

# FEBRUARY SAFETY THEME: ELECTRICITY

A recent electrical fire incident at the mill flotation plant was a timely reminder that working with or around electricity is identified as a major hazard at Ok Tedi.

Electrical hazards can include:

- Damaged electrical power lines
- Working near power lines
- Damaged cables and equipment allowing contact with exposed live part
- Using electrical equipment in wet or dusty conditions or close to metal ladders, etc
- Unsafe, untested or non-compliant electrical installations
- Overloaded electrical equipment generates heat
- Faulty or damaged earthing conductors associated with electrical installations

## It's alive unless it is proven dead.

Treat all exposed electrical parts as live or energised unless proven de-energised (dead) after isolation by a qualified and authorised electrical isolator. Always test for dead.

Risks include:

- Injury / death
- Arc flash / fire / explosion
- Equipment / environment damage
- Shutdown and loss of production.



## Be the CONTROL not the HAZARD



Only approved portable electrical equipment is permitted to be used on site. Equipment must be tested and tagged by an authorised person before use.



Portable electrical equipment may be protected by a site approved residual current device (RCD).



Inspect equipment before use and isolate and tag out damaged or faulty equipment.

Know how to deal with an electrical incident and how to raise an emergency response. Know the location and use of rescue kits and appropriate fire extinguishers.



All personnel receiving or suspected of receiving electrical shock need to advise the work supervisor and report to the medical centre..

## Electrical Installations

All electrical installations must be appropriately signed and protected to prevent unauthorised access.



Work in an electrical installation must only be undertaken by a competent and authorised electrician.

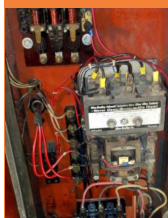


Electrical equipment must be isolated by an authorised electrical worker.

Wear the correct flash arc rated PPE if working in an electrical installation.

## Audit and Inspections

All electrical equipment, systems and installations must be regularly inspected and monitored by an authorised person.

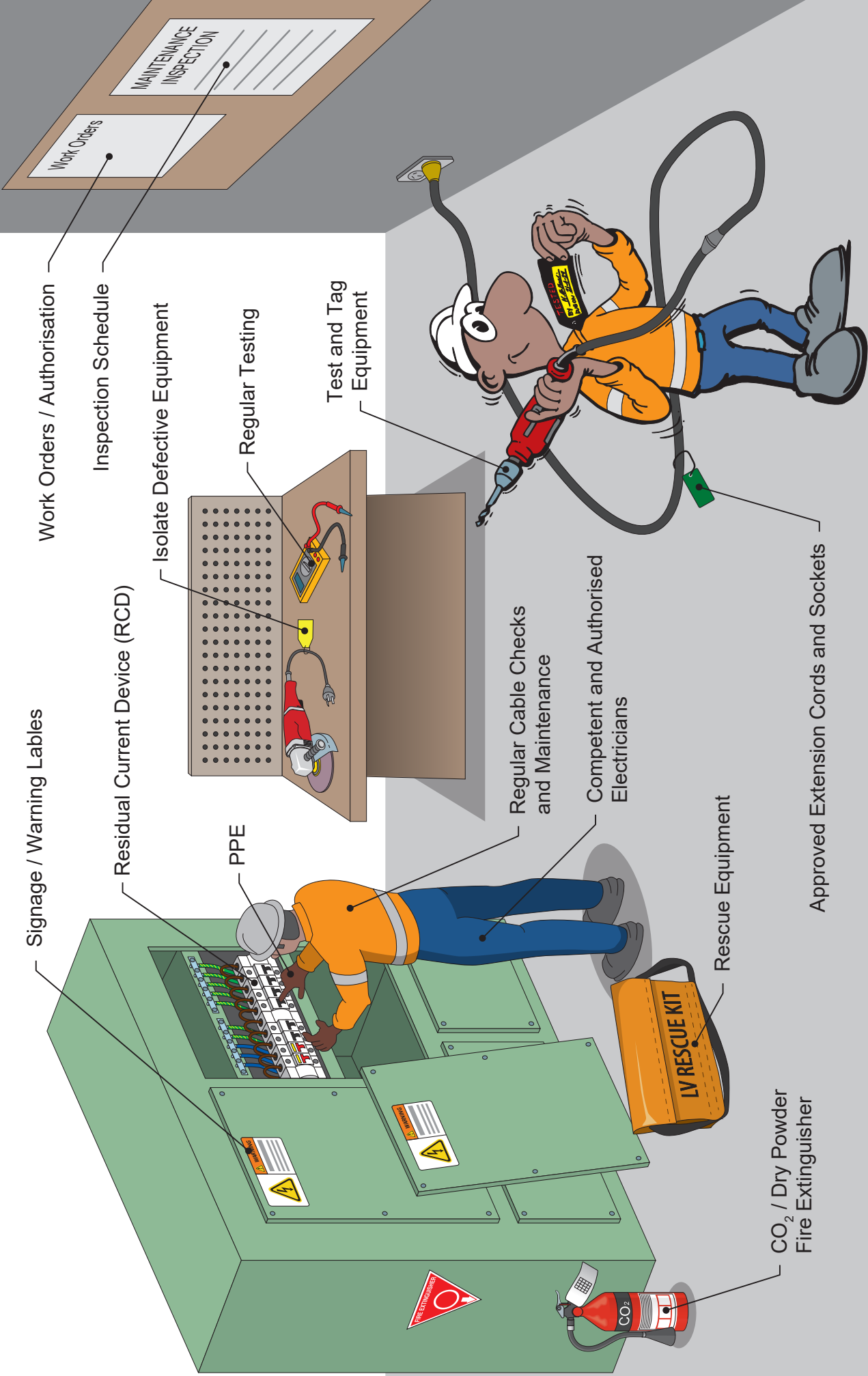


Managers must conduct a 274 Inspection in accordance with PNG Mining Safety Act 1977.



All electrical equipment and systems must be installed, tested, repaired and maintained by competent authorised personnel to OTML Electrical Engineering Site Specifications and relevant Australian Standards.

# ELECTRICAL CONTROLS



Signage / Warning Lables

Work Orders / Authorisation

Inspection Schedule

Residual Current Device (RCD)

Isolate Defective Equipment

PPE

Regular Testing

Test and Tag Equipment

Regular Cable Checks and Maintenance

Competent and Authorised Electricians

Rescue Equipment

Approved Extension Cords and Sockets

CO<sub>2</sub> / Dry Powder Fire Extinguisher

MAINTENANCE INSPECTION

Work Orders

LV RESCUE KIT

CO<sub>2</sub> FIRE EXTINGUISHER

## OPERATORS / EMPLOYEES

- Am I competent and authorised to use the portable electrical equipment?
- Have I performed a pre-operational inspection of portable electrical equipment?
- Have I tagged out any defective portable electrical equipment?
- Is the portable electrical equipment protected by a site approved residual current device (RCD)?
- Does the work area require intrinsically safe electrical equipment, e.g. working in a confined space?
- Am I competent and authorised to enter or access the electrical installation or perform any electrical works?
- Are all extension cords and sockets approved for the work area?
- Have I received authorisation prior to performing any live electrical work?

## SUPERVISORS / SUPERINTENDENTS

- Are pre-start checks performed on portable electrical equipment?
- Does all portable electrical equipment undergo regular testing and tagging?
- Is all portable electrical equipment protected by residual current devices?
- Are all personnel competent in the use of portable electrical equipment and associated electrical safety?
- Is intrinsically safe electrical equipment available for use in explosive atmospheres, e.g. in confined space?
- Are all extension cords and sockets approved for specific area use?
- Are all electrical installations appropriately signed and protected to prevent unauthorised access?
- Is defective electrical equipment correctly tagged and presented for repair by an authorised person prior to re-use?
- Are all personnel performing work in electrical installations wearing the correct flash arc rated PPE?
- Is a low voltage rescue kit available for all works that involve low voltage works or fault finding?

## MANAGERS / GENERAL MANAGERS

- Are training systems in place to ensure competencies are achieved and maintained?
- Are pre-operational checklists developed for portable electrical equipment at site?
- Is there a schedule in place to ensure all residual current devices and earth leakage relays are regularly inspected and tagged?
- Is there a schedule in place to ensure all portable electrical equipment is approved for site use and correctly tagged?
- Is there an schedule in place to ensure all electrical installations are correctly signed and protected to prevent unauthorised access?
- Are electrical installations likely to be exposed to lightning events protected by appropriate lightning protection?
- Are all electrical systems installed, repaired and maintained by competent authorised personnel to recognised standards?

### ELECTRICITY - KEY CONTROL CHECKLIST

**NEVER** rush in to help someone in an electrical incident - you will only make matters worse.

