control

- Safe work method (IM – 08 C) is the document for operational control.
- It is prepared for each activity by collating the existing control measures & the additional control measures identified during the risk assessment.
- The reference no of that particular safe work method is mentioned in the HSE Risk Assessment Sheet.
- The safe work method shall also indicate the person responsible for taking the respective control measure.

General Job Site Rules

1. Do not begin working until barricades, warning signs or other protective devices have been installed to isolate the work area from local traffic.
2. Do not walk under partially demolished walls or floors.
3. Stop working outdoors and seek shelter during lightning storms.
4. When working outside, keep shirts on to avoid dehydration and sun burn.
5. Drink plenty of clear liquids during your breaks.
6. Erect protective barriers or guards and warning signs prior to removing manhole covers where accessible by vehicular or pedestrian traffic.
7. Do not use a metal ladder within 50 feet of electrical power lines.
8. Do not block the walking surfaces of elevated working platforms, such as scaffolds, with tools or materials that are not being used.
9. Do not stand on sinks, toilets or cabinets; use a step ladder.
10. Stand clear of floor openings if guardrails or covers are removed or displaced.
11. If you discover a wasp nest or bee hive while installing or servicing equipment, use the long distance aerosol insecticide labeled "Wasp and Bee Insecticide" to spray the nest. **Test** with the stick or pole once again to ensure that all bees/wasps are gone before continuing work.





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12. Seek first aid immediately if bitten or stung by wasps or bees.

13. Do not handle caterpillars or other insects with your bare hands.

Loading & Unloading

1. Unloading goods and materials from a vehicle incorrectly resulting in a handling injury.
2. Unloading equipment from vehicle incorrectly resulting in a handling injury.
3. Falling from vehicle when unloading Falling objects from vehicle hitting personnel.
4. Incorrect use of the tail-lift resulting in falls incorrect use of the tail-lift resulting in falling objects.
5. Slips trips and falls when climbing into or from the vehicle Slips trips and falls getting to and from place of work Unauthorized access to loading, unloading activities by pedestrians or others.

Other potential hazards include:

Vehicle to vehicle damage when using the vehicle to property when using the vehicle to personnel
accident when using the vehicle

Avoid handling where possible.

Use mechanical aids such as Fork Lift Trucks to unload materials.

Use mechanical aids such as pump trucks and sack- barrows.

Manual handling assessments are to be conducted prior to unloading/ loading by a "competent person".

Individuals are to be trained and competent to undertake manual handling.

Responsibility for implementation

The company will delegate the implementation of this risk assessment to a senior member of staff.

Monitoring





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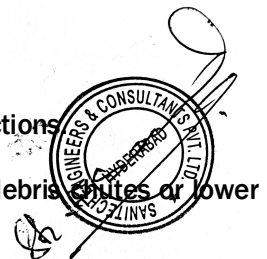
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This assessment will be monitored to ensure it is implemented and is effective. The assessment will be reviewed on an annual basis or if change occurs, or if there is an accident that requires a review of the risk assessment.

Scaffolding for Height Works:

1. Follow the manufacturer's instructions when erecting the scaffold.
2. Do not work on scaffolds outside during stormy or windy weather.
3. Do not climb on scaffolds that wobble or lean to one side.
4. Initially inspect the scaffold prior to mounting it. Do not use a scaffold if any pulley, block, hook or fitting is visibly worn, cracked, rusted or otherwise damaged. Do not use a scaffold if any rope is frayed, torn or visibly damaged.
5. Do not use any scaffold tagged "Out of Service."
6. Do not use unstable objects such as barrels, boxes, loose brick or concrete blocks to support scaffolds or planks.
7. Do not work on platforms or scaffolds unless they are fully planked.
8. Do not use a scaffold unless guardrails and all flooring are in place.
9. Level the scaffold after each move. Do not extend adjusting leg screws more than 12 inches.
10. Use your safety belts and lanyards when working on scaffolding at a height of 10 feet or more above ground level. Attach the lanyard to a secure member of the scaffold.
11. Do not climb the cross braces for access to the scaffold. Use the ladder.
12. Do not jump from, to, or between scaffolding.
13. Do not slide down cables, ropes or guys used for bracing.
14. Keep both feet on the decking. Do not sit or climb on the guardrails.
15. Keep the scaffold free of scraps, loose tools, tangled lines and other obstructions.
16. Do not throw anything "overboard" unless a spotter is available. Use the debris chutes or lower things by hoist or by hand.
17. Do not move a mobile scaffold if anyone is on the scaffold.





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18. Chock the wheels of the rolling scaffold, using the wheel blocks, and also lock the wheels by using your foot to depress the wheel-lock, before using the scaffold.

Confined Spaces (Like Shafts, Rooms which have less air and light)

1. Do not enter any area labelled "confined space" without a confined space entry permit.
2. Do not enter any confined spaces without reading and following this "confined space entry procedure."
3. Turn "off" disconnect, or lock and tag all systems that affect or make operational the confined space prior to entry.
4. Do not perform hot work such as electric or gas welding or cutting in or on a confined space until the atmosphere has been determined to be safe.
5. Use mechanical forced air ventilation when open flames or torches are used in a confined space.
6. Do not enter any confined space without a safety observer present; minimum of a two person team.
7. Use survey equipment such as a "organic vapor meter" to test and monitor the confined space for oxygen deficiency and explosive or hazardous gases/fumes. If the organic vapor meter reading for the explosive gases is above 10% of the LEL and if the oxygen reading is below 19.5% or greater than 23.5%, do not enter the confined space.

Fabrication

General Machine Safety

1. Replace the guards before starting machines, or after making adjustments or repairs to the machine.
2. Do not remove, alter or bypass any safety guards or devices when operating any piece of equipment or machinery.
3. Do not wear loose clothing or jewelers around moving machinery.
4. Long hair must be contained under a hat or hair net, regardless of gender.
5. Read and obey safety warnings posted on or near any machinery.





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6. Do not try to stop a work piece as it goes through any machine. If the machine becomes jammed, unplug it before clearing the jam.
7. Do not use metal working equipment such as grinders, sanders or beveling machines if they do not have safety guards.
8. Clamp work when using saws or cutting tools.

Use of electrical equipment

Pre-use check conducted by users

Electrical equipment subject to regular safety inspection and test ('PAT testing')

All tested appliances to be labelled showing date tested / next test date

Inventory of all portable electrical equipment kept and maintained by the school.

Fixed Installation testing (every 5 years min) and any remedial work actioned.

Records retained of these checks.

Recognized competent contractors used for repairs / maintenance.

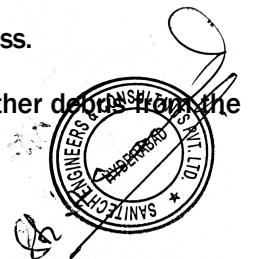
All electrical equipment brought on to the school by contractors must have been electrically tested.

Mains isolating switches must be clearly labelled and accessible.

Mains powered portable equipment to be protected by RCD in higher risk situations, e.g. equipment used outside or in wet conditions, and for equipment where there is a risk of cables being severed.

Drill Table Safety

1. Insert the work piece into the table grooves before starting the drilling process.
2. Use brushes or vacuum machinery to remove metal chips, shavings and other debris from the drill table. Do not use your bare hands.
3. Do not use dull, cracked or bent drill bits.





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Riveting/Bolting Safety

1. Wear safety goggles while riveting or bolting.
2. Do not use your hands to guide a bit into place when riveting or bolting steel.
3. Disconnect the snap and plunger from an air hammer when it is not in use.
4. Do not pass air powered tools from one worker to another by the hose.
5. Use a receptacle or a net to catch rivets or bolts that are knocked off or backed out from your work area.
6. Do not carry nuts, bolts, or rivets in your hands or pockets; use the carrying/storing container provided for this purpose.





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16. WORK PERMIT SYSTEM

The purpose of the work permit system is to ensure that works having potential hazard can be carried out with due regard to Safety, Health and Welfare of the workers; to prevent any incompatible work from being carried out at the same time in the project. The permit serves as official written records of “conditions and requirements” agreed upon by the issuer and receiver. It lists the hazards (which must be controlled) and the minimum safety precautions to be taken.

Various Work Permit as applicable to this project is as follows,

Construction Vessel or Confined Space Entry Permit.

Excavation Clearance Permit.

Confined spaces entry permit.

Electric Work Permit.(LT / HT)

Permit To Work on Plant & Other Power Driven Equipment.

Permit to Open Manhole Covers / Grills / Guardrails

Industrial radiography – Information form.

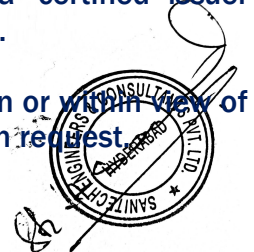
Hot work permit.

Height works permit.

Night works permit.

General rules related to Work Permit:

1. The authorized receiver must request a work permit from a certified issuer (Operation Supervisor) before doing any work in the restricted area.
2. The receiver of the work permit must keep a copy in his possession or within view of the job site for duration of the job, so that it may be presented upon request.
3. Work permits are valid only for the duration mention therein.





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4. If the work is not started or is stopped due to safety consideration, the permit is required to be revalidated by the issuing authority before the work is started or is stopped due to safety considerations, the permit is required to be revalidated by the issuing authority before the work is started or resumed.
5. If the work is not completed during the time for which the permit was issued, the person responsible for the work shall get it revalidated.
6. Any responsible member of the operation department is authorized to suspend the work and withdraw the work permit, if safety regulations are being violated and for any of the work permit conditions are not being abided and / or conditions around work site have changed which may lead to an imminently hazardous situation.
7. When the job is completed or at the end of the shift, each work permit must be closed out by both issuer and the receiver.





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17. Welfare Facilities at Site:

Drinking water:

Adequate supplies of drinking water shall be made available in site. (Standard: 6 ltrs per capita & located within 250 mtrs from the work spot)

All containers used for distribution of drinking water shall be clearly marked as "DRINKING WATER" and not to be used for any other purpose. Display with local languages (or understanding of majority of the workers).

Portable container used for storing drinking water shall have tight fittings lids and be equipped with tap these shall be kept free from contamination.

Tankers used for transporting portable water shall be clearly identified and shall not be used for any other purpose.

Outlets dispersing non-potable water shall be conspicuously marked.

Drinking water should be tested at least once in a 6 months.

Drinking water tank shall be provided with quick fix valve arrangement at ground level. So that worker shall not climb on the water tank to fill the water.

No Drinking water point shall be situated within six metres of any washing place, Urinal or latrine

Pest control:

Fumigation shall be done periodically in the site and at workmen camp for preventing mosquitoes breeding. Also water drainages in the plant shall be maintained to avoid accumulation of water. Accumulation of water increases mosquitoes breeding.

Sanitary facilities:

These facilities will be used which are provided at site

WORKMEN COLONY

Accommodation for workmen's will be provided with Drinking water, electricity, Toilets, etc.





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18. EHS ASSURANCE PLAN

EHS Reports to be submitted by NSC agencies

Reports	To be submitted
Monthly activity plan / Weekly activity plan	Every month / Every Week
Electrical inspection report (including PDB location)	Every week
Pep talk report	Daily
House keeping compliance report (location wise scrap collected details)	Every week
Fire extinguisher inspection report.	Every week
Equipment inspection report.	Every week
Weekly EHS safety report	Every week
Monthly EHS report (including monthly man hours report)	Every month
Scaffolding / Ladder inspection report.	Every week
Welding Machine & Gas Cutting set Inspection checklist.	Every week.
Portable tools inspection checklist.	Every week.
Site safety inspection report.	Weekly twice
Submitting first aid register for review	Every week
Third party certificate for all lifting tools and tackles.	Before using them at site.
License for an electrician	Before deployment at site.
Letter for nomination of the EHS officer with qualification and experience.	Before deployment at site.
Weekly training programme schedule & attendance sheet.	Every week
EHS Meeting	Every week
PPEs Inspection Report.	Every week
Permit System in line with site requirements.	Daily basis.
RCCB Inspection Report.	
Incident Investigation Report including near miss cases.	As & When required.
Emergency contact phone numbers.	
Legal Compliance tracking register.	Every month
Temporary Electrical supply requisition / checklist	After installing temporary electrical connections