

EOHS Induction Training

⊗ Inverter tripping
 Inverter 2 trip due to fault F13
 2766
 Acknowledged: No 20-02-2020 11:48

⊗ Inverter failure
 Inverter 1 trip due to fault 8A
 2048
 Acknowledged: No 20-02-2020 11:42

⊗ Module underperforming
 Module shading or String failure
 2
 Acknowledged: No 20-02-2020 11:48



Doc. No.	-	SE-EHS-OCP-10 / Ver. 1.0
Subject	-	EHS Induction
Site	-	Solar Operations (GM & RT)
Trainer	-	Abilaash. P
Date	-	31-07-2023

Applicable for all site employees



Site Manager/Site In charge/EHS Team

Site Engineer/Technician/Associate/Helper

Workers/Security/Drivers/Office boy

Note:

Training to be given by site manager / site in charge / EHS Team

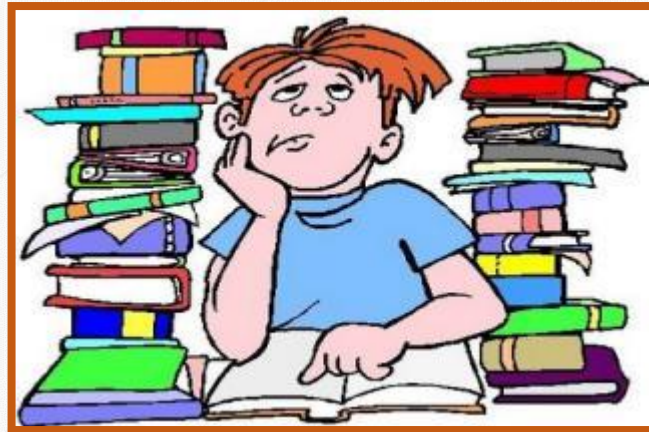
Purpose



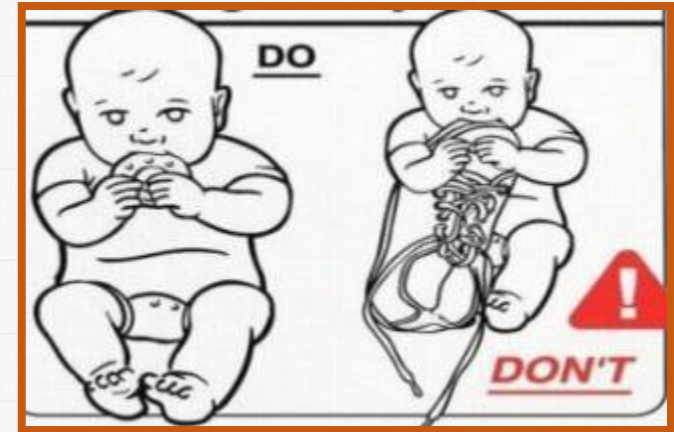
All members should undergo safety induction training before entering site for first time. To know...



The site safety rules



Safety awareness



Safety Dos and Don'ts

Site Layout



Please add your site layout and emergency escape map hereand use it.

Skyfri EOHS Policy



EHS-VISION	We are committed to progress, as a safe workplace & to create a sustainable environment by incorporating a sense of social responsibility & by abiding to all the applicable requirements.
EHS-MISSION	We aim not to have any accidents by providing training & awareness to all the personnel
Environment and Occupational Health & Safety (E O H &S) POLICIES	<ol style="list-style-type: none">1. We are committed to protect the environment wherever we operate by way of conserving vital environmental resources, preventing pollution, carry out proper waste disposal and ensure positive outcomes, with limited adverse impact to the environment2. We are committed to develop sustainable Environment and O & HS culture at all stages of our business operations.3. We are committed to comply to all applicable laws & regulations with respect to Environment, Occupational Health and Safety of personnel4. We are committed to protect the Occupational Safety & Health of all the members of the organization by addressing potential hazards, reducing risks, and preventing work related injuries & incidents5. Key responsibility of all individuals working at respective locations is to consider not only their own health and safety, but also the health and safety of other employees, workers, contractors, visitors at the work site/location and communicate this Policy to all interested parties6. We are committed to implement, maintain & continuously improve our E and O & HS Management Systems.

Document Reference No: SE-EOHSM-01; Version:1.0; Date: 19-May-2023:

Scope of E and O H&S system



The scope and intent of our E and O H&S system is to define, communicate and implement the Environmental, Occupational, Health & Safety aspects in our organization by:

- Provide policies, Develop procedures and the E_OH&S Management System implemented with the primary focus to assure the continued compliance of the requirements of the International Standard ISO 14001:2015 and ISO 45001:2018. The policies and process are integrated wherever possible/appropriate and available otherwise as separate entities. Procedures relevant to Environment and OH&S have prepared as appropriate.
- Effective process improvements to all systems of the business including Environment, Occupational Health & Safety
- To assure Conformity to our customer's and applicable statutory and regulatory requirements in the areas of Environment, Occupational Health & Safety;

Objectives/Targets



Objectives/Targets

<u>Environmental OBJECTIVES</u>	<ul style="list-style-type: none">➤ Ensure water consumption for Module cleaning is within 2 to 2.5 litres for Solar PV Ground mount plants and 3 to 4 litres for Solar PV Roof Tops depending on site condition and infrastructure.
<u>Occupational Health & Safety OBJECTIVES</u>	<ul style="list-style-type: none">➤ Zero fatalities at work site(s)➤ To increase awareness in performing work tasks safely with minimum of 80% compliance to training Plans

Approach to attain objectives: *Engage people in EHS matters and through effective participation in trainings and EHS programs and consultations*

80% Compliance to Training Plans will be linked to 80% attendance for all EOHS Trainings and 80% of all Planned EOHS trainings being achieved

Site Emergency Response



Contact Site Emergency response team (ERT)

Security ಸರ್ಕಾರಿ सुरक्षा व्यक्ति	First Aid ಪ್ರಥಮಿಕ ಔಷಧಿ प्राथमिक चिकित्सा	Safety ಸುರಕ್ಷಾ सुरक्षा व्यक्ति

Assembly Point.

Report to your Superior. Follow the instruction from your superior or the Assembly point in Charge.

Do not panic.

Never return to plant or offices at any case until the Fire warden permit.



Site Emergency Response



In case of alarm

- Keep calm, Stop Work and Switch Off All Machinery/Vehicles/Engines
- Leave the area, Take the safest and nearest way (Do not run and do not turn back)
- Proceed immediately to the emergency assembly point
- Stay at the assembly point until “All Clear” is given
- If you are trapped in a smoke-filled place, move closer to the floor where will be more fresh air



Fire Fighting Equipment



Fire safety

How to operate a fire extinguisher?

Step 1: Pull the Pin

Step 2: Aim at Fire

Step 3: Squeeze the handle

Step 4: Sweep from side to side



Fire Fighting Technique



When Faced with a Fire: Fight or Flight

FIGHT when:

- Fire is small and contained.
- You are safe from large amounts of toxic smoke
- You have a means of escape.

































FLIGHT when:

- Fire is starting to grow and spread.
- The smoke is thick, black or chemical-based.
- You are in a confined space with the fire.
- You are unsure if you can secure a safe route of escape while fighting the fire.



Fire Safety



CLASS	A	B	B	C	D	K
PICTURE SYMBOL						
TYPE	Common Combustibles Solids (wood, paper, cloth, etc.)	Flammable liquids Gasoline and solvents	Flammable gases Propane	Live electrical equipment Computers, fax machines	Combustible Metals Magnesium, Lithium, Titanium	Cooking Media Cooking oils and fats
Water	 Yes	 No	 No	 No	 No	 No
Foam	 Yes	 Yes	 No	 No	 No	 Yes <small>(ABF Foam Only)</small>
Dry Powder	 Yes	 Yes	 Yes	 Yes	 No	 No
Carbon Dioxide CO2	 No	 Yes	 No	 Yes	 No	 No



Site Emergency Response



Definition of Emergency

- An emergency is an illness or injury that could end in death or serious complication if it is not treated immediately

Definition of Non-Emergency

- A non-emergency, on the other hand, does not end in death or serious complication if it is not treated immediately.

Emergency Cases



Emergency Cases:

- Traffic or Worksite Incident
- Broken bones or dislocation
- Sudden abdominal pain that doesn't subside
- Uncontrollable bleeding
- Sudden, severe chest pain or breathlessness
- Choking with difficulty in breathing
- Drug overdose or poisoning
- Loss of consciousness
- Head injury with bleeding, drowsiness or vomiting



Non-Emergency Cases



Non-Emergency Cases:

- Mild fever
- Coughs & cold
- Small cut or bruise
- Superficial burn or scald
- Localized rash or insect bite
- Minor nosebleed
- Pains and aches
- Mild diarrhea and vomiting



Personal Protective Equipment



SITE MANDATORY PPE



JOB SPECIFIC PPE



PPE



Purpose – for protection of head

- Protects you from falling objects & bumping head.
- Hard hats are designed to withstand impact from an 4 kg weight dropped from 1.5 mt.
- Hard Hats are designed for impact.



PPE



Purpose – for protection of head





How to wear

CHECK THE HELMET



WEAR THE HELMET



ADJUST THE HELMET



ADJUST THE CHINSTRIP



CONFIRM FREENESS



SAFE TO WORK





How not to wear

NOT HAVING CHINSTRIP



NOT WEARING CHINSTRIP



NOT WEARING PROPERLY



NOT WEARING PROPERLY



Wearing damaged HELMET



Safety Shoe – For protection of leg and toe



Safety Shoe protects your feet from compression, puncture, chemicals and electricity.

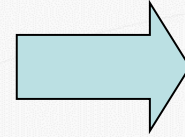


Safety Shoe – For protection of leg and toe



Safety Shoe – For protection of leg and toe

Sharp object pears in the toe



With safety shoes



Without shoes

Safety Shoe – For protection of leg and toe



Wearing damaged shoe



Shoe not wearing properly

PPE



Hand gloves – For protection of hand and finger



HOT OBJECT HANDLING



SHARP OBJECT HANDLING



SHARP OBJECT HANDLING



ROUGH OBJECT HANDLING



ELECTRICAL WORK



CHEMICAL HANDLING



WORKING ON M/C



CLEANING ACTIVITY



Safety goggles – For protection of eyes

When any of these hazards are present:

- Dust and other flying particles, such as metal shavings or sawdust
- Corrosive gases, vapors, and liquids
- Molten metal that may splash
- Potentially infectious materials such as blood or hazardous liquid chemicals that may splash
- Intense light from welding and lasers



PPE



Safety goggles – For protection of eyes



General Safety



Kadina.com

Welding



For Handling Chemicals



Grinding

PPE

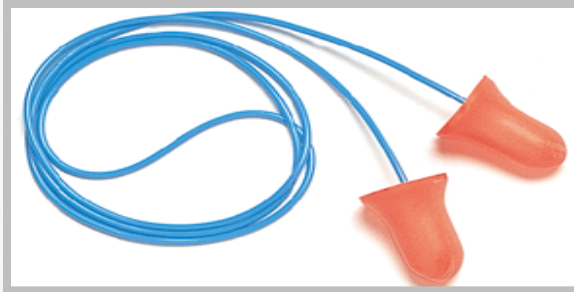


Mask - C19, Welding, chemical, dust





Ear protection - Ear plug, Ear muff



EAR PLUG



EAR MUFF



RIG M/C

SOURCES OF SOUND IN CONSTRUCTION INDUSTRY



GRINDING M/C



MIXER M/C



CUTTING M/C



DRILLING M/C

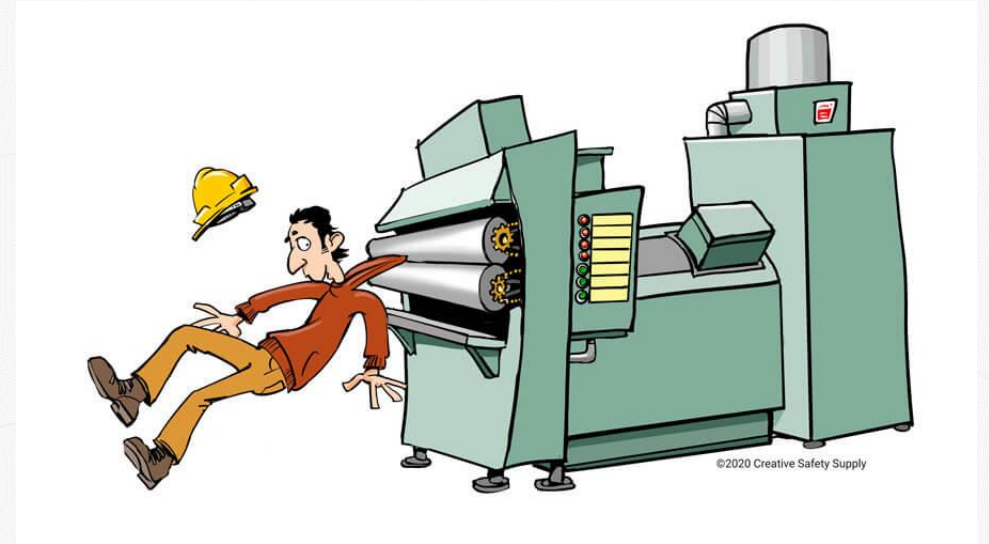


D.G

PPE



Do not wear loose clothing

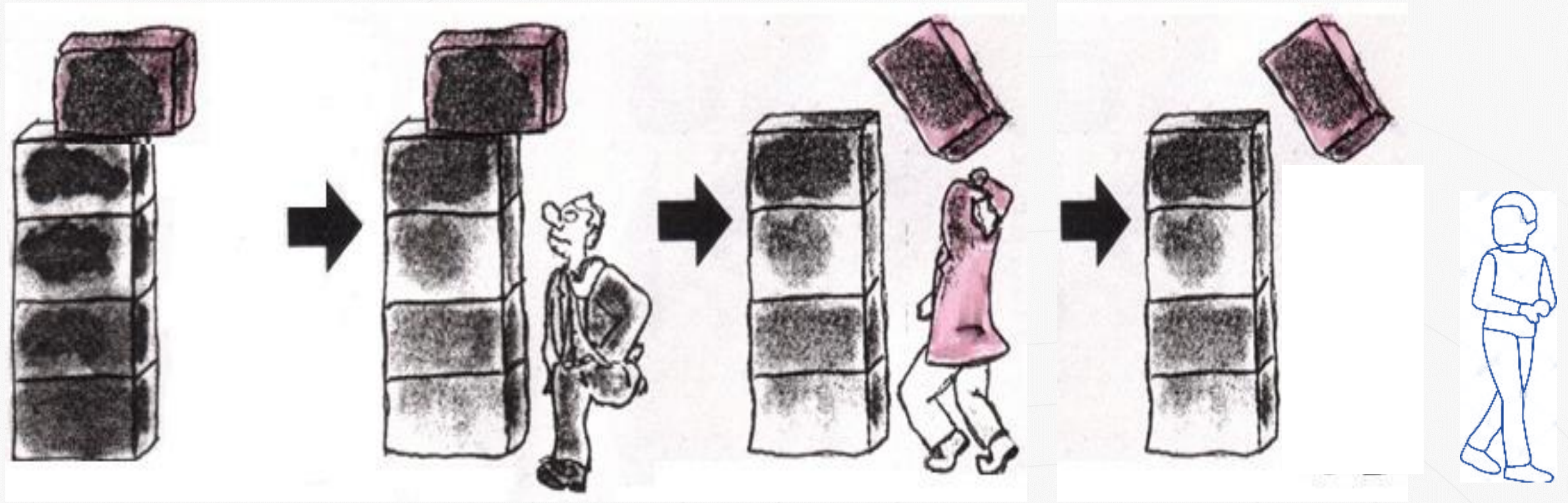


Passageway

- Do not enter other work areas without proper authorization.
- Use established aisles and walkways, do not take short cuts.
- Passageway and emergency exit doors must be kept clear at all time.
- Passageway and emergency exit doors must have proper signage making it prominently visible.



Unsafe Action Unsafe condition



Hazard

Risk

Accident

Nearmiss

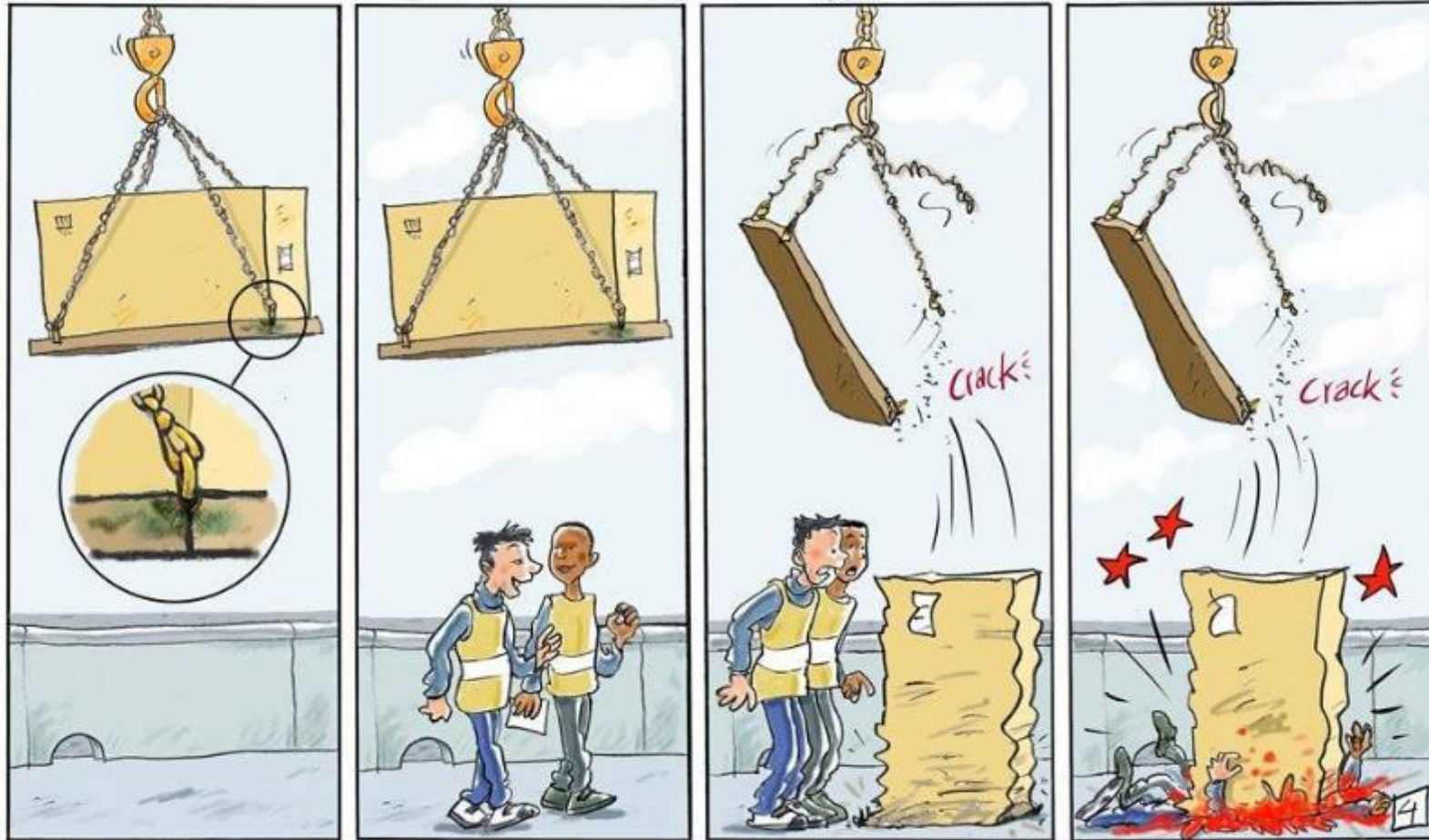
Unsafe condition

Unsafe action

Accident

Nearmiss

Unsafe Action Unsafe condition

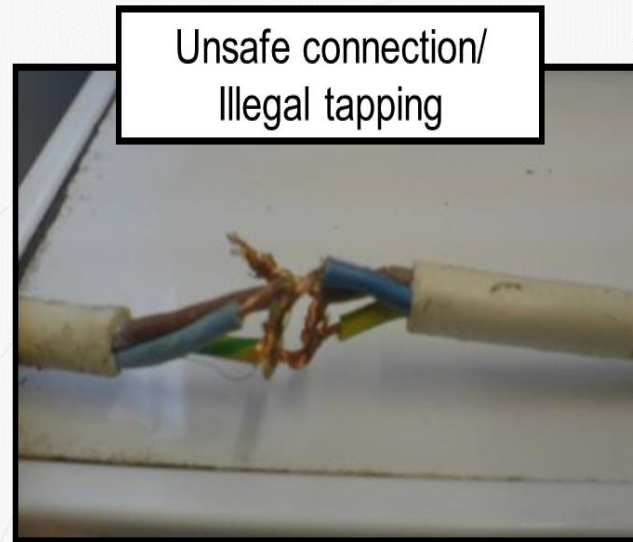
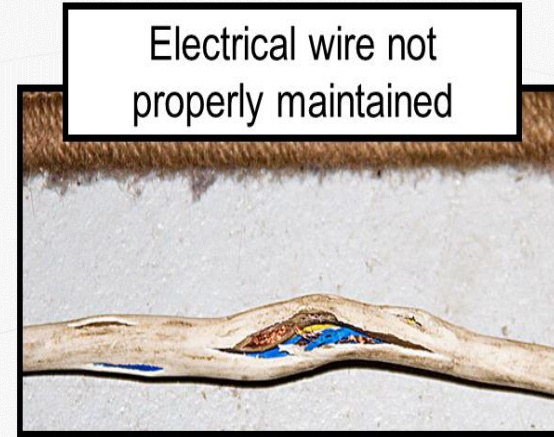


Unsafe condition. ○ Unsafe act ○ Near miss ○ Accident

Sources of Electrical Hazards



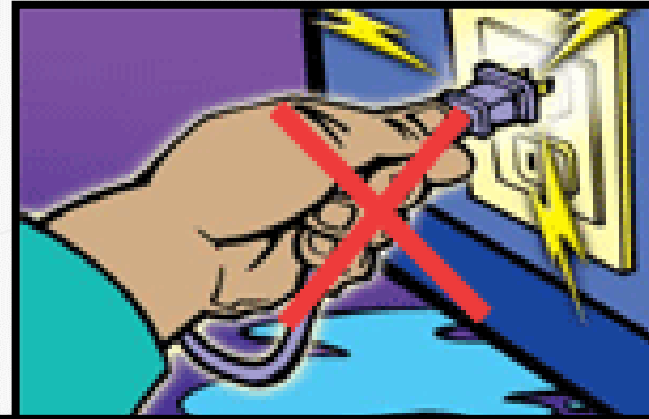
- A check for defective cables, plugs & sockets shall be carried out.
- Do not tap electricity directly from the distribution boxes without first informing the concerned & without permission.
- Any equipment that sparks or stalls shall be switched off and disconnected.
- Cables should not trail across the floor.



Sources of Electrical Hazards



Unplugging by pulling the wire



Handling any electrical equipment if your hand is wet



Using Damaged plug and cable

Electrical Safety



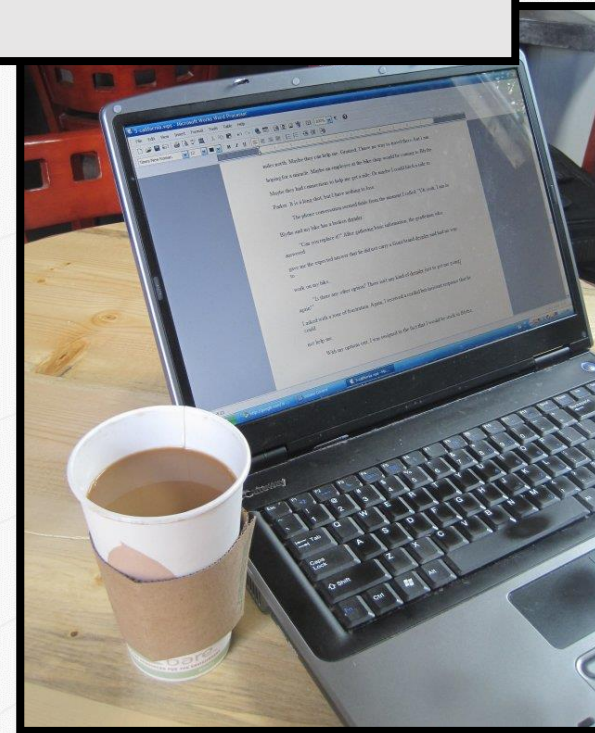
- The worker shall not stand on the wet area while using electrical equipment.
- No bare wires to be installed in plug sockets. Only industrial plugs to be used to install any wires to the sockets.



Sources of Electrical Hazards



Placing liquid substances near electrical plugs, sockets, appliances or heat source



Using cracked electrical outlets

Power tools

Handheld tools shall be equipped with and operating switch or lever requiring constant hand or finger pressure to operate (Dead-man Switch).



Hand Tools & Machine Tools



- The right size wrench to fit the nut shall be used.
- Hammer heads shall be tightly wedged on their shafts.
- Edge of cutting tools shall be kept sharp.
- Tools shall be kept in boxes or racks when not in use.
- Sharp edges of tools that are to be stored or carried shall be protected.
- Tools that are worn or damaged shall not be used.
- The correct tool for the job shall always be used.
- When working on machines that are provided with safety covers or safety guards, operate these machines only when the guards are in place.



Rooftops and Elevated Floor : DO's and DONOT's



Use proper access and egress for roof works.



Do not step on fragile roof surfaces.



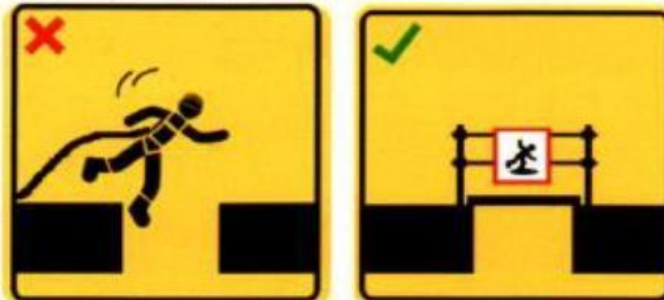
Use proper access and egress.



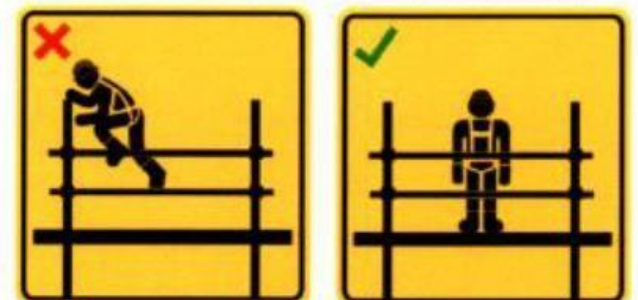
Check for roof edge protection such as guardrails.



Look out for openings.



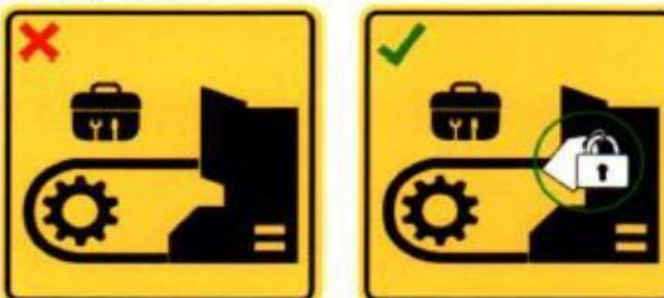
Do not climb or stretch over guard rails.



Secure safety harness when working on roofs.



Lock-out and tag-out before repair and maintenance.



Always maintain 3-point contact when use ladders.



Lock Out Tag Out (LOTO)



Lockout / Tagout procedures are designed to ensure safe working practices and must be strictly followed whenever systems are de-energized prior to servicing.



Lockout / Tagout procedure includes



- **Notify others** that the equipment will be shut down
- **Open all the energy isolating devices** identified on the equipment's specific procedure.
- **Lock and tag all energy isolating devices**, dissipate or restrain stored or residual energy.
- **Verify that the equipment is completely de-energized** by attempting to cycle it, and verify that the equipment is completely de-energized by testing for voltage with a voltmeter.

Proper labeling procedure includes



- Name of the person placing the procedure and the date placed,
- Details regarding the shutdown procedure for specific equipment, a list of all the energy sources and isolating devices.
- The lock placed on equipment during servicing should be removed only by the person who placed it.
- The lockout devices, such as padlocks, shall be approved for Lockout/Tagout procedures applications.
- Safety protocols need to be followed when re-energizing equipment, including notifying others that the system is about to be energized.





Remember to Lock in for each project.

Manual Handling



- Essential activity in most workplaces



- Common injuries

- Sprains
- Back pains

- Factors to consider

- Weight of object to be lifted
- Location of object from the body
- Height from which and to which the object is lifted
- Frequency of lift



Manual Handling



ALWAYS KEEP YOUR BACK STRAIGHT WHILE LIFTING



Step 1: Hold the load firmly



Step 2: Keep the load close to you



Step 3: Lift the load by pushing up your leg



Step 4: Ensure your legs are stable before moving off

Sources of Falling Hazards



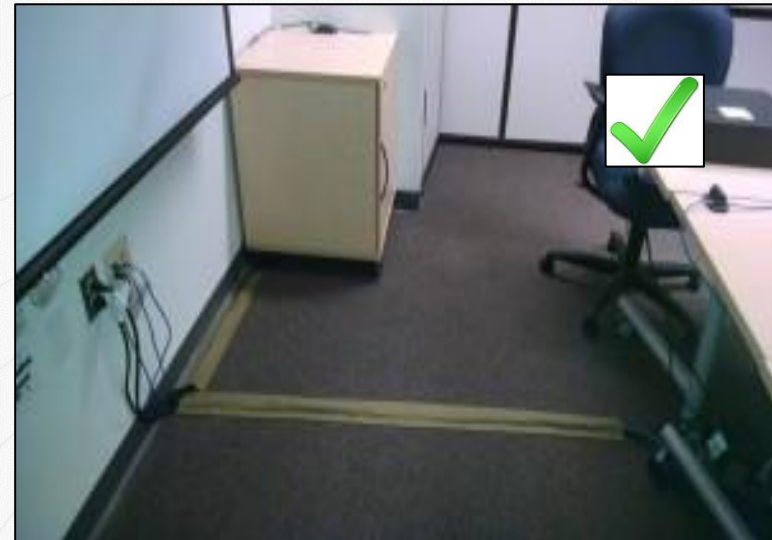
Sources of Hazards

- Exposed cables running along the floor
- Bulky objects placed in the middle of corridors



Preventive Measures

- Cables should be kept away from footpaths unless necessary
- If necessary, cables along footpaths should be taped over or covered
- Ensure main corridors are always cleared of bulky items



Energy Conservation



- Switch off all lights and electronic equipment when not in use, including after office hours and during weekends. Lights and machines give off heat, so turning them off when not in use also helps to reduce your building's cooling requirements.
- Set your computer to switch to sleep mode after 10 minutes of inactivity rather than switching into screen saver mode. Contrary to the perception that screen savers help to conserve energy, they do not.



Water Conservation



- Put up posters and stickers as a reminder on **water saving habits** in the pantry and toilets.
- **Install water saving devices** in toilets and pantry faucets.
- **Report any leaks** to the appropriate building/facilities personnel.



Employees & Sub-contractors responsibilities



1. To carry out the work with safety and do not meddle with customer property.
2. To notify conditions that constitute hazard to those potentially affected.
3. To demonstrate good work ethics without evading engineered safety devices.
4. To immediately inform EHS in-charge / immediate supervisor / Site head / when any near miss / minor injury / accident happens to any employee or any contract workers.
5. No minors (below the age of eighteen years) to be permitted to work on the project site.
6. No unauthorized persons to be permitted into the project site.
7. To follow the emergency response and evacuation procedures/plan.
8. To submit a brief safety report within 24 hours

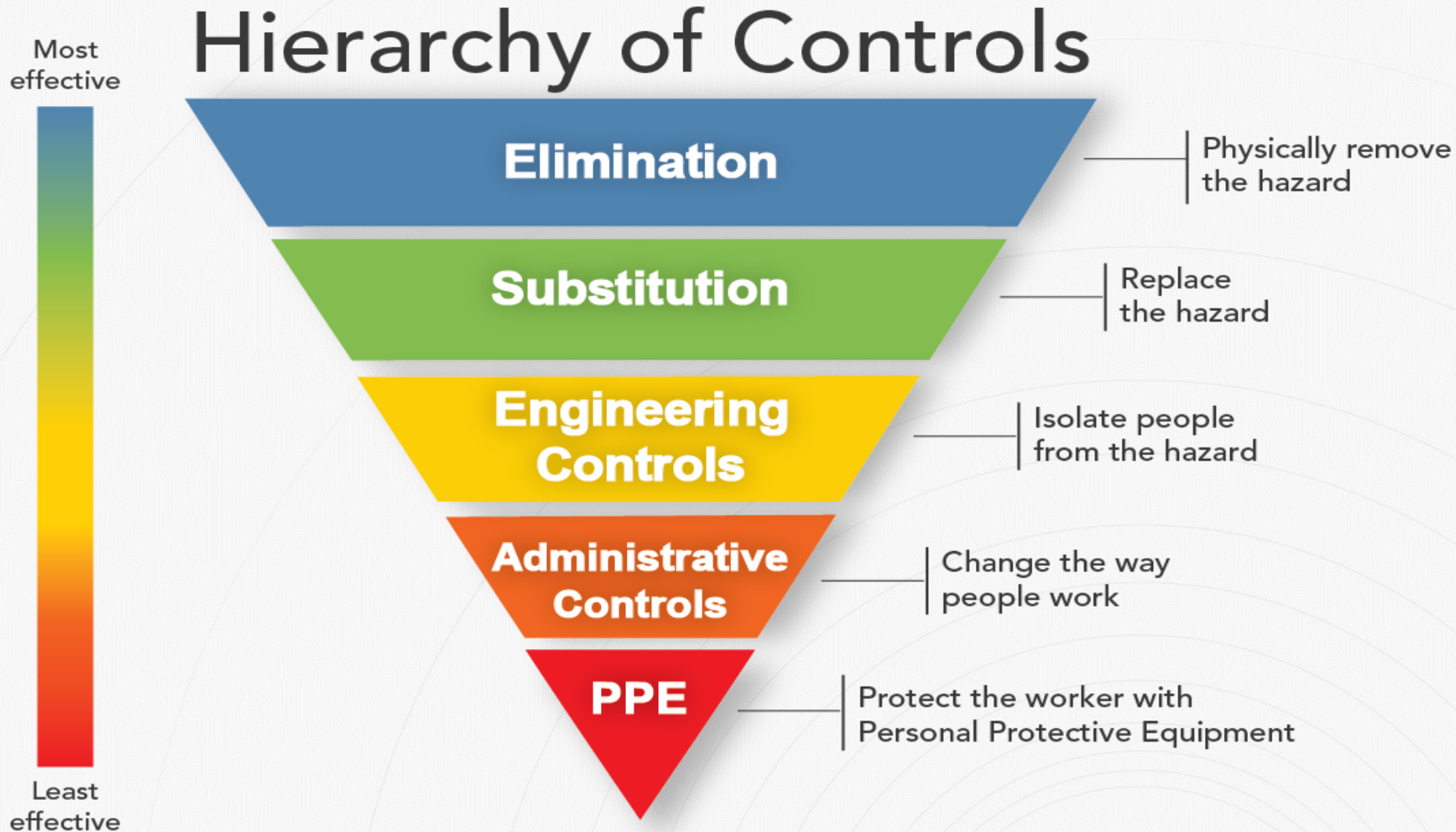
Procedure for Handling Safety Incidents



1. Ask for help (if necessary) and inform immediate Supervisor and Manager
2. Assess the situation and attend to the injured if safe to do so
3. Cordon and protect the incident scene
4. Pay attention to other details that will help in the investigation
5. Notify HSE Personnel on site and HQ.
6. Assist in the investigation
7. If medical attention and treatment is necessary, Supervisor should accompany the injured to a medical facility



Risk Management Hierarchy of Controls



Smoking, Drugs & Alcohol



- Smoking is not allowed inside the plant
- No alcohol is to be consumed in the plant premises
- Do not consume alcohol while driving/riding
- No illegal drugs, tobacco consumption is allowed when on duty



Wild Animals



- BE CAREFUL!!!
- DANGEROUS EVERYWHERE!!!



Insect and Snake Bites



- To avoid being stung and bitten, always wear closed shoes
- Never turn over a rock, construction material, or wood without keeping your finger well clear; if possible, use wooden planks to turn over.



Insect and Snake Bites



- Good housekeeping.
- Do not walk in darkness.
- Keep the room and eating places in hygienically clean condition.
- Adequate lighting to be provided around office and working areas

Prevention from Snake bite



- Watch where you place your hands and feet when removing debris. If possible, don't place your fingers under debris you are moving. Wear heavy gloves.
- If you see a snake, step back and allow it to proceed.
- Wear boots at least 10 inches high.
- Watch for snakes sunning on fallen trees, limbs or other debris.
- A snake's striking distance is about 1/2 the total length of the snake.

Prevention from Snake bite



DO

DO stay calm and reassure the bitten person.



DO move slowly away from the snake.



DO rinse venom in the eyes with running water in case of spitting snakes.



DO leave the wound area (or bite mark) alone.



DO remove all tight items around the affected area.



DO lay the patient on his/her side and reduce movement of the affected area.



DO rush to the nearest health facility for medical treatment.



DON'T

DON'T panic. Instead, calmly follow these first aid steps.



DON'T attack or kill the snake.

If you are close enough to hurt it, it is close enough to defend itself by biting you.



DON'T rub the eyes. Rubbing causes irritation to the eye and spreads the venom.



DON'T wash, cut or suck the wound. It can lead to infections and venom spreading.



DON'T tie the affected area to stop blood circulation.

It can lead to infections that cause loss of limbs or even death.



DON'T lay the patient on his/her back.

Lying on the back can block the airways.



DON'T use traditional methods or any unsafe treatments.

For venomous snakebites, blackstones and herbs don't help and will delay medical treatment.



Social Accountability Policy



 Skyfri	Social Accountability Policy	Number:	ASE-EHS-SAP
		Revision:	1.0
		Date:	02-11-2022

Skyfri Energy Private Limited (Skyfri Energy) is committed to protect the interests of its employees and improve the work conditions and ensure positive social outcomes. The company also will have meaningful engagement with all its stakeholders, including sub-contractors and support/respect human rights at the workplace. This policy aligns to the Skyfri Code of Conduct and the company is committed to high levels of Behavioral standards, a Safe and Healthy work environment and respect to all personnel at work.

Skyfri Energy is committed to conform to the following and will comply to laws with respect to these areas:

Child Labour and Young Workers: Skyfri Energy is committed to meeting international labour conventions and has always followed the practice of not hiring workers who are less than 18 years in its workforce.

Forced, Bonded or Compulsory Labour: Skyfri Energy does not support the use of forced or bonded or compulsory labour. It believes in a harmonious work environment wherein the individual on securing employment works on their own free will, without any threat of punishment or retaliation and is not exploited on any account.

ISO Certification



International
Organization for
Standardization



We are going for certification ,

- We all must use ISO documents only
- Old formats, procedures must not be used



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