A CELCOM-SABAH JOINT VENTURE COMPANY

CELCOM TIMUR (SABAH) SDN. BHD.

SAFE WORK PROCEDURES

General Electrical Safety

DOCUMENT NO. : CTSSB-OSHMP/SWP-10

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DATE:	1st JANUARY 2013	1st JANUARY 2013	1st JANUARY 2013

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1.0 GOVERNING POLICY

This procedure is made under the CTSSB's Occupational Safety and Health Policy.

2.0 PURPOSE

The purpose of this standard is to ensure that employees, visitors, suppliers, clients and contractors are protected from any an injury resulting from an electrical hazard.

3.0 SCOPE

This procedure shall apply to all CTSSB's employees and other interested parties at all CTSSB's premises and associated work areas.

4.0 REFERENCES

i. OSH Act 1994
ii. FMA 1967
iii. OHSAS 18001:2007
iv. DOSH Guidelines – " Hazard Identification, Risk Assessment and Risk Control'
v. CTSSB's OSH Management Plan : Part Four : Responsibility, Authority & Accountability
vi. CTSSB's Safe Work Procedure: Hazard Identification, Risk Assessment & Risk Control ***: CTSSB-OSHMP/SWP -01***
vii. CTSSB's Safe Work Procedure: Workplace Inspection for OSH Compliance ***: CTSSB-OSHMP/SWP -02***
viii. CTSSB's Safe Work Procedure: Accident Reporting and Investigation ***: CTSSB-OSHMP/SWP -4***
ix. CTSSB's Safe Work Procedure: Permit to Work. ***: CTSSB-OSHMP/SWP -7***

5.0 RESPONSIBILITY, AUTHORITY AND ACCOUNTABILITY

i. Manager of Human Resources and Administration

- Responsible for the overall implementation of this procedure including its periodic review.

ii. Head of Department (HOD) / Officer in-charge (OIC)

- The HOD / OIC are fully responsible for ensuring the implementation of this procedure and transmittal of the safety information to their subordinate.
- HOD / OIC or designated person shall ensure the implementation of this safe work procedure by instruct or train the new employee or contractor at any workplace under their control.
- Conduct workplace inspections to ensure all the CTSSB's employees and other interested parties at all CTSSB's premises and associated work areas that identified have potential high risk shall implement this Permit to Work System.
- To ensure the records of Permit to Work record are properly kept and easy to retrieve.

iii. All Employees (Including Contractor)

- To comply with this procedures at all time while at workplace owned or under the control of the CTSSB.
- To follow with instructions and/or to give full cooperation to the management or any officer this has been given an authority in order to ensure the implementation of this procedure.
- Each employee shall be held responsible for performing all work in a safe manner so that injuries to that person and to others will be avoided.
- An employee shall notify his employer or supervisor before attempting any work which, in the employee's opinion, appears hazardous above and beyond normal operating conditions.
- An employee shall report all injuries to his employer or supervisor without delay, regardless of the nature of the injury.
- Good housekeeping of all work areas and equipment shall be practiced.

6.0 TERMS AND DEFINITIONS

i. Circuit Breaker:
- A device that automatically interrupts the flow of an electrical current.

ii. Breaker Box:
- An insulated box on which interconnected circuits are mounted.

iii. Electrical Panel:
- An insulated panel on which electrical wires are mounted.

iv. Current Flow:
- The rate of flow of an electrical charge, generally expressed in amps.

v. Electrical Load:
- The amount of power delivered by a generator or carried by a circuit. A device to which the power is delivered.

vi. Ground-Fault Circuit Interrupter (GFCI):
- A GFCI detects grounding problems and shuts electricity off to prevent a possible accident.

vii. High Voltage:
- The term high voltage applies to electrical equipment that operates at more than 600 Volts (for terminal to terminal operation) or more than 300 Volts (for terminal to ground operation). Low voltage, high current AC or DC power supplies are also considered to be high voltage.

viii. Hazardous Energy Sources:
- This term applies to stored or residual energy such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure.

ix. Lockout:

- The placement of a lock on an energy-isolating device. This act prevents workers from operating a piece of equipment until the lock is removed.

x. Tagout:

- The placement of a tag on an energy-isolating device. A tagout device is a prominent warning device of a lockout.

xi. Energy-Isolating Device:

- A mechanical device that prevents the transmission or release of energy. Examples include the following:
  a. Manually operated circuit breakers
  b. Disconnect switches
  c. Line or block valves

xii. Electrical Shock

- A phenomena in which human body becomes part of electrical circuit.

xiii. Work Permit

- A written form used to authorise work that exposes workers to hazards. It identifies the work to be done, the hazards associated with the work and the necessary preparations and precautions required to perform the work.

xiv. Portable equipment

- Include but not limited to Portable grinder machines, Hand drill machines, Bench cutter machines, Jig saw machines, Portable welding sets and Cordless drills.

7.0 DETAILS PROCEDURE

i. Electrical Grounding

Proper electrical grounding can help prevent electrical injury. Most electrical equipment is grounded with either a three-prong plug or a two-prong plug and insulation. Because a grounding system may be defective without your knowledge, use a GFCI to ensure electrical safety. GFCIs are required in moist or potentially damp environments.

ii. Electrical Panels

Electrical panels or breaker boxes require special safety considerations, including the following:

- Know where your panel box is located.
- Do not tape circuit switches to keep a breaker from tripping.
- Ensure that breaker circuits are accurately labelled within panel boxes.
- Ensure that panel box doors are securely attached.
- Do not block panel boxes. There should be at least 30 inches of clear space in front of a panel box.
- Report tripped breakers and refer any electrical questions to the Facilities In-charge.

iii. Electrical Safety Guidelines

- Follow these guidelines for general electrical safety:
  a. Be familiar with the electrical hazards associated with your workplace.
  b. Unplug electrical equipment before repairing or servicing it.
  c. If a prong breaks off inside an outlet, do not attempt to remove it yourself. Call the Facilities In-charge for assistance.
  d. Ensure that outlets are firmly mounted. Report loose outlets to the Facilities In-charge.
  e. Report all electrical problems, including tripped breakers, broken switches, and flickering lights, to the Facilities.
  f. All appliances used in Suruhanjaya Tenaga labeled.
  g. Do not use an appliance that sparks, smokes, or becomes excessively hot, unless the appliance is specifically designed to exhibit these characteristics.
  h. Portable electrical heaters must be placed to avoid causing a trip hazard and must be kept away from combustible material. Never leave a heater unattended. Unplug the heater at the end of the day or when not in use.

i. Keep electrical equipment away from water, unless the appliance is specifically designed for use around water, such as a wet-dry shop vacuum.
j. Use GFCIs whenever possible.
k. Be aware of overhead power lines when working with tall equipment (e.g., cranes, sky lift, etc.).
l. Follow lockout/tagout procedures, as appropriate.

- **Follow these guidelines for electrical plug and cord safety:**

a. Do not remove the prongs of an electrical plug. If plug prongs are missing, loose, or bent, replace the entire plug.
b. Do not use an adapter or extension cord to defeat a standard grounding device. (e.g., Only place three-prong plugs in three-prong outlets; do not alter them to fit in a two-prong outlet.)
c. Use extension cords only when necessary and only on a temporary basis. Do not use extension cords in place of permanent wiring. Request new outlets if your work requires equipment in an area without an outlet.
d. Use extension cords that are the correct size or rating for the equipment in use. The diameter of the extension cord should be the same or greater than the cord of the equipment in use.
e. Do not run electrical cords above ceiling tiles or through walls.
f. Keep electrical cords away from areas where they may be pinched and areas where they may pose a tripping or fire hazard (e.g., doorways, walkways, under carpet, etc.)
g. Avoid plugging more than one appliance in each outlet. If multiple appliances are necessary, use an approved power strip with surge protector and circuit breaker. Do not overload the circuit breaker.
h. Discard damaged cords, cords that become hot, or cords with exposed wiring.
i. Never unplug an appliance by pulling on the cord; pull on the plug.

iv. Electrical Emergency Response

The following instructions provide guidelines for handling three types of electrical emergencies:

- **Electric Shock:**
  a. When someone suffers serious electrical shock, he or she may be knocked unconscious. If the victim is still in contact with the electrical current, immediately turn off the electrical power source.
  b. If you cannot disconnect the power source, try to separate the victim from the power source with a nonconductive object, such as a wood-handled broom.
  c. Do not touch a victim that is still in contact with a power source; you could electrocute yourself.
  d. Have someone call for emergency medical assistance immediately. Administer first aid, as appropriate.

- **Electrical Fire:**
  a. If an electrical fire occurs, try to disconnect the electrical power source, if possible.
  b. If the fire is small, you are not in immediate danger, and you have been trained in fighting fires, use any type of fire extinguisher except water to extinguish the fire.
  c. Do not use water on an electrical fire.

- **Power Lines:**
  a. Stay away from live power lines and downed power lines.
  b. Be particularly careful if a live power line is touching a body of water. The water could conduct electricity.
  c. If a power line falls on your car while you are inside, remain in the vehicle until help arrives.

8.0 RECORD OF AMENDMENT

Version No	Approval Date	Approved by	Amendment

9.0 APPENDICES

i. Standard Form
- Nil