

1.0 PURPOSE

The purpose of this document is to clarify the requirements for standby power sources and to clarify the explosion-proof requirements for line-powered telephones, signaling devices and mine communication systems approved under 30 CFR Part 23.

2.0 SCOPE

This policy applies to line-powered telephones, signaling devices and mine communication systems submitted for approval under 30 CFR Part 23.

3.0 REFERENCES

3.1 **30 CFR 23.7(b), first sentence.** All parts which, during normal operation, are capable of producing sparks that might ignite explosive methane-air mixtures shall be enclosed in explosion-proof compartments.

3.2 **30 CFR 23.7(g).** Line powered telephones and signaling devices or systems shall be equipped with standby power sources that have the capacity to enable the devices or systems to continue functioning in the event the line power fails or is cut off. Manufacturers shall furnish instructions for the proper maintenance of standby power sources.

3.3 Criteria for the Evaluation and Test of Intrinsically Safe Apparatus and Associated Apparatus, (ACRI2001)

4.0 DEFINITIONS

None.

5.0 POLICY

5.1. The intent of 30 CFR 23.7(b) is to ensure that the approved communication system will not ignite an explosive methane-air mixture, in the event a mine power outage causes accumulation of explosive methane-air mixtures in normally non-hazardous areas. The intent of 30 CFR 23.7(g) is to ensure continued communications in the mine in an emergency situation.

5.2. All line-powered communication equipment and systems submitted for Part 23 approval must be equipped with standby power sources.

- 5.3. Additionally, each component of a Part 23 approved system located underground, including equipment and wiring located outby, must either be enclosed in an explosion-proof enclosure or meet the requirements of the "Criteria for the Evaluation and Test of Intrinsically Safe Apparatus and Associated Apparatus, (ACRI2001) when operating under standby power.
- 5.4. Associated apparatus of a Part 23 approved system that is located on the mine surface must also be equipped with a standby power source unless it is capable of maintaining communications without a standby power source in the event the line power fails or is cut off. Although this apparatus is not required to be intrinsically safe or located in an explosion-proof enclosure when operating under standby power, outputs to underground mine areas must be evaluated for intrinsic safety. This associated apparatus must contain an approval label, but should not be labeled as permissible. The label should contain the following warning notes:
- 5.4.1. Intrinsically safe outputs tested for safety in methane-air mixtures only.
- 5.4.2. Approved only for use in mine surface locations and for connection to underground circuits when installed and maintained according to the requirements of system drawing XXXX. (This condition of use must be specified on the approval letter.)