Key Risk Controls for Electrical Engineering Safety

The elements required as a minimum to safely manage the use of electricity (These elements were identified via a risk assessment conducted and regularly reviewed by Mine Safety operations electrical engineering staff.)

Note: Where mines do not have hazardous zones or hazardous areas then it can be considered that the risk of explosions from hazardous areas is adequately managed.

- Electrical technology management systems incorporating emergency management and incident investigation
- Competency (of people engaged in electrical plant and systems throughout the life cycle).
- Fit for purpose (FFP) electrical plant.
    - Electrical protection
    - Earthing and lightning protection
    - Electrical plant (cables and apparatus) in non hazardous areas (HV, LV, ELV)
    - Machine (M/C) Control circuits - Functional safety, Field devices = ELV
    - Electrical plant (cables & apparatus) in a hazardous zone (includes gas monitoring) (HV, LV, ELV)
    - Signage
- Safe Procedures
    - Hazardous zone classification and identification
    - Removal/restoration of power procedures
    - Isolation procedures
    - Electrical testing procedures
    - Electric welding procedures
    - Electric shock and burn protocols
    - Use of portable apparatus U/G (underground)
    - Use of remote controlled plant
    - High Voltage procedures
    - Work near overhead lines