



NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Electrical Engineering Safety

Decision Sheet 9.1

Cable arcs in a Hazardous Zone

A basis for consistent application of Electrical Engineering Safety issues at NSW mines

Decision Sheets are developed by the Inspectors of Electrical Engineering in response to issues raised or questions asked by others in the DPI, in particular Mine Safety Operations and from our external clients. They are for use by any staff in Mine Safety Operations, but primarily by Electrical Engineering staff. They can be distributed externally to the DPI.

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NO LIVE LINE WORK
TEST BEFORE YOU TOUCH



Preamble

Mines are required to report incidents involving visible evidence of arcing on a cable in a hazardous zone. The DPI can not investigate all these matters and will rely on mine's conducting an investigation and reporting to the DPI. Sometimes the evidence of arcing only becomes apparent after the cable has been inspected at a licensed cable repair workshop.

Issue

What is visible evidence of arcing? &

Mines should have a process to investigate the cause of all cable failures so that when cable arcing is reported by a cable repair workshop, the mine has already done an investigation and can adequately report to the DPI.

Position

Evidence of arcing is carbon traces on the cable or globules of copper on or from the conductors.

The operator shall have a process for investigating the cause of every cable failure in the hazardous zone. This should be described in the mine's Removal and Restoration Procedures. If the investigation identifies visible evidence of arcing then a report must be made to the DPI.

Cable repair workshops may also be a source for identifying visible evidence. A good quality management system would capture such sources of information and include them in the reporting processes. The mine shall have a process whereby licensed cable repair workshops report evidence of arcing to the mine.

Reporting to the DPI must be done in accordance with legislative requirements.

Every report is an incident. Every incident is a COMET event. It is important to enter each and every incident in COMET and make it clear what the main causal factors are so that COMET data can be used to target problem areas.



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Notes:

Clause 56, Coal Mine Health and Safety Regulation 2006, requires the following to be notified pursuant to Section 110(c) of the Act

“(I) an event that occurs in a hazardous zone in the underground parts of the coal operation and from which an electric arc is observed or that leaves visible evidence on an electric cable of arcing having occurred.”

Notification is under section 110(c) – notification must occur as soon as possible, but no later than 7 days after the operator becomes aware. This means that if a workshop identifies evidence of arcing, then the operator has seven days from that date in which to notify the DPI and the DCI.

The notification must be on the prescribed form that is on the website, there is no ancillary report form specified, however the cable arcing report form used under the 1999 legislation can be used as a model for mine’s to use in reporting visible evidence of arcing. This form is on the website.

The mine can disturb the scene of the incident

