Electrical Safety

It is the policy of the Company:

- To achieve the best levels of health and safety; to comply with acts, regulations and codes of practice for electrical installations/wiring
- Electrical work shall be undertaken only by Registered Electrical Contractors or Licensed Electrical Workers who holds a current licence in respect of the specified class of work carried out by that worker

Authorities and Responsibilities

All personnel associated within any site have responsibilities regarding electrical safety.

Managers are responsible for and accountable to:

- Provide adequate supervision of all employees and contractors
- Ensure that all electrical work is carried out only by Registered Electrical Contractors or Licensed Electrical Workers and that each electrical worker holds a current licence in respect of the specific class of work carried out by that worker
- Provide and maintain safe systems for carrying out electrical work
- Ensure that all employees and contractors have and maintain the appropriate knowledge and skills regarding electrical lines and equipment for them to carry out their work
- Take timely and appropriate action when electrical incidents occur or unsafe electrical equipment is identified
- Ensure that electrical work is carried out in relation to construction or demolition complies with Australian Standards
- Ensure that all electrical equipment is maintained in safe condition and according to Australian Standards

All other employees are responsible for and accountable to:

- Comply with policies and procedures
- Be aware of the location of and safe clearances to overhead power lines, underground cables and electrical equipment
- Report all electrical incidents, hazards or potential hazards
- Check the operation of portable Residual Current Devices (Safety Switches) before each use

PROTECTION AND TESTING - Rcds Or Earth Leakage Circuit Breakers

Residual Current Devices (RCD's)

An RCD may be non-portable (on the switchboard at the origin of the final sub-circuit or at the socket supplying the appliance) or portable (in a portable device connected to a socket-outlet and which supplies the appliance)

If electricity is supplied to movable electrical equipment through a socket outlet and the supply of electricity is not protected by a non-portable R.C.D., the output side of the socket outlet must be directly connected to a portable R.C.D. or E.L.C.B.

Socket outlets, where there is an increased risk of electric shock to the user, must be protected by RCD's

All R.C.D.'s/E.L.C.B's must be tested regularly:

Non-portable R.C.D.'s – three monthly by the built-in test facility, and three yearly in accordance with AS3760 (in service Safety Inspection & Testing of Electrical Equipment)

Portable R.C.D./E.L.C.B. - before it is first used on any day by means of the built-in test facility and in accordance with AS3760 In-Service Safety Inspection and Testing of Electrical Equipment.

Inspection and Testing - Frequency

The Manager must ensure that equipment is inspected and tested in accordance with Australian Standards by a Registered Electrical Contractor of Licensed Electrical Worker
Cord extension sets, power boards, appliances connected by a flexible cord, portable isolation transformers and RCD's must be inspected and tested:

- Prior to initial introduction to service (except where the equipment is new and there is written evidence of compliance to AS/NZS 3760)
- Before return to service after repairs;
- Prior to each hire (for hire equipment, inspection only) and additionally tested at not greater than monthly intervals; and
- At intervals not exceeding those specified in the "Inspection & Testing Intervals" schedule appended to this document
- Prior to use, a quick visual inspection to ensure there are no defects (this is for the users personal satisfaction).

Equipment which has passed the inspection and test shall be fitted with a durable, non-reusable, non-metallic tag, which shall include:

- Name of the person or company performing the tests; and
- The test or re-test date

Test and Inspections Records

Test and inspection records must be kept for a period of seven (7) years and be available on site. The records include –

- A register of all electrical equipment; and
- A record of formal Inspection and Testing (covering the equipment, the type of inspection or test, the date and the results); and
- A repair register (covering the equipment, the date, the nature of the repair and who carried out the repair); and
- A record of all faulty equipment and equipment removed from service (covering the equipment, the date reported as faulty or removed from service, who reported the faulty equipment, the action taken and the date the fault was rectified)

Note: Copies of Registered Electrical Contractors' invoices, reports, certificates of electrical safety etc are filed at head office with the purchase order/payment voucher – contact accounts payable for copies as required

Operation of Fuses or Circuit Breakers

After a fuse or circuit breaker has operated, the cause of the fuse or circuit breaker operating must be determined prior to starting the plant or equipment.

Fire Management

Managers must ensure that

- switch rooms are fitted with appropriate fire extinguishers in readily accessible positions or an appropriate fire management system, and that site personnel are trained to act accordingly

Flexible Cables

Flexible cables and extension leads must be:

- located in positions where the cables and leads are not subject to damage (including damage by liquids), and
- are provided with protection against damage (including damage by liquids).

A flexible cable or extension lead must be supported at least 2m from the floor or ground if the:

- plug connected to the electricity supply is more than 10m from the equipment to which the cable or lead is connected,
- person using the equipment to which the cable or lead or connected cannot see the plug connected to the electricity supply, or
- cable or lead crosses a passageway or access way.

Use of Temporary Electric Power

All temporary electrical wiring installations and equipment used in construction work on sites must be safe for use.

The use of temporary electric power in our workplaces shall comply with the relevant Code of Practice and, as appropriate, the regulations of the Local Electricity Supply Authority, otherwise as a minimum to the latest edition of AS3000 "SAA Wiring Rules".

Electrical equipment that does not comply with the provisions of a Code of Practice or the Wiring rules must be removed from the workplace.

Tagging Of Electrical Equipment

When the piece of equipment has been inspected and tested, and has achieved the set criteria, it can then be tagged.

The tag, which may be colour coded to aid in identification of test period, should be made of durable, non-metallic material and shall include;

- the name of the person or company that performed the tests, and
- the test or retest date.

REMEMBER – IF IT'S NOT TAGGED – DON'T USE IT – REPORT IT!

INCIDENT RESPONSE AND REPORTING

The following serve as a guide to an appropriate response in the event of an electrical incident -

- **Do NOT Panic**
- **Do NOT put yourself or anyone else at risk**
- **Switch off the source of electricity supply – only if it can be safely done**
- **First Aider to administer First Aid to any injured person – call Ambulance if required**
- **Make the area/site safe without disturbing any evidence needed for a thorough investigation**
- **Assist relevant authorities (e.g. police, etc) with their investigations**
- **Carry out a site investigation of the incident - it is important that the incident has been investigated before the circuit involved is re-energised, for safety reasons, as well as assisting the investigation**

In addition to the immediate verbal advice to the Authorities for serious electrical incidents, a written report is required to be sent within 24 hours after such incidents, and other incidents involving accidental contact with any electrical installation or electric shock and serious electrical incidents.

Serious Electrical Incident means an incident involving electricity which causes or has the potential to cause

- The death or injury to a person; or
- Significant damage to property; or
- A dangerous electrical event; or
- A serious risk to public safety

TESTING AND INSPECTION SCHEDULE FOR ELECTRICAL EQUIPMENT

[RCD: Residual Current Devices/ EPOD: Electrical Portable Outlet Device (Power Board)]

ENVIRONMENT/LOCATION WHERE EQUIPMENT IS BEING USED	CLASS OF EQUIPMENT		RCDS		EXTENSION CORDS AND EOPDS/POWER BOARDS
	CLASS I: PROTECTIVELY EARTHED	CLASS II: DOUBLE INSULATED	PUSH-BUTTON TEST BY USER	OPERATING TIME RCD TESTER	
Weighbridge Fixed Plant/Mobile Plant	6 Monthly	12 Monthly	3 Monthly	2 Years	12 Months
Factories, Workshops, Manufacturing Areas, Repair & Maintenance Areas, Assembly/ Fabrication Areas	6 Monthly	12 Monthly	Daily, at change of shift or before every use, whichever is the longer.	12 Monthly	6 Monthly
Commercial environments with no special protection such as offices, tea rooms/kitchens, laboratories and health care areas	12 Monthly	12 Monthly	Quarterly or before every use, whichever is the longer	Every 2 Years	12 Monthly
Office environments where equipment is NOT subject to constant flexing of cords and other electrical parts	5 Yearly	5 Yearly	3 Monthly	Every 2 Years	5 Yearly
Office environments where equipment is subject to constant flexing of cords and other electrical parts or abuse/hostile environment	12 Monthly	12 Monthly	3 Monthly	Every 2 Years	12 Monthly

Reference: Refer to AS/NZS 3760, Industry Standard for Electrical Installations on Construction Sites (Vic) (OCEI) May 2002, Part 4, Testing: State Codes of Practice/s

INSPECTION	TESTING
☑ Check cables and equipment are free from external damage ☑ Check live equipment is protected against direct contact ☑ Check any damage to component defects in the accessories, connectors, plugs or outlet sockets ☑ Check controls are in good working order i.e. they are secure, aligned and appropriately identified ☑ Check covers, guards and the like are secured in the manner intended by the manufacturer or supplier ☑ Check safety facilities and devices are in good working order ☑ Check ventilation inlets and exhausts are unobstructed ☑ Check appropriate items are labelled ☑ Check flexible cords are effectively anchored ☑ Check flexible cords do not have exposed or twisted inner cores or damaged external sheaths	☑ Test continuity of the earthing conductor for all protectively earthed equipment ☑ Carry out an insulation resistance test ☑ Test portable isolation transformers ☑ Test operation of fixed and portable RCD's ☑ For electric motors, test the no load current and the full load current ☑ Test the operation of emergency stops ☑ Test the operation and installation of lanyard systems