

C2. ELECTRICAL SAFETY

C: OPERATIONS STANDARDS

1.0 Scope

1.1 This standard applies to all electrical work above 110 volts DC or 32 volts AC.

2.0 Competency Standards and Safe Work Procedures

2.1 There shall be electrical competency standards and safe work procedures for all electrical work, i.e. construction, decommissioning and demolition of electrical equipment.

2.2 The competency standards shall specify the frequency for re-certification, which shall be no less than every two years.

2.3 All electrical installation work shall be conducted by competent personnel in accordance with governing regulation, code, design criteria and safe work procedures.

3.0 Electrical Equipment

3.1 Electrical safety devices such as earth leakage and overload protection shall be installed on all final distribution circuits and the settings established by qualified personnel.

3.2 Electrical equipment, grounding continuity and electrical safety devices shall be inspected and/or tested on a suitable schedule and the findings recorded.

3.3 There must be a system for removing electrical equipment unfit or unsafe for purpose.

3.4 There must be a system for maintaining an up-to-date set of single line diagrams. The diagrams will show: system fault calculations; equipment details; electrical protection discrimination curves; and cable ratings.

4.0 Isolation and Access

- 4.1 Equipment shall be isolated in accordance with the site Isolation Procedure (see Rio Tinto Standard C.1 Isolation). Where it is necessary to work on live equipment for the purposes of troubleshooting or testing, such work must be carried out according to a written safe work procedure.
- 4.2 Electrical panels, enclosures, control centres, substations and equipment shall be appropriately guarded, labelled, and made inaccessible (except for emergency shut off mechanisms) to unauthorised personnel. Areas containing such equipment are 'controlled areas'.
- 4.3 Where it is necessary for untrained personnel (e.g. visitors) to enter controlled areas there shall be a system for communicating the hazards and for escorting them with appropriately trained personnel. Contractors must have a permit to work in controlled areas.
- 4.4 Employees and contractors exposed to electrical hazards shall receive electrical hazard training at the commencement of their employment and thereafter on an annual basis.