Faulty Isolator Handle

WHAT HAPPENED

The Log-Washer at a Sand and Gravel Quarry stopped working. It appeared that a fuse had blown within the panel in the switchroom.

The manager turned off the isolator handle on the Fuse Combination Unit (FCU), (A typical FCU is shown in Photo No 1 below) this released the mechanical interlock allowing the cabinet to open.

Prior to removing the fuse the manager used a volt meter to check that isolation had indeed taken place and to his horror found that a high voltage still existed across two out of the three fuses and between these two phases and earth.

Had anybody touched the fuses or other conductors within the panel by hand or with a tool at this point it would have resulted in electrocution. Arrangements were made for an electrical contractor to replace the FCU.

On opening the ‘failed’ FCU it was found that the rocker ‘cam’ had sheared on two of the three phases leaving the incoming sliding contact in the closed position bridging the contact terminals

allowing power to flow through the fuses

There were no physical indications on the FCU to suggest that there was a problem of this magnitude.



Example of FCU

LEARNING POINTS / ACTIONS TAKEN

The FCU was replaced by a competent electrical contractor.

The Lock-Off and Isolation Procedures throughout the company must be amended to include testing every time that access is required inside a panel (to, for example, replace fuses or reset trips): to ensure that all parts to be handled are de-energised. The isolator handle cannot always be trusted to do this.

The foregoing applies to all aspects of business, not just Quarries.

The outcome in this incident could have been very different had the manager not carried out testing before attempting to remove fuses.

LOCATION:	**QUARRY**	**ALERT STATUS:**	**Normal**
ACTIVITY:	**MAINTENANCE & HOUSEKEEPING**	**DATE ISSUED:**	**12/08/2011**
SUB ACTIVITY:	**N/A**	**INCIDENT No:**	**00295**