400 VOLT PILLAR BLOW UP

As a result of this incident, the asset owner commissioned an independent report on the following areas:

Contractor Site Safety Management Systems

The contractor agreed that there were deficiencies in their site safety management systems and agreed to address these problems via their quality systems.

Suitability of Low Voltage Protection

The asset owner recognised that in this instance the fault level at the pillar was marginal for operating the upstream 400 amp fuse given the high impedance and intermittent nature of the fault. A 315 amp fuse in the next downstream switching pillar would have cleared this fault in less than 5 seconds. This is not a widespread issue and some residential areas in the region have been identified for further investigation to be undertaken.

Compliance of the Weber Unit to AS3439 and Live Working Procedures

The Weber unit is manufactured to EN 60947-3 and complies with AS/NZ 3439/1 with the barriers in place.

The investigation established the Weber 160 amp three phase fused disconnect units are not safe to work on live with the phase barriers removed. The asset owner has standardised the Jean Muller 160 amp three phase fused disconnect units for future installations.

Live Working Procedures

The asset owner has made changes to internal health and safety documents, including the addition of a section on low voltage pillars, which defines appropriate practices and safety precautions. Where there is any doubt about the safety of the unit, it must be de-energised even before an inspection is made.

To change the contractor's staff culture regarding working live on pillars, the new instructions have been included as part of their latest safety refresher course. This includes the presentation of a training video showing the burning pillar.

A work method instruction has also been developed by the contractor, which clearly details the correct practices and methods to be used when working on 160 amp three phase fused disconnect units. This includes torque settings.